PERGOLA COMMONS
PROPOSED MIXED-USE DEVELOPMENT

Urban Transportation Considerations
City of Guelph

Prepared For: FCHT Holdings (Ontario) Corporation, a Subsidiary of First Capital REIT

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BA Group

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1.0 INTRODUCTION

BA Group has been retained by FCHT Holdings (Ontario) Corporation, a subsidiary of First Capital REIT to provide transportation advisory services in relation to a proposed mixed-use development on the lands municipally known as 1 Clair Road East (the "Site") in the City of Guelph.

For the purposes of this study, the following definitions have been adopted:

- The "Site" refers to the lands bound by Clair Road East to the north, Hawkins Drive to the east, Poppy Drive East to the south, and Farley Drive (private) to the west.
- The lands bound by Clair Road East to the north, Farley Drive (private) to the east, Poppy Drive East to the south, and Gordon Street to the west will be referred to as the "Remaining FCR Lands".
- The entire lands bound by Clair Road East to the north, Hawkins Drive to the east, Poppy Drive East to the south, and Gordon Street to the west will be referred to as the "FCR Lands".

This report has been prepared for a Zoning By-law Amendment (ZBA) on the FCR Lands in coordination with the proposed changes on the Site. This report forms part of the ZBA submission to the City of Guelph, and addresses the transportation related elements of the Site. Some elements of the report are also presented to inform the zoning submission for the overall FCR Lands and will continue to be re-confirmed and outlined in further detail as part of subsequent Site plan submissions.

1.1 Existing Site

The proposed development Site is currently occupied by a mix of single-storey commercial buildings and surface parking, and is bound by Clair Road East to the north, Hawkins Drive to the east, Poppy Drive East to the south, and Farley Drive (private) to the south.

The lands west of the private portion of Farley Drive (south of Clair Road East and north of Poppy Drive East) and bound by Clair Road East to the north, Farley Drive (private) to the east, Poppy Drive East to the south, and Gordon Street to the west, are also owned by First Capital; however, the lands west of Farley Drive are not contemplated for redevelopment as part of this application. These remaining lands are occupied by a variety of commercial uses, as well as surface parking.

Presently, an east-west private street through the Site exists (the "Internal East-West Street"), connecting Hawkins Drive in the east and Farley Drive (private) in the west, and providing access to the various commercial uses on the Site.

The Site location is provided in **Figure 1**, below.

1.2 Study Process

This study has been undertaken in-part utilizing two levels of engagement so far with various stakeholders, as follows:

City of Guelph Terms of Reference

As part of the preliminary coordination for the Project, a formal Terms of Reference was submitted to City of Guelph Transportation Staff that outlined the intended scope for the Study, and identified specific assumptions to be considered as part of the Study's traffic analysis. Details pertaining to the assumptions identified within the Terms of Reference are integrated into **Sections 10.0** and **11.0**. The formal Terms of Reference addressed to the City of Guelph Transportation Staff is provided in **Appendix B**.

Public Engagement Open House

Extensive feedback from City of Guelph residents was heard and recorded during the Open House held on November 28th, 2023, pertaining both to the current development concept as well as current area transportation and traffic conditions. The feedback received pertaining to the development proposal has been incorporated into this report, where appropriate. See **Section 4.3.2** of this report for feedback as it relates to Area Transportation Context.

1.3 This Study

BA Group has undertaken a review of the key transportation related aspects of the ZBA application being submitted to the City of Guelph to permit the proposed mixed-use development on the Site. Key transportation-related aspects of the application reviewed as part of this study include:

Development Plan

- A review of the proposed development plan; and
- A review of the transportation elements of the proposed development plan including Site pedestrian and vehicular access, vehicular and bicycle parking facilities, and loading facilities.

Area Policy and Transportation Context

- A review of the existing and future transportation context of the Site considering area road network, area transit services, the surrounding pedestrian environment, and the area cycling network; and
- A discussion related to the existing area travel characteristics.

Site Planning, Circulation, and Parking Considerations

- A review of the vehicular parking, bicycle parking, and loading supply requirements and provisions for the proposed development; and
- A review of the functionality and appropriateness of the proposed vehicular facilities, including loading / garbage collection facility arrangements.

Transportation Demand Management

- A review of potential strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system.

Multi-Modal Travel Demand Considerations

- A review of area transit, pedestrian, and cycling context today;
- Development of future background traffic forecasts including specific area developments in the study area; and,
- An outline of multi-modal travel demand projections for the proposed development; and,
- An assessment of traffic volume changes on the area street network.

Traffic Operations Review

- An assessment of traffic operations at study area intersections today and in the future.
- A left-turn lane warrant for the east approach (westbound left) of the Clair Road East / Hawkins Drive intersection.
- A signal warrant for the Clair Road East / Hawkins Drive intersection.

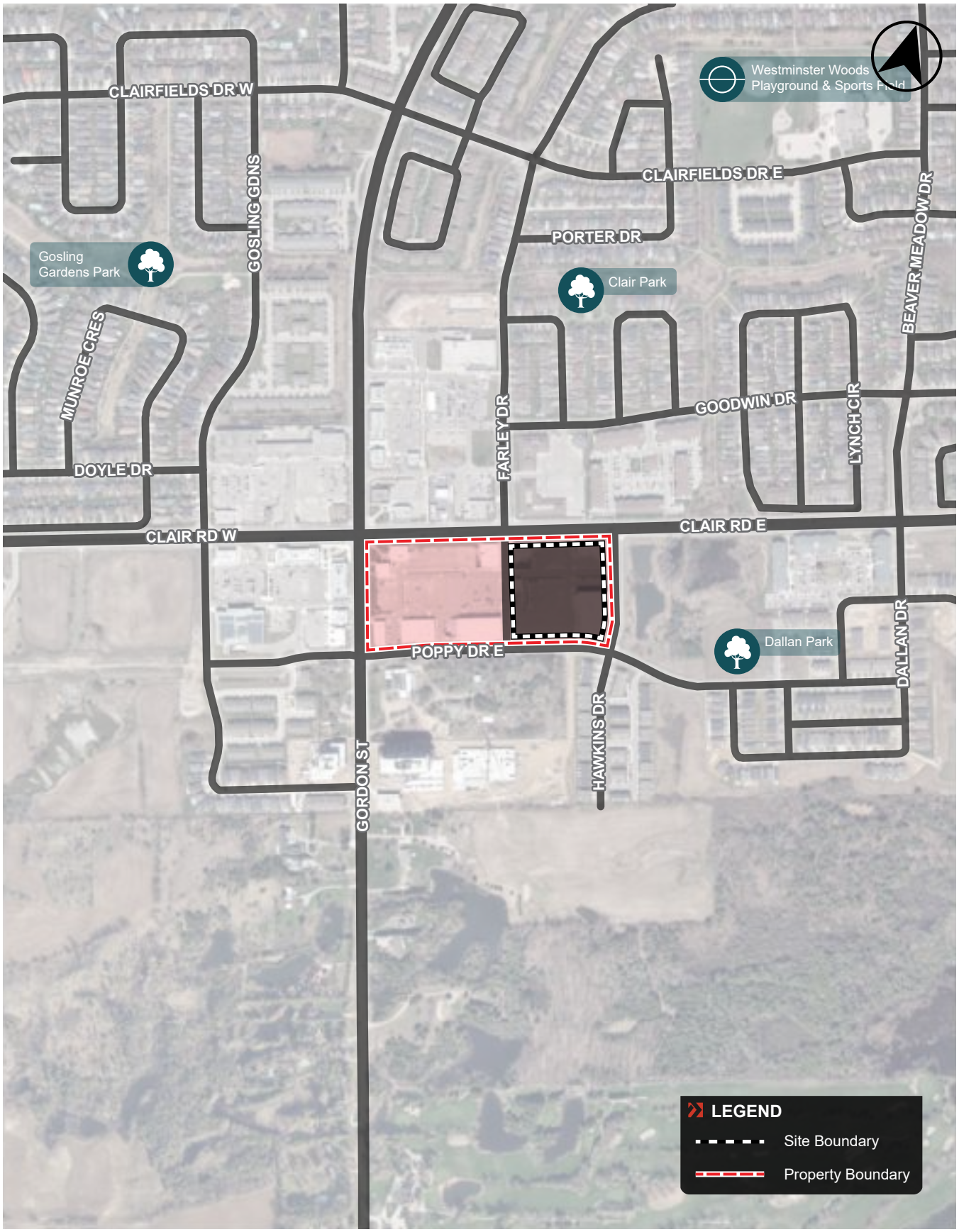

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FIGURE 1 SITE LOCATION

2.0 PROPOSED DEVELOPMENT

The following provides a review of the proposed development plans for the Site. Reduced scale architectural plans are provided in **Appendix A**.

2.1 Development Plan

The proposed development includes 4 buildings, ranging from 10- to 14-storeys and including a mix of residential and at-grade retail uses. The Site is currently proposed to include 715 residential units and 2,127 m^2 gross floor area (GFA) of retail space at-grade. Development of the Site is proposed to be undertaken through a phased approach, whereby the lands south of the Internal East-West Street (private) are developed in Phase 1 and Phase 2, while the lands north of the Internal East-West Street (private) are developed as part of Phase 3. The proposed Site plan is illustrated in **Figure 3**, and the proposed development plan is presented in **Table 1**. Reduced scale architectural plans are provided in **Appendix A**.

Table 1 Development Plan Summary

Phase	Use	Units / GFA
Phase 1	Residential	187 units
Phase 2	Residential	246 units
	Retail	342 m^2 GFA
Phase 3	Residential	282 units
	Retail	1,785 m^2 GFA
Total Residential		**715 units**
Total Retail		**2,127 m^2 GFA**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.

2.2 Key Transportation Elements

2.2.1 Site Access and Circulation

Vehicular Access

The Site is proposed to be accessed via three entrances, two of which currently exist at the Internal East-West Street's intersection with Farley Drive and Hawkins Drive, and the third of which is proposed to be opposite and aligned with the existing Poppy Drive East / 1888 Gordon Street site access to form an internal T-shaped driveway network. Collectively, these three Site accesses will provide routing choice for future residents and visitors to / from the Site.

The Internal East-West Street is an existing condition that will form a phasing line that will permit Phases 1 and 2 to proceed while keeping retail uses operating until such time that Phase 3 is built. The Internal East-West Street also provides essential underground servicing to the existing and proposed future uses.

The Internal East-West and North-South Streets are proposed to be configured to create an internal network that supports efficient internal routing choice and service access to all buildings from any of the proposed Site accesses.

Access to vehicular parking facilities for each building will be provided along the Internal North-South Street for Phase 1 and 2, and the Internal East-West Street for Phase 3. Pick-up / drop-off activity is proposed to be conducted through layby spaces along the Internal East-West Street, in close proximity to the primary lobby entrances for each Phase of development.

Operations and queuing assessment of the private street network was also considered in this study, as discussed with City staff, and is presented in **Sections 10.3.2** and **11.5.2**.

Pedestrian Access

Pedestrian access to the Site is proposed to be provided via the three Site accesses along Farley Drive, Hawkins Drive, and Poppy Drive East. Additionally, a north-south pedestrian connection from Clair Road East is proposed that will provide additional access opportunities for pedestrians to navigate and filter through the Site, as well as internal circulation from the future retail uses fronting onto Clair Road East to the remainder of the residential uses on the Site.

The Internal North-South Street is proposed as a textured flush street with the vehicular and pedestrian travelway delineated by bollards and landscape elements that will facilitate strong north-south active connections through the Site, while continuing to permit necessary vehicular circulation. Collectively with the north-south pedestrian connection, a continuous north-south active link will be created from Poppy Drive East in the south to Clair Road East in the north.

Primary pedestrian access to each building is proposed to be centered at the Internal East-West Street / Internal North-South Street intersection, providing a central internal intersection in conjunction with the proposed pick-up / drop-off facilities. Additional residential accesses are proposed along each building's frontage, and the proposed townhouses will have individual access locations for each respective unit.

2.2.2 Vehicular Parking

A total of 850 parking spaces are proposed across the Site's 3 development phases, inclusive of 742 resident spaces and 108 non-residential spaces (proposed to be provided on a non-exclusive basis for residential visitors and retail uses). All resident parking is proposed to be located within separate 2-level parking garages for each Phase of development. Residential visitor and retail parking is proposed to be located on the first level of each respective underground parking garage and at-grade, and will be separated from the resident parking by secure parking gates.

2.2.3 Bicycle Facilities

A total of 819 bicycle parking spaces are proposed to be located across the Site, including 809 residential spaces and 10 retail spaces.

Residential long-term bicycle parking is proposed to be located at-grade within each individual building, and each long-term bicycle storage location will be accessible from both internal and external entrances. Residential short-term bicycle parking is proposed to be located adjacent to the lobby entrance along Internal East-West Street for each respective building.

Retail long-term bicycle parking will be located within each respective retail space, while the retail short-term bicycle parking will be located along Clair Road East, proximate to the north-south pedestrian connection between Buildings C and D.

2.2.4 Loading and Servicing

Loading and servicing spaces are proposed to be located within each individual building adjacent to their respective underground parking garage ramps. As such, loading and servicing facilities may be accessed via the Internal North-South Street for Phases 1 and 2, and the Internal East-West Street for Phase 3. Vehicle manoeuvring diagrams demonstrating loading operations for each building are provided in **Appendix C**.

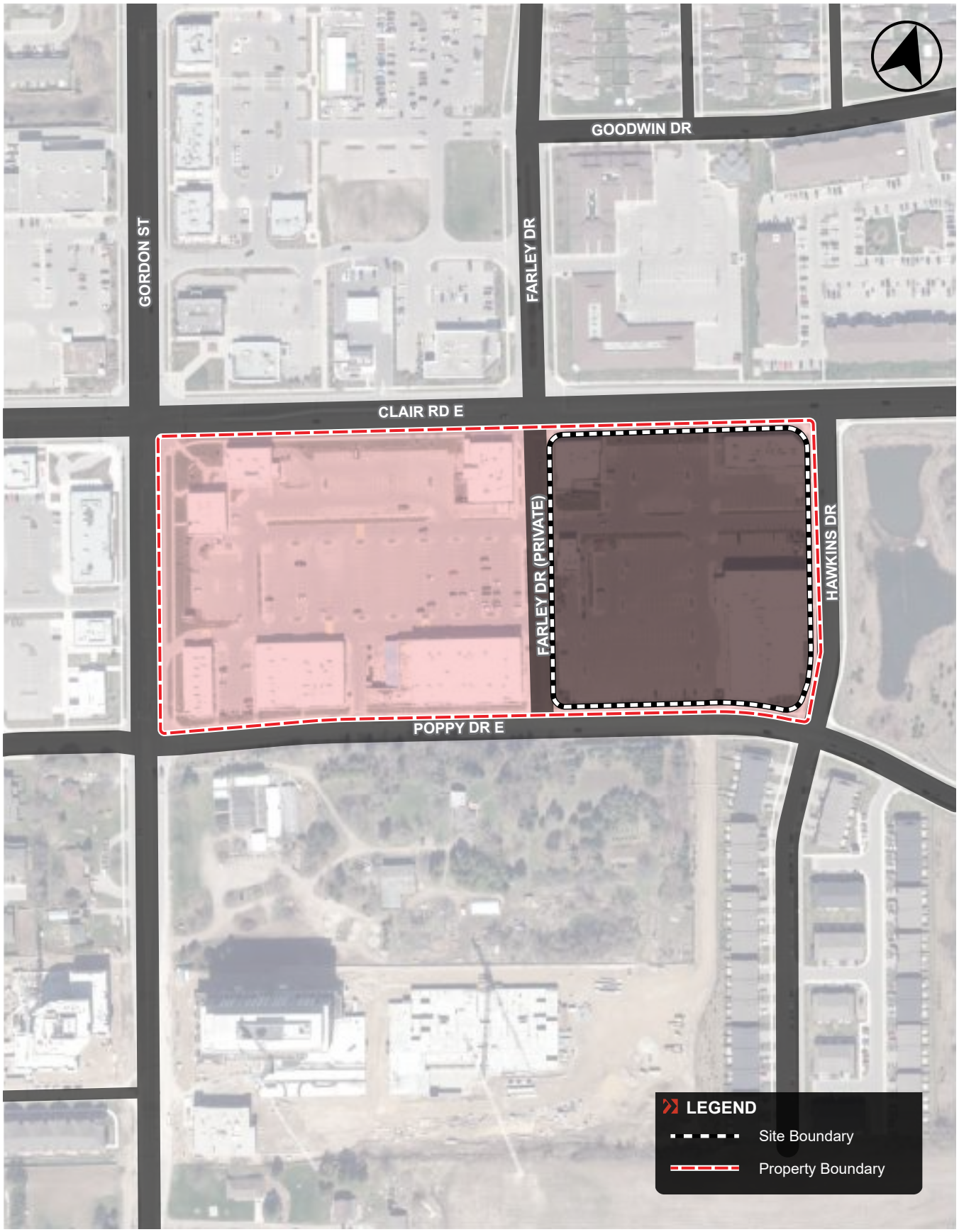

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FIGURE 2 SITE CONTEXT

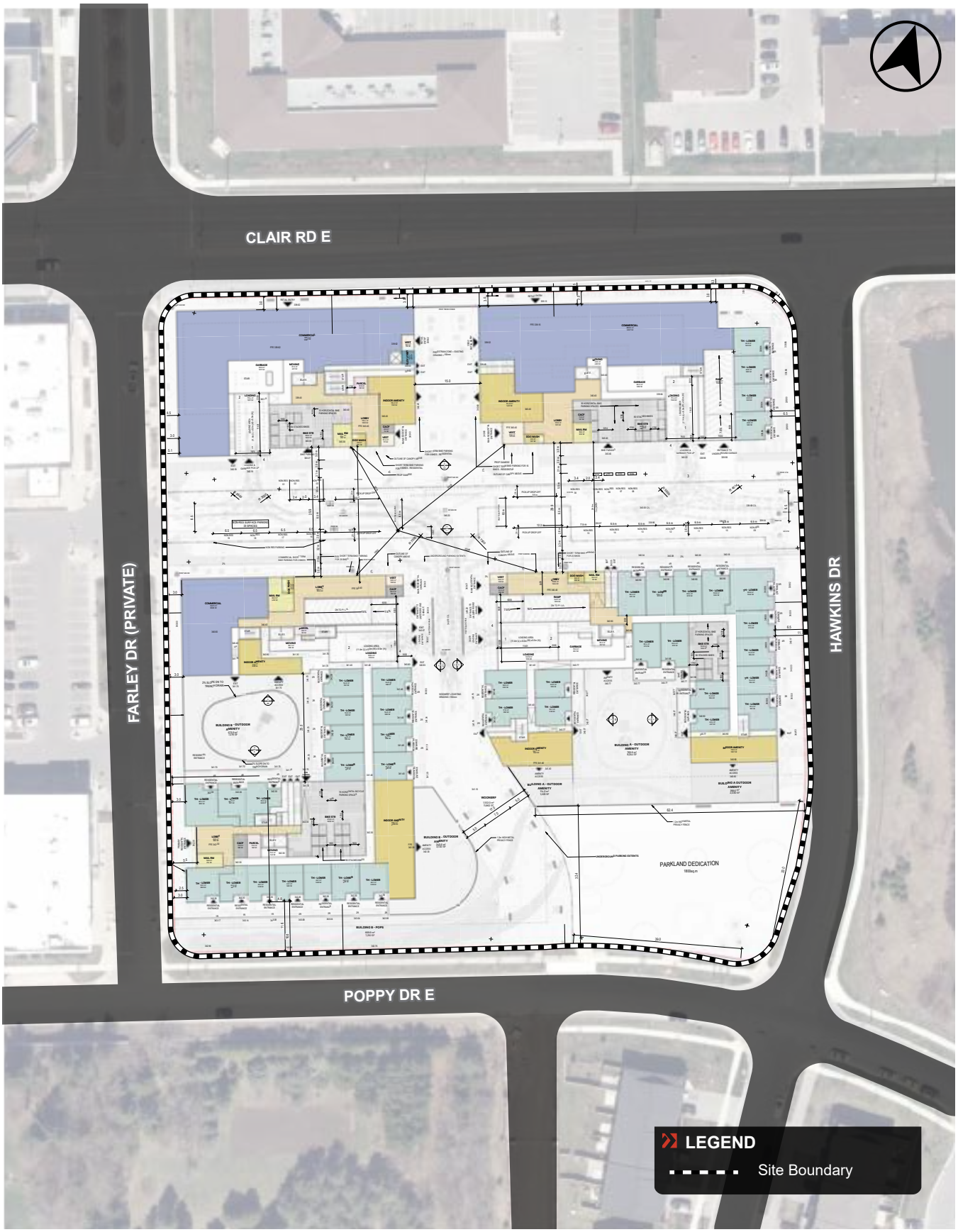

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FIGURE 3 SITE PLAN

3.0 PLANNING POLICY CONTEXT

3.1 Provincial Planning Statement (2024)

On October 20th, 2024, the *2024 Provincial Planning Statement* (2024 PPS) took effect, replacing *A Place to Grow: Growth Plan for the Greater Golden Horseshoe* and the *2020 Provincial Policy Statement* with an integrated planning statement.

The 2024 PPS in-part provides the following policy directives to municipalities with respect to transportation infrastructure and its integration with land uses:

> *2.1.6 Planning authorities should support the achievement of complete communities by:*
>
> *a) Accommodating an appropriate range and mix of land uses, housing options, transportation options with multimodal access, employment, public service facilities and other institutional uses (including schools and associated child care facilities, long-term care facilities, places of worship and cemeteries), recreation, parks and open space, and other uses to meet long-term needs.*
>
> *2.2.1 c) Promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation.*
>
> *2.2.1 d) Requiring transit-supportive development and prioritizing intensification, including potential air rights development, in proximity to transit, including corridors and stations.*
>
> *3.2.2 Efficient use should be made of existing and planned infrastructure, including through the use of transportation demand management strategies, where feasible.*
>
> *3.2.3 As part of a multimodal transportation system, connectivity within and among transportation systems and modes should be planned for, maintained and, where possible, improved, including connections which cross jurisdictional boundaries.*
>
> *3.9.1 Healthy, active, and inclusive communities should be promoted by: a) Planning public streets, spaces and facilities to be safe, meet the needs of persons of all ages and abilities, including pedestrians, foster social interaction and facilitate active transportation and community connectivity.*

The current proposal for the Site is consistent with the 2024 PPS. It represents an intensification of uses near existing and planned transit that makes efficient use of infrastructure and public service facilities. The current proposal also incorporates TDM strategies that promote a healthy community and multi-modal transportation system.

It is also noted that the Clair-Maltby Secondary Plan, discussed in **Section 3.2.3** below, denotes Gordon Street as a future transit spine for South Guelph, which will provide increased transit service between the City's downtown amenities and to the growing South Guelph area.

3.2 City of Guelph Policies

3.2.1 City of Guelph Official Plan

The *City of Guelph Official Plan, February 2022 Consolidation* (2022 Guelph OP) sets the planning framework to guide the future growth and development of the City. It identifies the area around the Clair Road / Gordon Street intersection as a Community Mixed-Use Node, which are appropriate higher density mixed-uses that serve the local and wider community. Specifically, Section 3.11.2 of the 2022 Guelph OP states that Community Mixed-Use Nodes will:

- Be well served by transit and facilitate pedestrian and cycling traffic; and
- Provide a mix of commercial, offices and residential development in a higher density compact urban form that supports walkable communities and live/work opportunities.

In addition to the area's designation as a Community Mixed-Use Node, the Site itself is designated a Greenfield Area (OP Schedule 1: Growth Plan Elements), which includes minimum density targets for new development in accordance with the Growth Plan. Furthermore, Section 3.12.2 of the Guelph OP states that Greenfield Areas will be planned and designed to:

- Create street configurations, densities and an urban form that supports walking, cycling and the early integration and sustained viability of transit services.
- Create high quality public open spaces with site design and urban design standards that support opportunities for transit, walking and cycling; and
- Promote, where appropriate through secondary planning, the development of identifiable, pedestrian oriented neighbourhood scale 'urban villages' through the use of medium and high density, street-related built form that contains a mix of commercial, residential and employment uses, as well as supporting live/work environments. These centres will be designed around active public spaces and streets and pedestrian access that is well-linked to the surrounding neighbourhood through walking, cycling, and public transit.

The Site is consistent with these policies contained within the 2022 Guelph OP in creating pedestrian oriented and vibrant mixed-use environment that is conducive to active modes of travel.

The 2022 Guelph OP also provides policies pertaining to Transportation Demand Management (TDM) within the City, and acknowledges its contribution to creating and supporting an overall integrated and sustainable transportation system. TDM measures and they relate to the Site are provided in **Section 9.0**.

3.2.2 City of Guelph Transportation Master Plan

The *City of Guelph Transportation Master Plan (2022)* (Guelph TMP) provides a framework for transit, cycling, and active transportation network expansions within the City. The Guelph TMP is a key study which identifies and plans for network improvements that address existing issues while accommodating for future growth within its jurisdiction. The Guelph TMP provides the following relevant goals for the City's transportation network:

- People of all ages and physical ability will be able to travel safely using any transportation mode that they choose.
- Guelph's transportation system will be easy-to-use, reliable and give people and businesses the options they want when they need them.
- Transit service will provide travel times and traveler convenience at levels that are competitive with travel by car; and
- Guelph's transportation system will plan for the changes of tomorrow, while delivering great service today.

The Guelph TMP provides various multimodal recommendations for the City, including those for the road network, transit services, and active transportation infrastructure. Notably, the Guelph TMP makes the following recommendations for transportation infrastructure in the area of the Site:

- Gordon Street, and specifically the lands around the Clair Road / Gordon Street intersection as an area suitable for an enhanced pedestrian realm.
- Clair Road and Gordon Street included as part of the Cycling Spine Network; and
- Clair Road and Gordon Street included as part of the Quality Transit Network, with potential lane conversion.

3.2.3 Clair-Maltby Secondary Plan

The Clair-Maltby Secondary Plan (2022) (CMSP) provides a detailed planning and policy framework for the lands in south Guelph generally bound by Poppy Drive West in the north, Victoria Road South in the east, Maltby Road in the south, and the eastern limits of the Southgate Business Park in the west. The CMSP provides numerous objectives to guide development within its boundaries, most notably:

- Promote healthy, active living including the provision of active transportation infrastructure to provide a variety of mobility choices for residents of all ages.
- Create compact, walkable neighbourhoods through the design of development to reflect healthy neighbourhood design principles.
- Design new development and infrastructure to create a modified street grid pattern and trail system that is designed to facilitate all modes of transportation with a priority on walking, cycling and transit.
- Facilitate safe, direct and attractive active transportation routes for people of all ages and abilities through the design of new development and infrastructure.
- Enable continuous multimodal travel throughout Clair-Maltby with connections to city-wide travel networks.
- Provide efficient transit service throughout Clair-Maltby that integrates with the rest of the city's transit network and encourage links to regional transit; and
- Design an urban transit hub to provide a focal point in the transit network that integrates different modes of transportation and place-making strategies to provide a place of connectivity on Gordon Street.

The CMSP provides key mobility policies that will guide the future evolution of the area transportation infrastructure, including the provision of active transportation facilities along all area arterial and collector roads, as well as off-road connections, improved and expanded transit services, and a future multimodal road network that encourages alternative travel modes and discourages auto-based travel. A detailed discussion of proposed transportation infrastructure improvements provided within the CMSP is provided in **Section 4.0**.

3.2.4 City of Guelph Development Charges Background Study

The City of Guelph's *2023 Development Charges Background Study* (2023 DC Study) provides insight into the planned future area transportation infrastructure improvements within the City through a horizon year of 2051. Notably, the 2023 DC Study identifies the planned widening of Gordon Street from Gosling Gardens to Maltby Road to occur between 2027 and 2032. The proposed Gordon Street widening is discussed further in **Section 4.1.2**.

4.0 AREA TRANSPORTATION CONTEXT

4.1 Area Street Network

4.1.1 Existing Street Network

The existing area street network consists of arterial, collector, local, and private streets. Characteristics of the area street network are summarized in **Table 2**, and illustrated in **Figure 4**.

Table 2 Area Street Network

Name	Speed Limit	Parking Restrictions	Description
Arterial			
Clair Road East	60 km/h	No parking on either side of the road at any time.	Clair Road East is a City Arterial Road that generally runs in an east-west direction. In the vicinity of the Site, it has a 4-lane cross-section (2 travel lanes in either direction) with auxiliary left-turn lanes at signalized intersections. Clair Road East extends from Victoria Road South in the east to Gordon Street in the west, where it continues as Clair Road West. Parking is prohibited along Clair Road East.
Gordon Street	60 km/h	No parking on either side of the road at any time.	Gordon Street is a City Arterial Road that generally runs in a north-south direction. In the vicinity of the Site, it has a 4-lane cross section (2 travel lanes in either direction) with auxiliary left-turn lanes at signalized intersections. Gordon Street extends from Waterloo Avenue in the north (north of which it continues as Norfolk Street) to Maltby Road in the south (south of which it continues as Brock Road North). Parking is prohibited along Gordon Street
Collector			
Poppy Drive East	40 km/h	Dedicated layby parking provided on north side with 2-hour limit on weekdays from 9 am – 6 pm. No parking restrictions specified on south side.	Poppy Drive East is a City Collector Road that generally runs in an east-west direction. In the vicinity of the Site, it has a 2-lane cross-section (1 travel lane in either direction). Poppy Drive East extends from Dallan Drive in the east to Gosling Gardens in the west. In the vicinity of the Site, 2-hour weekday parking is permitted on the north side of Poppy Drive East between its intersection with Farley Drive and Gordon Street.
Farley Drive	40 km/h	No parking on either side of the road at any time.	Farley Drive is a City Collector Road that generally runs in a north-south direction. In the vicinity of the Site, it has a 2-lane cross-section (1 travel lane in either direction). Farley Drive east extends from Blair Drive in the north to Clair Road East in the south, where it extends as a private internal connection for the Site. Parking is prohibited along Farley Drive.
Private			
Farley Drive (south of Clair Road East)	Not Posted	Dedicated layby parking provided on east side without time restriction	Farley Drive (south of Clair Road East) is a private connection that runs in a north-south direction. It contains a 2-lane cross-section (1 travel lane in either direction) and extends from Clair Road East in the north to Poppy Drive East in the south. Parking is prohibited on Farley Drive.

4.1.2 Future Street Improvements

Transportation infrastructure in south Guelph is expected to undergo significant improvement and expansion as part of the CMSP, the boundary of which is located directly south of the Site, and recommended improvements per the Guelph TMP and 2022 Guelph OP. New multimodal road infrastructure is proposed for the area, bringing new mobility and routing opportunities, including active transportation linkages and infrastructure. Additionally, the future introduction of new street extensions and the completion of 'missing links' in the area will serve future area development, as well as improve circulation and capacity for existing area traffic operations. Future area street context is illustrated in **Figure 4**.

Gordon Street Widening

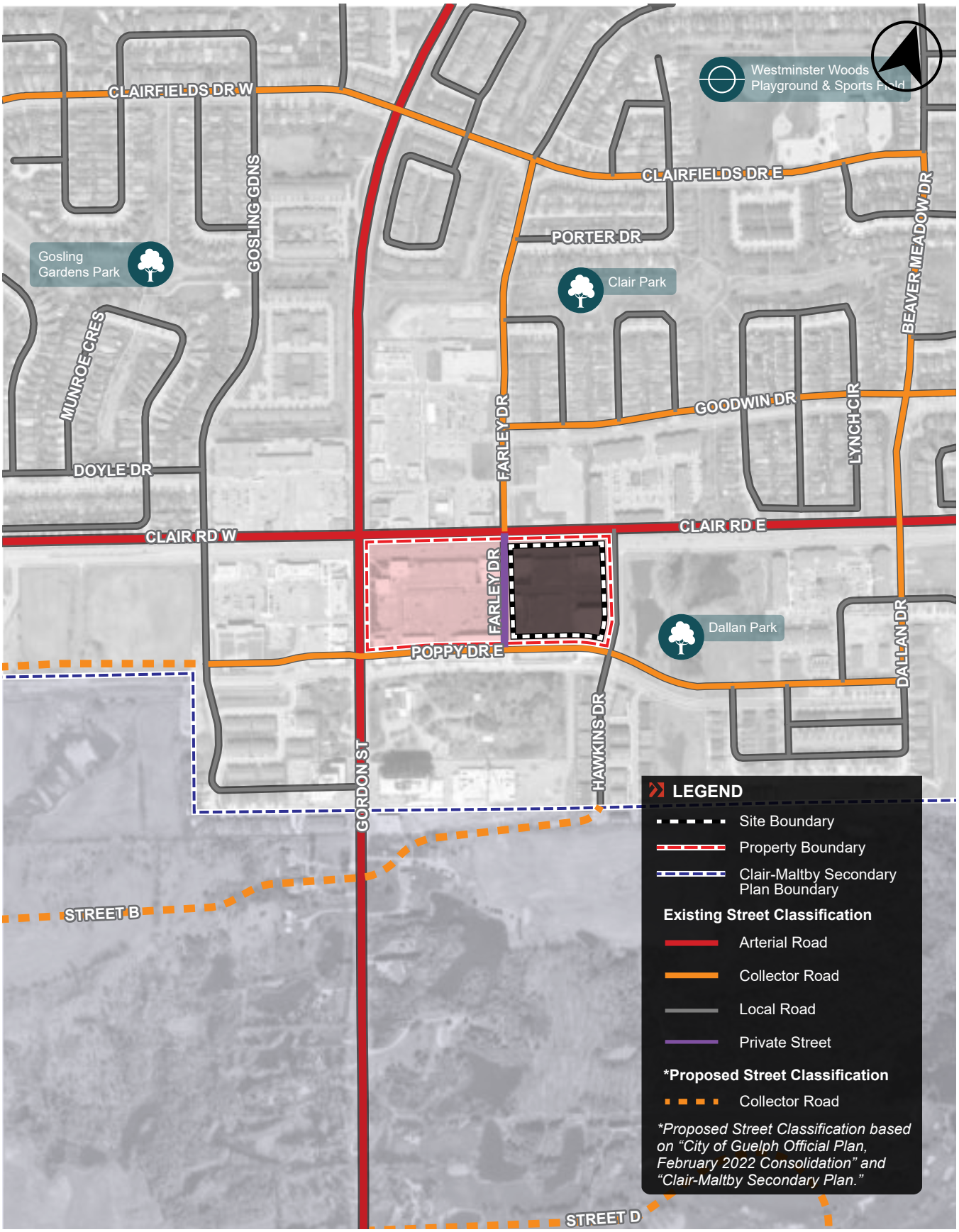
Per the 2023 DC Study, Gordon Street is planned to be widened to a 4-lane cross-section from Gosling Gardens in the north to Maltby Road in the south. The widening is expected to occur between 2027 and 2032, and will enhance Gordon Street's capacity to accommodate new and forecast traffic associated with the Clair-Maltby Secondary Plan south of the Site.

Hawkins Drive Extension

Per the CMSP Mobility Plan, Hawkins Drive, located adjacent to the east of the Site and terminating approximately 230 metres south of its intersection with Poppy Drive East, is planned to be extended south and west, connecting with and across Gordon Street. This extension will in part provide future routing choice for travelers along the south and east legs of the Clair Road / Gordon Street intersection. The future extension of Hawkins Drive is expected to be timed in coordination with future area development as part of the CMSP.

Poppy Drive West Extension

The Poppy Drive West Extension is identified within the 2022 Guelph OP as a future collector road that will connect a currently 'missing link' from the future location of the South End Community Centre in the west to Gosling Gardens in the east. The future extension of Poppy Drive West will also provide routing choice for existing and future area traffic travelling along the south and west legs of the Clair Road / Gordon Street intersection.



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Aerial maps provided courtesy of: Esri, DigitalGlobe, GeoEye, Earthstar Geographies, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, the GIS User Community and/or Google Earth/Maps.

FIGURE 4 AREA STREET NETWORK

4.2 Area Transit Context

4.2.1 Existing Transit Context

The Site is currently served by numerous Guelph Transit stops which provide access to downtown Guelph and surrounding area, as well as numerous GO transit routes which provide connections to regional destinations. **Table 3** provides a summary of the existing area transit services proximate to the Site.

Table 3 Existing Transit Context

Route	Headways (Peak Hours)	Nearest Stop(s)	Description
GO Bus Service			
17 Waterloo / Hamilton	~1 hour during peak hours	Gordon Street @ Clair Road East & Gordon Street @ Clair Road West	Route 17 Waterloo / Hamilton operates in a generally east-west direction between the City of Waterloo in the West and the City of Hamilton in the east, with various stops along the Highway 7 and Highway 6 corridors.
29 Guelph / Mississauga	~1 hour during peak hours	Gordon Street @ Clair Road East & Gordon Street @ Clair Road West	Route 29 Guelph / Mississauga operates in a generally east-west direction between Guelph Central Station in the west and Kipling Station in the east, with various stops along the Highway 401 and Highway 403 corridors.
48 Guelph / Highway 407 Bus Terminal	~1 hour during peak hours	Gordon Street @ Clair Road East & Gordon Street @ Clair Road West	Route 48 Guelph / Highway 407 Bus Terminal operates in a generally east-west direction between the University of Guelph in the west and the Highway 407 Bus Terminal in the City of Vaughan in the east, with various stops along the Highway 407 corridor.
Guelph Transit Bus Service			
16 Southgate	~30 mins	Clair Road East @ Hawkins Drive Poppy Drive East @ Hawkins Drive Poppy Drive East @ Gordon Street	Route 16 Southgate operates in a generally east-west direction between the Hanlon Industrial Park in the west and the area of the Clair Road East / Dalan Drive / Beaver Meadows Drive in the east. Route 16 Southgate services the variety of commercial / industrial uses within the Hanlon Creek Industrial Park, providing connections to Downtown Guelph via the Gordon Street corridor, including Route 99 Mainline.
99 Mainline	~30 mins	Clair Road West @ Gosling Gardens	Route 99 Mainline operates in a generally north-south direction between SmartCentres Guelph in the north and the area of Clair Road / Gordon Street in the south. Route 99 Mainline services the Gordon Street / Norfolk Street corridor, including the University of Guelph and Downtown Guelph, with stops proximate to Guelph Central Station that provide additional connections to regional GO Transit on the Kitchener Line.
19 Hanlon Creek	~30 mins	Clair Road West @ Gosling Gardens	Route 19 Hanlon Creek operates in a generally north-south direction between Stone Road Mall in the north and the area of Clair Road / Gordon Street in the south. Route 19 Hanlon Creek generally services the City of Guelph west of Highway 6 (Hanlon Expressway).

4.2.2 Future Transit Improvements

Transit service is expected to undergo improvements in line with the continued development and growth of South Guelph. The Guelph TMP identifies the Gordon Street corridor in proximity to the Site as part of the City's Quality Transit Network, with the potential for future lane conversion. Furthermore, the Guelph TMP identifies the Clair Road corridor in proximity to the Site as part of the City's Quality Transit Network, with potential for future lane widening east of the Site. Both of these corridors will serve as important transit links between South Guelph and the remainder of the City, providing connections to local destinations and regional transit linkages.

In addition to the Guelph TMP, the Clair-Maltby Secondary Plan identifies the Gordon Street corridor as the future transit spine for the CMSP and proposes a future transit hub to be located within the heart of the Secondary Plan area.

In November 2021, City of Guelph Council approved the Guelph Transit Future Ready Action Plan, which aims to generate holistic changes to Guelph's transit service across the entire City over a 10-year period (2022 – 2032). These changes in part aim to provide increased service frequency and coverage across the City, as well as improve service to new growth areas, including the Clair-Maltby Secondary Plan Area, which is located in close proximity to the Site. Notably, as part of the Guelph Transit Future Ready Action Plan, the Community Node at Clair Road / Gordon Street is planned to see increased service levels, which will in-part serve to accommodate the planned and anticipated growth in this area.

The proposed improvements to transit service in South Guelph will help increase connectivity and accessibility to core destinations within the City and will help to reduce long-term reliance on personal automobiles in the area, particularly as development in South Guelph.

Figure 5 illustrates the existing and planned area transit context.

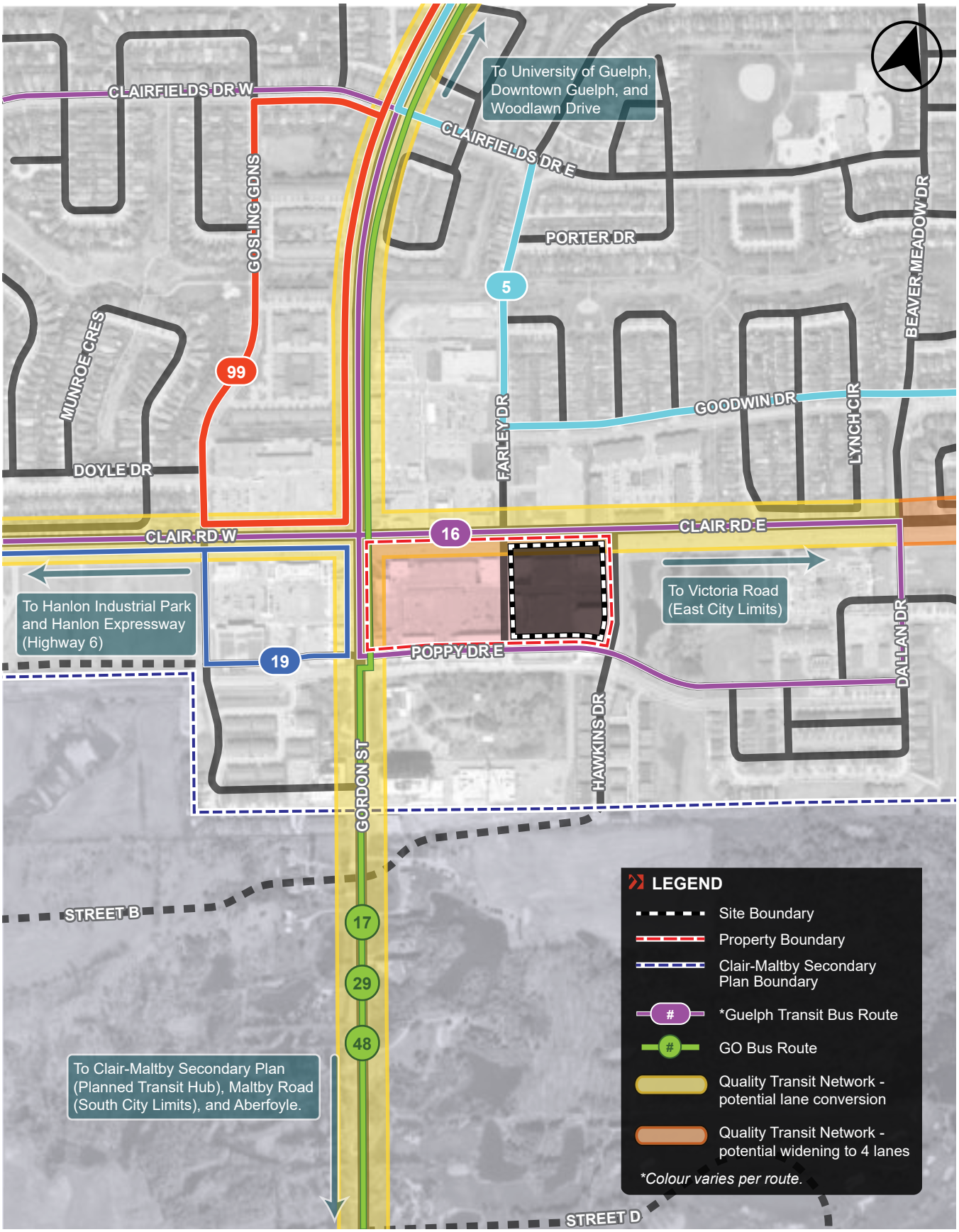

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FIGURE 5 AREA TRANSIT CONTEXT

4.3 Active Transportation Context

4.3.1 Cycling Connections

Existing Cycling Connections

There is currently a lack of dedicated cycling infrastructure in the area of the Site, limited to painted bicycle lanes along Clair Road and Gordon Street.

Figure 6 demonstrates the existing cycling network in the area of the Site.

Planned Cycling Connections

The Guelph TMP proposes that both the Gordon Street and Clair Road corridors be included as part of the City's On-Street Spine Cycling Network, and proposes future cycling infrastructure intended for all ages and abilities along these corridors.

In addition to the Guelph TMP, the CMSP highlights an essential future north-south active transportation connection travelling parallel to the east of Gordon Street throughout the CMSP area, tying into the existing Hawkins Drive. This north-south connection will greatly enhance area active transportation linkages, particularly between the Site and the future development within the Clair-Maltby Secondary Plan area.

Future area cycling improvements considered as part of the Guelph TMP and the Clair-Maltby Secondary Plan are illustrated in **Figure 6**.

4.3.2 Pedestrian Connections

Existing Pedestrian Connections

The Site is located west of the Clair Road / Gordon Street intersection, which currently has a variety of commercial, retail, and community amenities within walking distance and served by sidewalks along both sides of all major area streets.

Proximate to the Site, dedicated signalized pedestrian crossings are provided at the Clair Road East / Farley Drive intersection, the Clair Road / Gordon Street intersection, and the Gordon Street / Poppy drive intersection.

Figure 7 demonstrates the existing pedestrian context and area destinations.

Planned Pedestrian Connections

The Guelph TMP denotes the Gordon Street corridor, as well as the lands adjacent to the Clair Road / Gordon Street intersection, as a future enhanced pedestrian realm area, with improved pedestrian facilities and connections to encourage walking as a viable alternative to vehicular travel for local trips. The Guelph TMP also identifies specific segments of Gordon Street and Clair Road for improvement under medium-term horizons (2031) and long-term horizons (2051).

The essential north-south active transportation connection identified in the CMSP will also enhance area pedestrian connectivity, providing a dedicated linkage from the area of the Site to the future development lands to the South.

Given the evolving context of the area's active transportation connections, including future infrastructure along Clair Road and the future essential active transportation link, BA Group believes that a controlled pedestrian crossing is appropriate along Poppy Drive East. This potential crossing could be considered either at Poppy Drive East / Farley Drive, or at Poppy Drive East / Hawkins Drive, subject to coordination with City Staff on its potential integration with the broader active transportation network. A controlled pedestrian crossing could be facilitated by either STOP control or by a pedestrian crossing treatment designed in accordance with Ontario Traffic Manual (OTM) Book 15.

Public Open House Feedback

The following notable comments were received during the Public Open House held on November 28th, 2023 with respect to Poppy Drive East:

- **On-street parking conditions along Poppy Drive East** were identified by numerous area residents as presenting challenges to north-south crossings along Poppy Drive East as well as egress from the existing 1888 Gordon Street site access. Currently, parking is permitted on both the north and south sides of Poppy Drive East, and it was noted that large trucks frequently park on the south side of Poppy Drive East, inhibiting pedestrian and driver sightlines for oncoming traffic.

- **Limited area north-south dedicated pedestrian crossings** were identified through the Open House engagement process, particularly between the South side of Poppy Drive East and the north side of Clair Road East.

  Currently, Poppy Drive East does not have any dedicated north-south pedestrian crossings, as all area intersections along the corridor are free flow in the east-west direction. The introduction of the Internal North-South Street at the existing intersection of Poppy Drive East / 1888 Gordon Street site access may present opportunities for dedicated pedestrian crossings in this area.

  Dedicated north-south crossings of Clair Road East in the area of the Site are currently limited to the Clair Road East / Farley Drive and Clair Road / Gordon Street intersections. With current and planned area development approximate and south of the Site, and in consideration of the identified essential north-south active transportation route east of the Site per the Clair-Maltby Secondary Plan, opportunities may exist to provide an additional crossing at or proximate to the Clair Road East / Hawkins Drive intersection. Potential future signalization of this intersection is discussed in greater detail in **Section 11.4.**

While not directly related to the current development proposal, BA Group believes there are opportunities to improve driver sightlines relative to truck activity parked on the south side of Poppy Drive East. Potential solutions include further restricting no parking zones along Poppy Drive East, and / or providing curb extensions that will improve visibility past parked vehicles, and physically restrict parking next to the 1888 Gordon Street site access. Through further correspondence , City staff have noted that this issue has been previously raised to the City's Transportation Engineering Department, and that staff have conducted a field review which resulted in the implementation of no parking zones on both sides of the residential access.

BA Group believes that a controlled pedestrian crossing is appropriate along Poppy Drive East and could be considered either at Poppy Drive East / Farley Drive, or at Poppy Drive East / Hawkins Drive, subject to coordination with City Staff on its potential integration with the broader active transportation network. A controlled pedestrian crossing could be facilitated by either STOP control or by a pedestrian crossing treatment designed in accordance with Ontario Traffic Manual (OTM) Book 15. Through further correspondence, City of Guelph staff have noted the City will continue to monitor the needs for future improvements to facilitate safe crossings and maintain traffic operations.

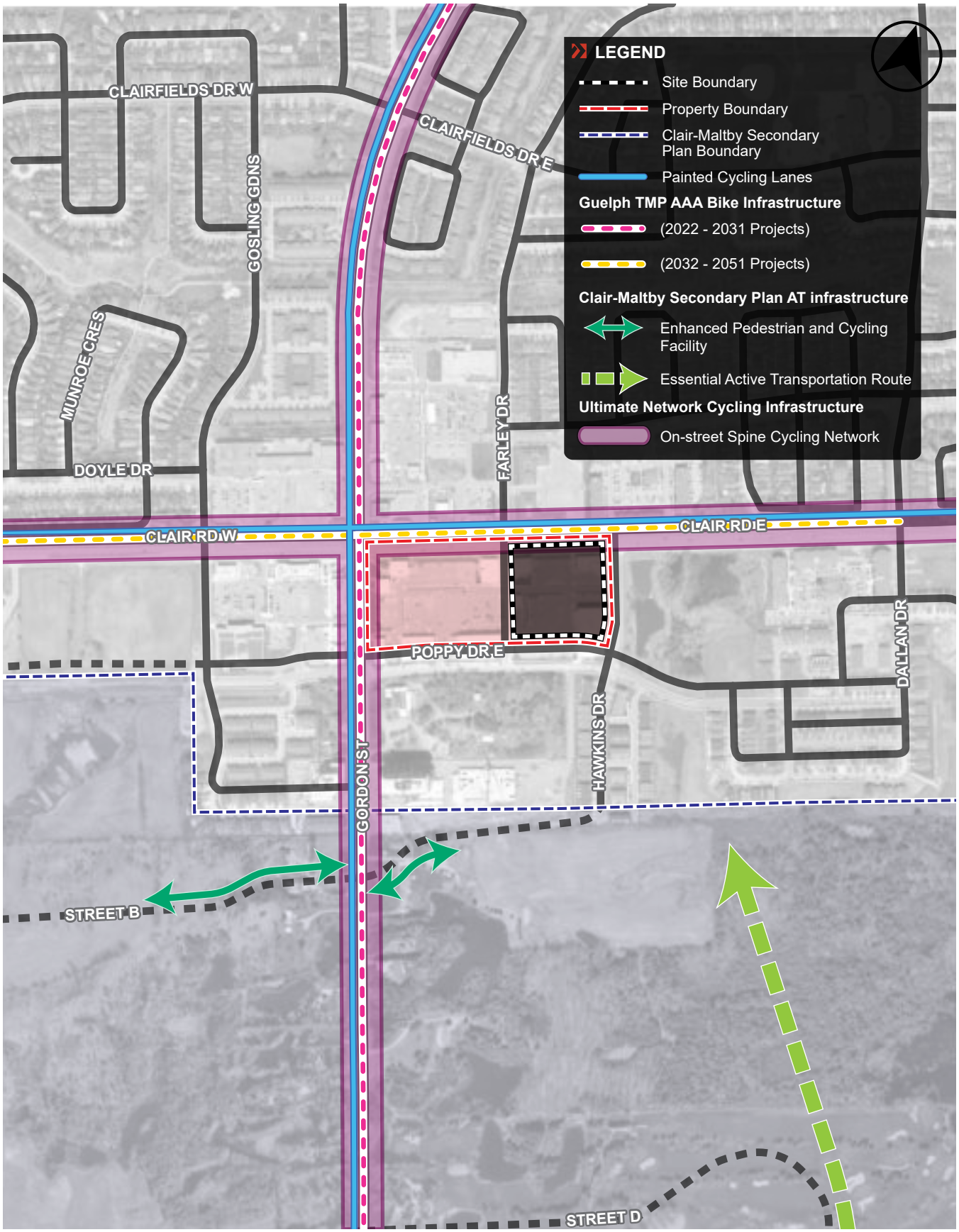

FIGURE 6 AREA CYCLING CONTEXT

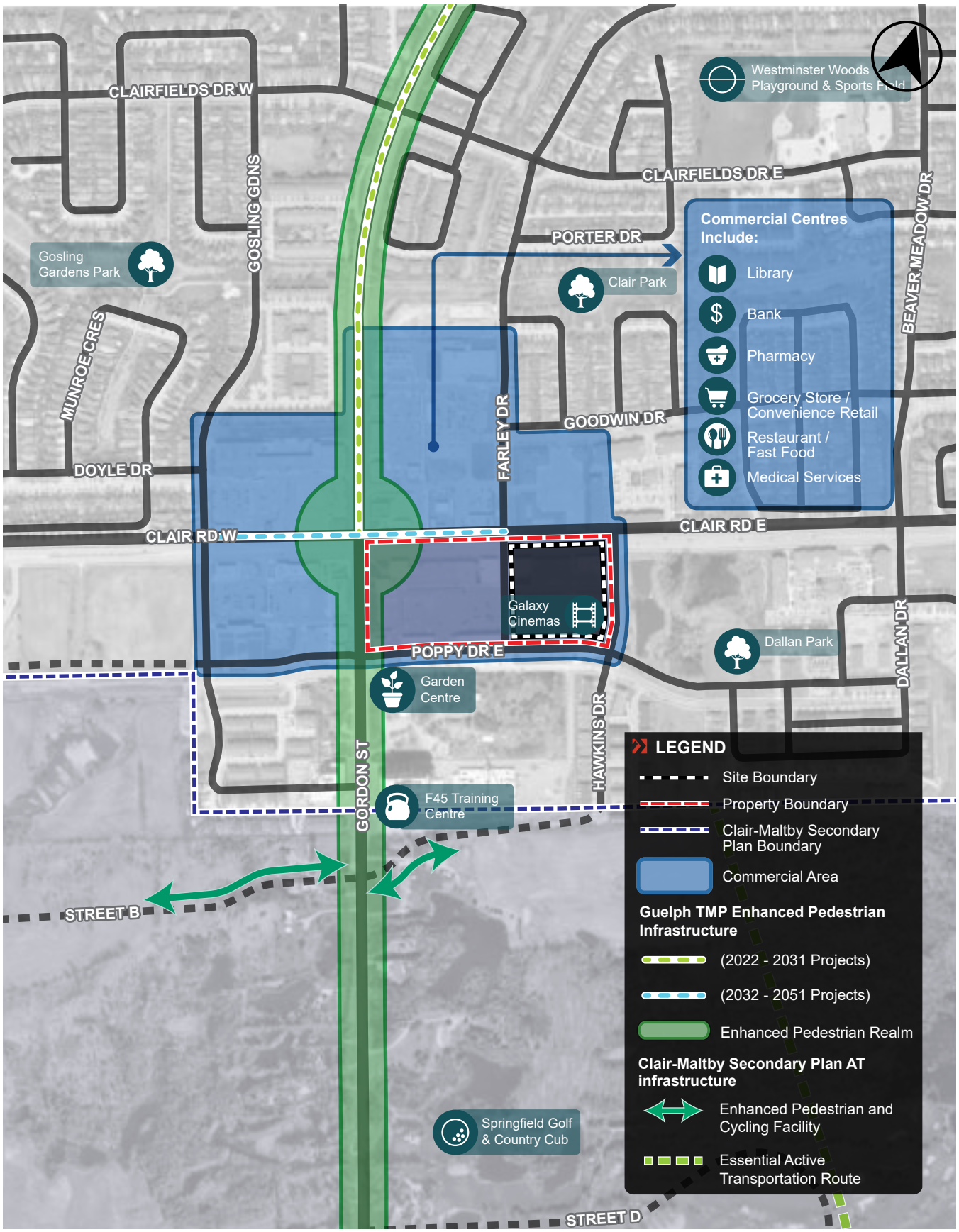

FIGURE 7 AREA PEDESTRIAN CONTEXT

5.0 FUNCTIONAL SITE PLAN ELEMENTS

5.1 Proposed Accesses and Internal Circulation

5.1.1 Vehicular Access and Circulation

As summarized in **Section 2.2.1**, vehicular access to the Site is proposed to be provided via three accesses, located along Farley Drive (private), Hawkins Drive, and Poppy Drive East. Accesses along the private segment of Farley Drive and Hawkins Drive are proposed to be retained from the existing condition and the access at the Poppy Drive East / 1888 Gordon Street site access is proposed to be constructed as part of the redevelopment.

The proposed Site access to Poppy Drive East is proposed to be aligned with the existing 1888 Gordon Street site access as demonstrated on the reduced scale architectural plans in **Appendix A**.

The proposed accesses at Farley Drive and Hawkins Drive are located approximately 50 metres south of their respective intersections with Clair Road East. A review of forecast future queuing conditions along the south approach of the Clair Road East / Farley Drive and Clair Road East / Hawkins Drive intersections is provided in **Section 11.5.2**.

Internal vehicular circulation is currently proposed to be facilitated by two internal street segments:

- An Internal East-West Street that connects the proposed Site accesses at Farley Drive and Hawkins Drive; and
- An Internal North-South Street that connects the proposed Site access at Poppy Drive East to the Internal East-West Street at a future three-legged intersection.

These proposed segments will provide vehicular routing choice for future residents and Site visitors as well as allow appropriate circulation for loading and servicing activities.

Access to vehicular parking facilities for each building will be provided along the Internal North-South Street for Phase 1 and 2, and the Internal East-West Street for Phase 3. Pick-up / drop-off activity is proposed to be conducted through layby spaces along the Internal East-West Street, in close proximity to the primary lobby entrances for each Phase of development.

5.1.1.1 SIGHT DISTANCE CONSIDERATIONS

At all Site accesses on the Site plan, the available boulevard and building elements are set back greater than the 4.4m sight distance required for drivers, as measured from the travel way, in accordance with Transportation Association of Canada (TAC) sight design guidelines.

Subsequent Site plan applications shall continue to confirm that a drivers' sightline be free of obstructions and that any landscape elements within a drivers' sightline shall be reviewed and be limited to a lower tree canopy of 2.5m and an upper planting/object height of 0.85m.

5.1.2 Pedestrian Access and Circulation

Pedestrian access to the Site is generally proposed to be provided via the three Site accesses at Farley Drive, Hawkins Drive, and Poppy Drive East as noted above. Additionally, a north-south pedestrian connection is proposed to be provided from Clair Road East to the intersection of the Internal East-West Street and the Internal North-South Street.

The Internal North-South Street is proposed to function as a textured flush street with the vehicular and pedestrian travel way delineated by bollards and landscape elements signaling a slow environment and emphasizing pedestrian connectivity. Collectively with the north-south pedestrian connection, a strong active link will be created between Poppy Drive East in the south and Clair Road East in the north, providing connections across the Site and in particular with the commercial uses along Clair Road East.

Primary pedestrian access to each building is proposed to be centred at the Internal East-West Street / Internal North-South Street intersection, providing a central internal node of activity in conjunction with the proposed pick-up / drop-off spaces. Additional residential accesses are proposed along each building's frontage, and the proposed townhouses will have individual access for each respective unit.

5.2 Pick-up / Drop-off Activities

Pick-up / drop-off activities are proposed to be centred around the proposed tabled intersection of the Internal East-West and Internal North-South Streets, which will ultimately function as the central activity node for the Site. Dedicated lay by spaces for pick-up / drop-off activities will be positioned along the Internal East-West Street on either side of the proposed tabled intersection, in close proximity to the lobby entrances of each building on the Site.

The proposed internal vehicular circulation for the Site will facilitate intuitive routing for pick-up / drop-off, eliminating the requirement for turnaround manoeuvres and instead allowing travellers to use an alternative exit from the Site.

5.3 Traffic Calming Measures

The proposed development is intended to function as a pedestrian-friendly, engaging space that supports and encourages active travel within, through, and around the Site, while continuing to facilitate the necessary vehicular traffic associated with a mixed-use development. To support the objectives of the Site, and to manage future internal vehicular traffic, a variety of measures are proposed which will calm traffic and ensure that internal connections continue to function as multimodal links, rather than simply service lanes for the various development Phases.

5.3.1 Continuous Textured Material Surfaces

The Internal North-South Street will employ the use of continuous textured materials, indicating to drivers to use caution while travelling. Bollards and strategically located vegetation (e.g. trees and planters) will be used to delineate permeable separation between pedestrian-only space and vehicle space. The Internal North-South Street will prioritize active linkages, while continuing to accommodate the necessary vehicular circulation required of a mixed-use development.

5.3.2 On-Street Parking & Curb Extensions

The Internal East-West Street is proposed to have on-street non-residential parking and pick-up / drop-off facilities to serve the future retail and residential uses on the Site. Heightened activity along the Internal East-West Street will indicate to drivers to use caution when travelling along this connection.

Strategically located curb extensions at the Internal East-West Street / Internal North-South Street intersection will reduce travel lane width, enhancing pedestrian crossing visibility and reducing crossing distances at this intersection.

5.3.3 Tabled Intersection

To manage potential future vehicular traffic along the Internal East-West Street, and to promote the pedestrian-oriented nature of the internal connections, a tabled intersection of the two internal private streets is proposed. The south approach of the intersection is proposed to be flush with the tabletop and the north-south pedestrian connection to its north, further prioritizing this link as a core component of the Site. The tabled intersection will restrict vehicular travel speeds through the Site, requiring drivers to slow down when approaching and exiting the intersection.

The tabled intersection along the east-west private street has been designed with consideration for the Transportation Association of Canada (TAC) *Canadian Guide to Traffic Calming, Second Edition* (2018) (TAC Traffic Calming Guide). The design guidelines for tabled intersections (2-way STOP control) and raised crosswalks at intersections have both been considered, given that the configuration of this tabled intersection incorporates elements of both features (all-way STOP control, raised crosswalks on all approaches).

For raised crosswalks at intersections, the TAC Traffic Calming Guide recommends a minimum transition length of 1.5 metres (2.0 metre desirable transition length) and a transition slope not exceeding 6%.

The proposed all-way STOP controlled tabled intersection has been designed to account for consistent transition lengths and to meet the recommended slopes for raised crosswalks at intersections. A transition length of 3.5 metres has been applied to both the west and east approaches, resulting in slopes of 5.7% and 2.6%, respectively.

The travelled surface for pedestrians is intended to be located along the top of the tabled intersection, eliminating any “step down” onto the street for pedestrians. This will improve connectivity and accessibility for pedestrians. The pedestrian crosswalks also meet the recommended minimum width of 2.5 metres.

Additionally, all approaches of the tabled intersection are proposed to be STOP-controlled, further reducing the travel speeds at the tabled intersection and mitigating the impact of the proposed transitions.

Details related to the transition slopes at the proposed tabled intersection will continue to be coordinated with the City prior to Site Plan approval.

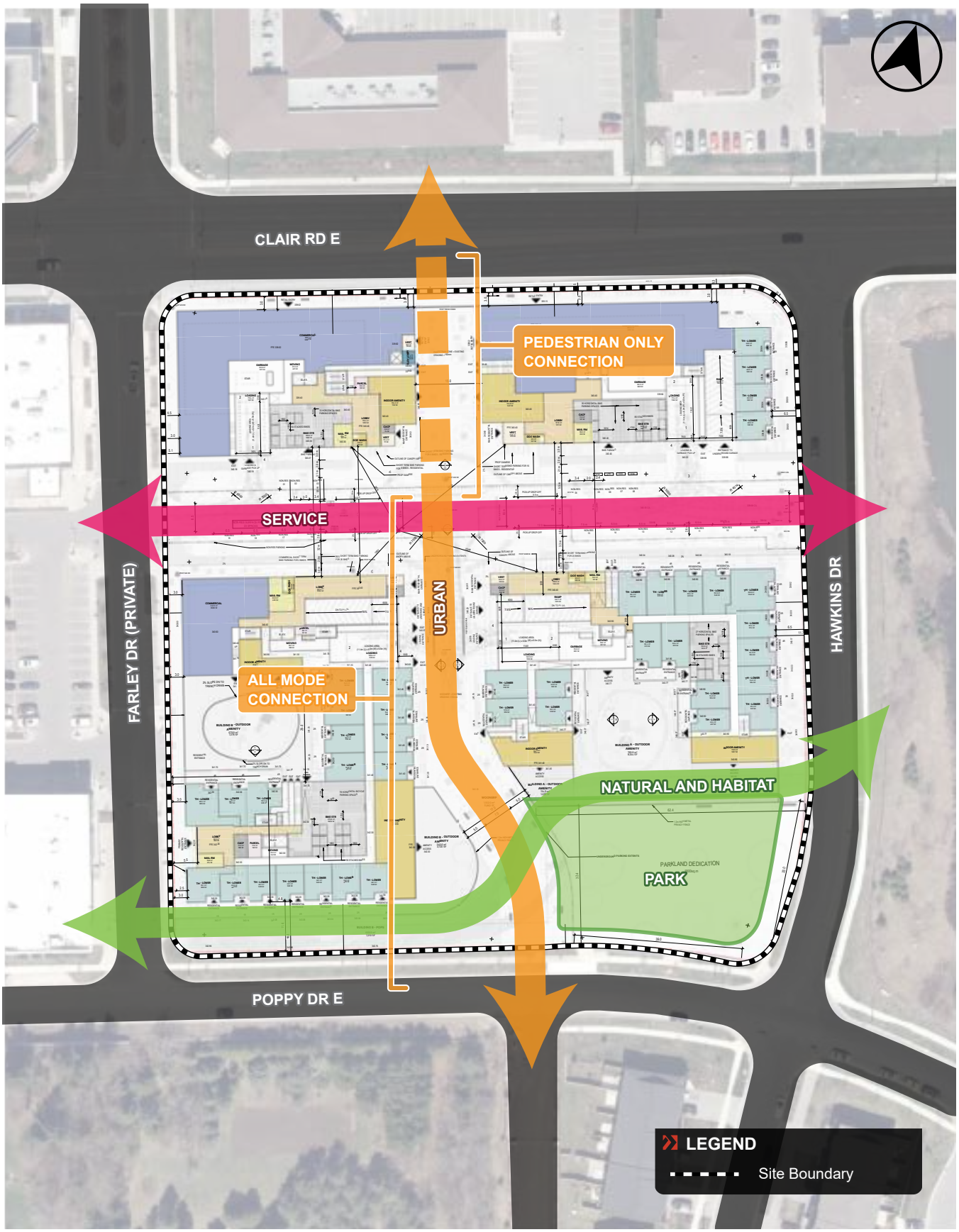

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FIGURE 8 INTEGRATED SITE PLAN ELEMENTS

6.0 VEHICULAR PARKING CONSIDERATIONS

6.1 Existing Parking Conditions

The Site is currently subject to the City of Guelph Zoning By-law (1995)-14864 under Specialized Commercial Shopping Centre (CC-20). There is also a Council-approved new City-wide Zoning By-law (2023)-20790 that is currently under appeal. The CC-20 designation identifies a parking requirement of 1 space / 23m^2 GFA (4.35 spaces / 100m^2 GFA).

Existing parking observations were undertaken in November 2023 for the entirety of Pergola Commons (including the lands west of Farley Drive (private) and the Site). The existing parking supply for both the Site and the commercial lands west of Farley Drive (private) is provided in **Figure 9**. A summary of the existing parking supply and requirements for the entire Pergola Commons is provided in **Table 4.**

Table 4 Existing Site Parking Context – In-Force Zoning By-Law

Location	Required Rate	GFA	Required Supply	Existing Supply	Net Difference
East of Farley Drive (Site)	1 space / 23m^2 GFA (4.35 spaces / 100 m^2 GFA)	4,524 m^2 GFA	197 spaces	304 spaces	+107 spaces
West of Farley Drive (Private)		8,897 m^2 GFA	387 spaces	376 spaces	-11 spaces
Total		**13,421 m^2 GFA**	**584 spaces**	**680 spaces**	**+96 spaces**

As demonstrated above, Pergola Commons collectively exceeds the prevailing Zoning By-law requirement by 96 spaces. However, the commercial lands west of Farley Drive (private) have an 11-space deficiency if considered independently from the Site. Therefore, at the time of full build-out of the Site, the lands west of Farley Drive (private) would no longer conform to the prevailing Zoning By-law requirements.

To further gauge the existing Site parking context, a summary of existing parking demands for the entirety of Pergola Commons is provided in **Table 5**. Notably, the observed peak parking demand occurred during the Saturday evening peak hour.

Table 5 Existing Site Parking Demands

Location	GFA	Existing Observed Peak Demand	Functional Surplus / Deficit	Peak Demand Rate (space / 100 m^2 GFA)
East of Farley Drive (Site)	4,524 m^2 GFA	185 vehicles	+119 spaces	4.09 spaces / 100 m^2 GFA
West of Farley Drive (Private)	8,897 m^2 GFA	240 vehicles	+136 spaces	2.70 spaces / 100 m^2 GFA
Total	**13,421 m^2 GFA**	**425 vehicles**	**+255 spaces**	**3.17 spaces / 100 m^2 GFA**

As demonstrated above, both the lands west of Farley Drive (private) and the Site operate with functional surpluses of over 100 parking spaces compared to peak demands. Furthermore, the peak demand rates for both portions of Pergola Commons are below the required Zoning By-law rate of 4.35 spaces / 100 m^2 GFA (1 space per 23m^2 GFA) under CC-20.

Zoning By-law (2023)-20790 (appealed) considers a zoning requirement of 3.0 spaces / 100 m^2 GFA. As noted in **Section 6.4.5**, adopting a rate of 3.00 spaces / 100 m^2 GFA for the existing to remain lands west of Farley Drive (private) would be appropriate to meet and exceed existing demands and is consistent with the latest Zoning By-law (2023)-20790 (appealed) for retail uses.

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FIGURE 9 SITE PARKING CONTEXT

6.2 City of Guelph Zoning By-law (1995)-14864 Vehicular Parking Requirements

6.2.1 Vehicular Parking Requirements

Site-Related Vehicular Parking Requirements

Vehicular parking requirements for the Site under Zoning By-law (1995)-14864 based on the proposed land uses are provided in **Table 6**.

Table 6 Zoning By-law (1995)-14864 Vehicular Parking Requirements

Use	Units / GFA	Minimum Parking Rate		Minimum Parking Requirement
Resident Parking				
Resident	715 units	First 20 Units:	1.5 spaces / unit	30 spaces
		Subsequent Units	1.25 spaces / unit	869 spaces
		Total Residential		**899 spaces**
Residential Visitor		**20% of Residential Requirement**		**180 spaces**
Resident				**719 spaces**
Non-Residential Parking				
Retail Establishment	2,127 m^2 GFA	1 space / 16.5 m^2 GFA		129 spaces
Total Resident Parking				**719 spaces**
Total Residential Visitor Parking				**180 spaces**
Total Retail Parking				**129 Spaces**
Total Parking Requirement				**1,028 spaces**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.

6.2.2 Accessible Parking Requirements

Zoning By-law (1995)-14864 requires that accessible parking be provided at the following rates:

> **400 or more required parking spaces:** 4 spaces + 1 additional space per 100 required spaces.

Application of the above-noted accessible parking rate results in a requirement to provide 14 accessible parking spaces.

6.3 City of Guelph Zoning By-law (2023)-20790 (Appealed) Vehicular Parking Requirements

Notwithstanding the above, the City of Guelph Zoning By-law (2023)-20790 (appealed), approved by municipal Council in April 2023, represents the latest outlook on the provision of parking for new development in the City. The Site is considered to be subject to the resident and residential visitor parking rates for "Mixed Use Building" under Zoning By-law (2023)-20790 (appealed), as the later phases of development are proposed to include at-grade retail components. Use of the Mixed Use Building resident rates is also considered appropriate given the range of proximate retail and commercial uses, both on the Site west of Farley Drive and elsewhere nearby within a reasonable walking or cycling distance.

6.3.1 Vehicular Parking Requirements

Site-Related Vehicular Parking Requirements

Vehicular parking requirements for the Site under Zoning By-law (2023)-20790 (appealed) for Mixed Use Buildings are provided in **Table 7**.

Table 7 Zoning By-law (2023)-20790 (Appealed) Vehicular Parking Requirements – The Site

Use	Units / GFA	Minimum Parking Rate	Maximum Parking Rate	Minimum Parking Requirement	Maximum Parking Requirement
Resident Parking					
Resident[2]	715 units	1 space / unit	1.5 spaces / unit	715 spaces	1,073 spaces
Permissible Resident Range				**715 spaces**	**1,073 spaces**
Non-Residential Parking					
Residential Visitor[2]	715 units	0.1 spaces / unit	0.25 spaces / unit	72 spaces	179 spaces
Multi-unit Building (Commercial)[3]	2,127 m^2 GFA	0 spaces for first 500 m2 GFA 3.5 spaces / 100 m^2 GFA in excess of 500 m^2 GFA.	5 spaces / 100 m^2 GFA	57 spaces	107 spaces
Permissible Non-Residential Range				**130 spaces**	**286 spaces**
Site Total Permissible Parking Supply				**844 spaces**	**1,359 spaces**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.
2. Resident and residential visitor parking rates are consistent with those for Mixed Use Buildings.
3. Retail parking rates are consistent with those for multi-unit commercial buildings.

Remaining FCR Lands Vehicular Parking Requirements

Vehicular parking requirements for the Remaining FCR Lands under Zoning By-law (2023)-20790 (appealed) for Mixed Use Buildings are provided in **Table 8**.

Table 8 Zoning By-law (2023)-20790 (Appealed) Vehicular Parking Requirements – Remaining FCR Lands

Use	Units / GFA	Minimum Parking Rate	Maximum Parking Rate	Minimum Parking Requirement	Maximum Parking Requirement
Multi-unit Building (Commercial)[1]	8,897 m^2 GFA	0 spaces for first 500 m^2 GFA 3.5 spaces / 100 m^2 GFA between 500 and 5,000 m^2 GFA. 2.5 spaces / 100 m^2 GFA in excess of 5,000 m^2 GFA	5 spaces / 100 m^2 GFA	260 spaces	445 spaces
Lands West of Farley Total Permissible Parking Supply				**260 spaces**	**445 spaces**

Notes:
1. Retail parking rates are consistent with those for multi-unit commercial buildings.

6.3.2 Accessible Parking Requirements

Site-Related Accessible Parking Requirements

Zoning By-law (2023)-20790 (appealed) requires that accessible parking be provided at the following rates:

> **201 to 1,000 required parking spaces:** 2 accessible parking spaces plus an additional 2% of total spaces (rounded up to the nearest whole number) with an equal number of Type A and Type B accessible parking spaces.

Application of the above noted accessible parking rates results in a requirement to provide a total of 19 accessible parking spaces for the Site, inclusive of 9 Type A spaces and 10 Type B spaces.

Remaining FCR Lands Accessible Parking Requirements

Application of the above noted accessible parking rates results in a requirement to provide a total of 10 parking spaces, including 5 Type A spaces and 10 Type B spaces.

6.3.3 Electric Vehicle Parking Requirements

Zoning By-law (2023)-20790 (appealed) requires that electric vehicle parking be provided at the following rates:

- A minimum of 20% of the total required parking spaces for mixed use buildings shall be electric vehicle parking spaces.
- A minimum of 80% of the total required parking spaces for mixed use buildings shall be provided as designed electric vehicle parking spaces.

Application of the recommended parking rates for the Site results in a requirement to provide a minimum of 844 parking spaces. Therefore, 169 parking spaces across the Site are required to be electric vehicle parking spaces, and 675 parking spaces are required to be designed electric vehicle parking spaces.

6.4 Proposed Vehicular Parking Supply Strategy

The current Site development plan proposes 850 parking spaces for the Site, including 255 spaces in Phase 1, 252 spaces in Phase 2, and 343 spaces in Phase 3. To support the proposed parking supply, amendments to the prevailing Zoning By-law (1995)-14864 and the Council approved (appealed) Zoning By-law (2023)-20790 are being sought and a parking strategy has been developed.

A phased parking strategy has been developed for the Site that seeks to balance the need to provide parking in the near-term to accommodate current demands while capitalizing on the significant investment in area transit and active transportation planned by the City in the long-term. Details of the parking strategy are further discussed below.

6.4.1 Draft Site-Specific By-law Parking Considerations

To ensure that the Project provides an adequate amount of parking for the proposed uses and to avoid any potential off-Site impacts, the following minimum parking requirements for the entire Site have been incorporated into the Draft Site-specific By-law, in accordance with the requirements in Zoning By-law (2023)-20790 (appealed):

- A minimum resident parking requirement of **1 space / unit**.
- A minimum residential visitor parking requirement of **0.1 spaces / unit**.
- No non-residential parking requirement for the first 500 m^2 GFA, a requirement of **3.5 spaces / 100 m^2 GFA** for all non-residential GFA between 500 m^2 and 5,000 m^2, and 2.5 spaces / 100 m^2 GFA for all GFA exceeding 5,000 m^2.
- The sharing of non-residential parking requirements is proposed, see **Section 6.4.2** for a detailed overview of the proposed sharing provisions.

Each phase of development on the Site will demonstrate that the above minimum by-law parking requirements are being met as part of future scoped submissions.

6.4.2 Shared Parking Considerations

In addition to the above recommended parking rates, two sharing provisions are recommended for the Site, as follows:

1. **The ability to share resident parking spaces across different phases of development.** This maximizes the efficiency of Site parking provisions and allows flexibility for delivering parking supply need at each phase of development.
2. **The ability to share residential visitor and retail parking requirements on a non-exclusive basis.** This provision is consistent with making efficient use of the non-residential parking supply and recognizes that different land uses experience peak parking demands at various times throughout the day. Furthermore, shared parking is an accepted practice that encourages efficient sharing between land uses and reduces the total number of parking spaces required.

The current development plan proposes 850 spaces, including 742 resident spaces and a total of 108 non-residential spaces, meeting the recommended parking requirements when applying the recommended shared parking provision #2.

The Site is supported by a suite of Transportation Demand Management initiatives that will assist and support residents in encouraging reduced auto ownership and reliance. Proposed TDM measures for the Site are further discussed in **Section 9.0.**

While the intended commercial uses on the Site are not currently known, it is anticipated that these uses will generally operate within the daytime and into the early evening. Thus, it is anticipated that retail parking on the Site will typically peak during the daytime. Conversely, residential visitor parking is typically expected to peak in the late evening into the night, and is therefore not expected to significantly conflict with the peak retail parking activity on the Site. BA Group recommends that Site Plan Applications for the various phases of development assess the evolving parking demands and context for the Site.

6.4.3 Recommended Accessible Parking Requirements

The accessible parking requirements provided in Zoning By-law (2023)-20790 (appealed) reflect an increased requirement relative to those provided in prevailing Zoning By-law (1995)-14864. BA Group recommends that the accessible parking requirements provided in Zoning By-law (2023)-20790 (appealed) be adopted for the Site. BA Group also recommends that the design of the Site complies with the *Accessibility for Ontarians with Disabilities Act (AODA).*

6.4.4 Recommended Electric Vehicle Parking Requirements

It is recommended that the Site provide 100% of residential parking spaces (resident and residential visitor) within the underground parking facilities on the Site with conduits capable of accommodating future EVSE charging equipment. This will allow flexibility in the future installation of electric vehicle charging equipment as appropriate, while not requiring that this infrastructure be provided at the outset of development.

6.4.5 Remaining FCR Lands Recommended Parking

As part of the proposed ZBA application, the non-residential parking rate will be applied across the entire FCR Lands, including the Site and the Remaining FCR Lands. As summarized in **Section 6.3.1**, the Remaining FCR Lands are permitted to provide between 260 spaces and 445 spaces. As such, the existing-to-remain parking supply of 376 spaces, as outlined in **Table 4**, conforms to the proposed non-residential requirement. Notably, the Remaining FCR Lands currently provide 12 accessible parking spaces, and therefore meet the minimum accessible parking requirement of 10 spaces.

6.5 Proposed Site-Related Parking Supply

Currently, 850 parking spaces are proposed for the Site, which exceeds the proposed parking rates provided in **Section 6.4.1**, above. The proposed parking supply for the Site is provided in **Table 9** .

Table 9 Proposed Parking Supply

Phase	Units / GFA	Proposed Supply	
Phase 1	187 units	Resident	232 spaces
		Non-Residential	23 spaces
		Total	**255 spaces**
Phase 2	246 units 342 m^2 GFA	Resident	226 spaces
		Non-Residential	26 spaces
		Total	**252 spaces**
Phase 3	282 units 1,785 m^2 GFA	Resident	284 spaces
		Non-Residential (Below-Grade)	36 spaces
		Non-Residential (At-Grade)	23 spaces
		Total	**343 spaces**
Build Out	715 units 2,127 m^2 GFA	Resident	742 spaces
		Non-Residential	108 spaces
		Total	**850 spaces**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.
2. Phase 3 reflects sharing between resident visitor and retail land uses.

The proposed full build-out parking supply of 850 parking spaces, including 742 resident spaces and 108 non-residential spaces meets the recommended parking supply requirements discussed in **Section 6.4.5** when applying the proposed sharing provisions between residential visitor and retail uses on a non-exclusive basis.

6.5.1 Proposed Site-Related Accessible Parking Supply

The current development plan proposes 34 accessible parking spaces across the Site, meeting the recommended accessible parking requirements that are consistent with Zoning By-law (2023)-20790 (appealed).

The specific number, location, and design of barrier-free accessible parking spaces on a by-phase basis will be identified in subsequent Site plan applications.

6.5.2 Proposed Electric Vehicle Parking Supply

The current development plan considers EV-ready spaces for the residential (resident and residential visitor) spaces on the Site, consistent with the recommended electric vehicle parking strategy.

The specific number, location, and design of electric vehicle parking spaces on a by-phase basis will be identified in subsequent Site plan applications.

7.0 BICYCLE PARKING CONSIDERATIONS

7.1 City of Guelph Zoning By-law (1995)-14864 Bicycle Parking Requirements

The prevailing City of Guelph Zoning By-law (1995)-14864 does not provide bicycle parking requirements for new development. As such, bicycle parking rates provided within the Council approved Zoning By-law (2023)-20790 (appealed) are considered appropriate for this application.

7.2 City of Guelph Zoning By-law (2023)-20790 (Appealed) Bicycle Parking Requirements

Bicycle parking requirements per Zoning By-law (2023)-20790 (appealed) are provided in **Table 10**.

Table 10 Zoning By-law (2023)-20790 (Appealed) Bicycle Parking Requirements

Use	Units / GFA	Minimum Rate		Minimum Requirement
Resident	715 units	Short-Term	0.1 spaces / unit	72 spaces
		Long-Term	1 space / unit	715 spaces
Multi-unit Building (Commercial)	2,127 m^2 GFA	Short-Term	0.2 spaces / 100 m^2 GFA	5 spaces
		Long-Term	0.1 spaces / 100 m^2 GFA	3 spaces
Total Bicycle Parking Requirement		**Residential**		**787 spaces**
		Retail		**8 spaces**
		Total		**795 spaces**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.
2. Per Zoning by-law (2023)-20790 (appealed), calculated minimum parking requirements resulting in a fraction shall be rounded up to the next whole number.

Application of the bicycle parking requirements per Zoning By-law (2023)-20790 (appealed) results in a requirement to provide a total of 795 spaces, including 787 residential spaces and 8 retail spaces.

7.3 Proposed Bicycle Parking Supply

The current development concept proposes 819 bicycle parking spaces. The proposed requirements and supply are presented in **Table 11**.

Table 11 Proposed Site Bicycle Parking Supply

Use	Units / GFA	Minimum Requirement		Proposed Supply	Surplus
Residential	715 Units	Short-Term	72 spaces	**76 spaces**	**+4 spaces**
		Long-Term	715 spaces	**733 spaces**	**+18 spaces**
Multi-unit Building (Commercial)	2,127 m^2 GFA	Short-Term	5 spaces	**6 spaces**	**+1 space**
		Long-Term	3 spaces	**4 spaces**	**+1 space**
Total			**795 spaces**	**819 spaces**	**+24 spaces**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.

Residential long-term bicycle parking is proposed to be located at-grade within each individual building, and each long-term bicycle storage location will be accessible from both internal and external entrances. Residential short-term bicycle parking is proposed to be located adjacent to the lobby entrance along the Internal East-West Street for each respective building.

Retail long-term bicycle parking will be located within each respective retail space, while the retail short-term bicycle parking will be located along Clair Road East, proximate to the north-south pedestrian connection between Buildings C and D.

The proposed short- and long-term bicycle parking supply meets and exceeds the minimum requirements of Zoning By-law (2023)-20790 (appealed) and the Draft Zoning By-law Amendment for the Site.

8.0 LOADING CONSIDERATIONS

8.1 City of Guelph Zoning By-law Requirements

Neither the prevailing City of Guelph Zoning By-law (1995)-14864 nor the approved (appealed) Zoning By-law (2023)-20790 (appealed) provides specific minimum loading space rate requirements for new development. As such, loading space is allocated to each Phase of development based upon what is considered appropriate for the development context.

8.2 Proposed Loading Space Supply

The current development concept proposes dedicated loading facilities for each building on the Site to service the requirements of each development Phase. One (1) loading space is proposed for each building to accommodate the residential requirements of the Site, as well as the future retail uses contained within Phases 2 and 3.

In accordance with the *Waste Collection Guidelines for Multi-Residential Developments in the city of Guelph (2019)*, waste bin staging is proposed to be provided at a rate of 0.3 m^2 / unit. A summary of the proposed loading space supply is provided in **Table 12**.

Table 12 Summary of Proposed Loading Space Provisions

Building	Units / GFA	Loading Space
Phase 1		
Building A	187 units	1 space
Phase 2		
Building B	246 units	1 space
	342 m^2 GFA	
Phase 3		
Building C	146 units	1 space
	867 m^2 GFA	
Building D	136 units	1 space
	918 m^2 GFA	

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.

The proposed loading supply exceeds existing requirements and protects for the staging areas calculated using the City's Waste Management Guidelines. Vehicle manouevring diagrams for a waste collection vehicle are demonstrated in **Appendix C** demonstrating there is adequate space on the site plan to facilitate refuse vehicle manouevres.

The specific design of waste collection facilities along with revised vehicle manouevring diagrams for refuse vehicles is expected to also be refined and demonstrated again in subsequent Site plan applications.

9.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) refers to a variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system. TDM works to change how, when, where, and why people travel.

TDM strategies have multiple benefits including the following:

- Reduced auto-related emissions to improve air quality;
- Decreased traffic congestion to reduce travel time;
- Reduced personal transportation costs and energy consumption; and
- Support Official Plan policies and Provincial smart growth objectives.

The City of Guelph *Transportation Impact Study Guidelines* (October 2023) (Guelph TIS Guidelines) provide a suite of recommended TDM measures which may be incorporated into development applications to contribute towards mitigating auto travel associated with new development. These potential TDM measures have been considered in the preparation of this TDM strategy.

The following outlines measures that are currently incorporated within the Site plan or are recommended to be implemented to support TDM. It is important to note that these TDM strategies will be refined throughout the design process and through subsequent submissions. A summary of the proposed and potential TDM measures are provided in **Table 13**.

Table 13 Proposed Transportation Demand Management Strategies

Focus Area	Intent	Implementation
Land Use Integration	A mixed-use development provides several uses that allow people to meet a variety of their needs on Site. These local land uses provide a level of convenience that reduces the need to travel far off-site for typical daily activity.	• The current proposal includes 715 residential units and 2,127 m^2 GFA of at-grade retail. • There are also numerous commercial buildings within walking distance of the Site that contain employment and retail opportunities (e.g., grocery, restaurants).
Pedestrian Connectivity	A high-quality, safe, connection between the Site and transit stops, cycling network, and public street system encourages residents and visitors to travel around the Site area without a vehicle.	• Pedestrian facilities (i.e., sidewalks) along all Site frontages will be improved as part of the proposed development. • Quality internal pedestrian connections (including the north-south shared street) will facilitate access for residents and Site visitors to the external pedestrian network.

Transit Use	Support for and the promotion of the use of area transit services for both short and long-distance travel by residents and visitors will reduce the overall use of a vehicle and the need to own one.	• The site is adjacent to numerous existing transit stops, providing convenient access to area destinations. • New residents will be made aware of the existing transit services in the vicinity of the site with an information package to be included in the building's "Welcome Package" for new residents. • Collaborate with City staff and transit providers as part of subsequent Site plan applications to identify potential ways to incentivize local transit as an option for new residents.
Bicycle Facilities	Provide cycling infrastructure that supports and promotes cycling as a convenient and viable travel alternative to the personal automobile.	• The current proposal includes 858 bicycle parking spaces, inclusive of 850 residential spaces and 8 retail spaces. • The long-term bicycle parking spaces are provided in secured and weather protected facilities at-grade within each respective building. • The current proposal includes one (1) bike repair station for use by residents and visitors to the Site. • New residents will be made aware of the existing active transportation facilities in the vicinity of the site with an information package to be included in the building's "Welcome Package" for new residents.
Parking Facilities	Reduced parking standards within the proposed development encourages residents and visitors to re-consider the use or ownership of a vehicle.	• Resident parking, as drafted in the Zoning By-law Amendment, is proposed to be supplied at an overall long term minimum rate of 0.90 spaces / unit for residents, a slight reduction from the requirements of Zoning By-law (2023)-20790 (appealed). • The applicant will provide unbundled parking (i.e., purchase of a parking space is separate from the purchase of a dwelling unit) for the development. This allows the purchaser to only pay for the parking they require.
Ride Sharing	Alternative options to car ownership includes the use of ride-sharing services (e.g., Uber, Lyft). Facilitating pick-up and drop-off activities makes this alternative to car ownership attractive and convenient.	• Pick-up / drop-off activities will be managed via the Internal East-West Street, which includes lay-by parking space to accommodate these activities for 3 proposed development phases. Lay-by facilities ensure that pick-up and drop-off activities can occur conveniently without negatively impacting day-to-day vehicular activity on either of the internal streets or the external street network.

10.0 VEHICULAR TRAFFIC VOLUMES FORECAST

10.1 Study Area

As part of this study, and as confirmed through the Terms of Reference, the following study area is considered for this analysis:

Signalized Intersections

- Clair Road East / Gordon Street
- Poppy Drive East / Gordon Street
- Clair Road East / Farley Drive

Unsignalized Intersections

- Clair Road East / Hawkins Drive
- Poppy Drive East / Hawkins Drive
- Poppy Drive East / Farley Drive
- Farley Drive East / Internal East-West Street
- Farley Drive / Existing Site Access / Adjacent Site Access
- Hawkins Drive / Internal East-West Street
- Poppy Drive East / 1888 Gordon Street site access

10.2 Traffic Forecast Scenarios and Design Periods

Traffic volumes forecasting and operations analyses have been undertaken for the weekday morning, weekday afternoon, and Saturday midday street-peak hours under the following conditions:

- Existing Traffic Conditions (2023) – traffic activity levels under current conditions.
- Future Background Traffic Conditions (2028, 2033, 2038) – traffic activity levels 5, 10, and 15 years into the future, considering allowances for general corridor growth, traffic growth associated with the CMSP, and traffic volumes associated with specific area background developments.
- Future Total Traffic Conditions (2028, 2033, 2038) – traffic activity levels 5, 10, and 15 years into the future, considering future background traffic conditions as well as incremental Site-generated traffic at each of these horizon years.

10.2.1 Existing Turning Movement Counts

Existing turning movement counts at study area intersections were reviewed to determine appropriate weekday morning, weekday afternoon, and Saturday peak hours to utilize as design periods for this analysis. To provide a representative capture of the study area network, network peak hours were considered for all design periods, rather than individual peak hours. This excludes, however, the Poppy Drive East / 1888 Gordon Street Site Access intersection, which was counted on a separate day from the rest of the network, and therefore uses its individual intersection peaks. The following network peak hours were determined to be appropriate for this analysis:

- AM Peak Hour: 8:00 am – 9:00 am
- PM Peak Hour: 4:45 pm – 5:45 pm
- SAT Peak Hour: 2:45 pm – 3:45 pm

10.2.2 Existing and Future Lane Configurations and Traffic Controls

Existing and future lane configurations and traffic control are provided in **Figure 10** and **Figure 11**, respectively. The future study area road network is generally expected to remain the same as existing conditions, with the exception of the removal of the existing Site access south of the Farley Drive / Internal East-West Street intersection and adding a Site access along Poppy Drive East, opposite and aligned with the existing 1888 Gordon Street access.

A left-turn lane warrant was conducted for the east leg (westbound left) of the Clair Road East / Hawkins Drive intersection. This left turn is warranted under existing conditions.

A signal warrant was conducted at the Clair Road East / Hawkins Drive intersection. A signal is warranted under 2033 future background conditions with the growth of the Clair-Maltby Secondary Plan area. These warrants are further discussed in **Sections 11.3** and **11.4**, respectively.

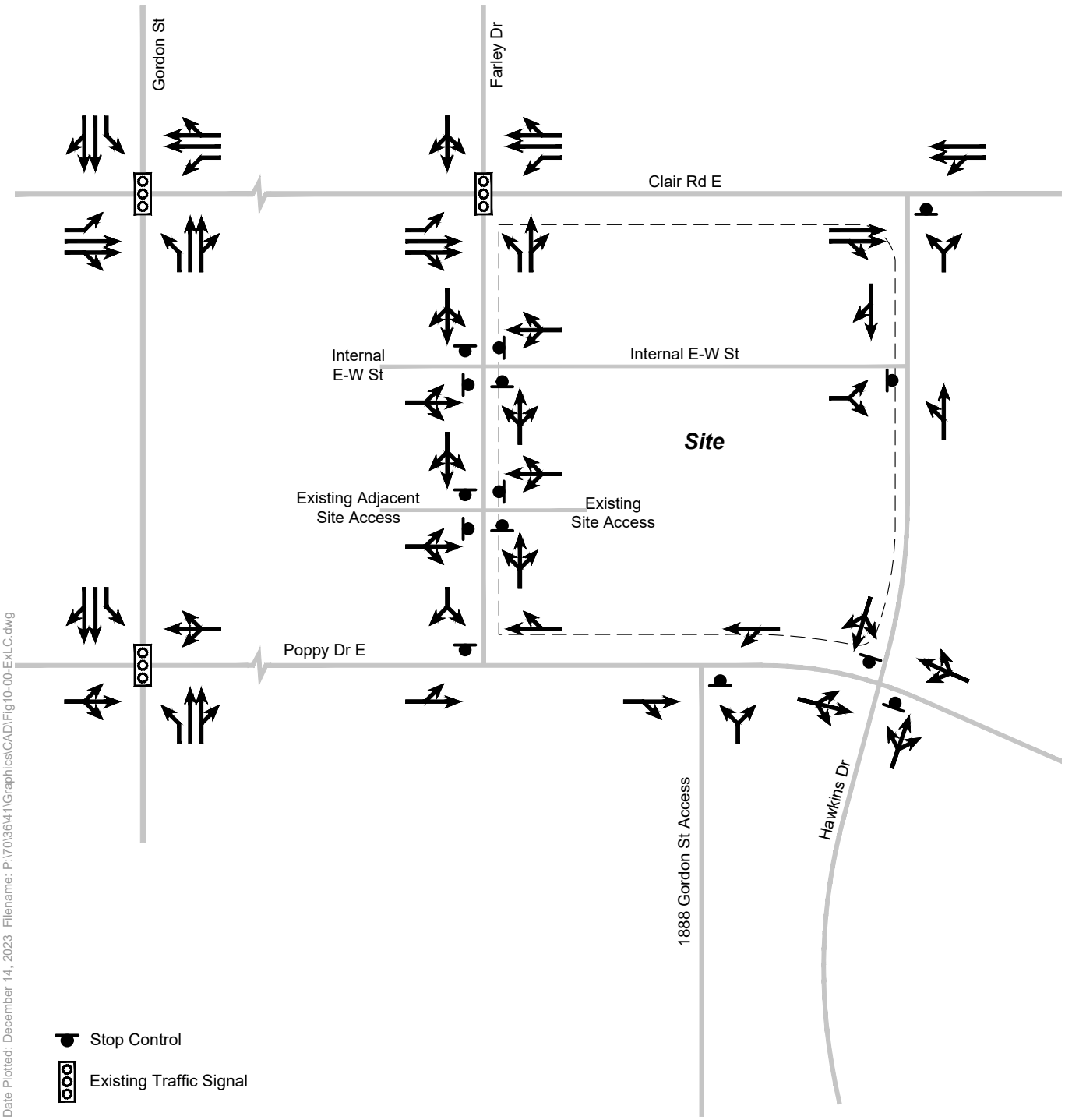


FIGURE 10 EXISTING LANE CONFIGURATION AND TRAFFIC CONTROL

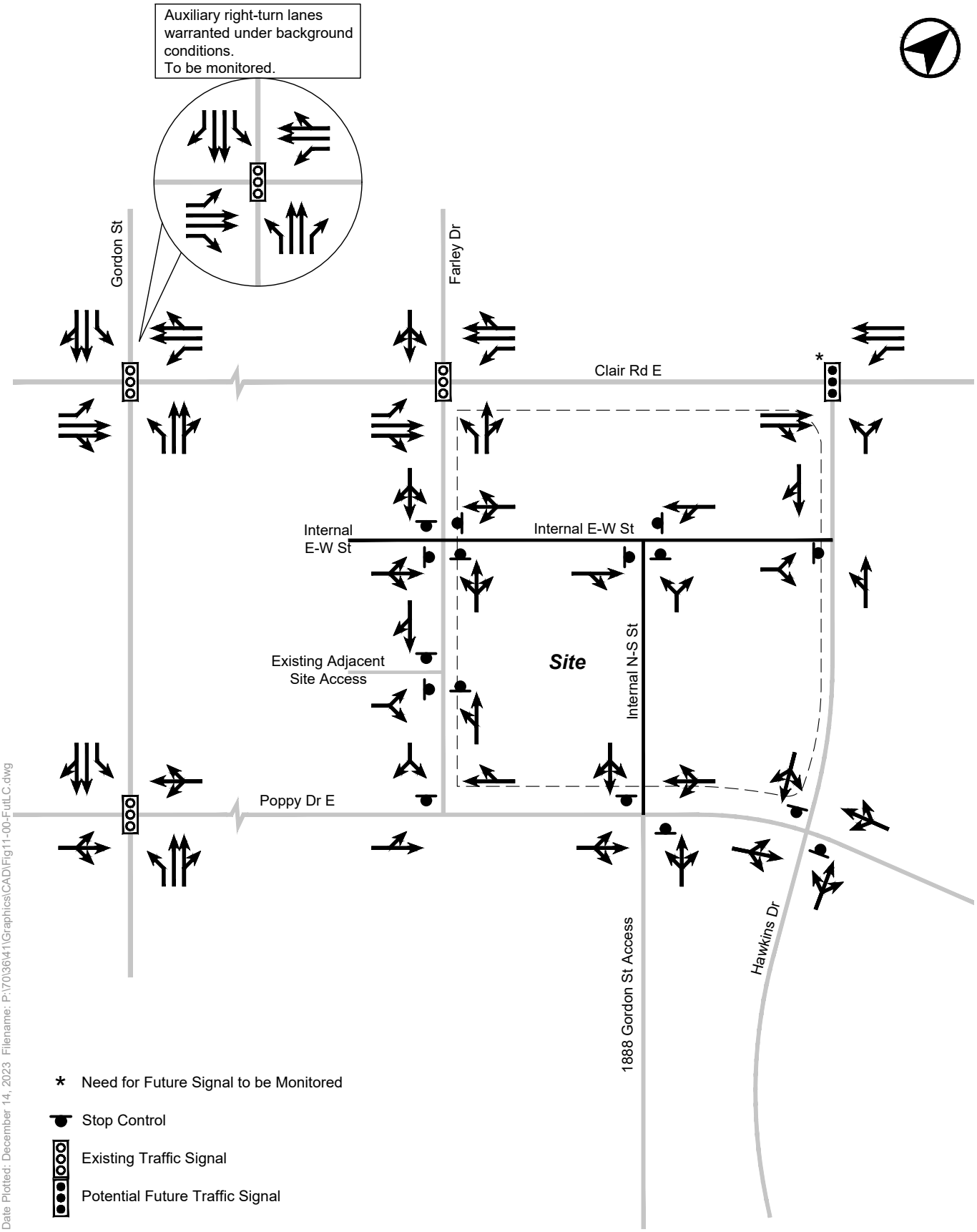


FIGURE 11 FUTURE LANE CONFIGURATION AND TRAFFIC CONTROL

10.3 Existing Area Traffic Volumes & Travel Patterns

Existing area traffic volumes were established at study area intersections for the weekday morning, weekday afternoon, and Saturday midday peak hours using traffic count data obtained from traffic surveys undertaken by Spectrum Traffic Data Inc. These counts are detailed in **Table 14**, below.

Table 14 Existing Turning Movement Count Summary

Intersection	Control Type	Date Counted	Data Source
Clair Road East / Hawkins Drive	Unsignalized	Wed. Sept. 20th, 2023 & Sat. Oct. 14th, 2023	Spectrum Traffic Data, Inc.
Poppy Drive East / Hawkins Drive	Unsignalized		
Poppy Drive East / Farley Drive	Signalized		
Poppy Drive East / Gordon Street	Signalized		
Clair Road East / Gordon Street	Signalized		
Clair Road East / Farley Drive	Unsignalized		
Farley Drive / Internal E-W Street	Unsignalized		
Farley Drive / Existing Site Access / Adjacent Site Access	Unsignalized		
Hawkins Drive / Internal E-W Street	Unsignalized		
Poppy Drive East / 1888 Gordon Street Site Access	Unsignalized	Thurs. Nov. 2nd, 2023 & Sat. Nov. 4th, 2023	

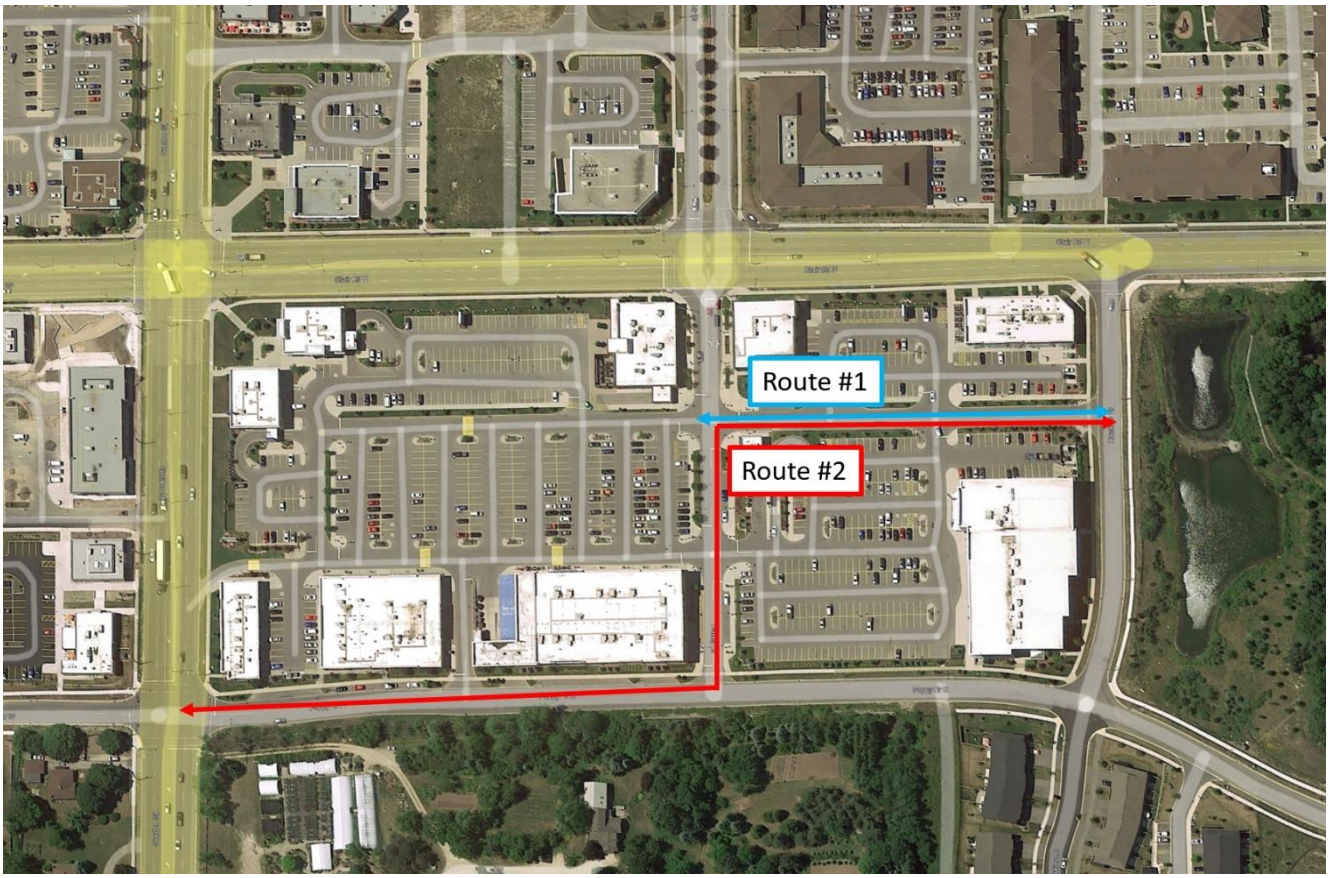
Weekday midday peak periods were also counted upon request by the City and Turning Movement Count (TMCs) were provided as part of the Terms of Reference. The weekday morning, weekday afternoon, and Saturday peak hours sufficiently represented peak design traffic conditions and were adopted for analysis. Detailed turning movement counts are provided in **Appendix E**.

10.3.1 Existing Cut-Through Traffic Through Site

Preliminary correspondence with the City of Guelph identified the potential for existing external area traffic to utilize the Internal East-West Street as a cut-through link between the Clair Road East / Hawkins Drive intersection and the commercial lands adjacent to the Site west of Farley Drive. Additionally, it was noted that existing traffic may utilize the Site's Internal East-West Street as a short-cut to avoid the Clair Road / Gordon Street intersection and /or the Clair Road East / Farley Drive intersection. As such, the existing cut-through and short-cut activity was reviewed as part of the assessment of existing area traffic conditions.

The two potential cut-through / short-cut routes considered as part of this review are illustrated in **Exhibit 1**, below.

Exhibit 1: Reviewed Cut-Through / Short-Cut Routes



It should be noted that peak cut-through traffic does not necessarily occur during the determined peak-hour design periods for the morning, afternoon, and Saturday peak hours. To provide a consistent model, cut-through traffic during the adjacent street peak-hour design periods is utilized in this comparison. Existing cut-through and short-cut activity for both Route #1 and Route #2 are summarized in **Table 15**.

Table 15 Existing Cut-Through and Short-Cut Activity

Route	AM Peak Hour Cut-Through Traffic			PM Peak Hour Cut-Through Traffic			SAT Peak Hour Cut-Through Traffic		
	EB	WB	2-Way	EB	WB	2-Way	EB	WB	2-Way
Route #1	4	12	16	20	13	33	10	22	32
Route #2	0	0	0	0	0	0	0	0	0
Total Cut-Through Traffic	**4**	**12**	**16**	**20**	**13**	**33**	**10**	**22**	**32**

Notably, the relative volumes of cut-through traffic through the Site are quite low, compared to the adjacent link volumes (between the Clair Road East / Farley Drive and Clair Road East / Hawkins Drive intersections). Therefore, cut-through routes through the Site are not considered to function as an alternative route for vehicular traffic travelling along either the Clair Road East or Gordon Street corridors. The Internal East-West Street functions as both an access to the existing commercial buildings on the Site as well as for those located west of Farley Drive. Cut-through volumes through the Site are considered to be relatively low compared to the broader traffic activity within the study area, and as such, are not considered to be a concern for the future design and traffic operations of the Site.

10.3.2 Existing Queuing Activity at Clair Road East / Farley Drive

A queuing study was undertaken for the south approach of the Clair Road East / Farley Drive intersection to assess existing conditions and determine the potential for queuing into the Farley Drive / Internal East-West Street intersection to its south. A summary of existing queuing activity at the south approach of the Clair Road East / Farley Drive intersection is provided in **Table 16**, and detailed information from the queue study is provided in **Appendix F**.

Table 16 Existing Queuing Activity at Clair Road East / Farley Drive

Period	Segment Distance	95th Percentile Queue[1]	
		Left Lane	Curb Lane
Morning	40 m	14 m	7 m
Midday		35 m	7 m
Afternoon		28 m	7 m
Saturday		35 m	7 m

Notes:
1. Conservatively assumes 1 car length is 7 metres.

As demonstrated above, existing queuing activity at the south approach of the Clair Road East / Farley Drive intersection can be acceptably accommodated without extending into the Farley Drive / Internal East-West Street intersection to the south.

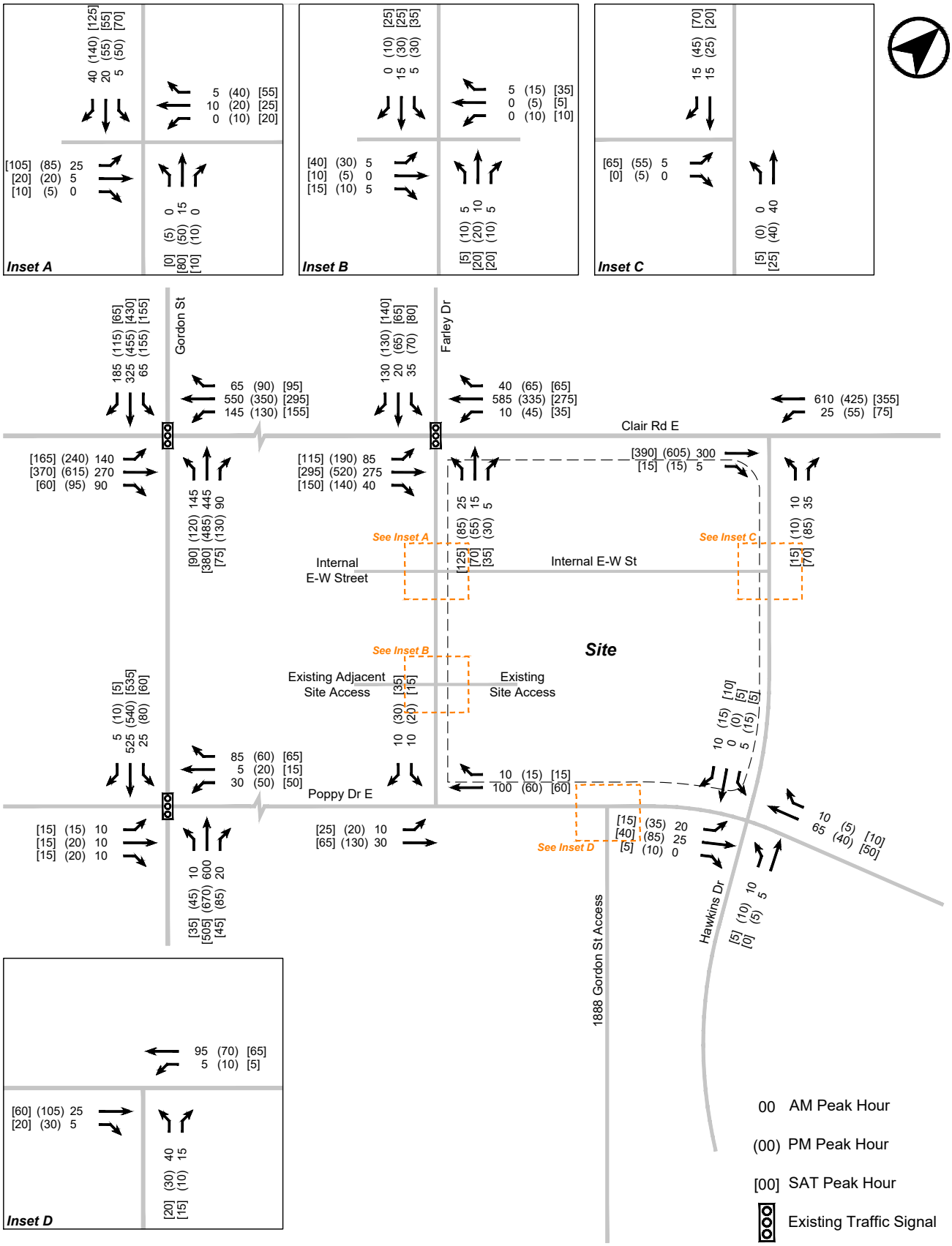


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FIGURE 12 EXISTING TRAFFIC VOLUMES

10.4 Future Background Traffic Volumes

Traffic growth on the study area road network has been considered through an evaluation of general area corridor growth, as well as consideration for specific area background developments, including those considered in the Clair-Maltby Secondary Plan.

10.4.1 Corridor Growth

General corridor growth rates were determined through preliminary correspondence with the City of Guelph, and have been applied to the study area corridors as follows:

- 0.5% for Gordon Street for all horizon years
- 1.5 % for Clair Road up to build-out of Phases 1 & 2 (2028) and up to build-out of Phase 3 and 5-years after build-out of Phases 1 & 2 (2033)
- 1.0% for Clair Road at 5 years after build-out of Phases 1 & 2 and at build out of Phase 3 (2033) and up to 10 years after build-out of Phases 1 & 2 and 5 years after build-out of Phase 3 (2038)

10.4.2 Area Background Developments

Consistent with prior correspondence with the City of Guelph, and given the contextual location of the Site in growing south Guelph, specific area background developments the following specific area background developments have been considered in this study, as presented in **Table 17**.

Through correspondence with the City of Guelph, and as stated in the agreed-upon TIS Terms of Reference, a phased approach has been undertaken for the application of traffic volumes associated with area background developments, particularly for background and site traffic associated with the Clair-Maltby Secondary Plan, which considers a long-term projected build-out period.

Table 17 Area Background Developments

Site Name / Location	Estimated Development Statistics[1]	Phasing of Considered Traffic Volumes		
		2028	2033	2038
Clair-Maltby Secondary Plan Background Developments				
Neumann Subdivision (132 Clair Road West)	10,497 m^2 GFA General office, medical-dental office, and business park	25%	50%	100%
Southgate Business Park (Northeast quadrant of Crawley Road / Maltby Road intersection)	150, 502 m^2 GFA Manufacturing and warehousing uses			
Hanlon Creek Business Park (Laird Road / Hanlon Creek Boulevard intersection)	No site statistics considered for this development			
Dallan Subdivision[2] (161, 205, 253 Clair Road East)	79 single detached units 126 townhouses 204 apartment units			
South End Centre (South of Bishop Macdonell Catholic Highschool)	13,935 m^2 GFA Recreation Centre			
1888 Gordon Street[3]	460 apartment units and townhouses			
Clair-Maltby Secondary Plan Generated Traffic				
CMSP Generated Traffic	10,125 residential units & 333 jobs	25%	50%	100%
Additional Area Background Developments				
331 Clair Road East	136 stacked townhouse units	100%	100%	100%
287 Clair Road East	Proposed 246 mid-rise apartment units.			

Notes:

1. Estimated development statistics derived from *Clair-Maltby Secondary Plan Transportation Report* and applicable TIS'.
2. Dallan Subdivision assumed to be 95% complete at present; therefore, only 5% of generated traffic volumes are considered for this background development herein.
3. Traffic volumes associated with 1888 Gordon Street have been conservatively included in this analysis, as current occupancy levels are unknown.
4. No trips assigned to Hanlon Creek Business Park, consistent with *Clair-Maltby Secondary Plan Transportation Report.*

CMSP Generated Traffic Saturday Vehicle Trip Scaling

The *Clair-Maltby Secondary Plan Transportation Master Plan Study* did not report a Saturday peak period scenario; therefore, to forecast Saturday peak period trips for the purposes of this analysis, a scaling factor was applied to the afternoon peak period trips, based on *ITE Trip Generation Manual* rates.

Trips forecast within the *Clair-Maltby Secondary Plan Transportation Master Plan Study* are presented in **Table 18**, below. Overall generated trips during the afternoon peak period and the Saturday peak period are used as the basis for determining the scaling factor for the Clair-Maltby Secondary Plan background traffic in this study.

Table 18 Saturday Peak Period Forecast Scaling – CMSP Generated Traffic

ITE Trip Generation Manual 10th Ed. **Land Use Code**	**CMSP Assumed Units / Jobs**	**PM Peak Period**			**SAT Peak Period**		
		In	Out	2-Way	In	Out	2-Way
Single-Family Detached Housing (LUC 210)	2,152 units	1,218	716	1,934	986	840	1,826
Multi-Family Housing (Mid-Rise) (LUC 221)	3,925 units	916	585	1,501	811	844	1,655
Multi-Family Housing (High-Rise) (LUC 222)	4,048 units	845	540	1,385	703	576	1,279
General Office Building (LUC 710)	333 jobs	30	148	178	16	14	30
Total Generated Trips		**3,009**	**1,989**	**4,998**	**2,516**	**2,274**	**4,790**
Scaling Factor for SAT Peak Period Trips (SAT 2-Way / PM 2-Way)							**-4.2%**

Notes:

1. *ITE Trip Generation Manual 10th Ed.* was used in the *Clair-Maltby Secondary Plan Transportation Master Plan Study*. The entries and factors noted above refer to the 10th Ed. to remain consistent. Additional Background Development traffic generation beyond the CMSP Transportation Study adopts the latest *ITE Trip Generation Manual 11th Ed.* rates.

As indicated above, traffic forecasted within the *Clair-Maltby Secondary Plan Transportation Master Plan Study* indicated a 4.2% reduction in Saturday peak period traffic relative to afternoon peak period volumes. This scaling factor was applied to the Clair-Maltby Secondary Plan generated background traffic for this study.

Additional Background Traffic Saturday Trip Scaling

Additional background developments considered in this study, identified by the City of Guelph, did not report a Saturday peak period scenario. To forecast Saturday peak period trips for the purposes of this analysis, a scaling factor was applied to the afternoon peak period trips, based on the latest *ITE Trip Generation Manual, 11th Ed.* relative vehicle trips generated by the background development site statistics. The following land use codes were considered in forecasting future trip generation for the various background development uses:

- Multi-Family Housing (Mid-Rise) (LUC 221)
- Multi-Family Housing (Low-Rise) (LUC 220)
- Single Family Detached Housing (LUC 210)
- Single Family Attached Housing (LUC 215)
- Manufacturing (LUC 140)
- General Warehousing (LUC 150)
- General Office (LUC 710)
- Medical-Dental Office (LUC 720)
- Business Park (LUC 770)
- Recreation Centre (LUC 495)

Table 19 Saturday Peak Period Forecast Scaling – Additional Background Developments

ITE 11th Ed. LUC	CMSP Assumed Units / GFA	PM Peak Period			SAT Peak Period		
		In	Out	2-Way	In	Out	2-Way
Manufacturing[1] (LUC 140)	27,870 m² GFA	69	153	222	28	26	54
General Warehousing[1] (LUC 150)	122,632 m² GFA	67	171	238	42	24	66
Single-Family Detached Housing (LUC 210)	100 units	59	35	94	50	42	92
Single-Family Attached Housing (LUC 215)	162 units	54	38	92	44	48	92
Multi-Family Housing (Low-Rise)[1] (LUC 220)	136 units	44	26	69	27	29	56
Multi-Family Housing (Mid-Rise) (LUC 221)	1,159 units	276	176	452	231	221	452
Recreation Centre[1] (LUC 495)	13,935 m² GFA	176	199	375	87	74	160
General Office[1] (LUC 710)	1,050 m² GFA	3	14	16	3	3	6
Medical-Dental Office[1] (LUC 720)	1,394 m² GFA	18	41	59	26	19	45
Business Park[2] (LUC 770)	8,053 m² GFA	27	78	106	27	27	53
Total Generated Trips		**793**	**931**	**1,723**	**564**	**513**	**1,077**
Scaling Factor for SAT Peak Period Trips (SAT 2-Way / PM 2-Way)							**-37%**

Notes:
1. *ITE Trip Generation Manual, 11th Ed.* for Saturday trips has a small sample size.
2. 25% of land allocated for Business Park allocated as GFA, consistent with assumptions for General Office and Medical-Dental Office in Neumann TIS.
3. *ITE Trip Generation Manual, 11th Ed.* does not provide Saturday peak hour of generator trips for business park. Overall Saturday trips scaled down using scaling factor for General Office (LUC 710).

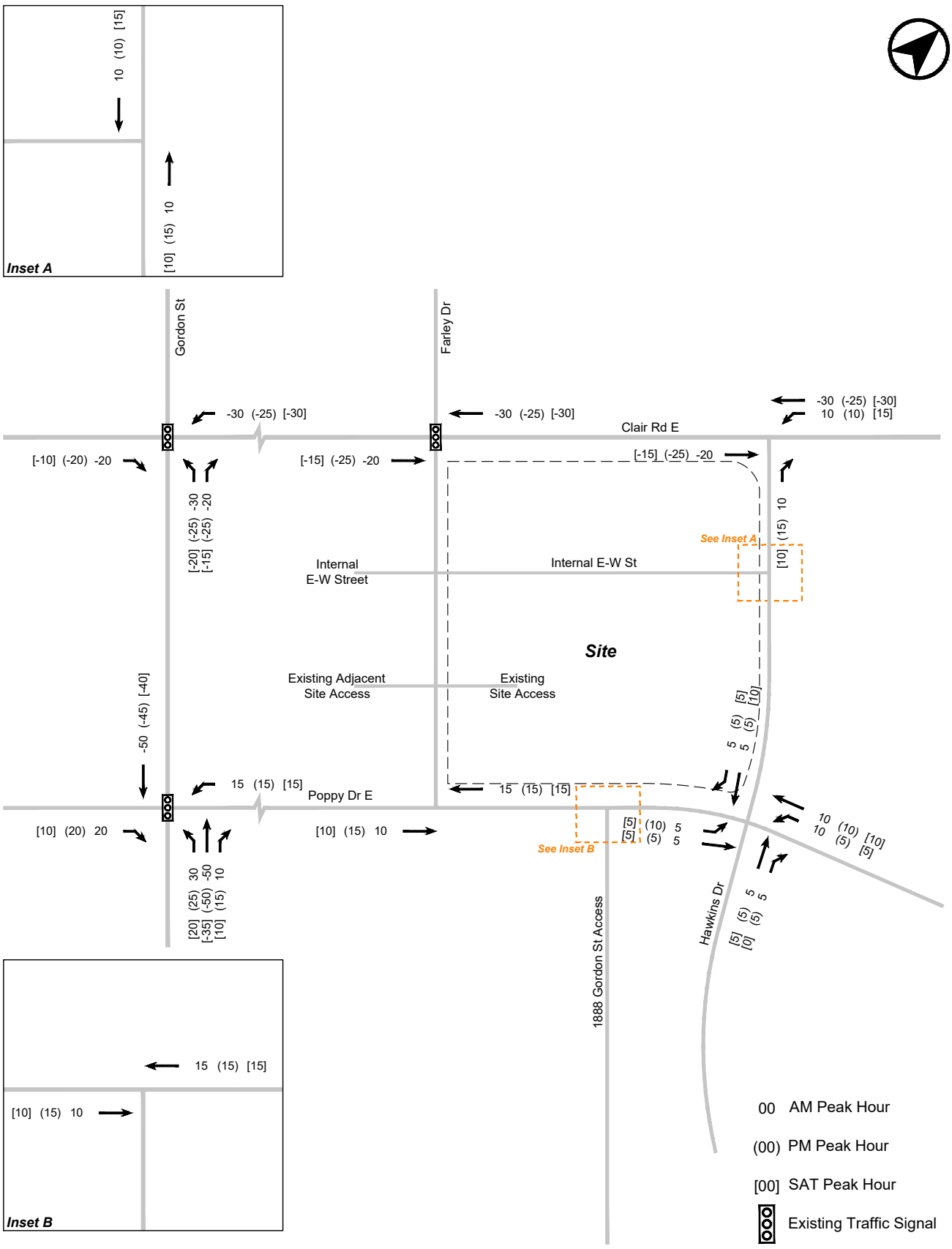
The large proportion of trips generated by employment-based uses considered as background developments as part of this study results in a scaling factor of -37% for the Saturday trips relative to PM peak hour trips associated with the additional background developments identified in **Table 17** (excluding CMSP generated traffic).

10.4.3 Reassignment of Traffic to Future Corridors

As the future collector road network planned as part of the Clair-Maltby Secondary Plan is built out, it is expected that some background traffic on the area road network will reassign to these new routes, particularly as the Plan continues to be built out and area traffic continues to increase.

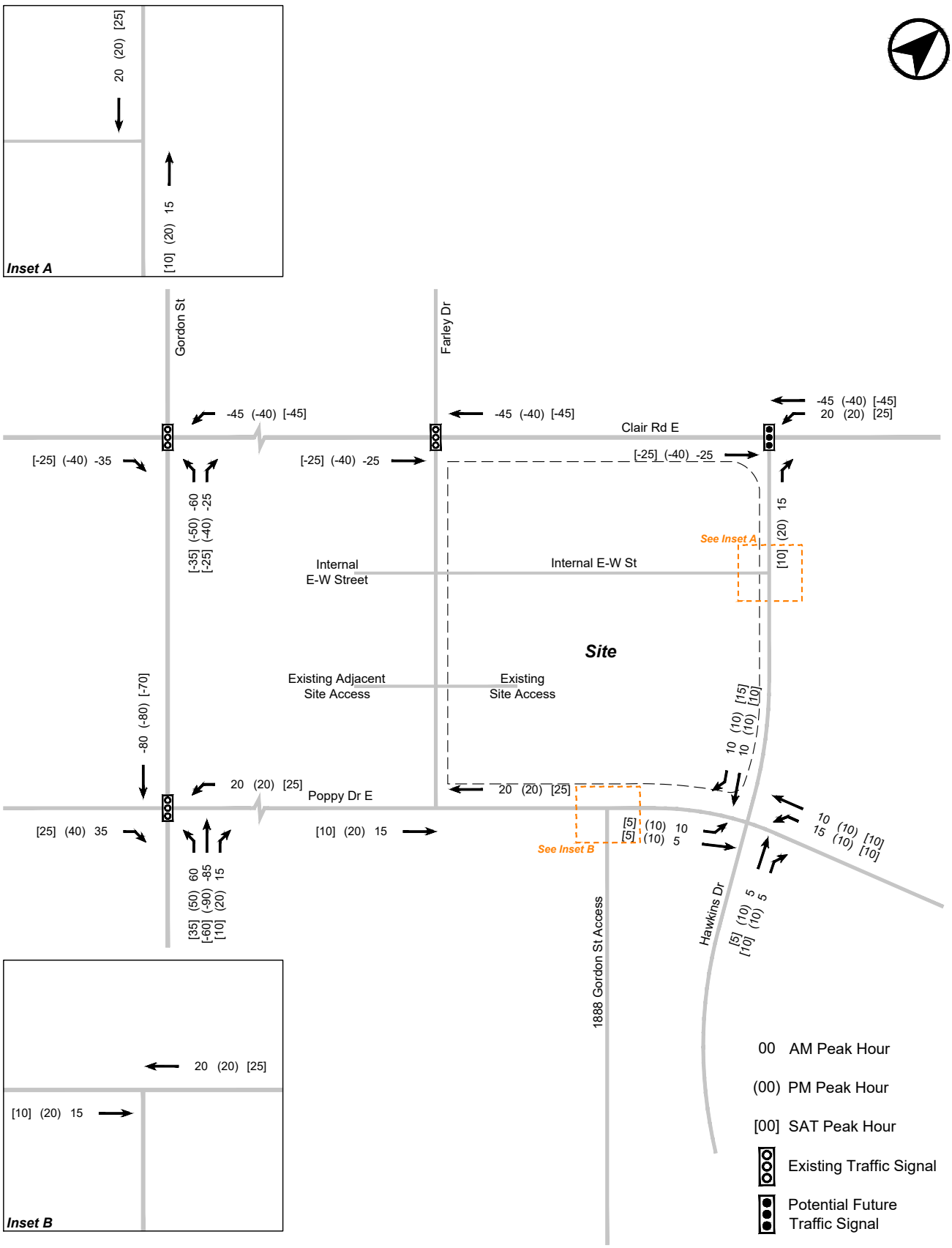
As discussed in **Section 11.2.1**, the future Hawkins Drive extension and the future Poppy Drive West extension are assumed to be complete for the 2033 and 2038 horizon periods, enhancing the area road network and providing increased routing choice in South Guelph. The reassignment of existing traffic (including horizon period corridor growth) to reflect the availability of alternative routing options for the 2033 and 2038 horizons is illustrated in **Figure 13** and **Figure 14**.

Background development traffic, including traffic associated with the build-out of the Clair-Maltby Secondary Plan and the additional background developments considered in this study, were also reassigned to the future collector road connections. This reassignment of background development traffic is reflected in the future background traffic figures.



Date Plotted: December 14, 2023 Filename: P:\7036\41\Graphics\CAD\Fig13-00-CG2033.dwg

FIGURE 13 2033 EXISTING AND CORRIDOR GROWTH TRAFFIC REASSIGNMENT

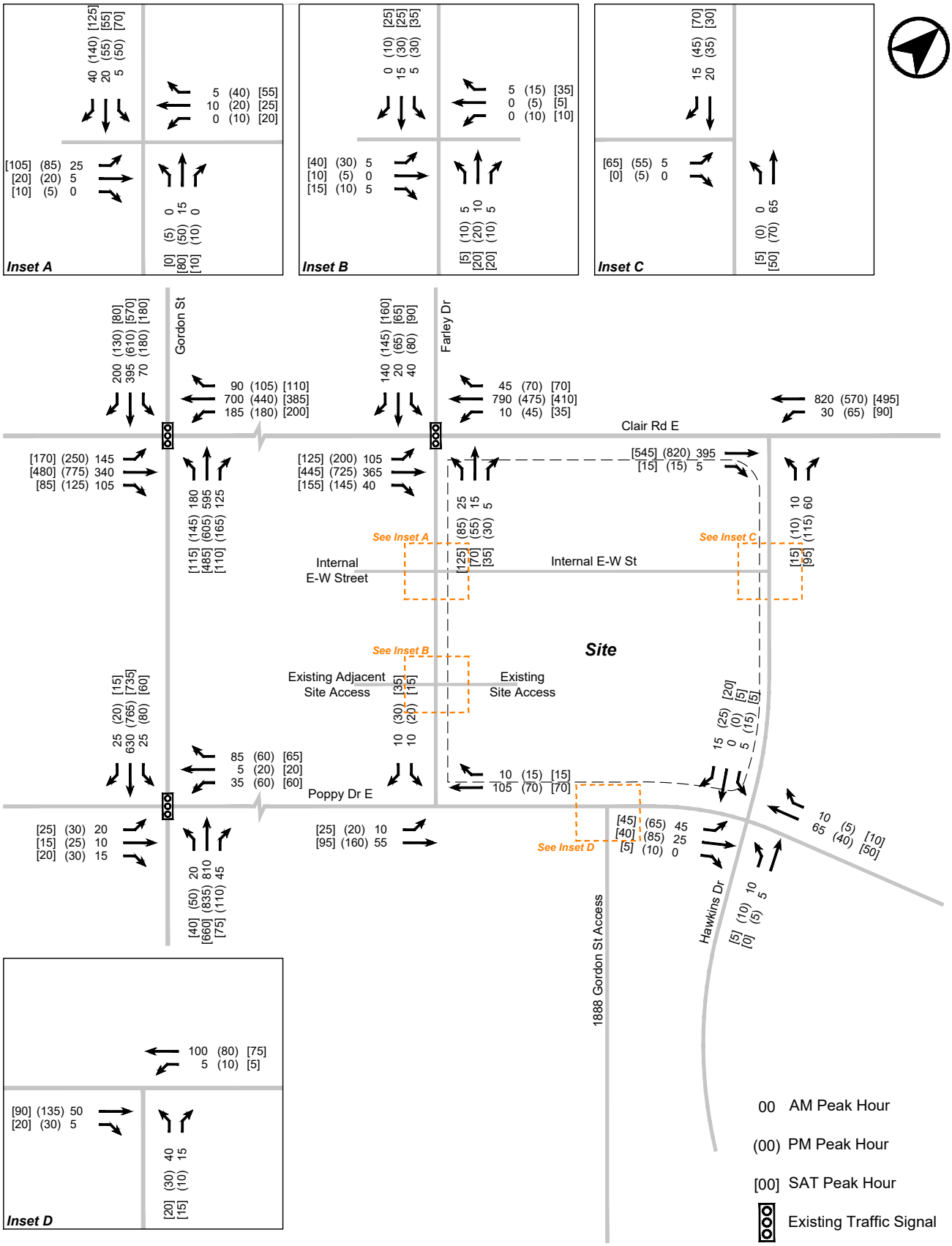


Date Plotted: December 14, 2023 Filename: P:\7036\41\Graphics\CAD\Fig14-00-CG2038.dwg

FIGURE 14 2038 EXISTING AND CORRIDOR GROWTH TRAFFIC REASSIGNMENT

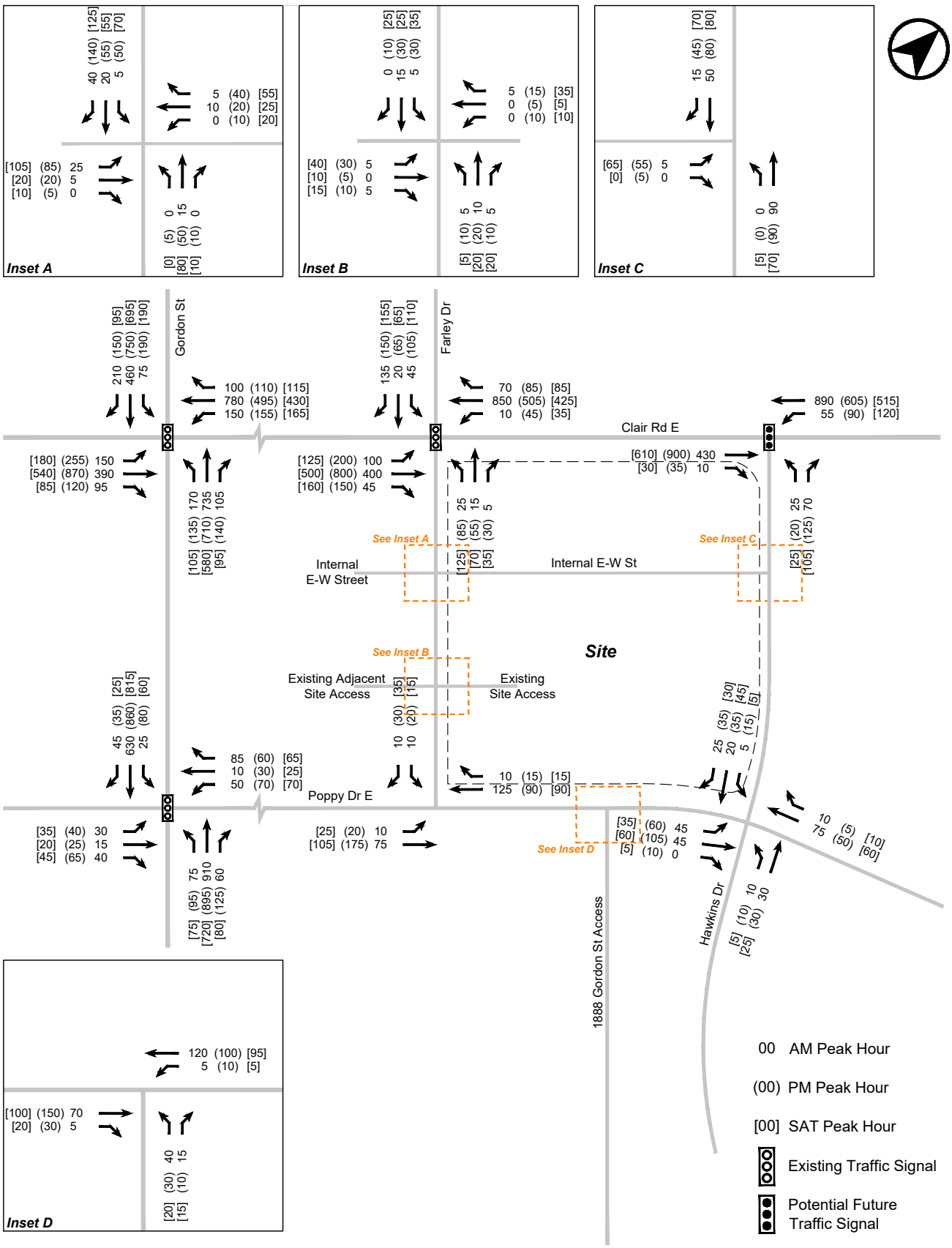
10.4.4 Future Background Traffic Volumes

Future background traffic volumes adopt the addition of existing area traffic volumes, corridor growth, the morning and afternoon peak hour site traffic volumes from the individual traffic studies for both the CMSP and area background developments, and the expected reassignment of traffic on the future collector road network. Saturday peak hour traffic adopted for the CMSP and area background developments considered a - 4% and - 37% scaling factor, respectively, from afternoon peak hours trips in order to assign Saturday peak hour traffic for related background development site trips to the area road network. Future background traffic volumes for the horizon years 2028, 2033, and 2038 are provided in **Figure 15**, **Figure 16**, and **Figure 17**, respectively.



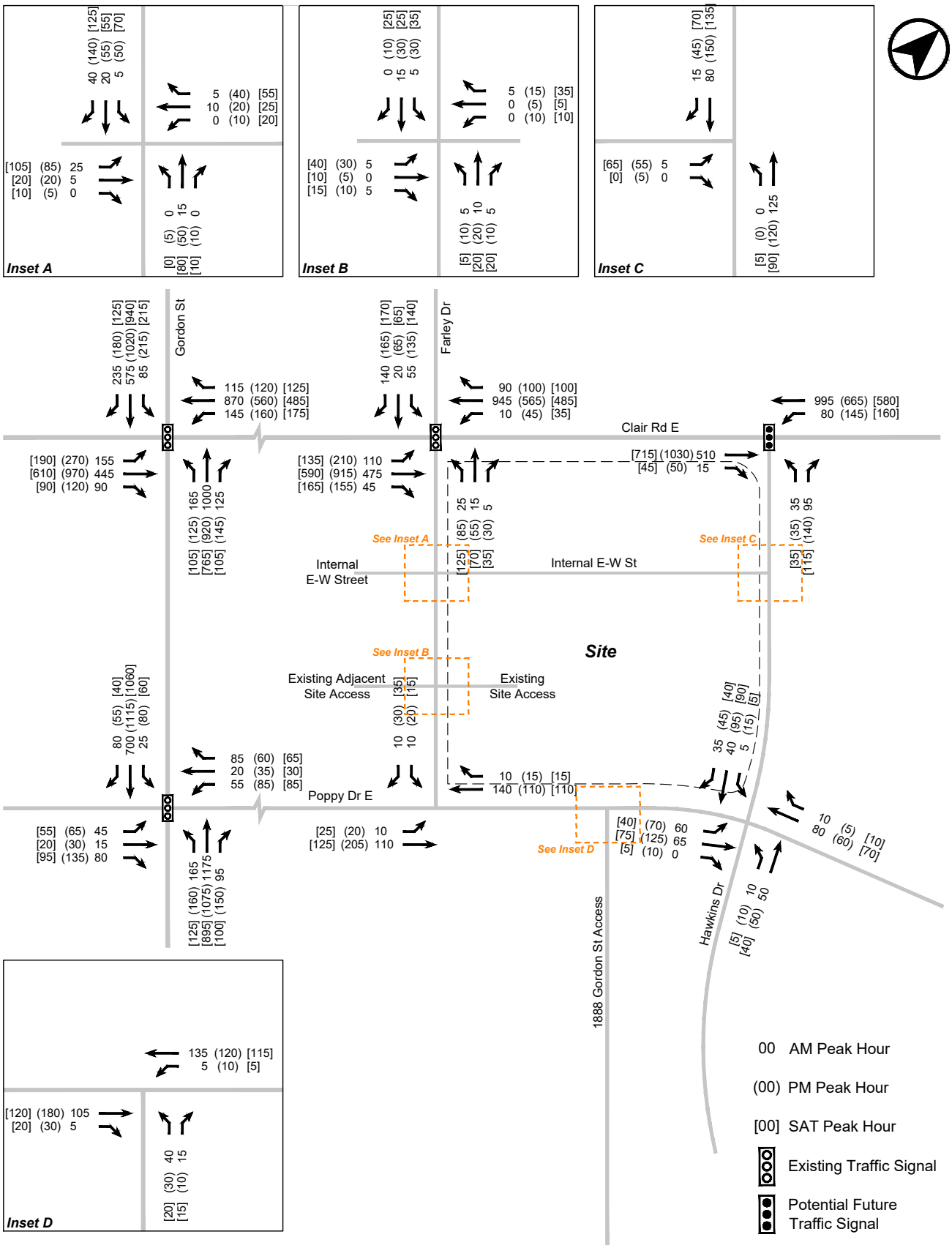
Date Plotted: December 14, 2023 Filename: P:\7036\41\Graphics\CAD\Fig15-00-FB2028.dwg

FIGURE 15 2028 FUTURE BACKGROUND TRAFFIC VOLUMES



Date Plotted: December 14, 2023 Filename: P:\7036\41\Graphics\CAD\Fig16-00-FB2033.dwg

FIGURE 16 2033 FUTURE BACKGROUND TRAFFIC VOLUMES



Date Plotted: December 14, 2023 Filename: P:\7036\41\Graphics\CAD\Fig17-00-FB2038.dwg

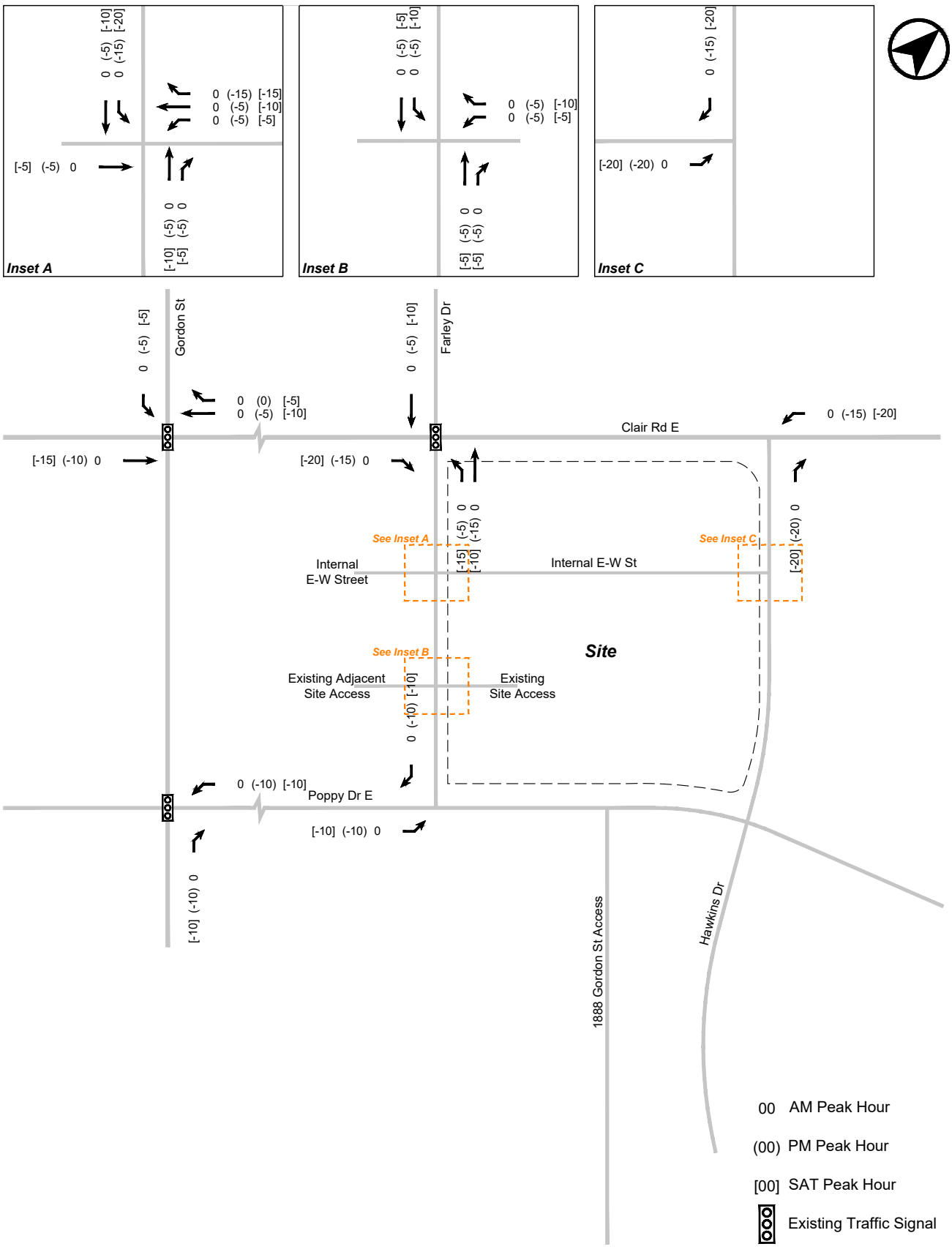
FIGURE 17 2038 FUTURE BACKGROUND TRAFFIC VOLUMES

10.5 Site-Generated Traffic Forecasts

10.5.1 Existing Site Traffic Volumes

Vehicular traffic is currently generated by the Site's existing commercial uses, including the Cineplex, Harvey's, Beer Store, and State & Main plaza. Through the development of the Site, the Farley Drive / Existing Site Access / Adjacent Site access intersection is proposed to undergo a reconfiguration to remove the existing Site access. As discussed in **Section 10.5.2**, commercial Site traffic is utilized as the basis for future forecast retail vehicular traffic, with some traffic removals in the afternoon and Saturday peak hours to reflect ITE Supermarket trip rates. As such, traffic using the existing Site access at the adjacent site access was locally reassigned to the proposed future Site accesses.

Existing commercial Site traffic removal is illustrated in **Figure 18**.



Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig18-01-STrem.dwg

FIGURE 18 EXISTING SITE TRAFFIC REMOVAL

10.5.2 New Vehicular Traffic Volumes Forecast

BA Group has established travel demand forecasts for auto-based and multimodal trips associated with the Site. Generally, the *ITE Trip Generation Manual, 11th Ed.* was referenced in forecasting vehicular trips associated with the Site, and 2016 Transportation Tomorrow Survey (TTS) mode split data was referenced in forecasting multimodal trips associated with the Site.

10.5.2.1 RESIDENTIAL VEHICLE TRIP GENERATION FORECAST

Residential vehicle trip generation forecasting was undertaken through review of *ITE Trip Generation Manual, 11th Ed.* trip rates for residential Multifamily Housing (Mid-Rise) (LUC 221). Residential vehicle trip generation forecasts during the weekday morning and afternoon peak hours, and the Saturday peak hour are provided in **Table 20**.

Table 20 Residential Vehicle Trip Generation Rates

Units		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Multifamily Housing (Mid-Rise) (LUC 221)		*0.09*	*0.28*	*0.37*	*0.24*	*0.15*	*0.39*	*0.20*	*0.19*	*0.39*
Phase 1	187 Units	15	55	70	45	30	75	35	35	70
Phase 2	246 Units	20	70	90	60	35	95	50	45	95
Phase 3	282 Units	25	80	105	65	45	110	55	55	110
Total	**715 Units**	**60**	**205**	**265**	**170**	**110**	**280**	**140**	**135**	**275**

Notes:
1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.
2. Vehicle Trips have been rounded to the nearest 5 trips.

10.5.2.2 RETAIL VEHICLE TRIP GENERATION FORECAST

Currently, the Site's commercial uses generate vehicular traffic, the corresponding trip rates of which have been compared to various *ITE Trip Generation Manual 11th Ed.* rates to determine if the existing observed Site-generated traffic may be considered a reasonable proxy for future forecasted vehicle traffic. Notably, operating hours for businesses currently located on the Site were considered in calculating existing observed vehicle trip rates during the weekday morning and afternoon peak hours, as well as the Saturday peak hour. The assessed peak hour of existing vehicular traffic was matched to the determined design periods for all peak hours, as discussed in greater detail in **Section 10.2**.

Existing observed commercial trips generated by the Site are provided in **Table 21**, below.

Table 21 Existing Site Commercial Trips

	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Survey Date	Wed. Sept. 20th, 2023						Sat. Oct. 14th, 2023		
Observed Trips[1]	20	15	35	150	135	285	205	175	380
Existing Site GFA Considered	1,457 m² GFA			4,524 m²					
Trip Rate[2]	**1.58**	**0.96**	**2.54**	**3.27**	**2.98**	**6.26**	**4.53**	**3.91**	**8.44**

Notes:
1. Observed trips omit traffic which travelled along the existing Internal East-West Street without interacting with an commercial uses on the Site.
2. Trip Rate reflects GFA of open commercial uses in AM, trip rates for PM and SAT periods reflect full existing Site GFA.
3. All trips rounded to the nearest 5 trips.

The precise nature of proposed future retail uses on the Site are not currently known. It is noted that the Phase 2 commercial GFA will operate concurrently with the interim existing-to-remain retail uses occupying the future Phase 3 Lands. As such, the existing observed trip rates provided in **Table 21** have been adopted for the Phase 2 commercial lands, as shown in **Table 22**. For the Phase 3 Lands specifically, vehicular trip rates for two potential future commercial uses have been considered, including strip retail plaza use (LUC 822) and supermarket use (LUC 850). In both instances, the fitted curve equation was used to better align the forecasted vehicular trip generation rates with the proposed GFA of the retail uses on the Site. A comparison of the observed existing commercial trips on the Site with forecast future Site retail trips generated by *ITE Trip Generation Manual 11th Ed.* when applied to the Phase 3 retail GFA is provided in **Table 22**.

Table 22 Commercial Trip Generation Rates Comparison

ITE Land Use Code & Survey Date	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
	In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
ITE Trip Generation Manual 11th Ed.[1]									
Strip Retail Plaza (LUC 822)	1.40	0.93	2.33	3.29	3.29	6.57	3.61	3.47	7.07
	30	**20**	**50**	**70**	**70**	**140**	**75**	**75**	**150**
Supermarket (LUC 850)	1.82	1.26	3.08	5.50	5.50	10.99	7.20	7.20	14.40
	40	**25**	**65**	**120**	**120**	**235**	**155**	**155**	**310**
Pergola Commons (East of Farley Drive)									
Existing Observed Site Trips[3]	1.07	0.65	1.72	6.90	6.29	13.19	9.56	8.25	17.81
	25	**15**	**40**	**150**	**135**	**285**	**205**	**175**	**380**
Adopted Retail Trip Rates (Phase 2 Commercial Lands)[4]	**1.58**	**0.96**	**2.54**	**3.27**	**2.98**	**6.26**	**4.53**	**3.91**	**8.44**
Adopted Retail Trip Rates (Phase 3 Commercial Lands)	**1.29**	**0.78**	**2.07**	**5.69**	**5.69**	**11.38**	**7.55**	**7.55**	**15.11**

Notes:
1. ITE Trip Generation Manual 11th Ed. Commercial vehicular trip rates converted to reflect rates per 100 m² GFA.
2. All trips rounded to the nearest 5 trips.
3. Rate derived by applying existing observed trips to forecast retail GFA.
4. Phase 2 adopted retail trip rate conservatively taken as observed trip rate of existing on-Site retail uses from **Table 21**.

The adoption of existing retail trip rates observed on- is considered a conservative assumption given the size, scale, and location of this commercial space. The commercial space proposed as part of Phase 3 adopts the existing observed site trips for the morning peak hour. With the future removal of the Cineplex on the Site, the afternoon and Saturday retail vehicle trip generation rates associated with ITE Supermarket uses (LUC 850) have been adopted for the Phase 3 commercial uses. This results in a small reduction in retail trips compared to existing uses. Supermarket uses are considered conservative and represent a worst-case (or highest trip generator) scenario relative to permitted uses for the site.

10.5.2.3 INTERACTION CONSIDERATIONS

The mixed-use nature of the Site in both the interim and ultimate development condition results in a potential reduction in trips generated by the Site as a proportion of trips may be captured internal to the Site boundaries. To assess the potential for internal trip capture on the Site, *ITE Trip Generation Handbook, 3rd Ed.* (2017*)* internal capture rates were applied to the interim and ultimate development statistics. Details regarding this assessment are provided in **Appendix D**.

The following Site statistics were considered for Site interaction between land uses:

Phase 1 & 2

- Phase 1 & 2 residential unit count: 433 units.
- Existing retail GFA located north of Internal East-West Street: 1,399 m^2 GFA.
- Future retail GFA located in Phase 2: 342 m^2 GFA.

Build Out

- Build out residential unit count (all Phases): 715 units.
- Future retail on Site: 2,127 m^2 GFA.

Notably, *ITE Trip Generation Handbook, 3rd Ed.* does not provide interaction rates for Saturday peak periods; therefore, afternoon peak period interaction rates were used to represent Saturday interaction activity for the purposes of this analysis. Internalization of trips under both the interim scenario, where Phase 1 and Phase 2 are constructed, and the build-out scenario are summarized in **Table 23**.

The Site is directly adjacent to considerable commercial uses on all corners of the Gordon Street / Clair Street intersection that could be captured as potential walking trips by future residents. For the purpose of this study, we have only considered interaction with retail proposed internal to the Site – which is considered to be a conservative assumption.

Table 23 Summary of Site Trip Interaction Reductions

Category	AM Peak Hour			PM Peak Hour			SAT Peak Hour[2]		
	In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Phase 1 & 2									
Residential Trips	35	125	160	105	65	170	85	80	165
Retail Trips	25	20	45	55	50	105	80	70	150
Residential Interaction	*0*	*0*	*0*	*-15*	*-5*	*-20*	*-20*	*-10*	*-25*
Retail Interaction	*0*	*0*	*0*	*-5*	*-15*	*-20*	*-10*	*-20*	*-25*
Primary Residential Trips	**35**	**125**	**160**	**90**	**60**	**150**	**65**	**70**	**140**
Primary Retail Trips	**25**	**20**	**45**	**50**	**35**	**85**	**70**	**50**	**125**
Primary Phase 1 & 2 Trips	**60**	**145**	**205**	**140**	**95**	**235**	**135**	**120**	**265**
Build Out									
Residential Trips	60	205	265	170	110	280	140	135	275
Retail Trips	30	20	50	110	110	220	150	150	300
Residential Interaction	*0*	*0*	*0*	*-30*	*-10*	*-40*	*-40*	*-15*	*-55*
Retail Interaction	*0*	*0*	*0*	*-10*	*-30*	*-40*	*-15*	*-40*	*-55*
Primary Residential Trips	**60**	**205**	**265**	**140**	**100**	**240**	**100**	**120**	**220**
Primary Retail Trips	**30**	**20**	**50**	**100**	**80**	**180**	**135**	**110**	**245**
Primary Build Out Trips	**90**	**225**	**315**	**240**	**180**	**420**	**235**	**230**	**465**

Notes:
1. All vehicular trips rounded to the nearest 5.
2. SAT Peak Hour interaction rates assumed to be equal to PM Peak Hour interaction rates for the purposes of this study.

As demonstrated above, no interaction reduction is considered during the morning peak hour for either the interim or build out horizons, with 20- and 25-trip reductions considered during the interim afternoon and Saturday peak hours, and 40- and 55-trip reductions during the build out afternoon and Saturday peak hours.

10.5.2.4 SUMMARY OF VEHICULAR TRIP GENERATION FORECASTS

A summary of primary vehicular trip generation forecasts for the Site in both the interim and build out scenarios is provided in **Table 24**.

Table 24 Summary of Primary Vehicular Trip Generation

Category		AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Existing Site Traffic										
Existing Retail		**20**	**15**	**35**	**150**	**135**	**285**	**205**	**175**	**380**
Phase 1 & 2										
Residential	433 units	*0.09*	*0.28*	*0.37*	*0.24*	*0.15*	*0.39*	*0.20*	*0.19*	*0.39*
		35	**125**	**160**	**105**	**65**	**170**	**85**	**80**	**165**
Existing Remaining Retail[2]	1,399 m^2 GFA[3]	*1.58*	*0.96*	*2.36*	*3.27*	*2.98*	*6.26*	*4.53*	*3.91*	*8.44*
		20	**15**	**35**	**45**	**40**	**85**	**65**	**55**	**120**
Phase 2 Retail	342 m^2 GFA	*1.58*	*0.96*	*2.36*	*3.27*	*2.98*	*6.26*	*4.53*	*3.91*	*8.44*
		5	**5**	**10**	**10**	**10**	**20**	**15**	**15**	**30**
Residential Interaction		*0*	*0*	*0*	*-15*	*-5*	*-20*	*-20*	*-10*	*-25*
Retail Interaction		*0*	*0*	*0*	*-5*	*-15*	*-20*	*-10*	*-20*	*-25*
Primary Residential Trips		**35**	**125**	**160**	**90**	**60**	**150**	**65**	**70**	**140**
Primary Retail Trips		**25**	**20**	**45**	**50**	**35**	**85**	**70**	**50**	**125**
Primary Phase 1 & 2 Trips		**60**	**145**	**205**	**140**	**95**	**235**	**135**	**120**	**265**
Net New Site Trips		**+40**	**+130**	**+170**	**-10**	**-40**	**-50**	**-70**	**-55**	**-115**

Table Continued on Next Page

Build Out										
Residential	715 units	*0.09*	*0.28*	*0.37*	*0.24*	*0.15*	*0.39*	*0.20*	*0.19*	*0.39*
		60	**205**	**265**	**170**	**110**	**280**	**145**	**135**	**280**
Proposed Phase 2 Retail	342 m^2 GFA	*1.58*	*0.96*	*2.54*	*3.27*	*2.98*	*6.26*	*4.53*	*3.91*	*8.44*
		5	**5**	**10**	**10**	**10**	**20**	**15**	**15**	**30**
Phase 3 Retail	1,785 m^2 GFA	*1.29*	*0.78*	*2.07*	*5.69*	*5.69*	*11.38*	*7.55*	*7.55*	*15.11*
		25	**15**	**40**	**100**	**100**	**200**	**135**	**135**	**270**
Residential Interaction		*0*	*0*	*0*	*-30*	*-10*	*-40*	*-40*	*-15*	*-55*
Retail Interaction		*0*	*0*	*0*	*-10*	*-30*	*-40*	*-15*	*-40*	*-55*
Primary Residential Trips		**60**	**205**	**265**	**140**	**100**	**240**	**100**	**120**	**220**
Primary Retail Trips		**30**	**20**	**50**	**100**	**80**	**180**	**135**	**110**	**245**
Net New Retail Trips		**+10**	**+5**	**+15**	**-50**	**-55**	**-105**	**-70**	**-65**	**-135**
Primary Build Out Trips		**90**	**225**	**315**	**240**	**180**	**420**	**235**	**230**	**465**
Net New Site Trips		**+70**	**+210**	**+280**	**+90**	**+45**	**+135**	**+30**	**+55**	**+85**

Notes:
1. All vehicular trips rounded to the nearest 5.
2. Phase 1 & 2 retail trip generation rates derived from existing observed area turning movement counts.
3. Phase 1 & 2 retail GFA is derived from interim existing to remain commercial located north of Internal East-West Street.

When compared to existing conditions, retail traffic is expected to decrease for the Site, while residential traffic is expected to increase, with some interaction between land uses.

With the removal of the Harvey's and Cineplex in Phases 1 and 2, and the introduction of 433 residential units, there is estimated to be a net decrease in vehicle traffic in the afternoon and Saturday peak hours (-50 and -115 two-way trips, respectively) compared to existing observed retail trips. During the morning peak hour, vehicle trips are estimated to increase by approximately 170 two-way trips, considering existing retail is less active or not operating in the morning peak hour.

At full build-out, net new vehicle Site trips will be +280, +135, and +85 two-way during the morning, afternoon, and Saturday peak hours respectively, compared to existing observed retail trips.

10.5.3 Multimodal Travel Demand Forecasts

Multimodal travel demand forecasts have been prepared to estimate Site-related trips across various travel modes. Details of the multimodal travel demand forecasting assessment are provided below.

10.5.3.1 AREA MODAL SHARE

South Guelph is an expanding and evolving area of the City, which has in part been subject to a recent secondary planning process, which included the completion of a transportation master planning study entitled: *Clair-Maltby Secondary Plan Transportation Master Plan Study (2019)*. This master planning study assessed a variety of data sources to determine an appropriate modelled future modal split for the Clair-Maltby Secondary Plan area, including 2016 Transportation Tomorrow Survey data and proxy development area modal splits in Markham, Oakville, and Burlington.

To maintain consistency with the *Clair-Maltby Secondary Plan Transportation Master Plan Study,* the modal splits adopted for the key outbound movement (weekday morning peak hour) and key inbound movement (weekday afternoon peak hour) have been utilized in this Study. The Clair-Maltby modal splits are presented in **Table 25.** For the purposes of this Study, adopted modal splits were applied to both retail and residential uses.

Table 25 Adopted Area Modal Splits

Mode	Outbound	Inbound
Auto	60%	72%
Passenger	10%	10%
Transit	10%	10%
Walk	10%	3%
Cycle	3%	2%
Other	7%	3%
Total	**100%**	**100%**

10.5.3.2 MULTIMODAL FORECASTS

A proportion of the future trips associated with the Site will be made using alternative travel modes to the personal automobile, including transit, cycling, and walking. Multimodal forecasts have been derived by factoring forecasted traffic volumes by the adopted area modal splits, provided in **Table 24**, and considering the internalization of trips derived in **Section 10.5.2.3**. For the purpose of this analysis, internal trips that were deducted from auto trips as interaction have been added to walking trips.

Multimodal trips have been provided in **Table 26** for both the interim (Phase 1 & 2 constructed) and build-out (all Phases constructed) horizons, to align with the modelled horizon periods.

Table 26 Multimodal Travel Demand Summary

Travel Mode	Units / GFA	AM Peak Hour			PM Peak Hour			SAT Peak Hour		
		In	Out	2-Way	In	Out	2-Way	In	Out	2-Way
Phase 1 & 2[3]										
Residential										
Auto	433 units	35	125	160	90	60	150	65	70	140
Passenger		10	20	30	15	10	25	10	10	20
Transit		10	20	30	15	10	25	10	10	20
Walk		10	20	30	20	5	25	20	10	25
Cycle		0	10	10	0	0	0	0	0	0
Other		0	15	15	5	0	5	0	0	0
Total		**65**	**210**	**275**	**145**	**85**	**230**	**105**	**100**	**205**
Retail										
Auto	342 m^2 GFA	5	5	10	10	10	20	15	15	30
Passenger		5	5	10	5	5	10	5	5	10
Transit		0	0	0	0	0	0	0	0	0
Walk		0	0	0	0	0	0	0	0	0
Cycle		0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0
Total		**10**	**10**	**20**	**15**	**15**	**30**	**20**	**20**	**40**

Table Continued on Next Page

Build-Out										
Residential										
Auto	715 Units	60	205	265	140	100	240	100	120	220
Passenger		15	35	50	25	20	45	20	20	40
Transit		15	35	50	25	20	45	20	20	40
Walk		15	35	50	45	20	65	50	25	75
Cycle		0	15	15	5	0	5	5	5	10
Other		5	25	30	15	5	20	5	5	10
Total		**110**	**350**	**460**	**255**	**165**	**420**	**200**	**195**	**395**
Table Continued on Next Page										
Retail										
Auto	2,127 m^2 GFA	30	20	50	100	80	180	135	110	245
Passenger		10	10	20	20	20	40	25	25	50
Transit		5	5	10	15	15	30	20	20	40
Walk		5	5	10	15	35	50	20	45	65
Cycle		0	0	0	5	5	10	5	5	10
Other		5	0	5	5	5	10	5	5	10
Total		**55**	**40**	**95**	**160**	**160**	**320**	**210**	**210**	**420**
Build Out Total										
Auto	715 Units 2,127 m^2 GFA	90	225	315	240	180	420	235	230	465
Passenger		25	45	70	45	40	85	45	45	90
Transit		20	40	60	40	35	75	40	40	80
Walk		20	40	60	60	55	115	70	70	140
Cycle		0	15	15	10	5	15	10	10	20
Other		10	25	35	20	10	30	10	10	20
Total		**165**	**390**	**555**	**415**	**325**	**740**	**410**	**405**	**815**

Notes:

1. Based on Site statistics provided by SvN Architects, dated March 20th, 2025.
2. All trips rounded to the nearest 5.
3. Phase 1 & 2 (interim horizon) retail trips are considered to be part of the existing condition and are therefore not considered in this multimodal forecast.

As demonstrated above, the Site is expected to generate in the order of 295, 260, and 245 two-way person trips during the weekday morning, weekday afternoon, and Saturday peak hours under the interim development condition, respectively.

Under the full build-out development condition, where all 3 Phases are constructed, a total of 555, 740, and 815 two-way person trips are forecast during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

10.5.4 Site Trip Distribution

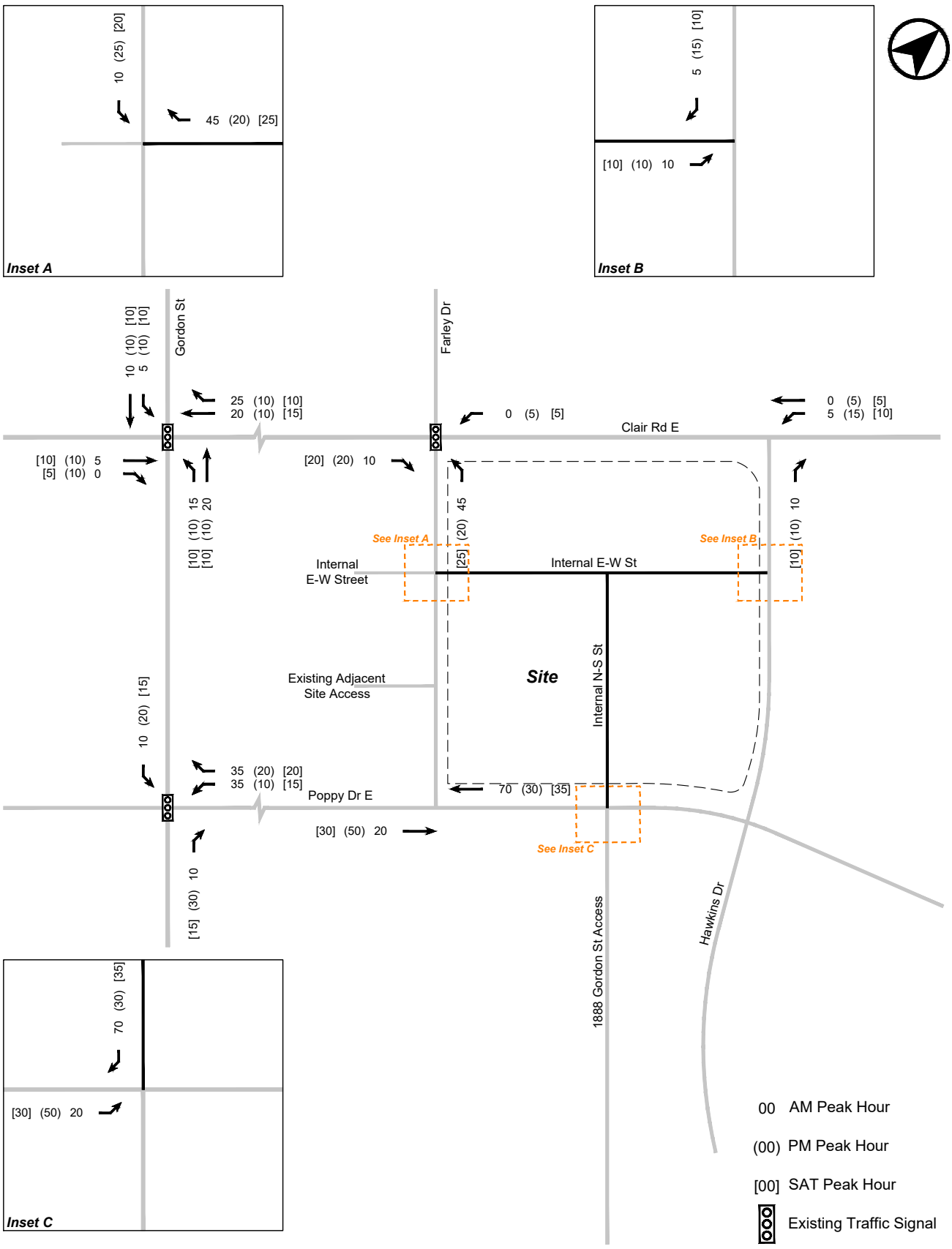
Residential Site vehicular trips have been distributed to the area road network based on results from 2016 TTS queries and existing area traffic patterns. 2016 TTS query data used as part of this exercise is provided in **Appendix G**. Forecast retail trips utilized existing movements for retail trips observed in the turning movement counts provided in **Appendix E**.

Direction of approach proportions are provided in **Table 27**.

Table 27 Residential Site Trip Distribution

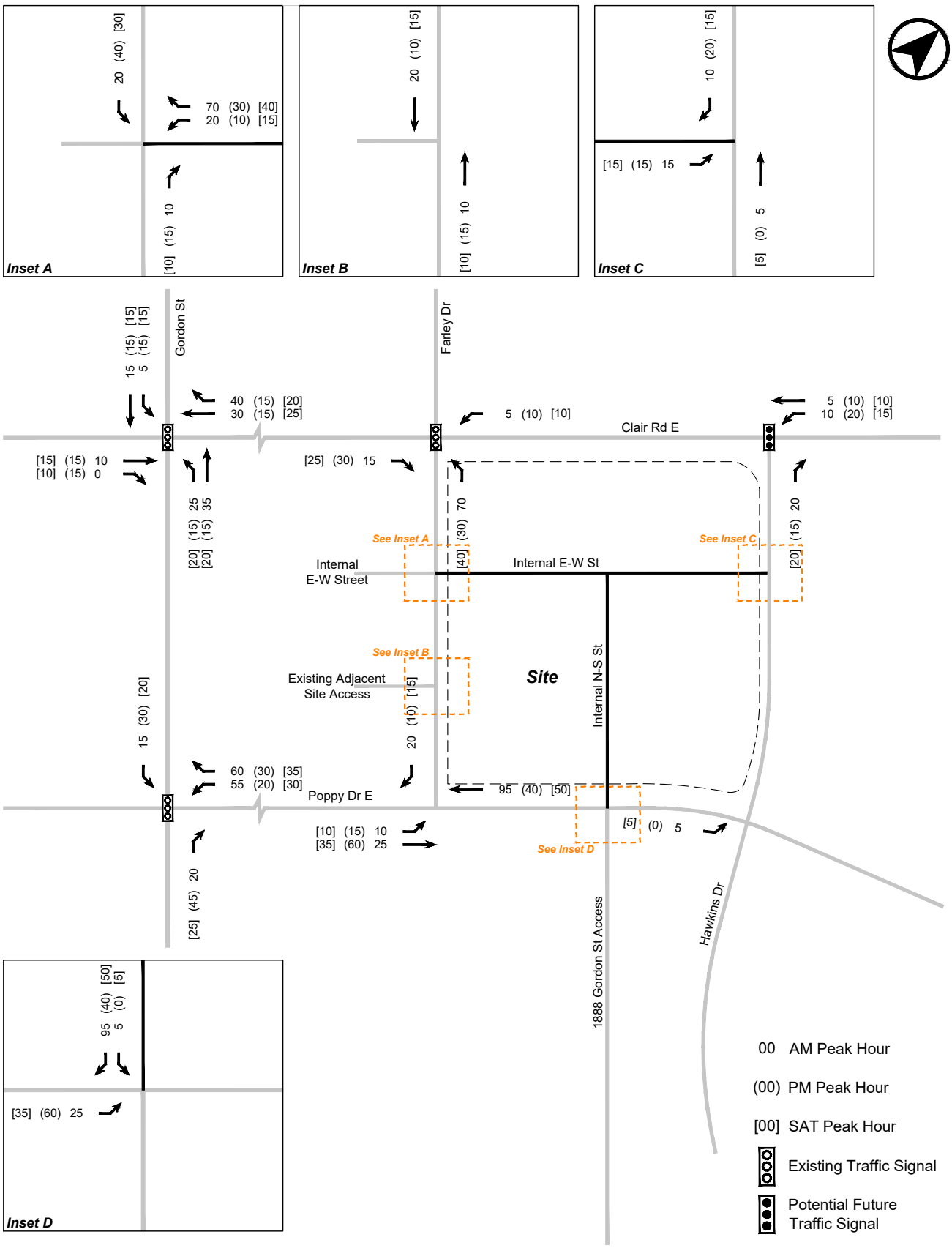
Major Street	Direction	Inbound	Outbound
Gordon Street	North	25%	35%
	South	35%	25%
Clair Road	East	20%	10%
	West	20%	30%
Total		**100%**	**100%**

Site-generated trips for the 2028, 2033, and 2038 horizon periods are provided in **Figure 19**, **Figure 20**, and **Figure 21**, respectively.



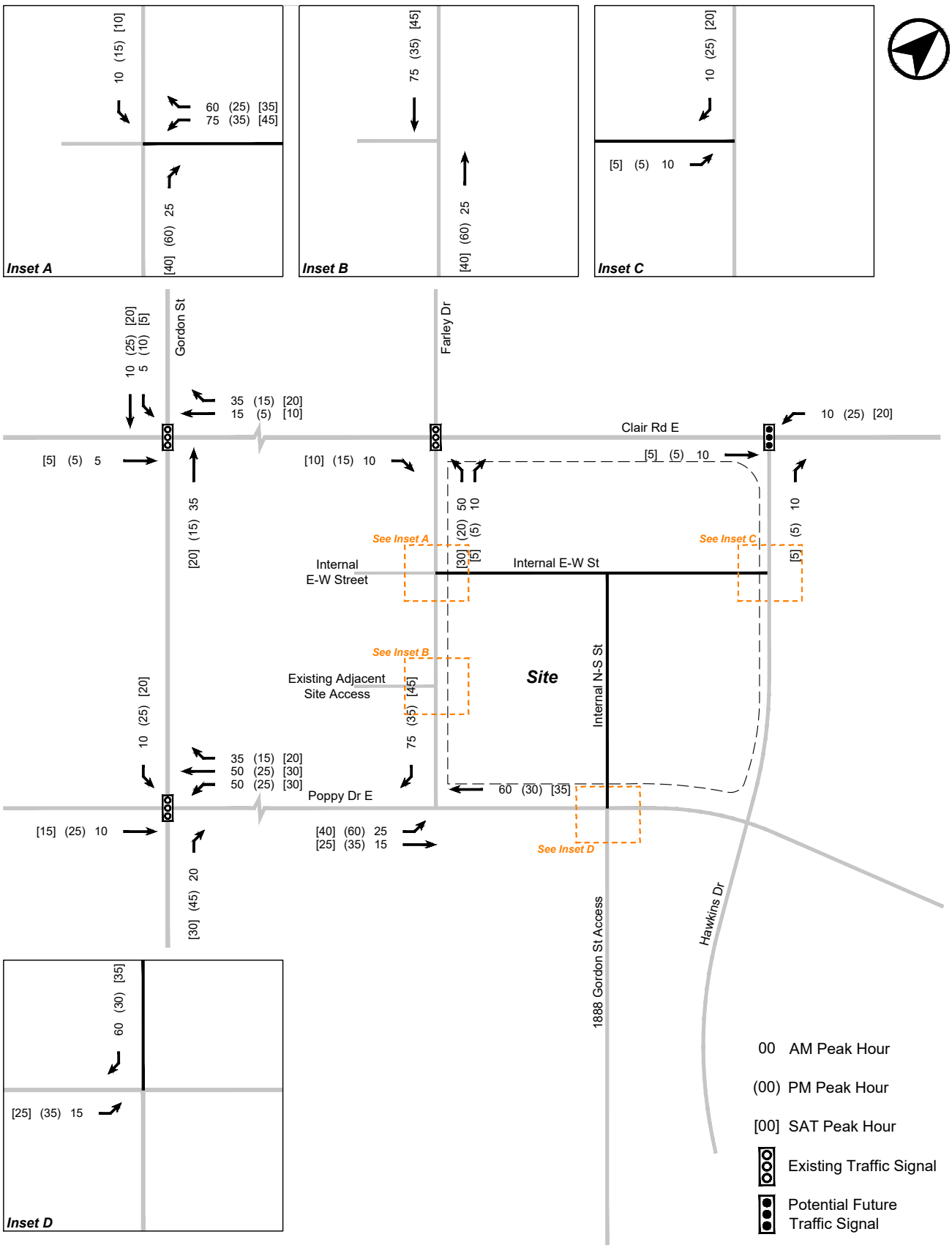
Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig19-01-ST2028.dwg

FIGURE 19 2028 SITE-GENERATED TRAFFIC VOLUMES



Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig20-01-ST2033.dwg

FIGURE 20 2033 SITE-GENERATED TRAFFIC VOLUMES



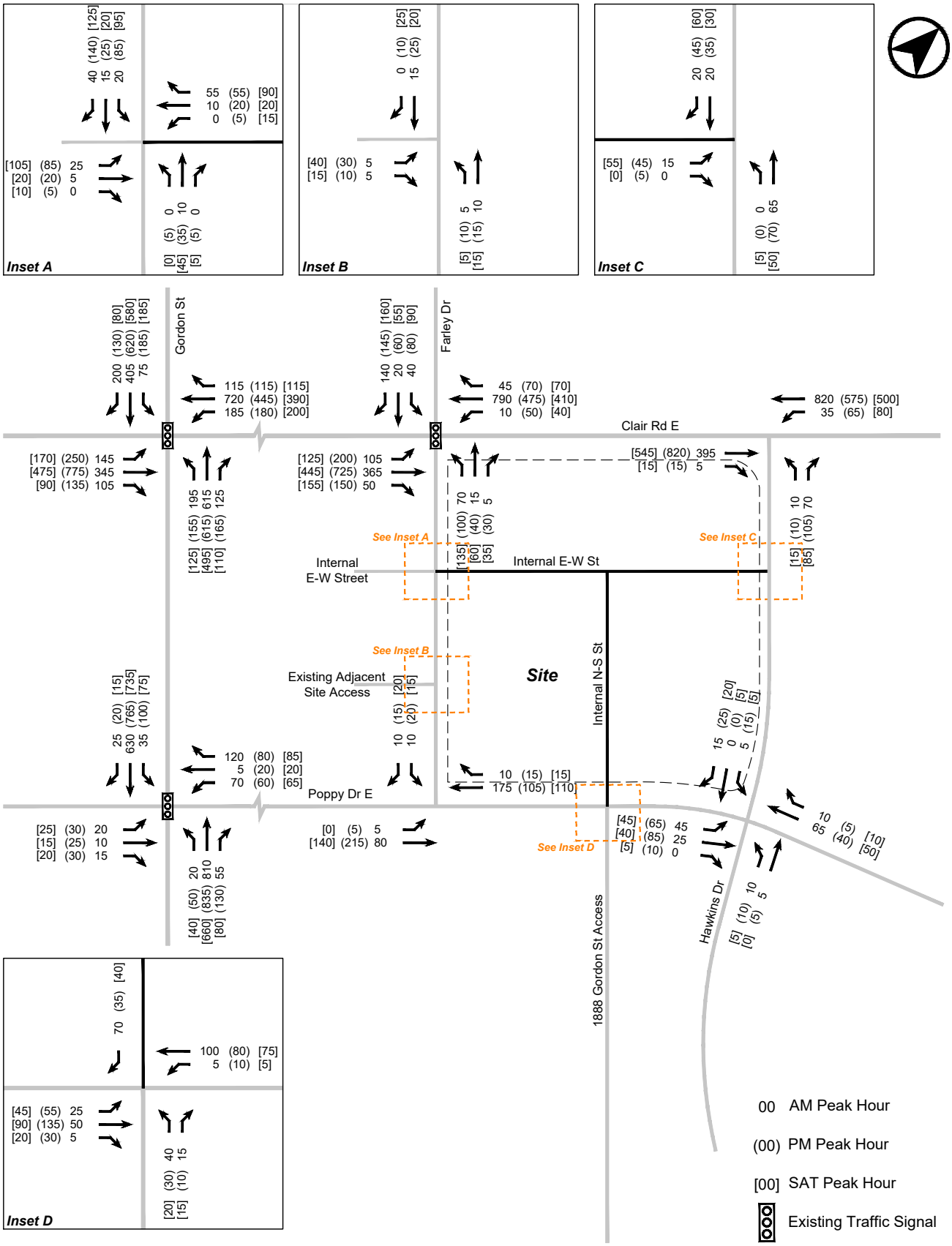
Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig21-01-ST2038.dwg

FIGURE 21 2038 SITE-GENERATED TRAFFIC VOLUMES

10.6 Future Total Traffic Volumes

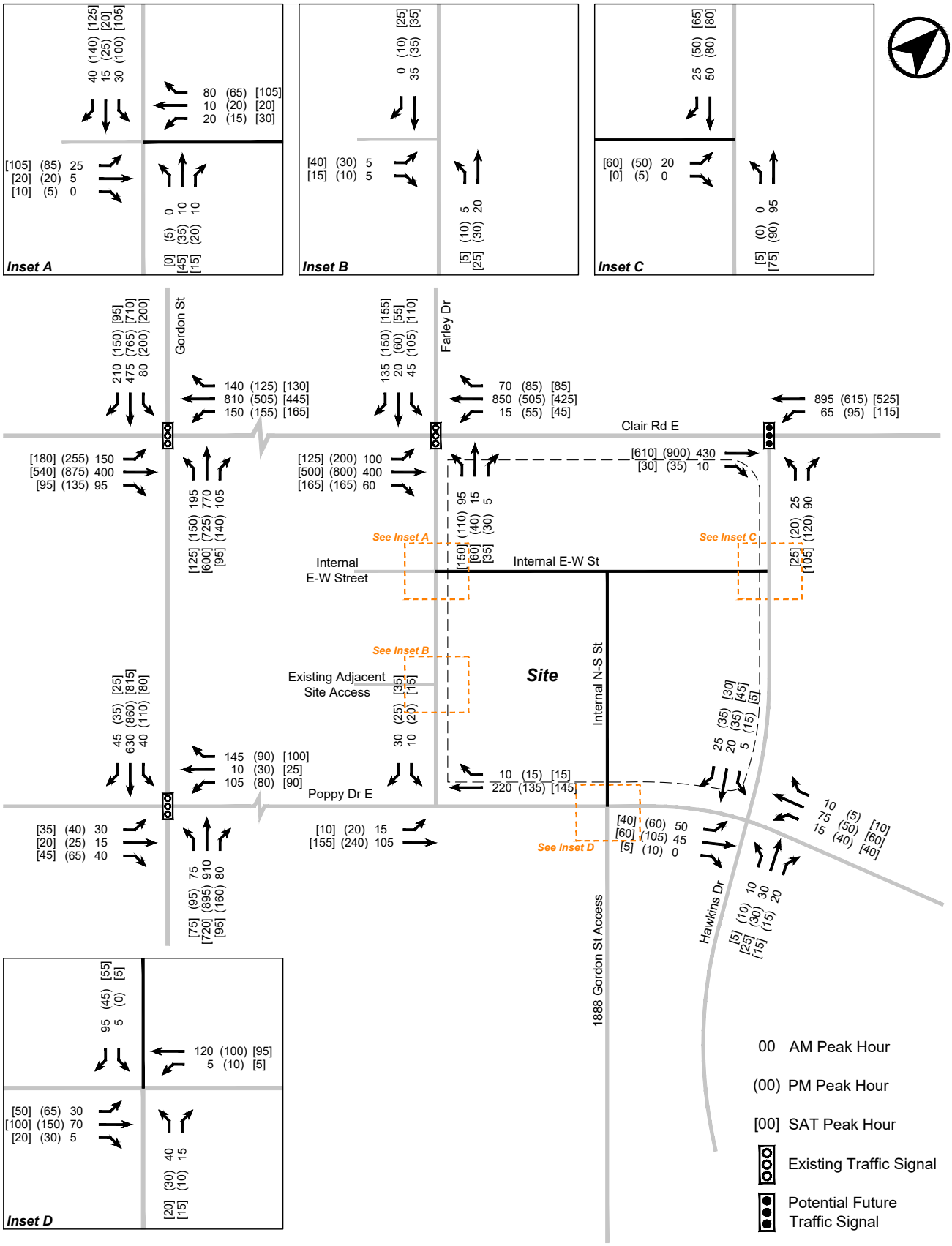
Future total traffic volumes have been established for the weekday morning, weekday afternoon, and Saturday peak hours through the addition of future background traffic volumes and future forecast Site traffic volumes for all horizon years.

Future total traffic volumes for the 2028, 2033, and 2038 horizon years are provided in **Figure 22**, **Figure 23**, and **Figure 24**, respectively.



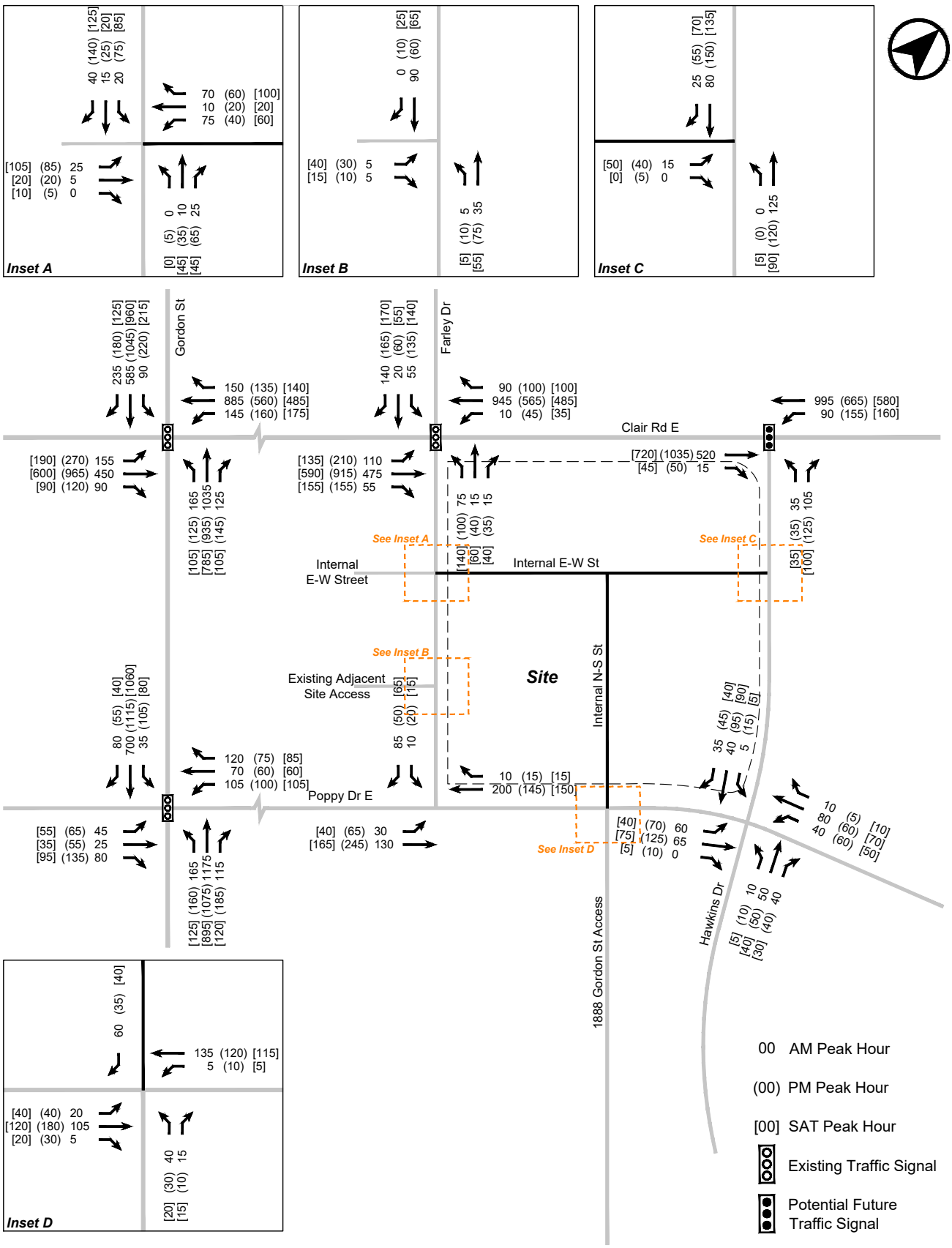
Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig22-01-FT2028.dwg

FIGURE 22 2028 FUTURE TOTAL TRAFFIC VOLUMES



Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig23-01-FT2033.dwg

FIGURE 23 2033 FUTURE TOTAL TRAFFIC VOLUMES



Date Plotted: July 4, 2024 Filename: \\bamediaaccount.file.core.windows.net\fp02data\WP\70\36\41\Graphics\CAD\Fig24-01-FT2038.dwg

FIGURE 24 2038 FUTURE TOTAL TRAFFIC VOLUMES

11.0 TRAFFIC OPERATIONS ASSESSMENT

11.1 Analysis Methodology

Traffic operations assessments have been undertaken at the study area intersections using standard capacity analysis procedures for signalized and unsignalized intersections as follows.

Signalized Intersections

Analyses undertaken at intersections under signalized traffic control utilize methodologies and procedures outlined in the Highway Capacity Manual (HCM) 2000 and Synchro Version 11, and in accordance with the City of Guelph's *Transportation Impact Study Guidelines (2023)*. Outputs of the signalized intersection assessment include volume to capacity ratios (v/c), whereby a v/c index of 1.00 indicates 'at or near capacity' conditions. Intersection movements and overall intersection operations are also assigned a level-of-service, in accordance with HCM 2000 criteria for signalized intersections, as follows:

- LOS A: Control Delay ≤ 10s
- LOS B: 10s < Control Delay ≤ 20s
- LOS C: 20s < Control Delay ≤ 35s
- LOS D: 35s < Control Delay ≤ 55s
- LOS E: 55s < Control Delay ≤ 80s
- LOS F: Control Delay > 80s

Unsignalized Intersections

Unsignalized intersection analyses have been carried out using standard capacity procedures for intersections operating under "two-way" and "all-way" STOP control and in accordance with HCM 2000 methodologies. Outputs of the unsignalized intersection assessment includes a level-of-service designation, ranging from A to F, providing a relative indication of the level of delay experienced by motorists completing a movement at an intersection. LOS A represents conditions under which motorists would experience little delay, while LOS F represents conditions where motorists would experience extended delays. HCM 2000 LOS criteria for unsignalized intersections are as follows:

- LOS A: Control Delay ≤ 10s
- LOS B: 10s < Control Delay ≤ 15s
- LOS C: 15s < Control Delay ≤ 25s
- LOS D: 25s < Control Delay ≤ 35s
- LOS E: 35s < Control Delay ≤ 50s
- LOS F: Control Delay > 50s

Turning Lane Warrant Analysis

A left-turn lane warrant was undertaken for the east approach of the Clair Road East / Hawkins Drive intersection under all analyzed scenarios in accordance with the criteria provided in Chapter 9 of the *Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (2017)* (TAC Geometric Design Guide) and the *Ontario Ministry of Transportation (MTO) Design Supplement (2023).* The left-turn lane warrant is discussed in **Section 11.3**.

Signal Warrant Analysis

A signal warrant analysis was undertaken to assess current and potential future need for signalization. The traffic signal warrant was undertaken in accordance with the Ontario Traffic Manual (OTM) Book 12 signalization Justifications 1 – 4. The signal warrant analysis is discussed in **Section 11.4**.

11.2 Network-Wide Parameters

Network-wide parameters have been determined through the Terms of Reference correspondence with the City of Guelph Transportation Staff and the City's *Transportation Impact Study Guidelines (2023)*. The following network-wide parameters have been employed as part of this analysis.

11.2.1 Future Network Configuration Assumptions

The following future network configuration assumptions have been adopted as part of this analysis:

2028 Horizon Year

- Introduction of Site access at the existing Poppy Drive East / 1888 Gordon Street site access intersection.
- Widening of Gordon Street south of its intersection with Gosling Gardens to 4 lanes (2 travel lanes in each direction).
- Under existing traffic conditions, a left-turn lane is warranted for the east approach of the Clair Road East / Hawkins Drive intersection, and has therefore been considered as part of the 2028 horizon period road network. Discussion of the left-turn lane warrant is provided in **Section 11.3**.

2033 Horizon Year

- Completed extension of Poppy Drive West from the future South End Centre in the East to the existing Poppy Drive West / Gosling Gardens intersection in the west.
- Completed extension of Hawkins Drive as part of the future development associated with the Clair-Maltby Secondary Plan area.
- Under 2033 horizon future background traffic conditions, a signal is warranted at the Clair Road East / Hawkins Drive intersection, and has therefore been considered as part of the 2033 and 2038 horizon period road network. Discussion of the left-turn lane warrant is provided in **Section 11.4**.

2038 Horizon Year

- An alternative future configuration of the Clair Road / Gordon Street intersection where auxiliary right-turn lanes are implemented for the south, east, and north approaches, consistent with the recommended future road network identified in the *Clair-Maltby Transportation Master Plan Study*. This alternative configuration is further discussed in **Section 11.5.1**.

11.2.2 Signal Timings

Existing Signal Timings

Existing signal timing plans, including signal phasing and cycle lengths, were obtained from the City of Guelph. Existing signal timing plans used as part of this Study are provided in **Appendix H**.

Future Signal Timings

The analysis of future traffic scenarios maintained existing signal timing plans at all currently existing signalized intersections with optimized splits under the existing cycle length of 90 seconds.

The modelled signalization of the Clair Road East / Hawkins Drive intersection adapted the existing signal timing plan for the adjacent Clair Road East / Farley Drive intersection, utilizing the same parameters for the morning peak, afternoon peak, and Saturday peak periods. Details regarding the modelled signal timing plan for the Clair Road East / Hawkins Drive intersection are provided in **Appendix K**.

11.2.3 Base Saturation Flow Rates

A base saturation flow rate of 1,900 pcuphlg (passenger car units per hour per lane green) has been adopted under all traffic analysis scenarios.

11.2.4 Heavy Vehicle Assumptions

Heavy vehicle percentages used for this analysis are consistent with those observed in the existing intersection turning movement counts.

11.2.5 Lost Time Adjustment

For the purposes of this analysis, a lost time adjustment of 0 seconds has conservatively been employed under all traffic analysis scenarios.

11.2.6 Lane Utilization Factors

Default Synchro lane utilization factors (LUF) have been adopted under all traffic analysis scenarios for this analysis.

11.2.7 Peak Hour Factors

For the purposes of this analysis, peak hour factors (PHF) observed as part of existing intersection turning movement counts have been adopted under all traffic analysis scenarios. Where PHF data was unavailable, a factor of 0.92 has been adopted.

11.3 Left-Turn Lane Warrant Analysis

As part of the analysis for this study, a left-turn lane warrant was conducted for the east approach of the Clair Road East / Hawkins Drive intersection. The warrant was undertaken utilizing the criteria provided in Chapter 9 of the *Transportation Association of Canada (TAC) Geometric Design Guide for Canadian Roads (2017)* (TAC Geometric Design Guide) and the *Ontario Ministry of Transportation (MTO) Design Supplement (2023).* Detailed results of the warrant are provided in **Appendix I**.

The left-turn lane warrant determined that a westbound auxiliary left-turn lane is warranted under all analyzed scenarios, with the exception of the existing morning peak period. As part of the left-turn lane warrant, the TAC Geometric Design Guide provides additional guidance regarding storage lengths as a function of left-turn volumes and opposing approach volumes. These recommended storage lengths are compared to the forecast 95th percentile queues modelled in Synchro under all scenarios which warrant a left-turn lane in **Table 28**. Notably, a signal is warranted under the 2033 and 2038 horizon periods; therefore, left-turn lane warrants were not conducted for these scenarios.

Table 28 Left-Turn Lane Warrant Analysis – Storage Length Comparison

Design Period		TAC Recommended Storage Length	Forecast 95th Percentile Queue
Existing Conditions			
AM Peak Period		Not Warranted	--
PM Peak Period		15 m	1.4 m
SAT Peak Period		15 m	1.8 m
2028 Horizon			
Future Background	AM Peak Period	15 m	0.8 m
	PM Peak Period	15 m	1.9 m
	SAT Peak Period	25 m	2.4 m
Future Total	AM Peak Period	15 m	0.9 m
	PM Peak Period	25 m	1.9 m
	SAT Peak Period	15 m	2.1 m
2033 & 2038 Horizons			
Future Background	AM Peak Period	Signal warranted under 2033 and 2038 horizons – See **Section 11.4**.	
	PM Peak Period		
	SAT Peak Period		
Future Total	AM Peak Period		
	PM Peak Period		
	SAT Peak Period		

Under existing and 2028 future background and future total scenarios, the storage lengths recommended by the TAC Geometric Design Guide do not exceed 25 metres.

11.4 Signal Warrant Analysis

In addition to the left-turn lane warrant at the Clair Road East / Hawkins Drive intersection, a signal warrant analysis has been undertaken to assess current and potential future need for signalization. The traffic signal warrant was undertaken in accordance with the Ontario Traffic Manual (OTM) Book 12 signalization justifications. Specifically, justifications 1 – 4 were assessed to determine potential future need for intersection signalization. Detailed results of the OTM Book 12 signal warrant analysis are provided in **Appendix J.**

Justification 4 has two distinct lower thresholds for signalization when assessing intersections, where one road has 2 or more approach lanes, and the other road has 1 approach lane. Given the major street (Clair Road East) has 2 approach lanes and the minor street (Hawkins Drive) has 1 approach lane, a threshold of 80 was determined to be applicable for use in this signal warrant analysis base on guidance in OTM Book 12.

The warrant assessment determined that signalization of the Clair Road East / Hawkins Drive intersection is not warranted under existing traffic conditions or 2028 conditions. Signalization is warranted under 2033 future background conditions by Justification 4: 4-Hour Volume. Additionally, signalization is warranted through Justification 4 under 2038 future background conditions, where all 3 phases of the Site are complete, and the Clair-Maltby Secondary Plan is built out.

The exact timeline for signalization of the Clair Road East / Hawkins Drive intersection is not tied directly to Site-related traffic volumes, but rather continued growth of area development. Signalization of the Clair Road East / Hawkins Drive intersection should be monitored to establish timing of implementation relative to growth of the Clair-Maltby Secondary Plan and relative to the City's desired intersection control at this location. Given the intersection is approximately 165 metres from the Clair Road East / Farley Drive intersection, it could be considered for signalization (T-intersection with pedestrian and cycling crossing) or partial moves (controlled by a median along Clair Road East) and should be evaluated in conjunction with the City's planned widening of Clair Road East to the east of the site and active transportation network.

11.5 Signalized Intersections Analysis Results

Traffic operations analysis results for the area signalized intersections under existing, future background, and future total conditions during the 2028, 2033, and 2038 horizon periods are summarized below. Detailed Synchro capacity analysis reports are provided in **Appendix K**.

11.5.1 Clair Road / Gordon Street Intersection Capacity Results

The Clair Road / Gordon Street intersection has a 90 second cycle length during the weekday morning, weekday afternoon, and Saturday peak hours. The existing cycle length was maintained in all analysis scenarios, with optimized splits employed under future background and future total scenarios.

11.5.1.1 2028 HORIZON YEAR

A summary of intersection capacity results for existing, future background, and future total traffic conditions during the 2028 horizon year are provided in **Table 29**.

Table 29 Clair Road / Gordon Street Capacity Results – 2028 Horizon

Movement	Existing Traffic		Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.59 (0.64) [0.50]	C (C) [C]	0.71 (0.70) [0.52]	C (C) [C]	0.72 (0.71) [0.52]	C (C) [C]
EBTR	0.44 (0.78) [0.62]	C (C) [C]	0.49 (0.89) [0.72]	C (D) [D]	0.48 (0.89) [0.71]	C (D) [D]
WBL	0.45 (0.52) [0.51]	C (C) [C]	0.61 (0.72) [0.66]	C (D) [C]	0.61 (0.72) [0.66]	C (D) [C]
WBTR	0.77 (0.51) [0.55]	D (C) [C]	0.87 (0.54) [0.59]	D (C) [C]	0.90 (0.54) [0.61]	D (C) [C]
NBL	0.45 (0.35) [0.22]	B (B) [A]	0.68 (0.60) [0.36]	C (C) [B]	0.77 (0.66) [0.39]	C (C) [B]
NBTR	0.49 (0.54) [0.33]	B (B) [B]	0.69 (0.74) [0.50]	C (C) [B]	0.73 (0.76) [0.51]	C (C) [B]
SBL	0.21 (0.45) [0.33]	B (B) [B]	0.33 (0.73) [0.48]	B (C) [B]	0.37 (0.77) [0.50]	B (C) [B]
SBTR	0.45 (0.50) [0.34]	C (C) [B]	0.57 (0.71) [0.53]	C (C) [C]	0.59 (0.73) [0.54]	C (C) [C]
Overall	**0.60 (0.64) [0.44]**	**C (C) [C]**	**0.78 (0.79) [0.60]**	**C (C) [C]**	**0.83 (0.81) [0.61]**	**C (C) [C]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under existing conditions, the intersection operates at overall v/c ratios of 0.60, 0.64, and 0.44 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under future background conditions, the intersection operates at overall v/c ratios of 0.78, 0.79, and 0.60 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under future total conditions, the intersection operates at overall v/c ratios of 0.83, 0.81, and 0.61 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

In addition to overall intersection capacity, all individual movement under all scenarios are expected to operate within capacity and at acceptable levels of service.

A summary of 95th percentile queues for existing, future background, and future total traffic conditions during the 2028 horizon year are provided in **Table 30**.

Table 30 Clair Road / Gordon Street 95th Percentile Queues – 2028 Horizon

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
EBL	75 m	#28.8 (#44.8) [31.2]	#42.2 (#50.8) [31.4]	#43.1 (#52.1) [31.4]
EBT	200 m	37.9 (77.8) [45.2]	49.4 (#115.1) [60.7]	50.1 (#117.0) [60.5]
WBL	30 m	43.4 (26.3) [m25.1]	52.1 (#49.1) [#38.2]	49.6 (#48.9) [#40.9]
WBT	180 m	86.4 (37.7) [28.2]	#111.0 (57.7) [41.6]	#120.5 (57.8) [42.3]
NBL	60 m	13.0 (7.6) [7.0]	#36.3 (26.3) [7.9]	#28.0 (#33.3) [9.2]
NBT	145 m	55.8 (15.2) [17.7]	37.9 (26.1) [25.7]	46.3 (34.9) [26.9]
SBL	160 m	14.7 (29.0) [28.3]	15.4 (#39.7) [33.2]	16.1 (#43.8) [34.2]
SBT	195 m	49.1 (59.6) [51.8]	61.1 (82.0) [70.1]	63.2 (83.4) [71.3]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

As demonstrated above, under existing, future background, and future total conditions for the 2028 horizon period, select movements (westbound left) are expected to have 95th percentile queues that exceed available storage. The westbound left turn lane length is currently constrained by a back-to-back left turn along Clair Road. Future conditions do not significantly alter queuing conditions for the westbound left (a change of 1-2 car lengths). Considering the opposing eastbound left turns along Clair Road exceed the westbound left storage at Clair Road East / Gordon Street, the City could consider monitoring the queuing on left turns along Clair Road to better balance storage lane requirements, if required, as part of any future reconstruction projects along Clair Road.

11.5.1.2 2033 HORIZON YEAR

A summary of intersection capacity results for existing, future background, and future total traffic conditions during the 2033 horizon year are provided in **Table 31**.

Table 31 Clair Road / Gordon Street Capacity Results – 2033 Horizon

Movement	Existing Traffic		Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.59 (0.64) [0.50]	C (C) [C]	0.80 (0.81) [0.61]	D (D) [C]	0.80 (0.85) [0.63]	D (D) [C]
EBTR	0.44 (0.78) [0.62]	C (C) [C]	0.51 (0.92) [0.74]	C (D) [D]	0.50 (0.96) [0.75]	C (D) [D]
WBL	0.45 (0.52) [0.51]	C (C) [C]	0.52 (0.73) [0.63]	C (D) [C]	0.53 (0.72) [0.65]	C (D) [C]
WBTR	0.77 (0.51) [0.55]	D (C) [C]	0.91 (0.56) [0.65]	D (C) [C]	0.96 (0.60) [0.68]	D (C) [C]
NBL	0.45 (0.35) [0.22]	B (B) [A]	0.75 (0.68) [0.39]	C (C) [B]	0.92 (0.75) [0.45]	E (D) [B]
NBTR	0.49 (0.54) [0.33]	B (B) [B]	0.83 (0.81) [0.55]	C (C) [B]	0.88 (0.81) [0.58]	C (C) [B]
SBL	0.21 (0.45) [0.33]	B (B) [B]	0.43 (0.85) [0.55]	C (D) [B]	0.49 (0.89) [0.58]	C (D) [B]
SBTR	0.45 (0.50) [0.34]	C (C) [B]	0.66 (0.85) [0.60]	C (D) [C]	0.69 (0.85) [0.65]	C (D) [C]
Overall	**0.60 (0.64) [0.44]**	**C (C) [C]**	**0.87 (0.88) [0.66]**	**C (C) [C]**	**0.94 (0.92) [0.68]**	**D (D) [C]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under future background conditions, the intersection operates at overall v/c ratios of 0.87, 0.88, and 0.66 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under future total conditions, the intersection operates at overall v/c ratios of 0.94, 0.92, and 0.68 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

In addition to overall intersection capacity, all individual movement under all scenarios are expected to operate within capacity and at acceptable levels of service.

A summary of 95th percentile queues for existing, future background, and future total traffic conditions during the 2033 horizon year are provided in **Table 32**.

Table 32 Clair Road / Gordon Street 95th Percentile Queues – 2033 Horizon

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
EBL	75m	#28.8 (#44.8) [31.2]	#46.8 (#61.0) [33.9]	#48.4 (#66.3) [33.9]
EBT	200m	37.9 (77.8) [45.2]	55.6 (#131.1) [68.1]	56.8 (#139.4) [69.1]
WBL	30m	43.4 (26.3) [m25.1]	36.5 (#40.9) [#33.1]	36.3 (#41.3) [#33.4]
WBT	180m	86.4 (37.7) [28.2]	#129.1 (60.1) [45.7]	#148.3 (61.9) [49.3]
NBL	60m	13.0 (7.6) [7.0]	#28.9 (#34.4) [8.0]	#46.6 (#41.8) [17.3]
NBT	145m	55.8 (15.2) [17.7]	#112.0 (45.2) [20.6]	#117.2 (56.4) [25.5]
SBL	160m	14.7 (29.0) [28.3]	16.5 (#55.2) [#34.5]	17.0 (#60.0) [35.8]
SBT	195m	49.1 (59.6) [51.8]	74.7 (#113.9) [86.8]	75.9 (#107.8) [89.2]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

As demonstrated above, under future background and future total conditions for the 2033 horizon period and consistent with 2028 conditions, select movements (westbound left) are expected to have 95th percentile queues that exceed available storage. The westbound left turn lane length is currently constrained by a back-to-back left turn along Clair Road. Future conditions do not significantly alter queuing conditions for the westbound left (a change of 1-2 car lengths). Considering the opposing eastbound left turns along Clair Road exceed the westbound left storage at Clair Road / Gordon Street, the City could consider monitoring the queuing on left turns along Clair Road to better balance storage lane requirements, if required, as part of any future reconstruction projects along Clair Road.

11.5.1.3 2038 HORIZON YEAR

Baseline Configuration

A summary of intersection capacity results for existing, future background, and future total traffic conditions during the 2038 horizon year under the baseline existing lane configuration are provided in **Table 33**.

Table 33 Clair Road / Gordon Street Capacity Results – 2038 Horizon Baseline Configuration

Movement	Existing Traffic		Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS	V/C	LOS
EBL	0.59 (0.64) [0.50]	C (C) [C]	0.85 (1.01) [0.75]	D (F) [C]	0.85 (1.03) [0.77]	D (F) [D]
EBTR	0.44 (0.78) [0.62]	C (C) [C]	0.57 (1.04) [0.78]	C (E) [D]	0.57 (1.03) [0.77]	C (E) [C]
WBL	0.45 (0.52) [0.51]	C (C) [C]	0.56 (0.78) [0.80]	C (D) [D]	0.57 (0.78) [0.79]	C (D) [D]
WBTR	0.77 (0.51) [0.55]	D (C) [C]	1.03 (0.64) [0.68]	E (C) [C]	1.09 (0.65) [0.70]	F (C) [C]
NBL	0.45 (0.35) [0.22]	B (B) [A]	0.84 (0.63) [0.56]	D (D) [C]	0.85 (0.63) [0.56]	D (D) [D]
NBTR	0.49 (0.54) [0.33]	B (B) [B]	1.08 (0.96) [0.74]	E (D) [C]	1.12 (0.98) [0.76]	F (D) [C]
SBL	0.21 (0.45) [0.33]	B (B) [B]	0.52 (1.04) [0.74]	C (F) [C]	0.55 (1.06) [0.74]	C (F) [C]
SBTR	0.45 (0.50) [0.34]	C (C) [B]	0.81 (1.10) [0.80]	C (F) [C]	0.82 (1.12) [0.82]	D (F) [C]
Overall	**0.60 (0.64) [0.44]**	**C (C) [C]**	**1.05 (1.06) [0.82]**	**D (E) [C]**	**1.09 (1.07) [0.82]**	**E (E) [C]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under future background conditions, the intersection operates at overall v/c ratios of 1.05, 1.06, and 0.82 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under future total conditions, the intersection operates at overall v/c ratios of 1.09, 1.07, and 0.82 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under both future background and future total conditions, the morning and afternoon peak hour operations at the Clair Road / Gordon Street intersection are expected to operate over capacity in the 2038 horizon period. This condition is a result of significant planned area development, including significant planned development related to the Clair-Maltby Secondary Plan.

There are a number of forecasting assumptions that are relevant in assessing whether over capacity conditions at the Clair Road / Gordon Street intersection under future background scenarios are accurate to the 2038 horizon:

- This study assumes full build-out of the Clair-Maltby Secondary Plan under the 2038 horizon period. This may be considered a conservative assumption relative to the actual build-out timing for the entire Secondary Plan lands.
- The Clair-Maltby Secondary Plan Transportation Master Plan Study analyzed the maximum density development scenario, which assumed residential development in the order of 10,000 units and 333 jobs south of the Site. Numerous factors may contribute to either different or lesser development scenarios being realized long-term.
- This study does not include any specific reduction or significant rerouting of existing corridor traffic that may move from single occupant vehicle to transit, cycling or carpooling over time.

- This study only considers local area rerouting through the future collector road network, and particularly two future road extensions (Hawkins Drive and Poppy Drive West). Broader network expansion is proposed as part of Clair-Maltby Secondary Plan, including the extension of Clairfields Drive West as a north-south collector road west of Gordon Street. It is likely that this future extension, in tandem with the remaining planned network improvements, will provide relief at the Clair Road / Gordon Street intersection.
- This study includes a number of conservative forecasting and analysis assumptions, mentioned specifically in **Sections 10.0** and **11.0** that could overemphasize the area estimated vehicle traffic generation and operations results.

An alternative configuration for the Clair Road / Gordon Street intersection was considered in the Clair-Maltby Secondary Plan Transportation Master Plan Study, which included auxiliary right-turn lanes on the north, south, and west approaches and is assessed below. Assessment of 2038 forecast volumes on the alternative intersection configuration (with right-turn lanes) results in improved capacity results for vehicles, with the majority of individual movements operating at or below capacity. This configuration notably favours vehicle capacity over other modes in a conservative forecasting scenario and should not be considered in advance of monitoring growth of traffic and promoting transit priority and enhanced pedestrian and active transportation design in the local area to promote a shift to other modes.

A summary of 95th percentile queues for existing, future background, and future total traffic conditions during the 2038 horizon year under the baseline existing configuration are provided in **Table 34**.

Table 34 Clair Road / Gordon Street 95th Percentile Queues – 2038 Horizon Baseline Configuration

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
EBL	75m	#28.8 (#44.8) [31.2]	#49.3 (#76.9) [#38.5]	#49.3 (#78.3) [#40.1]
EBTR	200m	37.9 (77.8) [45.2]	62.6 (#157.6) [77.7]	63.4 (#156.3) [76.6]
WBL	30m	43.4 (26.3) [m25.1]	30.4 (m#43.0) [m#40.6]	29.4 (m#42.6) [m#39.8]
WBTR	180m	86.4 (37.7) [28.2]	#156.0 (75.1) [60.5]	#166.6 (74.3) [61.7]
NBL	60m	13.0 (7.6) [7.0]	#55.9 (m29.2) [27.0]	m#41.5 (m26.4) [m25.9]
NBTR	145m	55.8 (15.2) [17.7]	#177.1 (#139.7) [57.2]	#185.3 (#143.6) [63.7]
SBL	160m	14.7 (29.0) [28.3]	17.9 (#70.4) [#62.6]	18.8 (#73.2) [#65.6]
SBTR	195m	49.1 (59.6) [51.8]	98.0 (#176.5) [#143.1]	#101.0 (#181.9) [#147.2]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

As demonstrated above, under future background and future total conditions for the 2038 horizon period and consistent with both the 2028 and 2033 conditions, select left-turn movements (westbound left and eastbound left) are expected to have 95th percentile queues that exceed available storage. The westbound and eastbound left-turn lane lengths are currently constrained by back-to-back left turns along Clair Road. Future conditions do not significantly alter queuing conditions for either left turn (a change of 1-2 car lengths). As with previous recommendations for the 2028 and 2033 horizon conditions, the City could consider monitoring the queuing on left turns along Clair Road to better balance storage lane requirements, if required, as part of any future reconstruction projects along Clair Road.

Under 2038 horizon conditions, the northbound through movement is also expected to exceed available storage under both future background and future total scenarios. The Clair-Maltby Secondary Plan considers the extension of Clairfields Drive West as an alternative north-south collector corridor travelling parallel to the west of Gordon Street. While not directly considered as part of this study, this corridor will likely act as supplemental relief for the Clair Road / Gordon Street intersection.

Alternative Configuration

The *Clair-Maltby Secondary Plan Transportation Master Plan Study* considered an alternative configuration for the Clair Road / Gordon Street intersection, which included auxiliary right-turn lanes on the north, south, and west approaches. A summary of intersection capacity results for future background and future total traffic conditions during the 2038 horizon year under the alternative lane configuration recommended in the *Clair-Maltby Secondary Plan Transportation Master Plan Study* are provided in **Table 35**.

Table 35 Clair Road / Gordon Street Capacity Results – 2038 Horizon Alternative Configuration

Movement	Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS
EBL	0.84 (0.94) [0.74]	D (E) [C]	0.85 (0.98) [0.76]	D (E) [D]
EBT	0.47 (0.90) [0.72]	C (D) [C]	0.46 (0.90) [0.71]	C (D) [C]
EBR	0.07 (0.10) [0.06]	C (C) [C]	0.07 (0.10) [0.06]	C (C) [C]
WBL	0.49 (0.76) [0.70]	C (D) [C]	0.48 (0.77) [0.69]	C (D) [C]
WBTR	1.03 (0.66) [0.73]	E (C) [C]	1.05 (0.67) [0.74]	E (C) [C]
NBL	0.63 (0.63) [0.47]	C (D) [C]	0.66 (0.63) [0.48]	C (D) [C]
NBT	0.94 (0.86) [0.63]	D (C) [C]	1.00 (0.86) [0.65]	D (C) [C]
NBR	0.16 (0.13) [0.07]	C (C) [B]	0.16 (0.14) [0.07]	C (C) [C]
SBL	0.52 (0.96) [0.65]	C (E) [B]	0.55 (1.00) [0.66]	C (E) [B]
SBT	0.56 (0.93) [0.69]	C (D) [C]	0.58 (0.94) [0.70]	C (D) [C]
SBR	0.21 (0.20) [0.11]	C (C) [B]	0.22 (0.20) [0.11]	C (C) [B]
Overall	**0.95 (0.97) [0.73]**	**D (D) [C]**	**0.99 (1.01) [0.75]**	**D (D) [C]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under future background conditions, the intersection operates at overall v/c ratios of 0.95, 0.97, and 0.73 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under 2038 future total conditions, the intersection operates at overall v/c ratios of 0.99, 1.01, and 0.75 during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Both future background and future total conditions are demonstrated to significantly improve through the application of the recommended intersection configuration presented in the *Clair-Maltby Secondary Plan Transportation Master Plan Study,* and are comparable to those provided in the study under future total conditions when the recommended configuration was applied. The potential implementation of the recommended configuration changes to the Clair Road / Gordon Street intersection, as well as additional mitigation measures, are discussed in greater detail, below.

11.5.1.4 MITIGATION MEASURES

Significant planned area developments, including the Clair-Maltby Secondary Plan and additional area developments, are expected to increase long-term travel demand on the existing and future South Guelph road network. As indicated in this study, continued growth in the area is expected to result in the Clair Road / Gordon Street intersection exceeding capacity long-term based on the forecast estimates, particularly at the build out of development associated with the Clair-Maltby Secondary Plan. Notwithstanding, opportunities exist to improve long-term area transportation network capacity, as summarized through the potential mitigation measures provided, below.

- **Future configuration change at the Clair Road / Gordon Street intersection.** As indicated above, implementation of the intersection configuration recommended in the *Clair-Maltby Secondary Plan Transportation Master Plan Study* would be expected to improve traffic operations for vehicle capacity in the long-term. The provision of auxiliary right-turn lanes for the north, south, and west approaches would improve v/c ratios along both corridors and improve intersection through-put. However, reconfiguration of this intersection to increase vehicular capacity will ultimately reduce the pedestrian and active transportation-oriented qualities envisioned for both corridors in the long-term by increasing required crossing distances, adding travel lanes, and generally supporting increased vehicle use in the area. This configuration should not be considered in advance of monitoring growth of traffic and promoting alternative travel options, including transit and active transportation, in the local area to encourage a shift to other modes.

- **Signal timing plan adjustments.** In conjunction with the potential future reconfiguration of the Clair Road / Gordon Street intersection, increasing the signal's cycle length to 110 seconds would increase intersection throughput by permitting extended green times for all movements. Consideration of changes to cycle length should be considered in tandem with supporting a pedestrian and active transportation-oriented environment in the area.

- **Increased investment in transit and active transportation infrastructure.** As an alternative to increasing vehicle capacity, opportunities may be explored to reduce vehicular travel demand in South Guelph through continued and increased investment in transit services and active transportation infrastructure. The Guelph TMP and Clair-Maltby Secondary Plan both envision Gordon Street as an enhanced corridor that supports high levels of transit services, augmented with quality active transportation infrastructure to provide mode choice to residents and visitors for local and City-wide trips. Increasing the proportion of trips using alternative travel modes long-term will reduce vehicular travel demand, and improve network capacity, including at the Clair Road / Gordon Street intersection.

- **Increased use of area collector road network.** As the Poppy Drive extension is completed to the west and the Clair Maltby Secondary Plan collector road networks (north-south and east-west) are completed to the south, further routing options will become available to existing vehicle trips, that are not captured in detail as part of this study. Poppy Drive, under existing and future total conditions, is underutilized as a collector corridor and has the capacity to accommodate shifts in traffic from Clair Road while remaining within a Collector road designation and characteristics.

While there are no immediate capacity issues observed at the Clair Road / Gordon Street intersection, significant planned area development traffic, if realized based on conservative forecasting assumptions, is expected to constrain this intersection in medium- and long-term planning horizons. We recommend that the City continue to monitor intersection operations, particularly as the Clair-Maltby Secondary Plan nears build-out, and assess potential mitigation measures in accordance with City transportation and mobility objectives.

Under all scenarios, Site related impacts to the Clair Road East / Gordon Street intersection are minor.

11.5.2 Other Study Area Intersection Capacity Results

The Clair Road East / Farley Drive intersection and Poppy Drive / Gordon Street intersection both operate with a 90 second cycle length during the weekday morning, weekday afternoon, and Saturday peak hours. The existing cycle length was maintained for all scenarios, with optimized splits employed for future background and future total conditions.

2028 Horizon Year

A summary of intersection capacity results for existing, future background, and future total traffic conditions during the 2028 horizon year are provided in **Table 36**.

Table 36 Other Area Intersection Capacity Results – 2028 Horizon

Movement	Existing Traffic		Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS	V/C	LOS
Clair Road East / Farley Drive						
EBL	0.18 (0.29) [0.19]	A (A) [A]	0.27 (0.35) [0.23]	A (A) [A]	0.28 (0.35) [0.23]	A (A) [A]
EBTR	0.16 (0.34) [0.23]	A (A) [A]	0.21 (0.46) [0.33]	A (A) [A]	0.22 (0.46) [0.33]	A (A) [A]
WBL	0.02 (0.10) [0.07]	A (A) [A]	0.02 (0.12) [0.08]	A (A) [A]	0.02 (0.14) [0.09]	A (A) [A]
WBTR	0.33 (0.22) [0.20]	A (B) [B]	0.46 (0.31) [0.30]	B (B) [B]	0.48 (0.31) [0.30]	B (B) [B]
NBL	0.30 (0.61) [0.82]	D (D) [E]	0.30 (0.60) [0.82]	D (D) [E]	0.71 (0.71) [0.88]	D (D) [E]
NBTR	0.08 (0.18) [0.24]	C (C) [C]	0.07 (0.18) [0.22]	C (C) [C]	0.07 (0.14) [0.19]	C (C) [C]
SBTLR	0.39 (0.70) [0.71]	D (D) [D]	0.45 (0.73) [0.76]	D (D) [D]	0.41 (0.73) [0.72]	D (D) [D]
Overall	**0.33 (0.43) [0.39]**	**B (B) [B]**	**0.44 (0.53) [0.47]**	**B (B) [B]**	**0.50 (0.52) [0.48]**	**B (B) [B]**
Poppy Drive / Gordon Street						
EBTLR	0.14 (0.17) [0.16]	D (C) [C]	0.25 (0.29) [0.23]	D (D) [C]	0.22 (0.30) [0.23]	C (D) [C]
WBTLR	0.24 (0.42) [0.43]	D (D) [D]	0.27 (0.46) [0.51]	D (D) [D]	0.54 (0.49) [0.56]	D (D) [D]
NBL	0.02 (0.07) [0.06]	A (A) [A]	0.04 (0.09) [0.08]	A (A) [A]	0.04 (0.10) [0.08]	A (A) [A]
NBTR	0.29 (0.35) [0.27]	A (A) [A]	0.40 (0.45) [0.37]	A (A) [A]	0.43 (0.46) [0.38]	A (A) [A]
SBL	0.05 (0.16) [0.11]	A (A) [A]	0.06 (0.20) [0.14]	A (A) [A]	0.09 (0.26) [0.18]	A (A) [A]
SBTR	0.23 (0.25) [0.26]	A (A) [A]	0.30 (0.36) [0.36]	A (A) [A]	0.31 (0.36) [0.37]	A (A) [A]
Overall	**0.27 (0.35) [0.28]**	**A (B) [A]**	**0.37 (0.43) [0.38]**	**A (B) [B]**	**0.43 (0.45) [0.40]**	**B (B) [B]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under existing conditions, both the Clair Road East / Farley Drive and Poppy Drive / Gordon Street intersections operate at acceptable levels of capacity during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Under future background and future total conditions, the intersections continue to operate at acceptable levels of capacity during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

In addition to overall intersection capacities, all individual movements under all scenarios are expected to operate within capacity and at acceptable levels of service.

A summary of 95th percentile queues for existing, future background, and future total traffic conditions during the 2028 horizon year are provided in **Table 37**.

Table 37 Other Area Intersection 95th Percentile Queues – 2028 Horizon

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
Clair Road East / Farley Drive				
EBL	130 m	10.4 (m14.0) [21.0]	m21.8 (m9.6) [14.9]	m21.7 (m9.4) [17.3]
EBT	180 m	32.0 (65.5) [36.4]	41.2 (m88.2) [57.2]	41.8 (m88.0) [57.3]
WBL	65 m	2.7 (7.3) [6.8]	2.7 (7.3) [6.9]	2.7 (7.8) [7.7]
WBT	555 m	60.3 (35.4) [31.1]	88.2 (51.1) [47.2]	88.2 (51.1) [48.3]
NBL	40 m	10.7 (28.0) [41.1]	10.8 (28.2) [#42.1]	25.0 (33.0) [#45.1]
NBT	35 m	7.9 (19.0) [23.9]	7.9 (19.0) [23.4]	7.9 (15.9) [19.9]
SBT	130 m	26.9 (58.3) [63.8]	30.6 (64.2) [70.3]	30.6 (62.2) [65.5]
Poppy Drive / Gordon Street				
EBT	200 m	9.6 (14.1) [13.1]	13.1 (20.0) [16.3]	13.2 (20.1) [16.3]
WBT	795 m	18.6 (27.2) [28.0]	19.7 (30.2) [33.5]	36.0 (32.5) [37.9]
NBL	95 m	2.4 (6.7) [5.8]	3.9 (7.2) [6.5]	3.9 (7.2) [6.5]
NBT	170 m	50.6 (62.9) [46.7]	74.7 (83.6) [65.5]	76.1 (87.2) [66.8]
SBL	50 m	m3.2 (m6.7) [6.1]	m2.3 (m4.8) [m5.1]	m3.2 (m6.0) [m6.3]
SBT	145 m	38.5 (29.6) [30.3]	44.5 (m38.6) [45.5]	43.8 (m37.4) [46.4]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

As demonstrated above, under existing, future background, and future total traffic conditions for the 2028 horizon period, the northbound left turning movement (95th percentile) at the Clair Road East / Farley Drive intersection is reported to approach or exceed available storage. There are numerous modelling and network assumptions to be considered when assessing the acceptability of future modelled queuing activity for this turning movement:

- The observed 95th percentile queue lengths for the northbound left turn at the Clair Road East / Farley Drive intersection (provided in **Section 10.3.2**) are shorter than what is modelled in Synchro for existing conditions. The observed queuing activity suggests a 95th percentile queue length of approximately 35 metres in the existing condition, whereas Synchro indicates a queue length of approximately 41 metres.
- 95th percentile queues represent an occasional condition at peak times – 50th percentile queues, which are more commonly observed, regularly do not exceed the available storage.

- Synchro Version 11 uses a conservative assumption for the stored passenger car length of 8 metres. This default parameter may result in overestimated 95th percentile queue lengths, as typical vehicle lengths do not exceed approximately 6 metres. Additionally, in a constrained scenario, passenger vehicles are more likely to queue closer together, resulting in a reduced effective vehicle length.
- The forecast queue lengths do not increase significantly under future conditions (about 1 car length or less), and in some cases queuing under future conditions improves as a result of actuated green time variation between forecasted scenarios.
- Future Site access connections to Poppy Drive, with enhanced routing choice, also reduce demand for specific movements at individual intersections across the site.

Based on the above considerations, the future queuing activity for the south approach of the Clair Road East / Farley Drive intersection during the 2028 horizon period is not expected to present capacity or functional operation concerns within the Site or on the area road network.

2033 Horizon Year

A summary of intersection capacity results for existing, future background, and future total traffic conditions during the 2033 horizon year are provided in **Table 38**.

Table 38 Other Area Intersection Capacity Results – 2033 Horizon

Movement	Existing Traffic		Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS	V/C	LOS
Clair Road East / Farley Drive						
EBL	0.18 (0.29) [0.19]	A (A) [A]	0.30 (0.39) [0.25]	A (A) [A]	0.32 (0.38) [0.25]	A (A) [A]
EBTR	0.16 (0.34) [0.23]	A (A) [A]	0.23 (0.52) [0.38]	A (B) [A]	0.25 (0.54) [0.38]	A (B) [A]
WBL	0.02 (0.10) [0.07]	A (A) [A]	0.02 (0.15) [0.09]	A (A) [A]	0.03 (0.17) [0.11]	A (A) [A]
WBTR	0.33 (0.22) [0.20]	A (B) [B]	0.50 (0.35) [0.33]	B (B) [B]	0.53 (0.35) [0.33]	A (B) [B]
NBL	0.30 (0.61) [0.82]	D (D) [E]	0.27 (0.50) [0.72]	D (C) [D]	0.77 (0.66) [0.84]	E (D) [E]
NBTR	0.08 (0.18) [0.24]	C (C) [C]	0.07 (0.16) [0.21]	C (C) [C]	0.06 (0.12) [0.17]	C (C) [C]
SBTLR	0.39 (0.70) [0.71]	D (D) [D]	0.50 (0.76) [0.77]	D (D) [D]	0.43 (0.76) [0.74]	C (D) [D]
Overall	**0.33 (0.43) [0.39]**	**B (B) [B]**	**0.48 (0.59) [0.49]**	**B (B) [B]**	**0.56 (0.60) [0.52]**	**B (B) [B]**

Table Continued on Next Page

Poppy Drive / Gordon Street						
EBTLR	0.14 (0.17) [0.16]	D (C) [C]	0.35 (0.39) [0.32]	D (D) [C]	0.25 (0.37) [0.29]	C (C) [C]
WBTLR	0.24 (0.42) [0.43]	D (D) [D]	0.39 (0.58) [0.57]	D (D) [D]	0.71 (0.65) [0.68]	D (D) [D]
NBL	0.02 (0.07) [0.06]	A (A) [A]	0.13 (0.20) [0.17]	A (A) [A]	0.15 (0.21) [0.18]	A (A) [A]
NBTR	0.29 (0.35) [0.27]	A (A) [A]	0.46 (0.49) [0.41]	A (B) [A]	0.53 (0.53) [0.44]	B (B) [B]
SBL	0.05 (0.16) [0.11]	A (A) [A]	0.07 (0.22) [0.15]	A (A) [A]	0.13 (0.32) [0.21]	A (A) [A]
SBTR	0.23 (0.25) [0.26]	A (A) [A]	0.33 (0.43) [0.43]	A (B) [A]	0.37 (0.44) [0.44]	A (B) [A]
Overall	**0.27 (0.35) [0.28]**	**A (B) [A]**	**0.44 (0.49) [0.43]**	**B (B) [B]**	**0.55 (0.54) [0.48]**	**B (B) [B]**
Clair Road East / Hawkins Drive						
EBTR	-- (--) [--]	-- (--) [--]	0.23 (0.43) [0.30]	A (A) [A]	0.24 (0.43) [0.30]	A (A) [A]
WBL	-- (--) [--]	-- (--) [--]	0.09 (0.21) [0.21]	A (A) [A]	0.11 (0.22) [0.20]	A (A) [A]
WBT	-- (--) [--]	-- (--) [--]	0.40 (0.23) [0.21]	A (A) [A]	0.41 (0.24) [0.21]	A (A) [A]
NBLR	-- (--) [--]	-- (--) [--]	0.20 (0.16) [0.17]	D (C) [C]	0.19 (0.16) [0.17]	D (D) [D]
Overall	**-- (--) [--]**	**-- (--) [--]**	**0.39 (0.37) [0.28]**	**A (A) [A]**	**0.39 (0.37) [0.28]**	**A (A) [A]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under future background and future total conditions, both the Clair Road East / Farley Drive, Poppy Drive / Gordon Street, and Clair Road East / Hawkins Drive intersections continue to operate at acceptable levels of capacity during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

In addition to overall intersection capacities, all individual movements under all scenarios are expected to operate within capacity and at acceptable levels of service.

A summary of 95th percentile queues for existing, future background, and future total traffic conditions during the 2033 horizon year are provided in **Table 39**.

Table 39 Other Area Intersection 95th Percentile Queues – 2033 Horizon

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
Clair Road East / Farley Drive				
EBL	130 m	10.4 (m14.0) [21.0]	m22.4 (m22.8) [19.8]	m22.4 (m20.7) [m22.6]
EBT	180 m	32.0 (65.5) [36.4]	m47.9 (m101.8) [67.6]	m48.0 (m98.8) [72.1]
WBL	65 m	2.7 (7.3) [6.8]	2.7 (7.9) [7.2]	m0.2 (4.7) [3.0]
WBT	135 m	60.3 (35.4) [31.1]	97.6 (55.3) [52.0]	98.3 (55.7) [54.0]
NBL	40 m	10.7 (28.0) [41.1]	10.7 (26.5) [39.3]	32.6 (34.4) [46.7]
NBT	35 m	7.9 (19.0) [23.9]	7.9 (18.1) [22.7]	7.9 (15.3) [19.2]
SBT	130 m	26.9 (58.3) [63.8]	33.9 (71.0) [74.6]	33.9 (69.4) [69.5]
Poppy Drive / Gordon Street				
EBT	200 m	9.6 (14.1) [13.1]	19.1 (26.6) [22.4]	18.7 (26.7) [22.6]
WBT	795 m	18.6 (27.2) [28.0]	25.8 (37.1) [38.9]	55.9 (45.6) [51.8]
NBL	95 m	2.4 (6.7) [5.8]	10.0 (11.8) [10.3]	10.6 (11.8) [10.3]
NBT	170 m	50.6 (62.9) [46.7]	88.5 (92.6) [72.6]	95.5 (99.3) [75.4]
SBL	50 m	m3.2 (m6.7) [6.1]	m2.5 (m3.6) [m4.9]	m4.3 (m5.2) [m5.8]
SBT	145 m	38.5 (29.6) [30.3]	35.1 (m34.6) [50.3]	33.7 (m31.8) [48.4]
Clair Road East / Hawkins Drive				
EBT	135 m	-- (--) [--]	16.0 (22.0) [25.3]	15.8 (21.9) [25.0]
WBL	25 m	-- (--) [--]	8.8 (12.4) [16.0]	10.1 (12.8) [15.5]
WBT	395 m	-- (--) [--]	67.1 (38.0) [32.7]	67.7 (38.6) [33.5]
NBL	160 m	-- (--) [--]	13.8 (14.0) [15.4]	14.7 (14.4) [15.4]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

As demonstrated above, under future background and future total traffic conditions for the 2033 horizon period, the northbound left turning movement (95th percentile) at the Clair Road East / Farley Drive intersection is reported to approach or exceed available storage. There are numerous modelling and network assumptions to be considered when assessing the acceptability of future modelled queuing activity for this turning movement:

- The observed 95th percentile queue lengths for the northbound left turn at the Clair Road East / Farley Drive intersection (provided in **Section 10.3.2**) are shorter than what is modelled in Synchro for existing conditions. The observed queuing activity suggests a 95th percentile queue length of approximately 35 metres in the existing condition, whereas Synchro indicates a queue length of approximately 41 metres.

- 95th percentile queues represent an occasional condition at peak times – 50th percentile queues, which are more commonly observed, regularly do not exceed the available storage.
- Synchro Version 11 uses a conservative assumption for the stored passenger car length of 8 metres. This default parameter may result in overestimated 95th percentile queue lengths, as typical vehicle lengths do not exceed approximately 6 metres. Additionally, in a constrained scenario, passenger vehicles are more likely to queue closer together, resulting in a reduced effective vehicle length.
- The forecast queue lengths do not increase significantly under future conditions (about 1 car length or less), and in some cases queuing under future conditions improves as a result of actuated green time variation between forecasted scenarios.
- Future Site access connections to Poppy Drive, with enhanced routing choice, also reduce demand for specific movements at individual intersections across the site.

Based on the above considerations, the future queuing activity for the south approach of the Clair Road East / Farley Drive intersection during the 2033 horizon period is not expected to present capacity or functional operation concerns within the Site or on the area road network.

2038 Horizon Year

A summary of intersection capacity results for existing, future background, and future total traffic conditions during the 2038 horizon year are provided in **Table 40**.

Table 40 Other Area Intersection Capacity Results – 2038 Horizon

Movement	Existing Traffic		Future Background Traffic		Future Total Traffic	
	V/C	LOS	V/C	LOS	V/C	LOS
Clair Road East / Farley Drive						
EBL	0.18 (0.29) [0.19]	A (A) [A]	0.37 (0.46) [0.31]	A (A) [A]	0.37 (0.45) [0.31]	A (A) [A]
EBTR	0.16 (0.34) [0.23]	A (A) [A]	0.27 (0.62) [0.47]	A (B) [B]	0.28 (0.61) [0.45]	A (B) [B]
WBL	0.02 (0.10) [0.07]	A (A) [A]	0.02 (0.18) [0.11]	A (B) [B]	0.02 (0.18) [0.11]	A (A) [A]
WBTR	0.33 (0.22) [0.20]	A (B) [B]	0.59 (0.43) [0.41]	B (B) [B]	0.59 (0.43) [0.40]	A (B) [B]
NBL	0.30 (0.61) [0.82]	D (D) [E]	0.25 (0.43) [0.61]	C (C) [C]	0.72 (0.51) [0.69]	E (C) [D]
NBTR	0.08 (0.18) [0.24]	C (C) [C]	0.07 (0.14) [0.18]	C (C) [C]	0.08 (0.12) [0.16]	C (C) [C]
SBTLR	0.39 (0.70) [0.71]	D (D) [D]	0.57 (0.81) [0.80]	D (D) [D]	0.56 (0.81) [0.80]	D (D) [D]
Overall	**0.33 (0.43) [0.39]**	**B (B) [B]**	**0.56 (0.68) [0.58]**	**B (B) [B]**	**0.59 (0.67) [0.57]**	**B (B) [B]**

Table Continued on Next Page

Poppy Drive / Gordon Street						
EBTLR	0.14 (0.17) [0.16]	D (C) [C]	0.50 (0.66) [0.53]	D (D) [D]	0.40 (0.69) [0.51]	C (D) [C]
WBTLR	0.24 (0.42) [0.43]	D (D) [D]	0.55 (0.75) [0.71]	D (D) [D]	0.84 (0.83) [0.80]	D (D) [D]
NBL	0.02 (0.07) [0.06]	A (A) [A]	0.32 (0.43) [0.37]	A (A) [A]	0.38 (0.47) [0.41]	A (B) [B]
NBTR	0.29 (0.35) [0.27]	A (A) [A]	0.62 (0.61) [0.52]	B (B) [B]	0.75 (0.68) [0.58]	B (B) [B]
SBL	0.05 (0.16) [0.11]	A (A) [A]	0.11 (0.29) [0.20]	A (A) [A]	0.19 (0.43) [0.30]	A (B) [A]
SBTR	0.23 (0.25) [0.26]	A (A) [A]	0.41 (0.61) [0.60]	A (B) [A]	0.48 (0.64) [0.65]	B (B) [A]
Overall	**0.27 (0.35) [0.28]**	**A (B) [A]**	**0.60 (0.64) [0.60]**	**B (B) [B]**	**0.76 (0.71) [0.66]**	**B (B) [B]**
Clair Road East / Hawkins Drive						
EBTR	-- (--) [--]	-- (--) [--]	0.28 (0.52) [0.37]	A (A) [A]	0.29 (0.53) [0.37]	A (A) [A]
WBL	-- (--) [--]	-- (--) [--]	0.15 (0.36) [0.31]	A (A) [A]	0.17 (0.38) [0.32]	A (A) [A]
WBT	-- (--) [--]	-- (--) [--]	0.46 (0.26) [0.24]	A (A) [A]	0.46 (0.26) [0.24]	A (A) [A]
NBLR	-- (--) [--]	-- (--) [--]	0.25 (0.23) [0.22]	D (D) [D]	0.25 (0.22) [0.21]	D (D) [D]
Overall	**-- (--) [--]**	**-- (--) [--]**	**0.44 (0.46) [0.34]**	**A (A) [A]**	**0.44 (0.46) [0.34]**	**A (A) [A]**

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

Under future background and future total conditions, both the Clair Road East / Farley Drive, Poppy Drive / Gordon Street, and Clair Road East / Hawkins Drive intersections continue to operate at acceptable levels of capacity during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

In addition to overall intersection capacities, all individual movements under all scenarios are expected to operate within capacity and at acceptable levels of service.

A summary of 95th percentile queues for existing, future background, and future total traffic conditions during the 2038 horizon year are provided in **Table 41**.

Table 41 Other Area Intersection 95th Percentile Queues – 2038 Horizon

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
Clair Road East / Farley Drive				
EBL	130 m	10.4 (m14.0) [21.0]	m24.2 (m18.2) [m26.5]	m24.0 (m17.6) [m25.7]
EBT	180 m	32.0 (65.5) [36.4]	m55.8 (m101.5) [89.4]	m56.5 (m100.4) [88.4]
WBL	65 m	2.7 (7.3) [6.8]	2.7 (8.3) [8.0]	m0.2 (4.0) [2.4]
WBT	135 m	60.3 (35.4) [31.1]	113.0 (67.4) [62.3]	114.7 (66.6) [62.8]
NBL	40 m	10.7 (28.0) [41.1]	10.7 (25.6) [36.3]	26.4 (30.4) [41.5]
NBT	35 m	7.9 (19.0) [23.9]	7.9 (17.7) [21.1]	9.2 (15.4) [18.8]
SBT	130 m	26.9 (58.3) [63.8]	39.9 (83.5) [83.7]	40.0 (83.3) [81.7]
Poppy Drive / Gordon Street				
EBT	200 m	9.6 (14.1) [13.1]	28.2 (47.6) [37.3]	31.8 (56.6) [40.9]
WBT	795 m	18.6 (27.2) [28.0]	33.6 (46.5) [47.6]	#84.3 (61.6) [65.5]
NBL	95 m	2.4 (6.7) [5.8]	19.5 (18.4) [15.8]	20.2 (19.1) [17.5]
NBT	170 m	50.6 (62.9) [46.7]	133.3 (116.4) [94.4]	140.7 (124.6) [104.6]
SBL	50 m	m3.2 (m6.7) [6.1]	m1.8 (m2.4) [m3.0]	m2.5 (m3.3) [m4.2]
SBT	145 m	38.5 (29.6) [30.3]	m31.7 (m26.3) [34.5]	m31.1 (m25.4) [34.1]
Clair Road East / Hawkins Drive				
EBT	135 m	-- (--) [--]	18.8 (27.2) [32.7]	20.6 (30.9) [29.7]
WBL	25 m	-- (--) [--]	11.8 (18.6) [20.6]	13.0 (19.6) [20.6]
WBT	395 m	-- (--) [--]	78.3 (42.2) [37.3]	78.3 (42.2) [37.3]
NBL	160 m	-- (--) [--]	18.1 (17.8) [18.4]	m17.7 (m17.9) [18.1]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

As demonstrated above, under future background and future total traffic conditions for the 2038 horizon period, the northbound left turning movement (95th percentile) at the Clair Road East / Farley Drive intersection is reported to approach or exceed available storage. There are numerous modelling and network assumptions to be considered when assessing the acceptability of future modelled queuing activity for this turning movement:

- The observed 95th percentile queue lengths for the northbound left turn at the Clair Road East / Farley Drive intersection (provided in **Section 10.3.2**) are shorter than what is modelled in Synchro for existing conditions. The observed queuing activity suggests a 95th percentile queue length of approximately 35 metres in the existing condition, whereas Synchro indicates a queue length of approximately 41 metres.
- 95th percentile queues represent an occasional condition at peak times – 50th percentile queues, which are more commonly observed, regularly do not exceed the available storage.
- Synchro Version 11 uses a conservative assumption for the stored passenger car length of 8 metres. This default parameter may result in overestimated 95th percentile queue lengths, as typical vehicle lengths do not exceed approximately 6 metres. Additionally, in a constrained scenario, passenger vehicles are more likely to queue closer together, resulting in a reduced effective vehicle length.
- The forecast queue lengths do not increase significantly under future conditions (about 1 car length or less), and in some cases queuing under future conditions improves as a result of actuated green time variation between forecasted scenarios.
- Future Site access connections to Poppy Drive, with enhanced routing choice, also reduce demand for specific movements at individual intersections across the site.

Based on the above considerations, the future queuing activity for the south approach of the Clair Road East / Farley Drive intersection during the 2038 horizon period is not expected to present capacity or functional operation concerns within the Site or on the area road network.

11.6 Unsignalized Intersections Analysis Results

Traffic operations analysis results for the area unsignalized intersections under existing, future background, and future total conditions during the 2028, 2033, and 2038 horizon periods are summarized below.

11.6.1 2028 Horizon Year

A summary of unsignalized intersection capacity results for existing, future background, and future total traffic conditions during the 2028 horizon year are provided in **Table 42**.

Table 42 Unsignalized Intersection Capacity Results – 2028 Horizon

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Clair Road East / Hawkins Drive						
EBT	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
EBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
WBTL	A (A) [A]	1.1 (2.8) [3.7]	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]
WBT	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
WBL	-- (--) [--]	-- (--) [--]	A (A) [A]	8.3 (9.4) [8.8]	A (A) [A]	8.3 (9.4) [8.8]
NBLR	B (B) [B]	11.6 (11.2) [11.7]	B (B) [B]	12.2 (11.7) [12.3]	B (B) [B]	12.1 (11.8) [12.2]
Poppy Drive East / Hawkins Drive						
EBTLR	A (A) [A]	3.4 (2.2) [1.9]	A (A) [A]	5.0 (3.3) [3.8]	A (A) [A]	5.0 (3.3) [3.8]
WBTLR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
NBTLR	B (B) [A]	10.5 (11.2) [9.8]	B (B) [B]	11.3 (12.2) [10.5]	B (B) [B]	11.3 (12.2) [10.5]
SBTLR	A (B) [A]	9.7 (10.2) [9.4]	A (B) [A]	9.8 (10.3) [9.5]	A (B) [A]	9.8 (10.3) [9.5]
Poppy Drive East / Farley Drive						
EBTL	A (A) [A]	2.0 (1.1) [2.2]	A (A) [A]	1.3 (1.0) [1.7]	A (A) [A]	0.5 (0.2) [0.0]
WBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
SBLR	A (A) [A]	9.4 (9.7) [9.3]	A (A) [A]	9.5 (9.9) [9.4]	B (B) [A]	10.1 (10.5) [9.7]
Poppy Drive East / 1888 Gordon Street Site Access / Internal N-S Street						
EBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	-- (--) [--]	-- (--) [--]
EBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	2.4 (2.1) [2.3]
WBTL	A (A) [A]	0.4 (1.0) [0.6]	A (A) [A]	0.4 (0.9) [0.5]	A (A) [A]	0.4 (0.9) [0.5]
NBLR	A (A) [A]	9.4 (9.9) [9.3]	A (B) [A]	9.6 (10.2) [9.6]	-- (--) [--]	-- (--) [--]
NBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	B (B) [B]	11.1 (12.1) [10.8]
SBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	9.2 (8.9) [8.9]

Table Continued on Next Page

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Farley Drive / Internal E-W Street						
EBTLR	A (A) [A]	7.6 (8.9) [9.5]	A (A) [A]	7.6 (8.9) [9.5]	A (A) [A]	7.7 (8.8) [9.4]
WBTLR	A (A) [A]	7.1 (8.0) [8.6]	A (A) [A]	7.1 (8.0) [8.6]	A (A) [A]	7.1 (7.9) [8.5]
NBTLR	A (A) [A]	7.3 (8.1) [8.7]	A (A) [A]	7.3 (8.1) [8.7]	A (A) [A]	7.4 (8.0) [8.3]
SBTLR	A (A) [A]	7.1 (9.1) [10.0]	A (A) [A]	7.1 (9.1) [10.0]	A (A) [A]	7.5 (9.3) [9.8]
Hawkins Drive / Internal E-W Street						
EBLR	A (A) [A]	9.2 (9.4) [9.5]	A (A) [A]	9.4 (9.6) [9.7]	A (A) [A]	9.5 (9.6) [9.6]
NBTL	A (A) [A]	0.0 (0.0) [1.2]	A (A) [A]	0.0 (0.0) [0.7]	A (A) [A]	0.0 (0.0) [0.7]
SBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
Farley Drive / Existing Adjacent Site Access / Existing Site Access						
EBTLR	A (A) [A]	6.9 (7.5) [7.7]	A (A) [A]	6.9 (7.5) [7.7]	-- (--) [--]	-- (--) [--]
EBLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	6.8 (7.3) [7.4]
WBTLR	A (A) [A]	6.5 (7.1) [7.2]	A (A) [A]	6.5 (7.1) [7.2]	-- (--) [--]	-- (--) [--]
NBTLR	A (A) [A]	7.3 (7.3) [7.3]	A (A) [A]	7.3 (7.3) [7.3]	-- (--) [--]	-- (--) [--]
NBTL	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.2 (7.2) [7.3]
SBTLR	A (A) [A]	7.2 (7.5) [7.7]	A (A) [A]	7.2 (7.5) [7.7]	-- (--) [--]	-- (--) [--]
SBTR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.1 (7.0) [7.0]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

A summary of 95th percentile queues for the Clair Road East / Hawkins Drive intersection under existing, future background, and future total traffic conditions during the 2028 horizon year are provided in **Table 43**.

Table 43 Clair Road East / Hawkins Drive 95th Percentile Queues – 2028 Horizon

Movement	Approximate Existing Available Storage (m)[2]	Existing Traffic	Future Background Traffic	Future Total Traffic
WBTL	395 m	0.6 (1.4) [1.8]	0.8 (1.9) [2.4]	0.9 (1.9) [2.1]
NBLR	160 m	2.3 (4.0) [4.0]	3.9 (5.6) [5.5]	4.3 (5.2) [5.0]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].
2. Storage measurement approximate. Turning Lane Storage measured as Storage plus ~1/3 of taper; Through Lane Storage measured from stop-bar to pedestrian crosswalk at upstream intersection.

11.6.2 2033 Horizon Year

A summary of unsignalized intersection capacity results for existing, future background, and future total traffic conditions during the 2033 horizon year are provided in **Table 44**.

Table 44 Unsignalized Intersection Capacity Results – 2033 Horizon

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Poppy Drive East / Hawkins Drive						
EBTLR	A (A) [A]	3.4 (2.2) [1.9]	A (A) [A]	4.0 (2.9) [2.8]	A (A) [A]	4.2 (2.9) [3.0]
WBTLR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	1.2 (3.4) [2.8]	A (A) [A]	1.2 (3.4) [2.8]
NBTLR	B (B) [A]	10.5 (11.2) [9.8]	B (B) [B]	11.9 (13.7) [11.2]	B (B) [B]	12.0 (13.7) [11.2]
SBTLR	A (B) [A]	9.7 (10.2) [9.4]	B (B) [B]	11.3 (13.4) [11.4]	B (B) [B]	11.4 (13.4) [11.5]
Poppy Drive East / Farley Drive						
EBTL	A (A) [A]	2.0 (1.1) [2.2]	A (A) [A]	1.0 (0.9) [1.6]	A (A) [A]	1.1 (0.7) [0.5]
WBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
SBLR	A (A) [A]	9.4 (9.7) [9.3]	A (B) [A]	9.8 (10.1) [9.6]	B (B) [B]	10.5 (10.9) [10.0]
Poppy Drive East / 1888 Gordon Street Site Access / Internal N-S Street						
EBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	-- (--) [--]	-- (--) [--]
EBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	2.2 (2.3) [2.3]
WBTL	A (A) [A]	0.4 (1.0) [0.6]	A (A) [A]	0.3 (0.8) [0.4]	A (A) [A]	0.3 (0.8) [0.4]
NBLR	A (A) [A]	9.4 (9.9) [9.3]	A (B) [A]	9.8 (10.4) [9.8]	-- (--) [--]	-- (--) [--]
NBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	B (B) [B]	12.1 (13.0) [11.3]
SBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	9.6 (9.0) [9.4]
Farley Drive / Internal E-W Street						
EBTLR	A (A) [A]	7.6 (8.9) [9.5]	A (A) [A]	7.6 (8.9) [9.5]	A (A) [A]	7.8 (9.0) [9.6]
WBTLR	A (A) [A]	7.1 (8.0) [8.6]	A (A) [A]	7.1 (8.0) [8.6]	A (A) [A]	7.6 (8.3) [9.0]
NBTLR	A (A) [A]	7.3 (8.1) [8.7]	A (A) [A]	7.3 (8.1) [8.7]	A (A) [A]	7.3 (8.1) [8.5]
SBTLR	A (A) [A]	7.1 (9.1) [10.0]	A (A) [A]	7.1 (9.1) [10.0]	A (A) [B]	7.9 (9.7) [10.3]
Hawkins Drive / Internal E-W Street						
EBLR	A (A) [A]	9.2 (9.4) [9.5]	A (B) [B]	9.8 (10.1) [10.4]	B (B) [B]	10.1 (10.1) [10.4]
NBTL	A (A) [A]	0.0 (0.0) [1.2]	A (A) [A]	0.0 (0.0) [0.5]	A (A) [A]	0.0 (0.0) [0.5]
SBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]

Table Continued on Next Page

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Farley Drive / Existing Adjacent Site Access / Existing Site Access						
EBTLR	A (A) [A]	6.9 (7.5) [7.7]	A (--) [--]	6.9 (--) [--]	-- (--) [--]	-- (--) [--]
EBLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	6.9 (7.3) [7.4]
WBTLR	A (A) [A]	6.5 (7.1) [7.2]	A (--) [--]	6.5 (--) [--]	-- (--) [--]	-- (--) [--]
NBTLR	A (A) [A]	7.3 (7.3) [7.3]	A (--) [--]	7.3 (--) [--]	-- (--) [--]	-- (--) [--]
NBTL	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.3 (7.3) [7.3]
SBTLR	A (A) [A]	7.2 (7.5) [7.7]	A (--) [--]	7.2 (--) [--]	-- (--) [--]	-- (--) [--]
SBTR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.3 (7.1) [7.2]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

11.6.3 2038 Horizon Year

A summary of unsignalized intersection capacity results for existing, future background, and future total traffic conditions during the 2038 horizon year are provided in **Table 45**.

Table 45 Unsignalized Intersection Capacity Results – 2038 Horizon

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Poppy Drive East / Hawkins Drive						
EBTLR	A (A) [A]	3.4 (2.2) [1.9]	A (A) [A]	4.0 (2.9) [2.6]	A (A) [A]	4.0 (2.9) [2.6]
WBTLR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	2.5 (3.9) [3.1]	A (A) [A]	2.5 (3.9) [3.1]
NBTLR	B (B) [A]	10.5 (11.2) [9.8]	B (C) [B]	14.1 (16.2) [11.9]	B (C) [B]	14.1 (16.2) [11.9]
SBTLR	A (B) [A]	9.7 (10.2) [9.4]	B (C) [B]	13.5 (20.2) [13.3]	B (C) [B]	13.5 (20.2) [13.3]
Poppy Drive East / Farley Drive						
EBTL	A (A) [A]	2.0 (1.1) [2.2]	A (A) [A]	0.7 (0.8) [1.4]	A (A) [A]	1.7 (2.0) [1.7]
WBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
SBLR	A (A) [A]	9.4 (9.7) [9.3]	B (B) [A]	10.0 (10.4) [9.8]	B (B) [B]	10.6 (11.2) [10.3]
Table Continued on Next Page						

Movement	Existing		Future Background		Future Total	
	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)
Poppy Drive East / 1888 Gordon Street Site Access / Internal N-S Street						
EBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	-- (--) [--]	-- (--) [--]
EBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	1.2 (1.4) [1.8]
WBTL	A (A) [A]	0.4 (1.0) [0.6]	A (A) [A]	0.3 (0.7) [0.4]	A (A) [A]	0.3 (0.7) [0.4]
NBLR	A (A) [A]	9.4 (9.9) [9.3]	B (B) [B]	10.2 (10.8) [10.0]	-- (--) [--]	-- (--) [--]
NBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	B (B) [B]	11.8 (12.7) [11.3]
SBTLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	9.3 (9.1) [9.1]
Farley Drive / Internal E-W Street						
EBTLR	A (A) [A]	7.6 (8.9) [9.5]	A (A) [A]	7.6 (8.9) [9.5]	A (A) [A]	7.9 (9.1) [9.7]
WBTLR	A (A) [A]	7.1 (8.0) [8.6]	A (A) [A]	7.1 (8.0) [8.6]	A (A) [A]	8.4 (8.7) [9.6]
NBTLR	A (A) [A]	7.3 (8.1) [8.7]	A (A) [A]	7.3 (8.1) [8.7]	A (A) [A]	7.4 (8.3) [8.7]
SBTLR	A (A) [A]	7.1 (9.1) [10.0]	A (A) [A]	7.1 (9.1) [10.0]	A (A) [B]	8.0 (9.6) [10.2]
Hawkins Drive / Internal E-W Street						
EBLR	A (A) [A]	9.2 (9.4) [9.5]	B (B) [B]	10.4 (11.0) [11.2]	B (B) [B]	10.6 (10.9) [11.0]
NBTL	A (A) [A]	0.0 (0.0) [1.2]	A (A) [A]	0.0 (0.0) [0.4]	A (A) [A]	0.0 (0.0) [0.4]
SBTR	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]	A (A) [A]	0.0 (0.0) [0.0]
Farley Drive / Existing Adjacent Site Access / Existing Site Access						
EBTLR	A (A) [A]	6.9 (7.5) [7.7]	A (A) [A]	6.9 (7.5) [7.7]	-- (--) [--]	-- (--) [--]
EBLR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.1 (7.5) [7.6]
WBTLR	A (A) [A]	6.5 (7.1) [7.2]	A (A) [A]	6.5 (7.1) [7.2]	-- (--) [--]	-- (--) [--]
NBTLR	A (A) [A]	7.3 (7.3) [7.3]	A (A) [A]	7.3 (7.3) [7.3]	-- (--) [--]	-- (--) [--]
NBTL	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.5 (7.6) [7.6]
SBTLR	A (A) [A]	7.2 (7.5) [7.7]	A (A) [A]	7.2 (7.5) [7.7]	-- (--) [--]	-- (--) [--]
SBTR	-- (--) [--]	-- (--) [--]	-- (--) [--]	-- (--) [--]	A (A) [A]	7.7 (7.4) [7.5]

Notes:
1. XX (XX) [XX] – Weekday Morning Peak Hour (Weekday Afternoon Peak Hour) [Saturday Peak Hour].

12.0 SUMMARY AND CONCLUSIONS

BA Group has been retained by FCHT Holdings (Ontario) Corporation, a subsidiary of First Capital REIT to provide transportation advisory services in relation to a proposed mixed-use development on the lands municipally known as 1 Clair Road East (the "Site") in the City of Guelph. This report has been prepared in support of a Zoning By-law Amendment (ZBA) for submission to the City of Guelph, and addresses the transportation related elements of the Site.

Key findings related to BA Group's review of the transportation related elements of the proposed development are presented below, including the results of the traffic impact assessment completed as part of this study.

Proposed Development

1. The proposed development includes 4 buildings, ranging from 10- to 14-storeys and including a mix of residential and at-grade retail uses.

2. The Site is currently proposed to include 715 residential units and 2,127 m^2 gross floor area (GFA) of retail space at-grade.

3. Development of the Site is proposed to be undertaken through a phased approach from south to north. The first 2 phases include the lands currently occupied by the existing Cineplex and Harvey's. Phase 3 (currently occupied by the Beer Store and a mix of retail uses) fronts Clair Road East and interfaces with Phases 1 and 2 through an existing Internal East-West Street.

Planning Policy Context

4. The Site is situated in South Guelph, an area of evolving transportation context in conjunction with its planned significant development and associated population growth. The Site is located immediately north of the City's Clair-Maltby Secondary Plan (CMSP).

5. The CMSP was approved by City Council in 2022 and provides a detailed planning and policy framework for the lands in south Guelph generally bound by Poppy Drive West in the north, Victoria Road South in the east, Maltby Road in the south, and the eastern limits of the Southgate Business Park in the west.

6. The Guelph Official Plan and the CMSP (OPA 79) provides key mobility policies that will guide the future evolution of the area transportation infrastructure, including the provision of active transportation facilities along all area arterial and collector roads, as well as off-road connections, improved and expanded transit services, and a future multimodal road network that encourages alternative travel modes and discourages auto-based travel.

Area Transportation Context

7. The Site is located near the Clair Road / Gordon Street intersection, at the confluence of 2 major corridors within the City of Guelph that provide access to Downtown Guelph as well as both Highway 6 and Highway 401.

8. Through the continued development of the CMSP, significant new road infrastructure is proposed south of the Site, including the extension of existing area roads as well as the introduction of a new collector road system that will serve the future population of the Secondary Plan area.

9. Transit and active transportation improvements are proposed in the area of the Site, including improvements to transit service along the Gordon Street and Clair Road corridors as well as enhancing area active transportation infrastructure. As part of the Guelph TMP and CMSP,

    - Gordon Street is envisioned as a future transit spine that will connect South Guelph to Downtown Guelph and as an enhanced pedestrian corridor per the Guelph TMP.

- Clair Road East is planned to be widened to 4 lanes east of Clair Road East / Hawkins Drive and will accommodate both expanded transit service and active transportation infrastructure.
- Hawkins Drive is proposed to extend as a collector road that connects to Gordon Street through the CMSP lands to the south.
- An essential north-south active transportation connection is proposed to extend south from Hawkins Drive through the CMSP lands to the south.

As part of community consultation, we heard that pedestrians wanting to cross Poppy Drive north-south find it difficult to find a gap in existing vehicle traffic that is currently free-flow. A controlled pedestrian crossing would be appropriate along Poppy Drive East to address existing concerns and could be considered at either the Poppy Drive East / Farley Drive intersection or the Poppy Drive East / Hawkins Drive intersection, subject to coordination with City Staff on its potential integration with the broader active transportation network. A controlled pedestrian crossing along Poppy Drive East could be facilitated by either STOP control or by a pedestrian crossing treatment designed in accordance with Ontario Traffic Manual (OTM) Book 15.

Functional Site Plan Elements

10. Vehicular access to the Site is proposed to be provided via three accesses, located along Farley Drive (private), Hawkins Drive, and Poppy Drive East. These proposed accesses will provide routing options for Site residents and visitors, and will integrate into the surrounding grid road network.
11. Accesses along the private segment of Farley Drive and Hawkins Drive are proposed to be retained from the existing condition, which also provides essential underground servicing to the existing and proposed future uses. A new access is proposed along Poppy Drive East opposite and aligned with the 1888 Gordon Street site access.
12. At all Site accesses on the Site plan, the available boulevard and building elements are set back greater than the 4.4m sight distance required for drivers, as measured from the travel way, in accordance with Transportation Association of Canada (TAC) sight design guidelines.
13. Subsequent Site plan applications shall continue to confirm that a drivers' sightline be free of obstructions and that any landscape elements within a drivers' sightline shall be reviewed and be limited to a lower tree canopy of 2.5m and an upper planting/object height of 0.85m.
14. Internal vehicular circulation is currently proposed to be facilitated by two internal street segments which create a T-shaped internal street system, providing strong distribution and efficient routing of Site activity to all proposed Site accesses:
    - An Internal East-West Street that connects the proposed Site accesses at Farley Drive and Hawkins Drive; and
    - An Internal North-South Street that connects the proposed Site access at Poppy Drive East to the Internal East-West Street at a future three-legged intersection.
15. Access to vehicular parking facilities for each building will be provided along the Internal North-South Street for Phase 1 and 2, and the Internal East-West Street for Phase 3.
16. Pick-up / drop-off activity is proposed through layby spaces along the Internal East-West Street, in close proximity to the primary lobby entrances for each Phase of development.
17. Measures that are outlined in TAC's guidelines and considered to be effective for traffic calming are proposed to manage vehicular traffic and operations along the Site's Internal East-West and North-South Streets, including:

- **Continuous textured material surfacing** on the Internal North-South Street, indicating to drivers to use caution. The Internal North-South Street is proposed to use bollards and strategically located vegetation (e.g. trees and planters) to delineate permeable separation between pedestrian-only space and vehicle space.
- **On-street parking** for non-residential uses and pick-up / drop-off facilities are proposed to be located along the Internal East-West Street to serve the future retail and residential uses on the Site.
- **Strategically located curb extensions** within the plan that will narrow the travel way for vehicles, encouraging lower vehicle speeds and enhancing pedestrian crossing visibility and reducing crossing distances at this intersection.
- **A tabled intersection** of the internal private streets is proposed to reduce vehicular travel speeds through the Site and provide quality pedestrian connectivity across development phases. The south approach of the intersection is proposed to be flush with the tabletop and the north-south pedestrian connection to its north. This intersection is proposed to be all-way STOP-controlled and will further enhance the north-south active linkage and provide pedestrians with a quality crossing location to access all phases of development.

Vehicular Parking Zoning By-law Requirements

18. The Site is currently subject to the City of Guelph Zoning By-law (1995)-14864 under Specialized Commercial Shopping Centre (CC-20). There is also a Council-approved new City-wide Zoning By-law (2023)-20790 that is currently under appeal.

Required Parking – Existing Commercial Land Uses

19. The CC-20 designation identifies a parking requirement of 1 space / 23m^2 GFA (4.35 spaces / 100m^2 GFA).
20. Existing parking observations were undertaken in November 2023 to understand parking demands related to existing commercial uses on the Site. Peak demands were observed as follows:
    - **East of Farley Drive (the Site):** 185 vehicles (4.09 spaces / 100 m^2 GFA).
    - **West of Farley Drive (Remaining FCR Lands):** 240 vehicles (2.70 spaces / 100 m^2 GFA).
    - **Overall Pergola Commons Demand:** 425 vehicles (3.17 spaces / 100 m^2 GFA).

Required Parking – Proposed Land Uses

21. Zoning By-law (1995)-14864 requires 1,028 parking spaces for the Site, including 719 resident spaces, 180 residential visitor spaces, and 129 retail parking spaces for an apartment building and retail establishment.
22. Zoning By-law (2023)-20790 (appealed) requires 844 parking spaces for the Site, including 715 resident parking spaces (1 space / unit), 72 residential visitor spaces (0.1 spaces / unit), and 57 retail parking spaces (3.5 spaces / 100 m^2 for GFA exceeding the first 500 m^2 GFA) for a Mixed Use Building.
23. Zoning By-law (2023)-20790 (appealed) requires 260 parking spaces for the FCR Lands. The existing supply of 376 spaces on the remaining FCR Lands meets this minimum requirement.

Accessible Parking Requirements

24. Zoning By-law (1995)-14864 requires 14 accessible parking spaces.
25. Zoning By-law (2023)-20790 (appealed) requires 19 accessible parking spaces, inclusive of 9 Type A spaces and 10 Type B spaces.

Electric Vehicle Charging Parking Requirements

26. Zoning By-law (1995)-14864 does not require electric vehicle charging.

27. Zoning By-law (2023)-20790 requires 169 parking spaces across the Site to be designated as electric vehicle parking spaces, and 675 parking spaces designated as designed electric vehicle parking spaces.

28. Electric vehicle charging requirements are not considered for the Remaining FCR Lands as part of this ZBA application.

Proposed Vehicular Parking Supply Strategy

29. There are 850 parking spaces currently proposed for the Site, including 255 spaces in Phase 1.

30. Zoning By-law Amendments to the in-force Zoning By-law (1995)-14864 and the Council adopted (appealed) Zoning By-law (2023)-20790 have been drafted in-part to support the proposed parking supply for the Site.

Recommended Parking Requirements

31. To ensure that the Project provides an adequate amount of parking for the proposed uses consistent with Zoning By-law (2023)-20790 (appealed) and to avoid any potential off-Site impacts, the following minimum parking requirements are recommended:

    - A minimum resident parking requirement of 1 space / unit.
    - A minimum residential visitor parking requirement of 0.1 spaces / unit.
    - The following non-residential parking requirements are recommended:
        - 0 spaces / 100 m^2 GFA for the first 500 m^2 GFA
        - 3.5 spaces / 100 m^2 GFA for all non-residential GFA between 500 m^2 and 5,000 m^2
        - 2.5 spaces / 100 m^2 GFA for all non-residential GFA in excess of 5,000 m^2 GFA.
    - Sharing provisions are recommended for the Site, as discussed below.

32. Two sharing provisions are proposed for the Site's parking requirements:

    a. The ability to share resident parking spaces across different phases of the development. This maximizes the efficiency of Site parking provisions and allows flexibility for delivering parking supply needs at each phase of development.

    b. The ability to share residential visitor and non-residential parking requirements on a non-exclusive basis. This provision is consistent with making efficient use of the non-residential parking supply and recognizes that different land uses experience peak parking demands at various times through the day and that shared parking is an accepted practice that encourages efficient sharing between land uses and reduces the total number of parking spaces required.

33. The Draft Zoning By-law Amendment reflects the recommended parking rates and sharing provisions.

34. The current development proposal provides 850 parking spaces, including 742 resident spaces and 108 non-residential spaces, meeting the recommendations for parking supply for the Site.

35. The Draft Zoning By-law Amendment also reflects the recommended non-residential parking requirement for the Remaining FCR Lands, which is consistent with Zoning By-law (2023)-20790 (appealed) for multi-unit commercial buildings and exceeds the existing peak observed parking demands of 2.70 spaces / 100 m^2 GFA for these commercial lands west of Farley Drive.

36. Monitoring the parking need on the Site would be appropriate for reviewing the overall trends related to parking demand, as the Site builds out. Throughout the Site planning process, each phase of development will demonstrate that the above parking requirements continue to be met.

Recommended Accessible Parking Requirements

37. We recommend that the design of the Site complies with the *Accessibility for Ontarians with Disabilities Act*.

38. The current development proposal for the Site includes 34 accessible parking spaces, meeting the recommended accessible parking requirements that are consistent with Zoning By-law (2023)-20790 (appealed).

39. The number, location, and design of barrier-free parking stalls will be identified in subsequent Site plan applications for the Site.

40. The Remaining FCR Lands currently provide 12 accessible parking spaces, meeting the recommended accessible parking requirements that are consistent with Zoning By-law (2023)-20790 (appealed).

Recommended Electric Vehicle Parking Provisions

41. We recommend that the Site provide 100% of residential parking spaces (resident and residential visitor) within the underground parking facilities on the Site with conduits capable of accommodating future EVSE charging equipment.

42. The current development plan considers EV-ready spaces for the residential (resident and residential visitor) spaces on the Site, consistent with the recommended electric vehicle parking strategy.

43. The number, location, and design of electric vehicle parking stalls will be identified in subsequent Site plan applications for the Site.

Bicycle Parking Considerations

44. The prevailing City of Guelph Zoning By-law (1995)-14864 does not provide bicycle parking requirements for new development.

45. Zoning By-law (2023)-20790 (appealed) requires 795 bicycle parking spaces for the Site, including 715 resident long-term spaces, 72 residential short-term spaces, 3 retail long-term spaces, and 5 retail short-term spaces.

46. The current development concept proposes 819 bicycle parking spaces, including 733 resident long-term spaces, 76 residential short-term spaces, 4 retail long-term spaces, and 6 retail short-term spaces. This supply meets and exceeds the minimum requirements stipulated in Zoning By-law (2023)-20790 (appealed).

Loading Considerations

47. Neither the prevailing City of Guelph Zoning By-law (1995)-14864 nor Zoning By-law (2023)-20790 (appealed) provides specific minimum loading space rate requirements for new development. As such, loading space is allocated to each Phase of development based upon what is considered appropriate for the development context.

48. The City of Guelph provides *Waste Collection Guidelines for Multi-Residential Developments* which provide guidance for the design of loading and refuse facilities.

49. The current development concept proposes 1 dedicated loading facility for each building on the Site to service the requirements of each development Phase.

50. Vehicle manoeuvring diagrams confirm that the current development concept can acceptably accommodate refuse collection.

51. Design of the loading and refuse area, including vehicle manoeuvring diagrams, will be reconfirmed in subsequent Site plan applications for the Site.

Transportation Demand Management

52. A comprehensive Transportation Demand Management (TDM) Plan is proposed to guide the provision of viable alternative transportation options for Site residents and visitors.

    Specific TDM measures proposed as part of the development plan include, but are not limited to:

    - Quality internal pedestrian connections that facilitate access for residents and Site visitors to the external pedestrian network.
    - Collaborate with City staff and transit providers as part of subsequent site plan applications to identify potential ways to incentivize local transit as an option for new residents..
    - Bicycle parking spaces meeting the minimum Zoning By-law requirement.
    - 1 bike repair station per building for use by residents and visitors to the Site.
    - An unbundled, reduced parking supply to discourage vehicular demand and encourage alternative travel modes.

53. The Site location and context within walking distance of a number of amenities as well as the significant investment in area transit and active transportation planned by the City, will directly contribute to the effectiveness of the TDM measures outlined above.

Existing Traffic Volumes and Travel Patterns

54. Existing Travel Patterns were observed on September 20th, October 10th, November 2nd, and November 4th in 2023.

55. The existing Site (east of Farley Drive), generates 35, 285, and 380 vehicle trips during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

Existing Cut-through Traffic

56. BA Group reviewed existing cut-through traffic conditions on the Site's Internal East-West Street. Observations indicate that:

    a. Vehicles are generally not using the Site as a by-pass route around the Clair Road / Gordon Street intersection – Poppy Drive to Hawkins Drive or Dallan Drive are more attractive and appropriate routes for this activity.

    b. Cut-through traffic currently travelling through the Site are considered to be interacting with the commercial lands to the west of the Site (i.e. west of Farley Drive), and are not considered to be substantial traffic volumes. Several traffic calming measures are also considered as part of the Site's future development that will deter existing traffic from routing via the east-west street as a 'cut-through' in future.

Existing Queuing Activity at Farley Drive

57. BA Group reviewed existing northbound queueing at the signalized intersection of Clair Road / Farley Drive. Observations indicate that queuing can be accommodated within the existing storage length internal to the site without impacting the first internal intersection. Queuing has also been assessed under future conditions, confirming a minor change to queueing lengths (~1 car length), and further connectivity has been incorporated into the Site plan to provide further redundancy in distributing Site traffic onto the area road network that provides additional options for alternate routing in the future.

Existing Pedestrian Activity

58. As mentioned in the Area Transportation Context, the existing free-flow condition of Poppy Drive (east-west) was identified by area residents as an existing obstacle to crossing north-south within the community. A controlled pedestrian crossing along Poppy Drive East is an appropriate measure to address existing conditions and concerns and could be facilitated by either all-way STOP control or by a pedestrian crossing treatment designed in accordance with Ontario Traffic Manual (OTM) Book 15 at Poppy Drive East's intersection with either Farley Drive or Hawkins Drive.

Existing Poppy Drive Access

59. Area residents identified difficulty exiting the existing 1888 Gordon Street site access opposite the future site access onto Poppy, due to large trucks frequently park on the south side of Poppy Drive East that may inhibit pedestrian and driver sightlines. While not directly related to the current development proposal, we believe there are opportunities to improve driver sightlines relative to truck activity parked on the south side of Poppy Drive East. Potential solutions include further restricting no parking zones along Poppy Drive East, and / or providing curb extensions that will improve visibility past parked vehicles, and will physically restrict parking close to the 1888 Gordon Street site access.

Travel Demand Forecasts

Area Background Traffic

60. Area traffic volume growth in the vicinity of the Site has been considered based on an evaluation of changes related to:

    a. General corridor growth along the major area road network.

    b. Traffic generated by the planned development associated with the Clair-Maltby Secondary Plan (CMSP). The CMSP notably considers the growth in the order of over 10,000 residential units and 333 jobs; and

    c. Specific area developments.

61. Vehicular traffic generated through the travel demand exercise summarized above was applied to the existing and planned area road network to generate future background traffic volumes.

Site Traffic

62. Multimodal travel demand forecasts have been generated for the Site:

Vehicle Travel Demands

    a. Vehicular travel demand forecasts for the Site's residential uses have been generated using the *ITE Trip Generation Manual, 11th Ed.* trip rates for residential Multifamily Housing (Mid-Rise) (LUC 221).

b. Retail travel demands for the Site were derived by scaling the existing commercial vehicular activity associated with the Site using *ITE Trip Generation Manual, 11th Ed.* trip rates for Supermarket uses (LUC 850) to more closely reflect a conservative potential future retail use.

c. Accounting for interaction between Site uses, build-out of the Site is expected to generate in the order of 315, 420, and 465 two-way primary vehicle trips during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

d. At full build-out, net new vehicle Site trips will be +280, +135, and +85 two-way trips during the morning, afternoon, and Saturday peak hours respectively, compared to existing observed retail trips.

Transit and Active Transportation Travel Demand

e. Transit and active transportation travel demand was derived by applying mode split data derived from the *Clair-Maltby Secondary Plan Transportation Master Plan Study* to the forecast vehicular travel demand. The following transit and active transportation trips are forecast for full build out of the Site:

   i. 60, 75, and 80 transit trips during the weekday morning, weekday afternoon, and Saturday peak periods, respectively.

   ii. 15, 15, and 20 cycling trips during the weekday morning, weekday afternoon, and Saturday peak periods, respectively.

   iii. 60, 115, and 140 walking trips during the weekday morning, weekday afternoon, and Saturday peak periods, respectively.

f. Under the full build out development condition, a total of 555, 740, and 815 two-way person trips are forecast during the weekday morning, weekday afternoon, and Saturday peak hours, respectively.

g. Vehicular traffic generated through the travel demand exercise summarized above were applied to the planned area road network and future background traffic volumes to generate future total traffic volumes.

Warrant Analysis

63. The east approach (westbound left) of the Clair Road East / Hawkins Drive intersection was determined to warrant a left-turn lane under existing weekday afternoon and Saturday Peak hours, as well as all 2028 horizon peak hours. An auxiliary left-turn was included in the modelled 2028 horizon scenario onward.

64. The Clair Road East / Hawkins Drive intersection was determined to warrant signalization under 2033 future background conditions. As such, this intersection was modelled with a traffic signal under all 2033 and 2038 horizon peak periods. The signal timing plan for the modelled signal was derived from the signal timing plan for the adjacent Clair Road East / Farley Drive intersection.

65. Signalization of the Clair Road East / Hawkins Drive intersection should be monitored to establish timing of implementation relative to growth of the Clair-Maltby Secondary Plan and relative to the City's desired intersection control at this location. Given the intersection is approximately 165 metres from the Clair Road East / Farley Drive intersection, it could be considered for signalization (T-intersection with pedestrian and cycling crossing) or partial moves (controlled by a median along Clair Road) and should be evaluated in conjunction with the City's planned widening of Clair Road to the east of the site and active transportation network.

Traffic Operations Assessment

66. Synchro Version 11 and the Highway Capacity Manual (HCM) methodology were used to analyze the study area intersections and proposed Site accesses. All Synchro analyses performed are in accordance with the City of Guelph's *Transportation Impact Study Guidelines (2023)*.

Traffic Operations

67. Under existing conditions, all signalized and unsignalized intersections operate at acceptable capacities and levels-of-service.

68. Under the 2028 and 2033 development horizons, all signalized and unsignalized intersections operate at acceptable capacities and levels-of-service.

69. Under the 2038 development horizon, the Clair Road / Gordon Street intersection operates above capacity with overall intersection v/c ratios in the order of 1.05, 1.06, and 0.82 during the weekday morning, weekday afternoon, and Saturday peak hours under future background conditions, and 1.09, 1.07, and 0.82 during the weekday morning, weekday afternoon, and Saturday peak hours under future total conditions.

Clair Road / Gordon Street Intersection – Forecasting Notes and Operational Considerations

70. There are a number of forecasting assumptions that are relevant in assessing whether over capacity conditions are accurate for the 2038 forecast horizon:

    a. Full build-out of the Clair-Maltby Secondary Plan as assumed for the 2038 horizon period as part of this analysis may be considered conservative relative to actual build-out timing of the entire Secondary Plan lands. The *Clair-Maltby Secondary Plan Transportation Master Plan Study* assumed the maximum density development scenario, which considered residential development in the order of 10,000 units and 333 jobs south of the Site. A number of factors may contribute to either different or lesser development scenarios long-term.

    b. An alternative configuration for the Clair Road / Gordon Street intersection was considered in the Clair-Maltby Secondary Plan Transportation Master Plan Study, which included auxiliary right-turn lanes on the north, south, and west approaches. Assessment of 2038 forecast volumes on the alternative intersection configuration (with right turn lanes) results in improved capacity results for vehicles, with the majority of individual movements operating at or below capacity. This configuration notably favours vehicle capacity over other modes in a conservative forecasting scenario and should not be considered in advance of monitoring growth of traffic and promoting transit priority and enhanced pedestrian and active transportation design in the local area to promote a shift to other modes.

71. Additional mitigation measures may be considered to address the Clair Road / Gordon Street intersection capacity constraints under long-term background traffic forecast scenarios, including :

    a. Signal timing plan enhancements in conjunction with the implementation of the alternative future intersection configuration; and

    b. Continued investment in and prioritization towards transit services and active transportation infrastructure in the area to reduce auto-dependence by the planned significant population growth.

72. It is recommended that the City continue to monitor intersection operations, particularly as the Clair-Maltby Secondary Plan nears build out, and assess potential mitigation measures in accordance with City transportation and mobility objectives.

73. Under all scenarios, the impacts of Site-generated traffic on operations at the Clair Road / Gordon Street intersection are minor.

74. Site driveways operate acceptably under all future scenarios.

75. Future queuing activity at site accesses can be acceptably accommodated within the Site.

76. Recommended local Improvements warranted by existing or background conditions (without development of the Site) include:

    a. A westbound left turn lane at Clair Road / Hawkins Drive that is warranted under existing conditions.

    b. A future signal-controlled or partial-moves (median-controlled) intersection at Clair Road / Hawkins Drive that is warranted in future (2033 scenario) with growth in the CMSP. The preferred timing and intersection arrangement should be evaluated in conjunction with the City's planned widening of Clair Road to the east of the Site and the essential north-south active transportation network being planned as an extension of Hawkins Drive in the CMSP.

    c. A controlled pedestrian crossing along Poppy Drive East (currently free-flow) as an appropriate measure to address existing conditions and concerns. This crossing could be facilitated by either all-way STOP control or by a pedestrian crossing treatment designed in accordance with Ontario Traffic Manual (OTM) Book 15 at Poppy Drive East's intersection with either Farley Drive or Hawkins Drive.

    d. No further measures are recommended on the area road network to facilitate the addition of Site traffic beyond what is already planned or recommended to address existing or background conditions.

77. The Site related traffic impacts on the local area road network are small. Site traffic can be acceptably accommodated on the local area road network and within the planned area infrastructure.

Appendix A:
Reduced Scale Architectural Plans

SITE STATS

OVERALL SITE AREA (Approx.)			53,497 sq.m
DEVELOPMENT SITE AREA			22,188 sq.m
PROPOSED PARKLAND DEDICATION		8%	1800 sq.m
NET SITE AREA			20,388 sq.m
DENSITY			3.75 FSI
LANDSCAPE COVERAGE			42%
BUILDING HEIGHTS			
	TOWER A	14 STOREYS	45.74 m*
	TOWER B1	14 STOREYS	44.27 m*
	TOWER B2	10 STOREYS	32.27 m*
	TOWER C	14 STOREYS	45.85 m*
	TOWER D	14 STOREYS	45.07 m*

* Measured from average grade

COMMON AMENITY AREA

PHASE 1 | BUILDING A		PHASE 2 | BUILDING B		PHASE 3 | BUILDING C & D	
NO. OF UNITS	187	NO. OF UNITS	246	NO. OF UNITS	282
INDOOR AMENITY	459	INDOOR AMENITY	722	INDOOR AMENITY	818
OUTDOOR AMENITY	1740	OUTDOOR AMENITY	1728	OUTDOOR AMENITY	1625
TOTAL AMENITY PROVIDED	**2199**	TOTAL AMENITY PROVIDED	**2450**	TOTAL AMENITY PROVIDED	**2443**
TOTAL AMENITY PER UNIT	**11.8**	TOTAL AMENITY PER UNIT	**10.0**	TOTAL AMENITY PER UNIT	**8.7**
POPS	0	POPS	670	POPS	0

ALL PHASES COMBINED	
INDOOR AMENITY	1,999
OUTDOOR AMENITY	5,093
TOTAL	7,092
TOTAL AMENITY PER UNIT	9.9

PRIVATE AMENITY AREA

PHASE 1 | BUILDING A		PHASE 2 | BUILDING B		PHASE 3 | BUILDINGS C & D	
AREA OF BALCONIES	1458	AREA OF BALCONIES	1860	AREA OF BALCONIES	2414

PRIVATE AMENITY AREA RATE 4.8 sq.m/unit

UNIT MIX

	PHASE 01								PHASE 02								PHASE 03															
	BUILDING A								BUILDING B								BUILDING C								BUILDING D							
	1B	1B+D	2B	2B+D	3B	2B TH	3B TH	TOTAL	1B	1B+D	2B	2B+D	3B	2B TH	3B TH	TOTAL	1B	1B+D	2B	2B+D	3B	2B TH	3B TH	TOTAL	1B	1B+D	2B	2B+D	3B	2B TH	3B TH	TOTAL
LEVEL 1						15	2	17						16	2	18						2	2	4						0		
LEVEL 2																																
LEVEL 3	8	2	7	4	2			23	11	1	10	4	2			28	3	3	3	7				16	1	5	5	4				15
LEVEL 4	8	2	7	4	2			23	11	1	10	4	2			28	3	3	3	7				16	1	5	5	4				15
LEVEL 5	8	2	7	4	2			23	11	1	10	4	2			28	3	3	3	7				16	1	5	5	4				15
LEVEL 6	8	2	7	4	2			23	11	1	10	4	2			28	3	3	3	7				16	1	5	5	4				15
LEVEL 7	3	1	2	1	1			8	9	1	5	0	1			16	2	2	2	1	1			8	4		2					6
LEVEL 8	3	1	3	1	2			10	8	2	7	2	1			20	3	1	2	2	2			10	4	1	4	1				10
LEVEL 9	3	1	3	1	2			10	8	2	7	2	1			20	3	1	2	2	2			10	4	1	4	1				10
LEVEL. 10	3	1	3	1	2			10	8	2	7	2	1			20	3	1	2	2	2			10	4	1	4	1				10
LEVEL. 11	3	1	3	1	2			10	4	1	4	1				10	3	1	2	2	2			10	4	1	4	1				10
LEVEL. 12	3	1	3	1	2			10	4	1	4	1				10	3	1	2	2	2			10	4	1	4	1				10
LEVEL. 13	3	1	3	1	2			10	4	1	4	1				10	3	1	2	2	2			10	4	1	4	1				10
LEVEL. 14	3	1	3	1	2			10	4	1	4	1				10	3	1	2	2	2			10	4	1	4	1				10
TOTAL	**56**	**16**	**51**	**24**	**23**	**15**	**2**		**93**	**15**	**82**	**26**	**12**	**16**	**2**		**35**	**21**	**28**	**43**	**15**	**2**	**2**	**146**	**36**	**27**	**50**	**23**	**0**	**0**		
GRAND TOTAL	**30%**	**9%**	**27%**	**13%**	**12%**	**8%**	**1%**	**187**	**38%**	**6%**	**33%**	**11%**	**5%**	**7%**	**1%**	**246**	**24%**	**14%**	**19%**	**29%**	**10%**	**1%**	**1%**	**146**	**26%**	**20%**	**37%**	**17%**				**136**

TOTAL ALL PHASES **715** UNITS

42% 1B
50% 2B
8% 3B

INCLUDING PARKLAND **322** UNITS/HA
EXCLUDING PARKLAND **351** UNITS/HA

PHASE 1 - BUILDING A			PHASE 2 - BUILDING B			PHASE 3 - BUILDING C			PHASE 3 - BUILDING D		
	GFA (sq.m)	NET FLOOR AREA (sq.m)		GFA (sq.m)	NET FLOOR AREA (sq.m)		GFA (sq.m)	NET FLOOR AREA (sq.m)		GFA (sq.m)	NET FLOOR AREA (sq.m)
LEVEL 1	2238	1581	LEVEL 1	2980	2323	LEVEL 1	2045	1571	LEVEL 1	1773	1428
LEVEL 2	1708	1358	LEVEL 2	2192	1740	LEVEL 2	988	753	LEVEL 2	428	292
LEVEL 3	2021	1763	LEVEL 3	2433	2117	LEVEL 3	1563	1398	LEVEL 3	1391	1237
LEVEL 4	2021	1763	LEVEL 4	2433	2117	LEVEL 4	1563	1398	LEVEL 4	1391	1237
LEVEL 5	2021	1763	LEVEL 5	2433	2117	LEVEL 5	1563	1398	LEVEL 5	1391	1237
LEVEL 6	2021	1763	LEVEL 6	2433	2117	LEVEL 6	1563	1398	LEVEL 6	1391	1237
LEVEL 7	901	798	LEVEL 7	1679	1476	LEVEL 7	925	808	LEVEL 7	869	744
LEVEL 8	880	770	LEVEL 8	1655	1447	LEVEL 8	882	780	LEVEL 8	830	767
LEVEL 9	880	770	LEVEL 9	1655	1447	LEVEL 9	882	780	LEVEL 9	830	722
LEVEL 10	880	770	LEVEL 10	1655	1447	LEVEL 10	882	780	LEVEL 10	830	722
LEVEL 11	880	770	LEVEL 11	827	722	LEVEL 11	882	780	LEVEL 11	830	722
LEVEL 12	880	770	LEVEL 12	827	722	LEVEL 12	882	780	LEVEL 12	830	722
LEVEL 13	880	770	LEVEL 13	827	722	LEVEL 13	882	780	LEVEL 13	830	722
LEVEL 14	880	770	LEVEL 14	827	722	LEVEL 14	882	780	LEVEL 14	830	722
MECH PH	420	0	MECH PH	420	0	MECH PH	420	55	MECH PH	420	79
TOTAL	**19510**	**16179**	**TOTAL**	**25274**	**21234**	**TOTAL**	**16803**	**14233**	**TOTAL**	**14864**	**12588**

TOTAL GFA (sq.m) FOR ALL PHASES **76450** sq.m
TOTAL NFA (sq.m) FOR ALL PHASES **64234** sq.m

New Zoning By-law (2023)-20790 :

Gross floor area (GFA) means the floor area of a building measured from the centre line of partition walls and from the exterior face of outside walls.

Net floor area means the gross floor area of a building measured from the interior walls, excluding stairways, common hallways, elevator shafts and other service and mechanical shafts, service and mechanical rooms, waste and recycling rooms, loading areas, and common washroom facilities.

CAR PARKING

PHASE 1 | BUILDING A			PHASE 2 | BUILDING B			PHASE 3 | BUILDINGS C & D		
NO. OF UNITS		187	NO. OF UNITS		246	NO. OF UNITS		282
MIN REQ. VISITOR	.1/unit	19	MIN REQ. VISITOR	.1/unit	25	MIN REQ. VISITOR	.1/unit	28.2
MIN REQ. RESIDENTIAL	.8/unit	187	MIN REQ. RESIDENTIAL	.8/unit	246	MIN REQ. RESIDENTIAL	.8/unit	282
REQ. ACCESSIBLE SPACES	1+2%	5	REQ. ACCESSIBLE SPACES	1+2%	6	REQ. ACCESSIBLE SPACES	1+2%	7
PROPOSED			**PROPOSED**			**PROPOSED**		
LEVEL P1			**LEVEL P1**			**LEVEL P1**		
NON-RES PARKING		23	NON-RES PARKING		26	NON-RES PARKING		36
RESIDENTIAL PARKING		103	RESIDENTIAL PARKING		97	RESIDENTIAL PARKING		120
TOTAL		126	TOTAL		123	TOTAL		156
LEVEL P2			LEVEL P2			LEVEL P2		
NON-RES PARKING		0	NON-RES PARKING		0	NON-RES PARKING		0
RESIDENTIAL PARKING		129	RESIDENTIAL PARKING		129	RESIDENTIAL PARKING		164
TOTAL		129	TOTAL		129	TOTAL		164
TOTAL ACCESSIBLE		10	TOTAL ACCESSIBLE		12	TOTAL ACCESSIBLE		12
OVERALL TOTAL		**255**	**OVERALL TOTAL**		**252**	**OVERALL TOTAL**		**320**
PROPOSED PARKING RATIO | NON-RES		**0.1**	**PROPOSED PARKING RATIO | NON-RES**		**0.1**	**PROPOSED PARKING RATIO | NON-RES**		**0.1**
PROPOSED PARKING RATIO | RES		**1.3**	**PROPOSED PARKING RATIO | RES**		**0.9**	**PROPOSED PARKING RATIO | RES**		**1.0**

OVERALL ALL PHASES

NON-RES PARKING	**85**
RESIDENTIAL PARKING	**742**
PROPOSED PARKING RATIO | NON-RES	**0.1**
PROPOSED PARKING RATIO | RES	**1.04**

COMMERCIAL PARKING

OVERALL COMMERCIAL AREA (BLDGS A,B,C & D)	2127	
MIN REQUIRED COMMERCIAL PARKING	57	0 spaces for the first 500 m^2 of GFA; 3.5 spaces / 100 m^2 GFA in excess of 500
NON-RES SURFACE PARKING PROPOSED	**23**	
NON-RES PARKING PROPOSED IN BLDGS C & D	**36**	
OVERALL NON-RES PARKING PROPOSED	**59**	

BIKE PARKING

PHASE 1 | BUILDING A | RES			PHASE 2 | BUILDING B| RES			PHASE 3 | BUILDING C | RES			PHASE 3 | BUILDING D | RES		
NO. OF UNITS		189	NO. OF UNITS		250	NO. OF UNITS		146	NO. OF UNITS		136
REQUIRED SHORT-TERM PARKING	.1/unit	19	REQUIRED SHORT-TERM PARKING	.1/unit	25	REQUIRED SHORT-TERM PARKING	.1/unit	15	REQUIRED SHORT-TERM PARKING	.1/unit	14
PROPOSED SHORT-TERM PARKING		**20**	PROPOSED SHORT-TERM PARKING		**26**	PROPOSED SHORT-TERM PARKING		**16**	PROPOSED SHORT-TERM PARKING		**14**
REQUIRED LONG-TERM PARKING	1/unit	189	REQUIRED LONG-TERM PARKING	1/unit	250	REQUIRED LONG-TERM PARKING	1/unit	146	REQUIRED LONG-TERM PARKING	1/unit	136
REQUIRED HORIZONTAL BICYCLE PARKING SPACES	25%	47	REQUIRED HORIZONTAL BICYCLE PARKING SPACES	25%	63	REQUIRED HORIZONTAL BICYCLE PARKING SPACES	25%	37	REQUIRED HORIZONTAL BICYCLE PARKING SPACES	25%	34
PROPOSED HORIZONTAL BICYCLE PARKING SPACES		**49**	PROPOSED HORIZONTAL BICYCLE PARKING SPACES		**78**	PROPOSED HORIZONTAL BICYCLE PARKING SPACES		**45**	PROPOSED HORIZONTAL BICYCLE PARKING SPACES		**41**
PROPOSED STACKED BICYCLE PARKING SPACES		**144**	PROPOSED STACKED BICYCLE PARKING SPACES		**176**	PROPOSED STACKED BICYCLE PARKING SPACES		**104**	PROPOSED STACKED BICYCLE PARKING SPACES		**96**
PROPOSED LONG-TERM PARKING		**193**	PROPOSED LONG-TERM PARKING		**254**	PROPOSED LONG-TERM PARKING		**149**	PROPOSED LONG-TERM PARKING		**137**

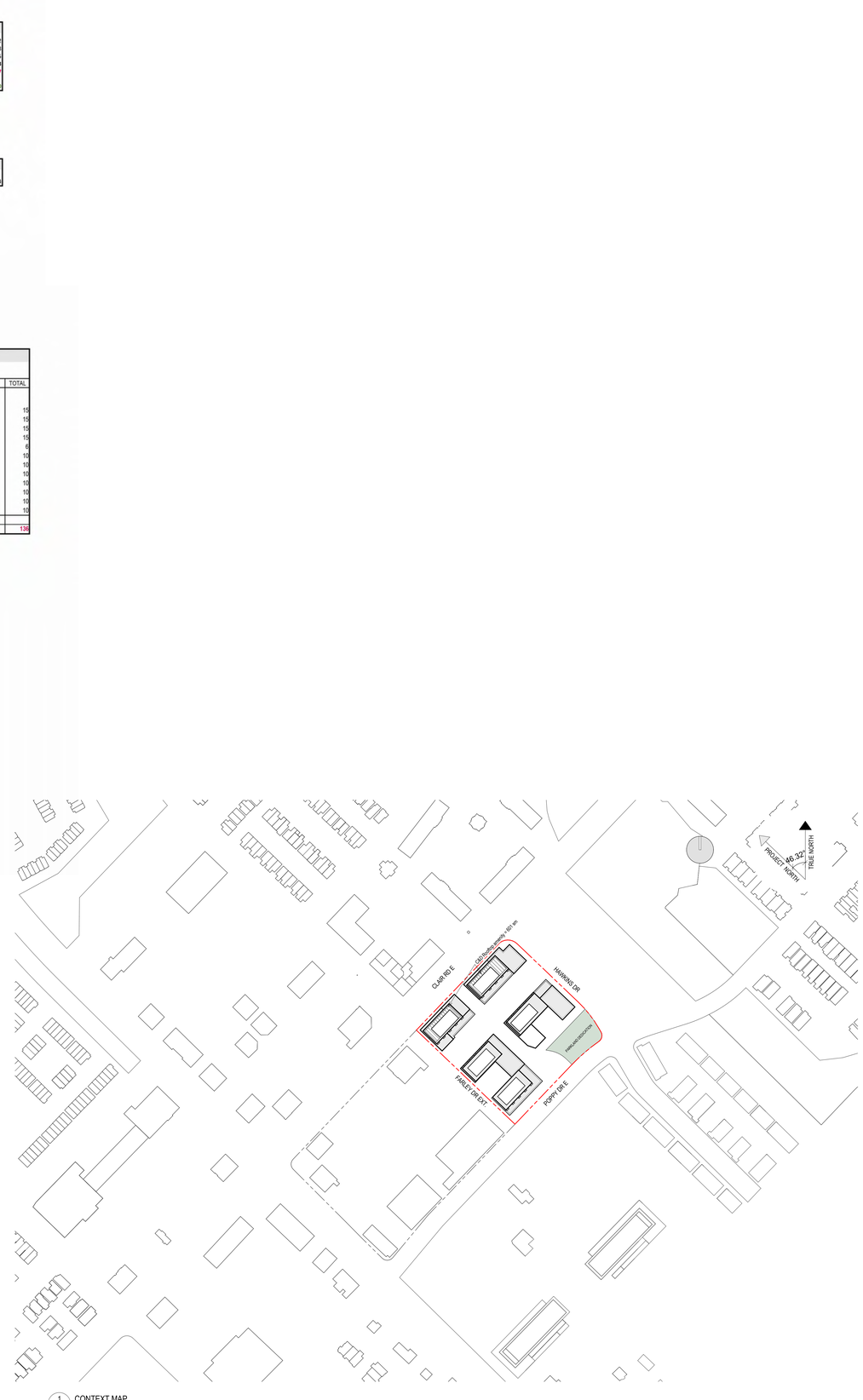
PROPOSED OVERALL COMMERCIAL BIKE PARKING	
LONG TERM BIKE PARKING	**4**
SHORT TERM BIKE PARKING	**4**

PROPOSED RESIDENTIAL BIKE PARKING- ALL PHASES	
LONG TERM BIKE PARKING	**733**
SHORT TERM BIKE PARKING	**70**

PHASE 2 | BUILDING B| COMMERCIAL		
AREA OF COMMERCIAL SPACE		342.5
REQUIRED SHORT-TERM PARKING	.2/100 sm	1
REQUIRED LONG-TERM PARKING	.1/100 sm	0
PROPOSED SHORT-TERM PARKING		**2**
PROPOSED LONG-TERM PARKING		**0**

PHASE 3 | BUILDING C | COMMERCIAL		
AREA OF COMMERCIAL SPACE		866.5
REQUIRED SHORT-TERM PARKING	.2/100 sm	2
REQUIRED LONG-TERM PARKING	.1/100 sm	1
PROPOSED SHORT-TERM PARKING		**2**
PROPOSED LONG-TERM PARKING		**2**

PHASE 3 | BUILDING D | COMMERCIAL		
AREA OF COMMERCIAL SPACE		918
REQUIRED SHORT-TERM PARKING	.2/100 sm	2
REQUIRED LONG-TERM PARKING	.1/100 sm	1
PROPOSED SHORT-TERM PARKING		**2**
PROPOSED LONG-TERM PARKING		**2**



1 CONTEXT MAP
A 101 1 : 2000

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NO.	DATE	REVISION / ISSUANCE
1	231215	Issued For ZBA Pre-Submission
2	240726	Issued For ZBA Pre-submission
3	250320	Issued For ZBA

NOTES

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Toronto, ON M5C 1K9
info@svn-ap.com
416.593.0499

PERGOLA COMMONS

PROJECT OVERVIEW

PROJECT		DRAWN	Author
SCALE	1 : 2000	CHECKED	Checker
DATE	11/10/23		

A 101

2025-03-20 11:36:30 AM

Autodesk Docs://Pergola Commons_CFC Dist #21422624_1 Pergola Commons_CAN.rvt

7 07_TYP FLOOR 08-14 NFA
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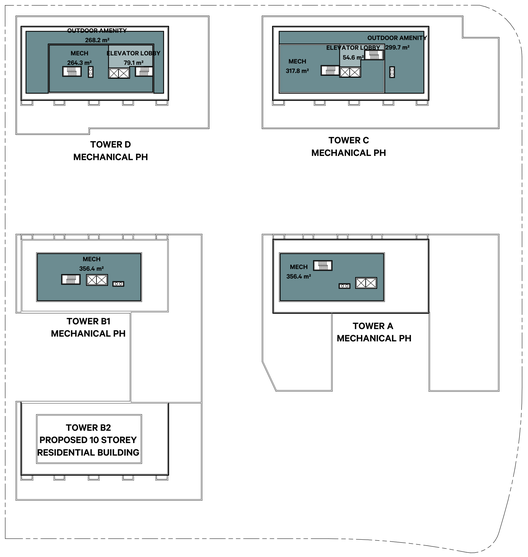


8 MECH PH FLOOR NFA
A 102 1 : 600

PHASE 1 - BUILDING A		
	GFA (sq.m)	NET FLOOR AREA (sq.m)
LEVEL 1	2238	1581
LEVEL 2	1708	1358
LEVEL 3	2021	1763
LEVEL 4	2021	1763
LEVEL 5	2021	1763
LEVEL 6	2021	1763
LEVEL 7	901	798
LEVEL 8	880	770
LEVEL 9	880	770
LEVEL 10	880	770
LEVEL 11	880	770
LEVEL 12	880	770
LEVEL 13	880	770
LEVEL 14	880	770
MECH PH	420	0
TOTAL	19510	16179

PHASE 2 - BUILDING B		
	GFA (sq.m)	NET FLOOR AREA (sq.m)
LEVEL 1	2980	2323
LEVEL 2	2192	1740
LEVEL 3	2433	2117
LEVEL 4	2433	2117
LEVEL 5	2433	2117
LEVEL 6	2433	2117
LEVEL 7	1679	1476
LEVEL 8	1655	1447
LEVEL 9	1655	1447
LEVEL 10	1655	1447
LEVEL 11	827	722
LEVEL 12	827	722
LEVEL 13	827	722
LEVEL 14	827	722
MECH PH	420	0
TOTAL	25274	21234

PHASE 3 - BUILDING C		
	GFA (sq.m)	NET FLOOR AREA (sq.m)
LEVEL 1	2045	1571
LEVEL 2	988	753
LEVEL 3	1563	1398
LEVEL 4	1563	1398
LEVEL 5	1563	1398
LEVEL 6	1563	1398
LEVEL 7	925	808
LEVEL 8	882	780
LEVEL 9	882	780
LEVEL 10	882	780
LEVEL 11	882	780
LEVEL 12	882	780
LEVEL 13	882	780
LEVEL 14	882	780
MECH PH	420	55
TOTAL	16803	14233

PHASE 3 - BUILDING D		
	GFA (sq.m)	NET FLOOR AREA (sq.m)
LEVEL 1	1773	1428
LEVEL 2	428	292
LEVEL 3	1391	1237
LEVEL 4	1391	1237
LEVEL 5	1391	1237
LEVEL 6	1391	1237
LEVEL 7	869	744
LEVEL 8	830	767
LEVEL 9	830	722
LEVEL 10	830	722
LEVEL 11	830	722
LEVEL 12	830	722
LEVEL 13	830	722
LEVEL 14	830	722
MECH PH	420	79
TOTAL	14864	12588

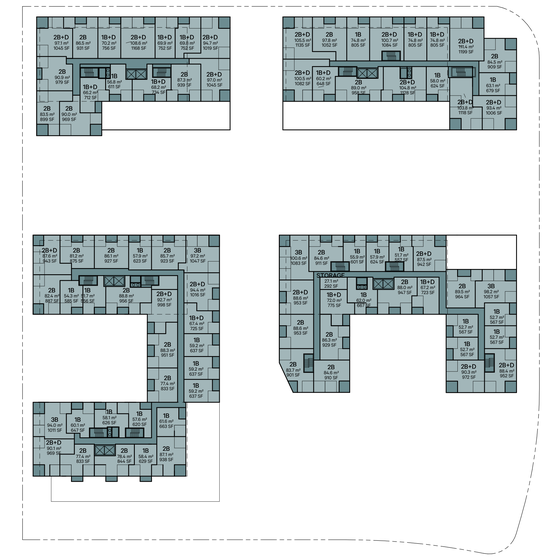
TOTAL GFA (sq.m) FOR ALL PHASES **76450** sq.m
TOTAL NFA (sq.m) FOR ALL PHASES **64234** sq.m

New Zoning By-law (2023)-20790 :

Gross floor area (GFA) means the floor area of a building measured from the centre line of partition walls and from the exterior face of outside walls.

Net floor area means the gross floor area of a building measured from the interior walls, excluding stairways, common hallways, elevator shafts and other service and mechanical shafts, service and mechanical rooms, waste and recycling rooms, loading areas, and common washroom facilities.

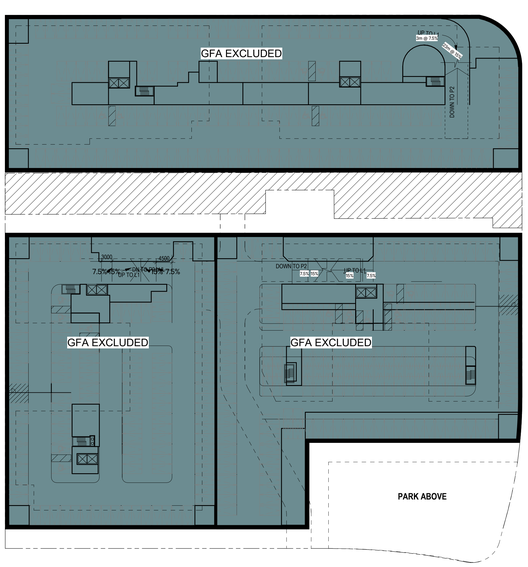
6 06_FLOOR 07 NFA
A 102 1 : 600



5 05_TYP FLOOR 03-06 NFA
A 102 1 : 600

4 04_FLOOR 02 NFA
A 102 1 : 600

3 03_GROUND LEVEL NFA
A 102 1 : 600



2 02_P1 NFA
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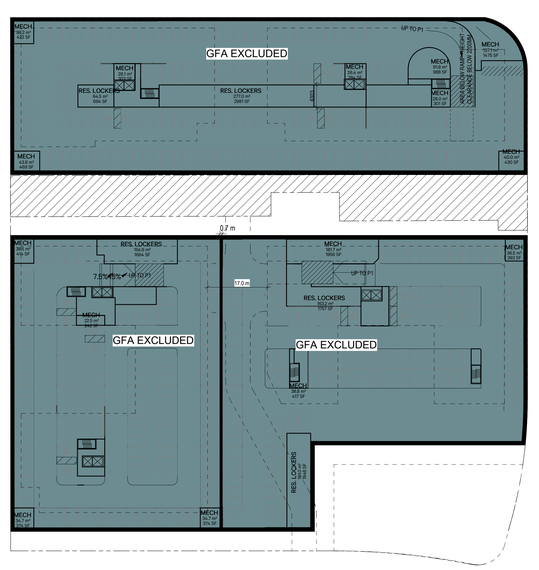

1 01_P2 NFA
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NO.	DATE	REVISION / ISSUANCE
1	231215	Issued For ZBA Pre-Submission
2	240726	Issued For ZBA Pre-submission
3	250320	Issued For ZBA

GFA INCLUDED

GFA EXCLUDED

NOTES

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PERGOLA COMMONS

GFA & NFA

PROJECT		DRAWN	Author
SCALE	As indicated	CHECKED	Checker
DATE	11/21/23		

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NOTES

CLAIR RD E

PERGOLA COMMONS
SITE AREA
53,497.3 sq.m

DEVELOPMENT
SITE AREA
22,188 sq.m

FARLEY DR EXT.

HAWKINS DR

PARKLAND DEDICATION

POPPY DR E

SvN
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PERGOLA COMMONS

OVERALL SITE PLAN

PROJECT		DRAWN	Author
SCALE	1 : 400	CHECKED	Checker
DATE	01/18/18		

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3	250320	Issued For ZBA

PROPERTY LINE

BUILDING OUTLINE ABV

DEVELOPMENT LINE

EASEMENT CENTERED ON EXISTING STM SEWER PIPE

EXISTING STORMWATER RETENTION / INFILTRATION SYSTEM

PARK ABOVE

PHASE 3 PARKING

NON-RES PARKING - 36 SPACES

100% OF ALL PARKING SPACES ARE EV-READY (CONDUIT ONLY)

RESIDENCE PARKING - 120 SPACES

100% OF ALL PARKING SPACES ARE EV-READY (CONDUIT ONLY)

MECH 42.7 m² / 459 SF

MECH 39.7 m² / 427 SF

MECH 38.1 m² / 410 SF

MECH 264.4 m² / 284 SF

MECH 39.7 m² / 427 SF

MECH 38.1 m² / 410

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PROPERTY LINE

DEVELOPMENT LINE

PHASE 3 PARKING

PHASE 2 PARKING

PHASE 1 PARKING

EASEMENT CENTERED ON EXISTING STM SEWER PIPE

EXISTING STORMWATER RETENTION / INFILTRATION SYSTEM

PARK ABOVE

RESIDENCE PARKING - 164 SPACES

100% OF ALL PARKING SPACES ARE EV-READY (CONDUIT ONLY)

RESIDENCE PARKING - 129 SPACES

100% OF ALL PARKING SPACES ARE EV-READY (CONDUIT ONLY)

MIN 2.2 M HEIGHT CLEARANCE

UP TO P1

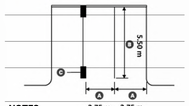
AREA BELOW RAMP - HEIGHT CLEARANCE BELOW 2200MM

RES. LOCKERS

ELEV LOBBY

MECH

Parking space dimensions

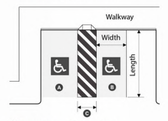


NOTES	2.75 m	2.75 m

A Width **2.75 m**
B Length **5.50 m**
C Column

C-30 | City of Guelph Zoning By-law

Accessible parking space dimensions



A Type A (3.4 m width x 5.5 m long)
B Type B (2.4 m width x 5.5 m long)
C Access aisle (2 m)

C-37 | City of Guelph Zoning By-law

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PERGOLA COMMONS

LEVEL P2 PARKING PLAN

PROJECT		DRAWN	Author
SCALE	1 : 200	CHECKED	Checker
DATE	11/06/23		

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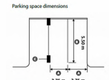
NOTES

GROUND FLOOR PLAN KEY NOTES:

1. LOADING SPACE HAS A LENGTH OF 11.4m, WIDTH OF 6m AND AN UNENCUMBERED VERTICAL CLEARANCE OF 6.5m, IS LEVEL (+/- 2%), AND IS CONSTRUCTED OF A MINIMUM 200mm REINFORCED CONCRETE
2. STAGING AREA HAS AN UNENCUMBERED VERTICAL CLEARANCE OF 6.5m, IS CONSTRUCTED OF 200mm REINFORCED CONCRETE, AND HAS A SLOPE NO GREATER THAN 2%
3. ALL ACCESS DRIVEWAYS USED BY WASTE COLLECTION VEHICLE WILL BE LEVEL (+/- 8%), HAVE A MINIMUM VERTICAL CLEARANCE OF 4.4m THROUGHOUT, A MINIMUM OF 4.5m WIDE THROUGHOUT, AND 6m WIDE AT INGRESS/EGRESS
4. OVERHEAD DOORS THE COLLECTION VEHICLE WILL BE PASSING THROUGH WILL HAVE A MINIMUM WIDTH OF 4m AND A VERTICAL CLEARANCE OF 6.5m

Parking space dimensions



- Width: **2.75 m**
- Length: **5.50 m**
- Column:

C 55 | City of Guelph Zoning By-law

Accessible parking space dimensions

- Type A (3.4 m width x 5.5 m long)
- Type B (2.4 m width x 5.5 m long)
- Access aisle (2 m)

C 57 | City of Guelph Zoning By-law

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PERGOLA COMMONS

GROUND LEVEL PLAN

PROJECT		DRAWN	Author
SCALE	1 : 200	CHECKED	Checker
DATE	12/04/23		

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NOTES

PROPERTY LINE

DEVELOPMENT LINE

RES. LOCKERS 2813 m² 3027 SF
RES. LOCKERS 1818.9 m² 2034 SF
RES. LOCKERS 2352 m² 2530 SF
RES. LOCKERS 3422.0 m² 3774 SF
RES. LOCKERS 2182.7 m² 2333 SF
RES. LOCKERS 1716.9 m² 184.5SF
RES. LOCKERS 39.2 m² 422 SF
BIKE STR 78.4 m² 844 SF
BIKE STR 77.1 m² 837 SF
BIKE STR 122.8 m² 1332 SF
BIKE STR 83.1 m² 894 SF
32 STACKED BIKES
8 HORIZONTAL BIKE PARKING SPACES
24 STACKED BIKES
10 HORIZONTAL BIKE PARKING SPACES
22 HORIZONTAL BIKE PARKING SPACES
80 STACKED BIKES
80 STACKED BIKES
OPEN TO RETAIL BELOW
OPEN TO LOADING BELOW
OPEN TO LOBBY BELOW
OPEN TO AMENITY BELOW
OPEN TO INDOOR AMENITY BELOW
GARBAGE 87 m² 937 SF
TH - UPPER 75.8 m² 816 SF
TH - UPPER 69.2 m² 744 SF
TH - UPPER 79.1 m² 852 SF
TH - UPPER 107.5 m² 1157 SF
TH - UPPER 50.9 m² 544 SF
TH - UPPER 62.4 m² 672 SF
TH - UPPER 62.4 m² 672 SF
TH - UPPER 59.9 m² 645 SF
TH - UPPER 96.9 m² 1043 SF
TH - UPPER 53.4 m² 574 SF
TH - UPPER 54.3 m² 584 SF
TH - UPPER 54.3 m² 584 SF
TH - UPPER 89.7 m² 965 SF
TH - UPPER 54.3 m² 585 SF
TH - UPPER 54.6 m² 588 SF
TH - UPPER 85.4 m² 865 SF
TH - UPPER 49.0 m² 527 SF
TH - UPPER 60.1 m² 647 SF
TH - UPPER 42.3 m² 455 SF
TH - UPPER 41.3 m² 444 SF
TH - UPPER 42.0 m² 443 SF
TH - UPPER 43.7 m² 470 SF
TH - UPPER 50.0 m² 539 SF
TH - UPPER 47.6 m² 512 SF
TH - UPPER 47.6 m² 512 SF
TH - UPPER 49.1 m² 528 SF
TH - UPPER 49.1 m² 528 SF
TH - UPPER 49.1 m² 528

Appendix B:
Pergola Commons Formal Terms of Reference

November 23, 2023

City of Guelph Transportation Staff
Kate.Berry@guelph.ca
Gwen.Zhang@guelph.ca
Munshif.Muccaram@guelph.ca

RE: PERGOLA COMMONS – TERMS OF REFERENCE & TRANSPORTATION SCOPE

DRAFT

Dear City of Guelph Transportation Staff,

BA Consulting Group has been retained by First Capital to provide transportation advisory services in relation to a proposed development at 1 Clair Road East (Pergola Commons and the "Site"). This letter provides a brief description of the terms of reference regarding the proposed scope of the Transportation Impact Study for the Site (the Site TIS).

The Site TIS is proposed to follow the City of Guelph's *Traffic Impact Study Guidelines* with scoped details provided in this Terms of Reference. BA Group and First Capital met with City of Guelph Transportation Staff on September 26th, 2023 and October 19th, 2023 to scope requried materials for the Site TIS. This Terms of Reference reflects the proposed scope for the Site TIS based on a review of the City's guidelines, meetings with City Staff, Site context, and proposed land uses.

3.1 Description of the Proposed Development

The Site TIS will provide a description of the proposed development in accordance with the bullet points provided under Section 3.1 of the Guelph TIS Guidelines.

3.2 Study Area

As confirmed in previous correspondence and meetings with the City of Guelph Transportation Staff, the study area for the Site TIS is provided below, and illustrated in **Exhibit 1.**

1. Clair Road East / Hawkins Drive
2. Poppy Drive East / Hawkins Drive
3. Poppy Drive East / Farley Drive
4. Poppy Drive East / Gordon Street
5. Clair Road East / Gordon Street
6. Clair Road East / Farley Drive
7. Site Access 1 / Farley Drive
8. Site Access 2 / Farley Drive
9. Site Access 3 / Hawkins Drive
10. Poppy Drive East / 1888 Gordon Street Access

Exhibit 1: Proposed Pergola Commons Study Area Intersections

DRAFT

Additional contextual information relevant to the study area will be provided as part of the Site TIS, in accordance with Section 3.2 of the Guelph TIS Guidelines.

3.3 Horizon Years and Peak Periods

3.3.1 Horizon Years

The following horizon years will be utilized as part of the traffic analysis contained in the Site TIS:

- Existing conditions (2023)
- Anticipated build-out year of Phases 1 & 2 (2028)
- Anticipated build-out year of Phase 3 and 5 years after build-out of Phases 1 & 2 (2033)
- 5 years after build-out of Phase 3 and 10 years after build-out of Phases 1 & 2 (2038)

3.3.2 Peak Periods

The following peak periods will be considered as part of the Site TIS:

- Weekday AM Peak Hour
- Weekday PM Peak Hour
- Saturday Midday Peak Hour

3.4 Existing Traffic Analysis

3.4.1 Traffic Counts

Existing traffic data has been collected as part of the preliminary data collection exercise for the Site TIS. Turning movement counts have been undertaken at the study area intersections during the following periods and times, in accordance with prior correspondence and meetings with City of Guelph Transportation Staff:

- Weekday Counts: 7:00 am – 7:00 pm
- Saturday Counts: 12:00 pm – 4:00 pm

In addition to peak period counts, City staff requested weekday midday counts be conducted for their review. As confirmed with staff, these are for review of data and not considered a design period for the purpose of analysis in the TIS.

Existing turning movement count data, including weekday midday peak period data, are provided in **Attachment A**, attached to the email in which this Terms of Reference was enclosed.

3.4.2 Data Balancing

Through review of turning movement counts at study area intersections, the following network-wide design periods have been identified for use in this analysis:

- AM Peak Hour: 8:00 am – 9:00 am
- PM Peak Hour: 4:45 pm – 5:45 pm
- SAT Peak Hour: 2:45 pm – 3:45 pm

Note: Node 10 in **Exhibit 1** utilizes its individual intersection peak hours, as it was counted on separate days than the remaining study area intersections.

Published counts remain unbalanced to best represent observed traffic for the network design periods noted above and recognize driveway activity contributing to changes in volume along the road corridors. Observed entry / exit imbalances were observed to be minor at closely spaced intersections (<5%), or imbalances are otherwise accounted for by mid-block driveways.

Existing turning movement volumes have been rounded to the nearest 5 vehicles per hour.

3.4.3 Active Transportation and Transit

Area pedestrian and cyclist data at study area intersections has been collected as part of the existing traffic data collection process.

Existing active transportation and transit conditions within the study area will be described as part of the Site TIS.

DRAFT

3.4.4 Capacity Analysis for Existing Traffic

Existing traffic conditions within the study area will be assessed, inclusive of the following components:

- Existing turning movement counts at study area intersections.
- Existing queueing conditions at the south approach of the Clair Road East / Farley Drive intersection; and
- Existing cut-through traffic conditions along the existing east-west connection extending from Farley Drive in the west to Hawkins Drive in the east.

3.5 Background Traffic Analysis

3.5.1 Background Growth

Through consultation with City of Guelph Transportation Staff, the following growth rates will be considered as part of the study area's background traffic:

- 0.5% for Gordon Street for all horizon years
- 1.5 % for Clair Road up to build-out of Phases 1 & 2 (2028) and up to build-out of Phase 3 and 5-years after build-out of Phases 1 & 2 (2033)
- 1.0% for Clair Road at 5 years after build-out of Phases 1 & 2 and at build out of Phase 3 (2033) and up to 10 years after build-out of Phases 1 & 2 and 5 years after build-out of Phase 3 (2038)

3.5.2 Other Area Developments

In addition to corridor growth, the following development-specific growth allocations will be considered, as presented in the City of Guelph's Clair-Maltby Secondary Plan (CMSP):

- Background development traffic identified as part of the Clair-Maltby Secondary Plan Transportation Study Report.
- Traffic generated via the proposed developments contemplated within the Clair-Maltby Secondary Plan TIS.

The following phasing of background traffic associated with the CMSP has been identified through prior correspondence with City of Guelph staff:

- 25% of all traffic generated by background developments and site traffic from the CMSP TIS at Phase 1 & 2 build-out (2028). **Please confirm this assumption, as a percentage of background growth at the build-out year was not explicitly stated in prior correspondence with City of Guelph Transportation Staff.**
- 50% of all traffic generated by background developments and site traffic from the CMSP TIS 5 years after build-out of Phase 1 & 2, and at build-out of Phase 3 (2033).
- 100% of all traffic generated by background developments and site traffic from the CMSP 10 years after build-out of Phase 1 & 2, and 5 years after build-out of Phase 3 (2038).

The following additional area background developments will be considered as part of this TIS:

- 331 Clair Road East
- 287 Clair Road East

Traffic from both the proposed 331 Clair Road East and 287 Clair Road East development are assumed to apply to all horizon years. **Please confirm this assumption.**

DRAFT

3.5.3 Planned Roadway Improvements

As identified in the *City of Guelph Transportation Master Plan* (2022) (Guelph TMP), a widening of Gordon Street from 2 to 4 lanes between Gosling Gardens and Maltby Road will be considered as part of this analysis.

Per the City of Guelph's 2023 *Development Charges Background Study* (2023) (Guelph DC Study), this widening is expected to be undertaken between 2027 and 2032. Therefore, it is assumed that the widening will be completed by the anticipated Phase 1 & 2 build-out year of 2028. **Please confirm this assumption.**

3.5.4 Active Transportation and Transit Improvements

Future modal split assumptions will be evaluated on the basis that transit may present significant impacts towards shifting area modal splits.

Future planned active transportation and transit improvements will be described in the Site TIS and considered in its analysis, as appropriate.

3.5.5 Capacity Analysis for Background Traffic

The assessment of background traffic conditions for the identified horizon years will be consistent with the capacity analysis methodology described in Section 3.8.1 of the Guelph TIS Guidelines.

3.6 Estimate of Travel Demand

3.6.1 Trip Generation

Site-related trip generation will be derived from ITE 11th Ed. trip rates. Consistent with prior correspondence with the City of Guelph, reductions to ITE vehicle trip rates will be determined through consideration of internalized trips as well as trip reductions associated with the implementation of TDM measures and future modal split targets provided within the City of Guelph Official Plan (February 2022 consolidation).

Modal split projections will also be informed by the *Clair-Maltby Secondary Plan Transportation Master Plan Study*, completed by BA Group in March 2019.

3.6.2 Trip Distribution

Trip distribution assumptions will be supported by the use of the most recently available TTS data, existing observed travel patterns, and output from the City's travel demand forecasting model. Consideration will also be given to the trip distribution assumptions presented in the transportation report completed for the CMSP.

3.6.3 Trip Assignment

Trip assignment will be undertaken in accordance with Section 3.6.3 of the Guelph TIS Guidelines, and will take into consideration potential pass-by trips, diverted trips, and internal trips, where appropriate.

DRAFT

3.7 Future Total Traffic Analysis

3.7.1 Capacity Analysis for Future Total Traffic

The assessment of future total traffic conditions for the identified horizon years will be consistent with the capacity analysis methodology described in Section 3.8.1 of the Guelph TIS Guidelines.

3.8 Traffic Operation Evaluation

3.8.1 Capacity Analysis Methodology

Capacity analysis at intersections within the study area will be conducted using the latest Synchro capacity analysis software and utilize Highway Capacity Manual (HCM) methodologies. Signal timing plans for the following signalized intersections have been obtained from the City of Guelph and will be utilized in this analysis:

- Clair Road / Gordon Street
- Clair Road East / Farley Drive
- Gordon Street / Poppy Drive

BA Group has reviewed the provided signal timing plans that reflect 90 second cycling lengths along Clair Road and Gordon Street. For the purposes of modelling in Synchro, signal timings will be set to actuated-coordinated, with Clair Road / Gordon Street set as the Master Intersection and the Reference Phase set to 2+6 NBTL SBTL.

Synchro input parameters will be consistent with those outlined in Section 3.8.1 of the Guelph TIS Guidelines.

Capacity analysis results will be presented in a tabular format in accordance with the specifications outlined in Section 3.8.1 of the Guelph TIS Guidelines.

3.8.2 Intersections with Capacity or Level of Service Deficiencies

Signalized and unsignalized intersections within the study area will be identified in the Site TIS in accordance with Section 3.8.2 of the Guelph TIS Guidelines.

City of Guelph Transportation Staff has identified that the Clair Road East / Gordon Street intersection is currently constrained and is therefore expected to operate at lower levels of service than would otherwise typically be acceptable.

3.8.3 Safety Analysis

In accordance with the Guelph TIS Guidelines, the safety measures outlined in Section 3.8.3 will be reviewed (where applicable) to the current rezoning application. **City to confirm whether the existing study area is considered collision-prone for the purpose of scoping the Site TIS. If so, collision data to be requested.**

3.9 Mitigation Measures

3.9.1 Traffic Signal Warrant

Traffic signal warrant analyses will be undertaken to determine if study area unsignalized intersections qualify for signalization under all proposed traffic scenarios.

DRAFT

3.9.2 Exclusive Turning Lane Warrant

Exclusive turning lane warrant analyses will be undertaken to determine if study area intersections qualify for exclusive turning lanes under all proposed traffic scenarios.

3.9.3 Transportation Demand Management Strategies

Transportation Demand Management (TDM) strategies will be presented within the Site TIS in consideration the potential measures presented in Section 3.9.3 of the Guelph TIS Guidelines.

3.9.4 Traffic Calming Measures

Where appropriate, traffic calming measures will be addressed within the Site TIS in consideration of the City's Traffic Calming Policy.

3.10 Access Management

3.10.1 Number and Location of Accesses

The number and location of accesses for the Site will be determined in accordance with the considerations provided in Section 3.10.1 of the Guelph TIS Guidelines.

3.10.2 Site Triangle and Site Distance

An assessment of site triangles and sight distance will be considered as part of the Site TIS, where appropriate.

3.10.3 Access Control

Traffic signal warrant analyses will be performed for the Clair Road East / Hawkins Drive intersection under future scenarios, consistent with the methodology presented in Section 3.9.1 of the Guelph TIS Guidelines.

3.10.5 Access Geometrics

Access configuration will be designed in accordance with the considerations presented in Section 3.10.5 of the Guelph TIS Guidelines, where appropriate.

Vehicle manoeuvring diagrams will be provided as part of the Site TIS in accordance with Section 3.10.5 of the Guelph TIS Guidelines.

3.11 Internal Traffic Circulation

Transportation-related components of the Site plan will be reviewed in accordance with the considerations provided in Section 3.11 of the Guelph TIS Guidelines.

Transportation-related components of the Site plan will be described within the Site TIS, and vehicle manoeuvring diagrams will be provided as part of the Site TIS in accordance with Section 3.11 of the Guelph TIS Guidelines and the City's Waste Management Guidelines.

3.12 Findings and Recommendations

In accordance with the Guelph TIS Guidelines, findings from the transportation study will be included in the Site TIS, and recommendations for improvement will be provided, where appropriate and necessary.

DRAFT

3.13 Parking Justification Study

A parking justification study will be provided within the Site TIS, to be reviewed by City of Guelph Planning Staff.

3.14 Documentation and Reporting

Documentation and reporting for findings from the Site TIS will be presented in consideration of Section 3.14 of the Guelph TIS Guidelines.

As noted above, the following considerations have been specifically highlighted by City of Guelph Transportation Staff, and will be included as part of the Site TIS:

- Assessment of existing and future queueing conditions at the south approach of the Clair Road East / Farley Drive intersection.
- Assessment of existing cut-through traffic conditions along the internal east-west connection between Farley Drive and Hawkins Drive.
- Left turn warrant analysis at the Clair Road East / Hawkins Drive intersection.
- Signal warrant analysis at the Clair Road East / Hawkins Drive intersection.

3.15 Preliminary Review of Cut-Through Traffic

A preliminary review of "cut-through" traffic along the Site's existing east-west connection has been undertaken; the results of which are summarized below.

The preliminary review of "cut-through" traffic considered two distinct types of activity:

- Those accessing / leaving the commercial buildings on the Site west of Farley Drive (Route #1 in **Exhibit 2**), and
- Those travelling through the Site to avoid the Clair Road / Gordon Street and / or Clair Road East / Farley Drive intersections (Route #2 in **Exhibit 2**).

This review of cut-through traffic has indicated:

- A small number of vehicles are currently utilizing Route #1 to access the commercial buildings west of Farley Drive given its an unconstrained environment (33 two-way vehicles per hour or less), and
- No vehicles are currently utilizing Route #2 to avoid the Clair Road / Gordon Street and / or Clair Road East / Farley Drive intersections (i.e. as an alternate route to Poppy Drive). Observed cut-through traffic during the weekday morning and afternoon peak hours is provided in **Table 1**, below.

The relative volumes of cut-through traffic through the Site are quite low, compared to the adjacent link volumes (between the Clair Road East / Farley Drive and Clair Road East / Hawkins Drive intersections). Therefore, cut-through routes through the Site are not considered to function as an alternative route for vehicular traffic travelling along either the Clair Road East, Gordon Street, or Poppy Street corridors.

The east-west connection through the Site functions as both an access to the existing commercial buildings on the Site including an existing underground servicing connection. Cut-through volumes through the Site are considered to be relatively low compared to the broader traffic activity within the study area, as will be further demonstrated within the completed TIS. While cut-through traffic is not considered to be a concern for the future design and traffic operations of the Site at this time, the TIS will outline measures that can be taken to further reduce the desire for passenger traffic to use the east-west as a cut-through (i.e. traffic calming measures through design) and what measures can be protected for should unanticipated issues arise.

DRAFT

Exhibit 2 Reviewed Cut-Through Traffic Routes

Table 1 Existing Peak Period Cut-Through Traffic

Route	AM Peak Hour Cut-Through Traffic			PM Peak Hour Cut-Through Traffic			SAT Peak Hour Cut-Through Traffic		
	EB	WB	2-Way	EB	WB	2-Way	EB	WB	2-Way
Route #1	4	12	16	20	13	33	10	22	32
Route #2	0	0	0	0	0	0	0	0	0
Total Cut-Through Traffic	**4**	**12**	**16**	**20**	**13**	**33**	**10**	**22**	**32**

It should be noted that peak cut-through traffic does not necessarily occur during the determined peak-hour design periods for the morning, afternoon, and Saturday peak hours. To provide a consistent model, cut-through traffic during the adjacent street peak-hour design periods is utilized in this comparison. Existing area traffic volumes during the weekday morning, afternoon, and Saturday peak hours are provided in , below.

DRAFT

We trust the above Terms of Reference is satisfactory. Please do not hesitate to reach out to us directly for any matters of clarification.

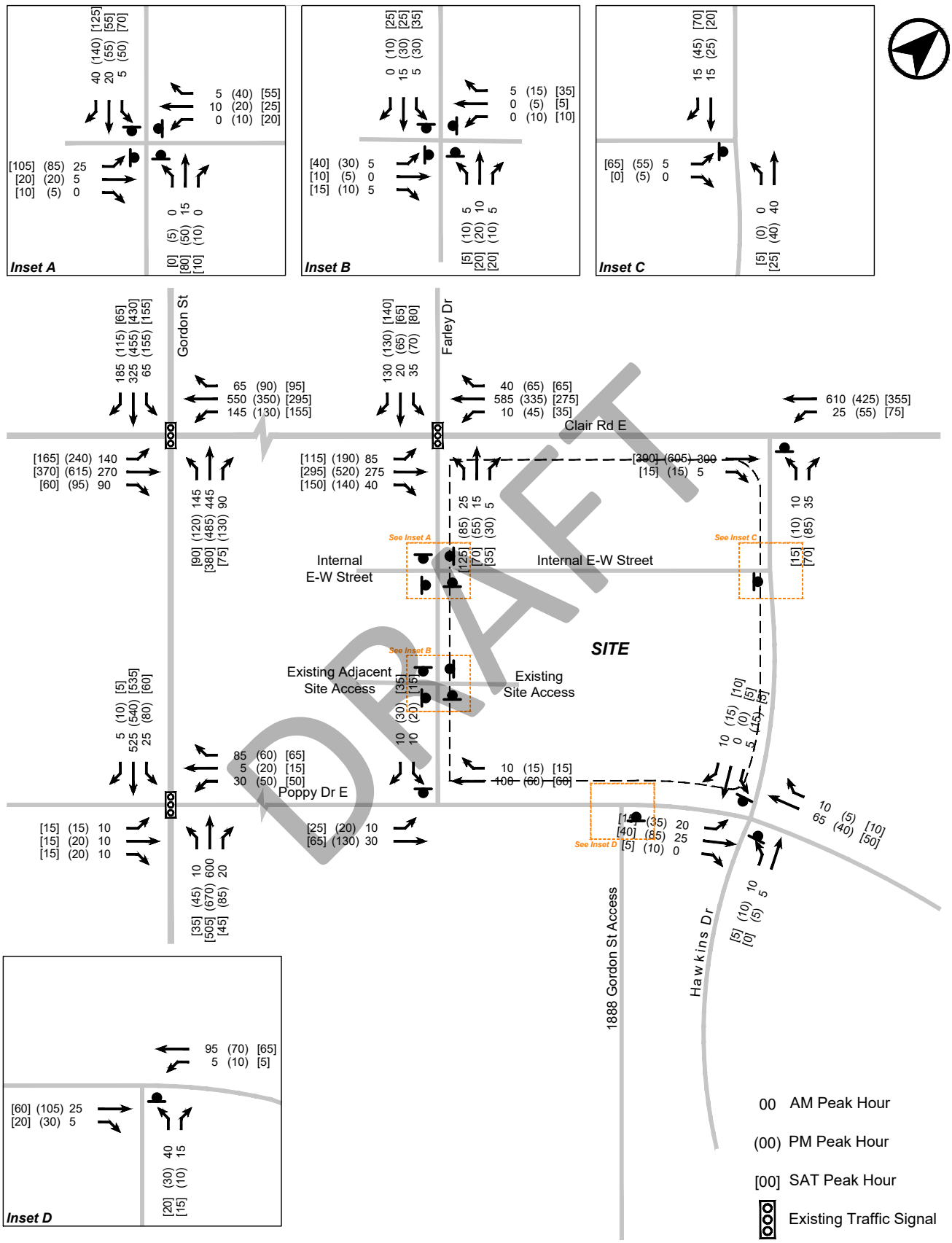
Sincerely,

BA Consulting Group Ltd.

Emily J. Ecker, P. Eng.
Senior Asscociate

Cc: Hendrik Rolleman, Transportation Analyst

DRAFT



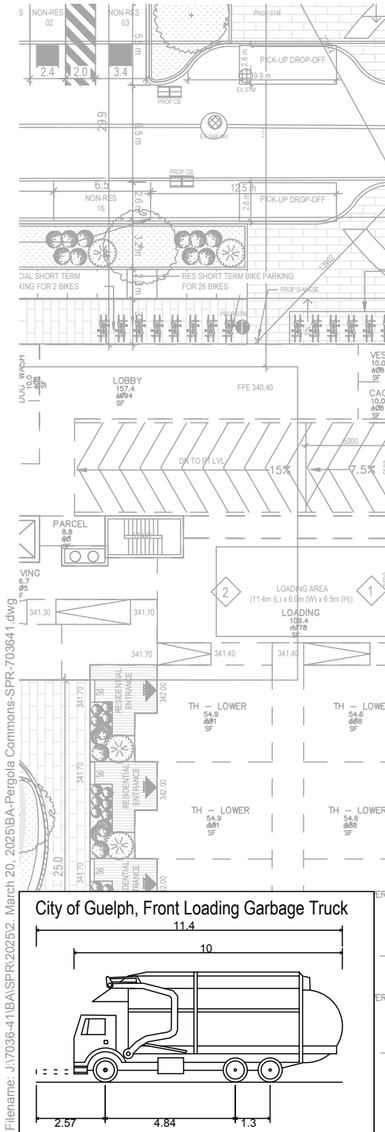
Date Plotted: November 14, 2023 Filename: P:\7036\41\Graphics\CAD\Fig 09-01-EX.dwg

FIGURE 1 EXISTING TRAFFIC VOLUMES

Appendix C:
Vehicle Manoeuvring Diagrams

INBOUND

OUTBOUND



Overall Length (forks down)	11.40m
Overall Length (forks up)	10.00m
Overall Width	2.60m
Overall Body Height	4.10m
Outside Turning Radius	14.31m
Centreline Radius	12.00m
Inside Turning Radius	9.79m

Filename: J:\7036-41\BA\SPR\202502_March 20, 2025\BA-Pergola Commons-SPR-703

Date Plotted: March 20, 2025

BA Group

PERGOLA COMMONS

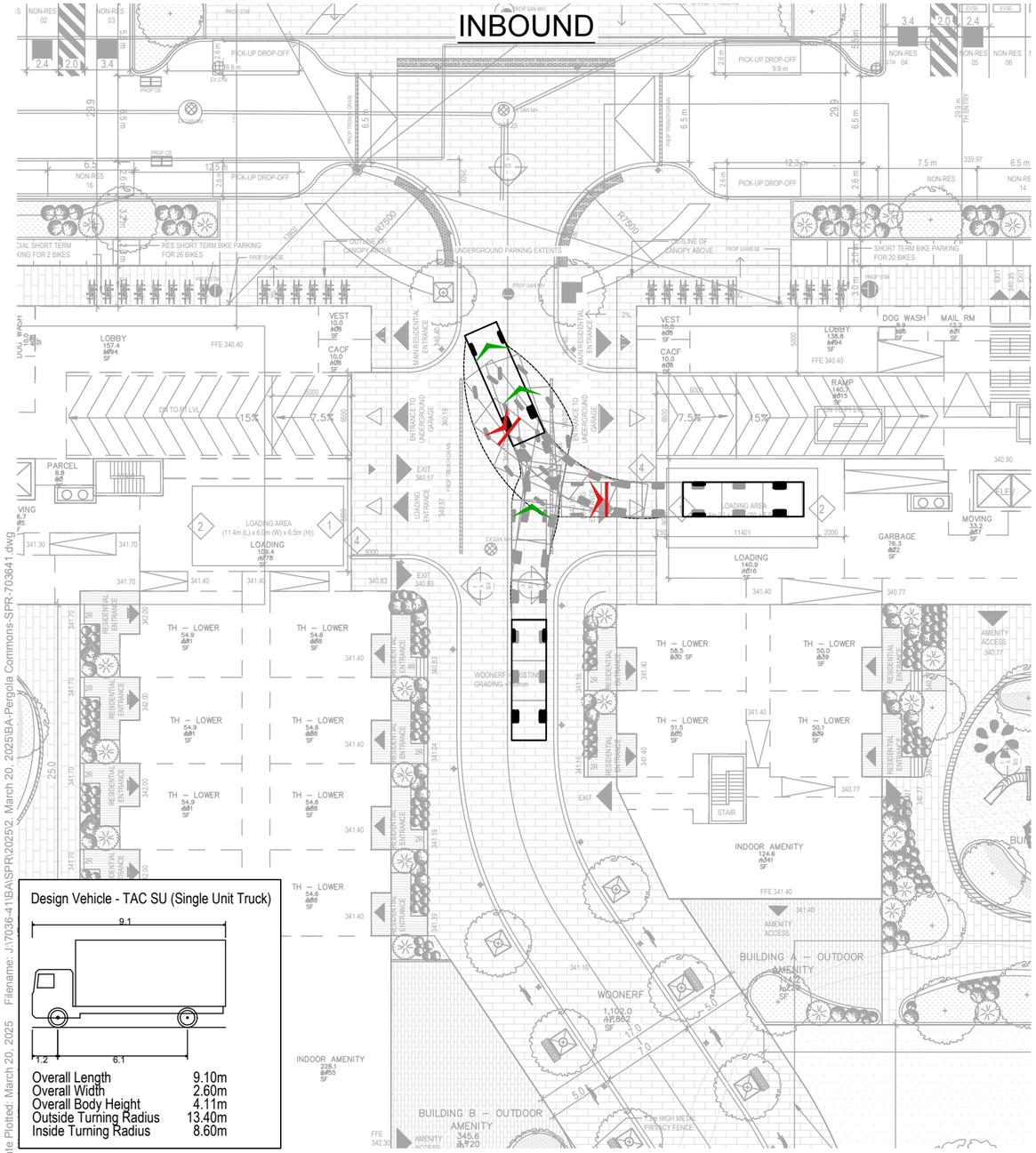
Vehicle Manoeuvring Diagram
City of Guelph Garbage Truck
Building A

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

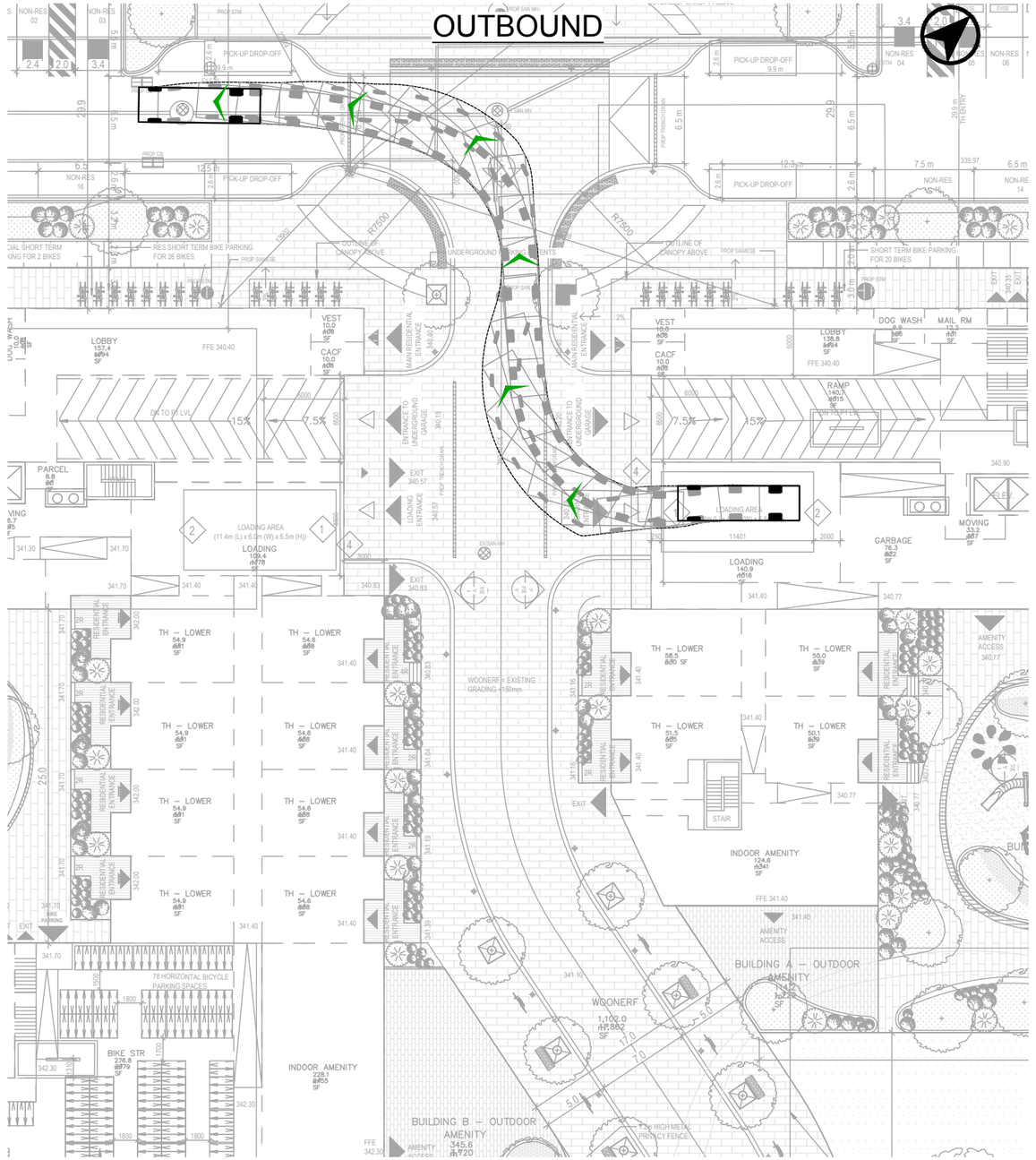
Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-01

INBOUND



OUTBOUND



Design Vehicle - TAC SU (Single Unit Truck)

Overall Length	9.10m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	13.40m
Inside Turning Radius	8.60m

Date Plotted: March 20, 2025 Filename: J:\7036-41\BA\SPR\20252\2. March 20, 2025\BA-Pergola Commons-SPR-703

BA Group

PERGOLA COMMONS

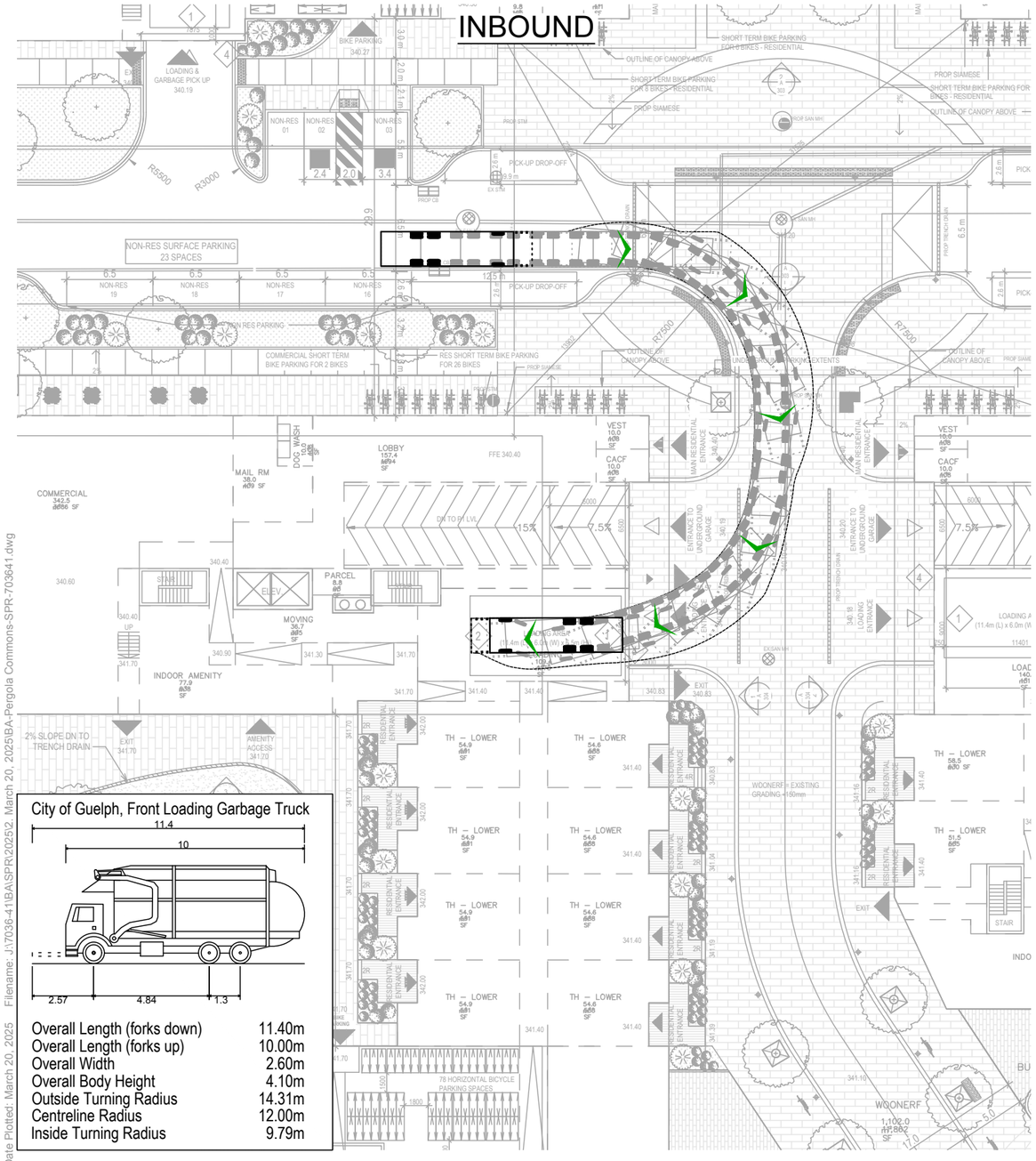
Vehicle Manoeuvring Diagram
TAC Single Unit (SU) Truck
Building A

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

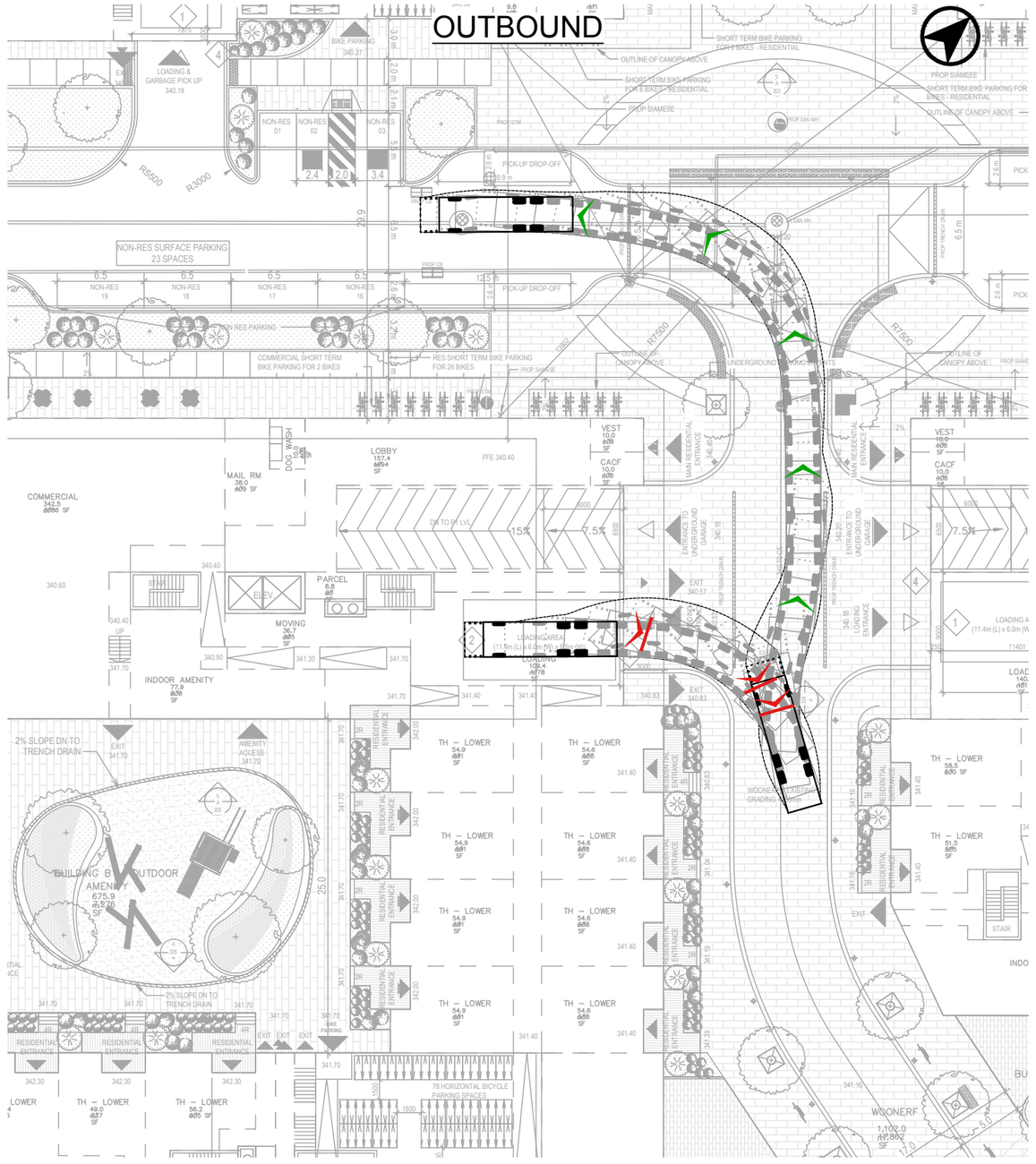
Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-02

INBOUND



OUTBOUND



City of Guelph, Front Loading Garbage Truck

Overall Length (forks down)	11.40m
Overall Length (forks up)	10.00m
Overall Width	2.60m
Overall Body Height	4.10m
Outside Turning Radius	14.31m
Centreline Radius	12.00m
Inside Turning Radius	9.79m

Date Plotted: March 20, 2025 Filename: J:\7036-41\BA\SPR\20252. March 20, 2025\BA-Pergola Commons-SPR-703641.dwg

BA Group

PERGOLA COMMONS

Vehicle Manoeuvring Diagram
City of Guelph Garbage Truck
Building B

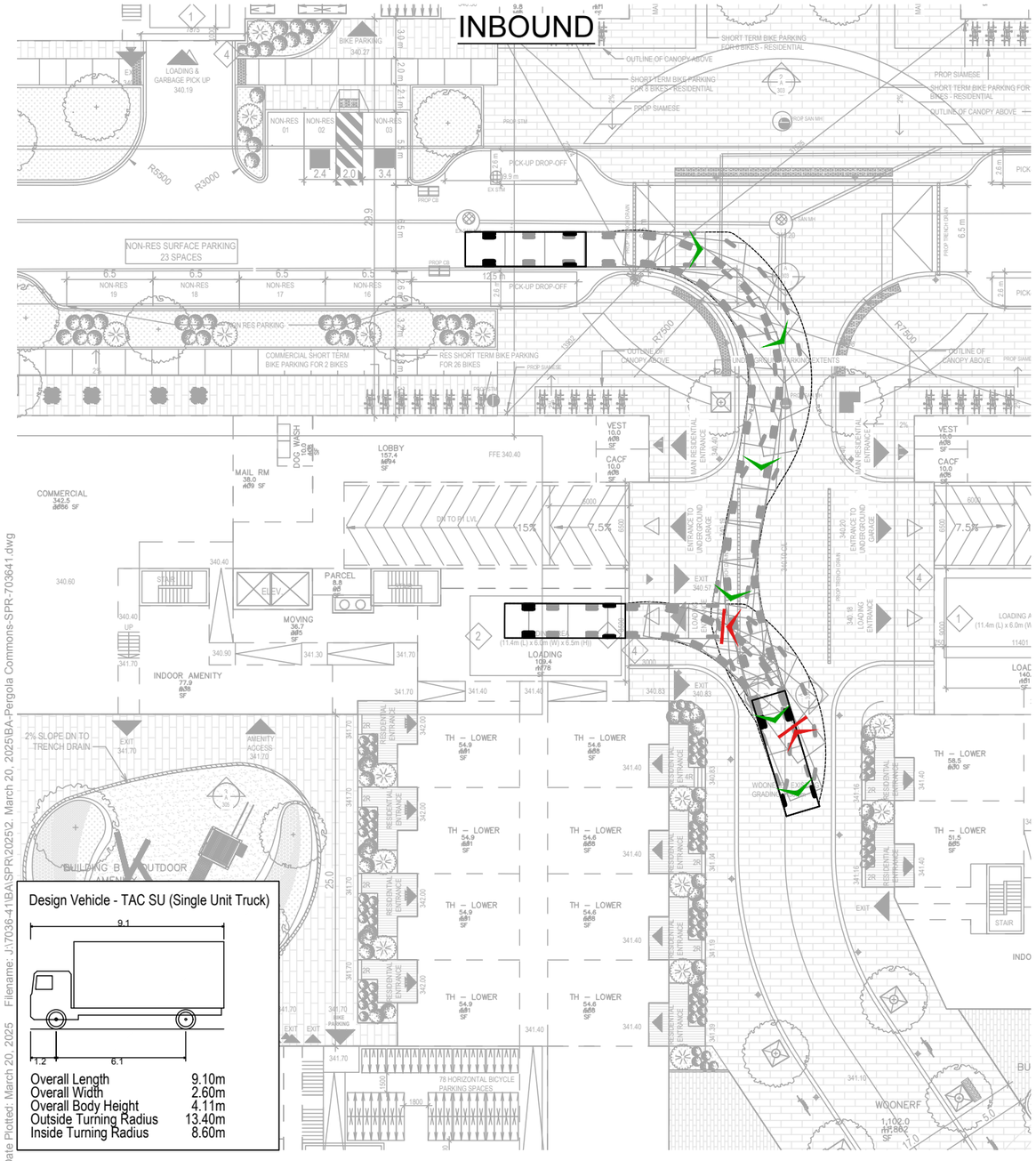
Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-03

INBOUND

OUTBOUND



Design Vehicle - TAC SU (Single Unit Truck)

Overall Length	9.10m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	13.40m
Inside Turning Radius	8.60m

Date Plotted: March 20, 2025 Filename: J:\7036-41\BA\SPR\20252. March 20, 2025\BA-Pergola Commons-SPR-703641.dwg

BA Group

PERGOLA COMMONS

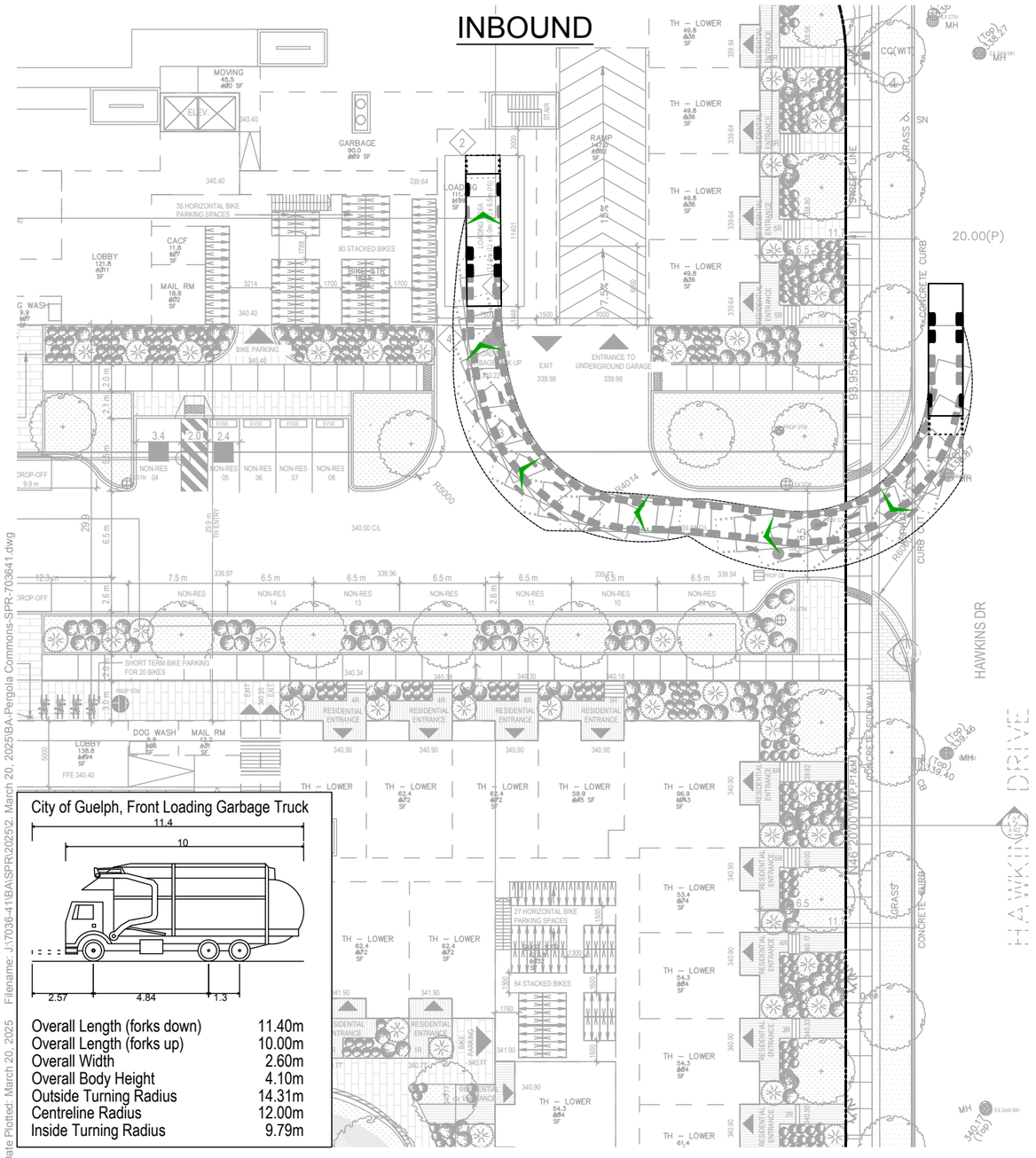
Vehicle Manoeuvring Diagram
TAC Single Unit (SU) Truck
Building B

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

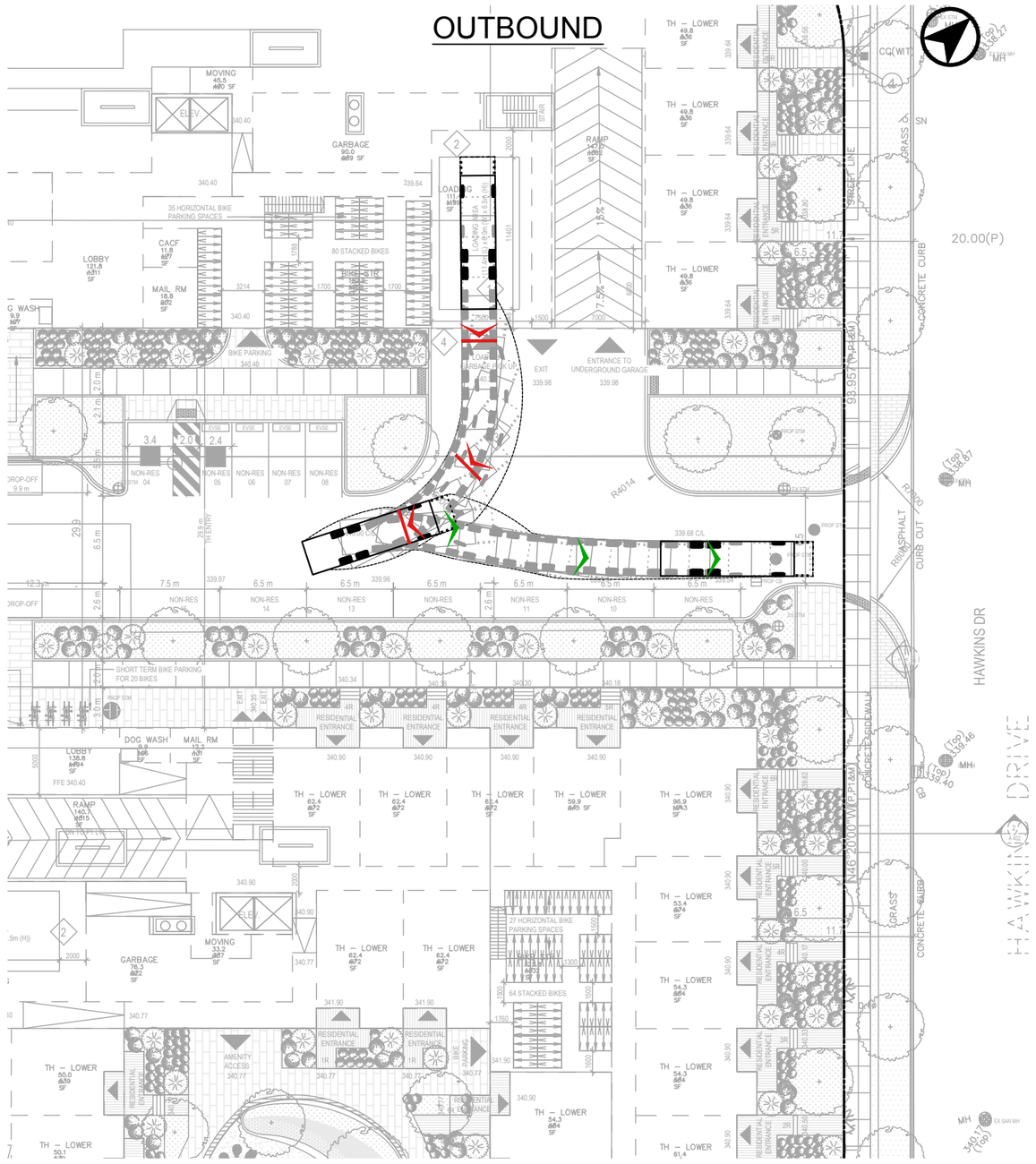
Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-04

INBOUND



OUTBOUND



City of Guelph, Front Loading Garbage Truck

Overall Length (forks down)	11.40m
Overall Length (forks up)	10.00m
Overall Width	2.60m
Overall Body Height	4.10m
Outside Turning Radius	14.31m
Centreline Radius	12.00m
Inside Turning Radius	9.79m

Date Plotted: March 20, 2025 Filename: J:\7036-41\BA\SPR\20252 March 20, 2025\BA-Pergola Commons-SPR-703641.dwg

BA Group

PERGOLA COMMONS

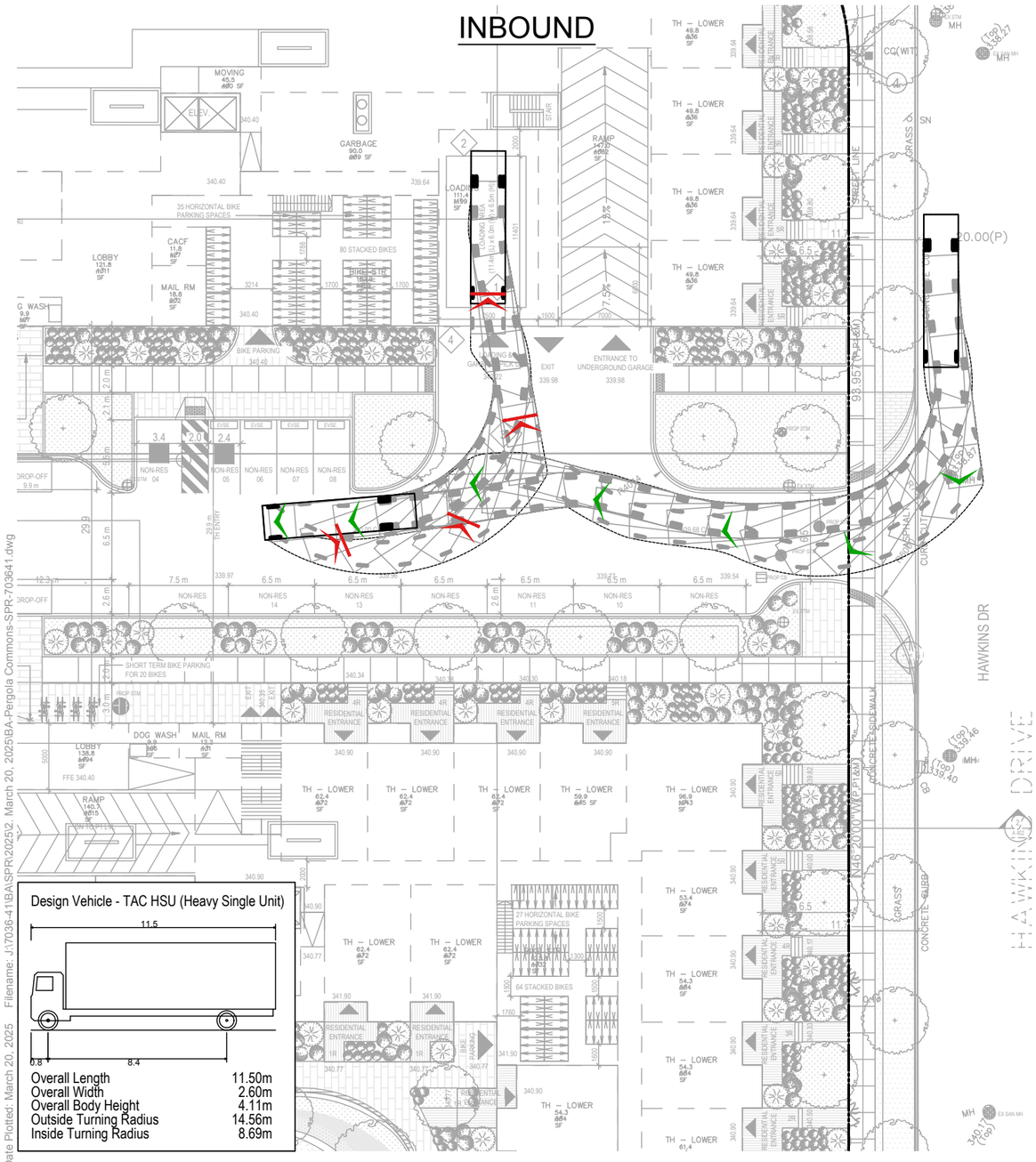
Vehicle Manoeuvring Diagram
City of Guelph Garbage Truck
Building C

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

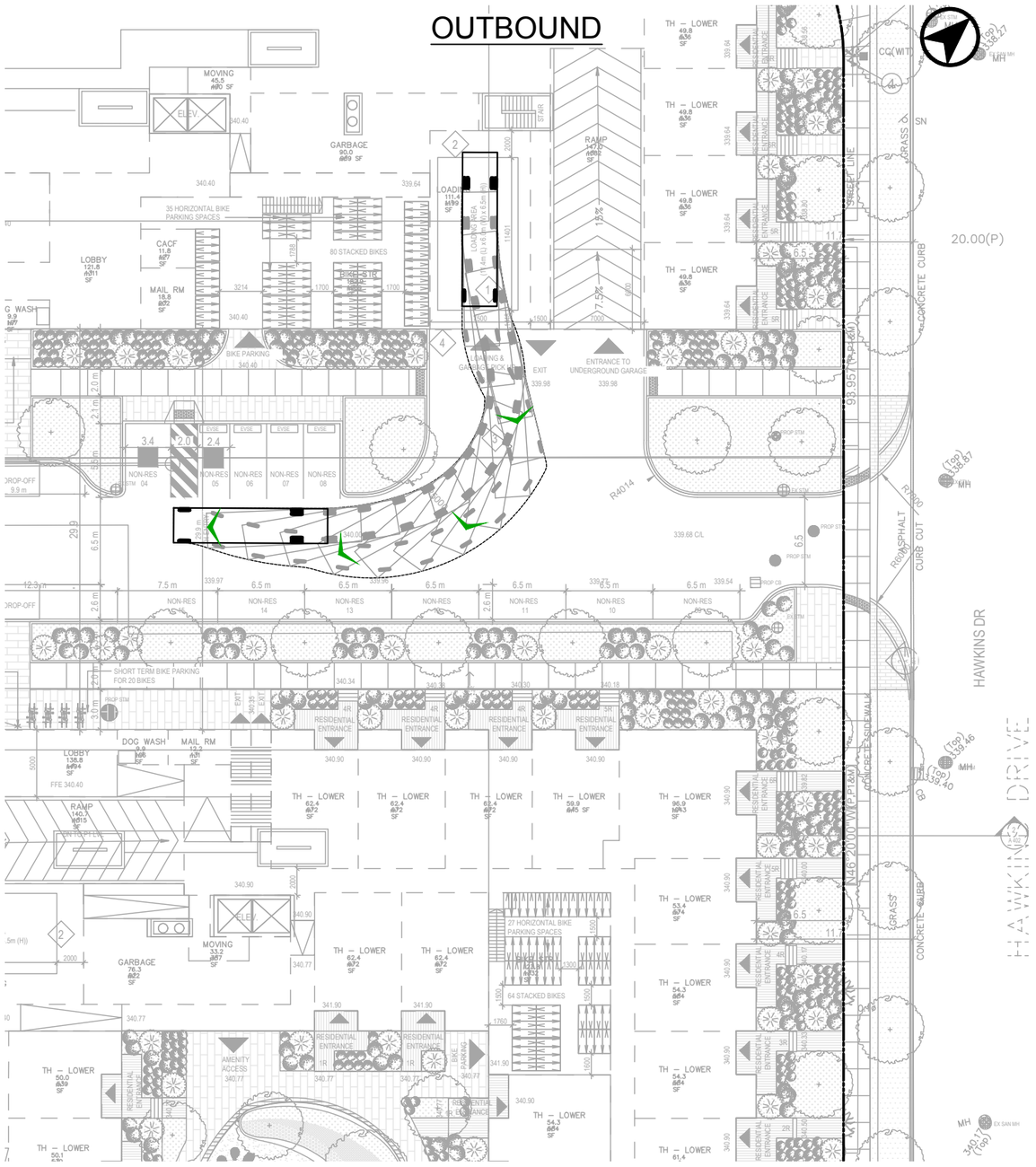
Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-05

INBOUND



OUTBOUND



Date Plotted: March 20, 2025 Filename: J:\7036-41BA\SPR\2025\2 March 20, 2025\BA-Pergola Commons-SPR-703641.dwg

BA Group

PERGOLA COMMONS

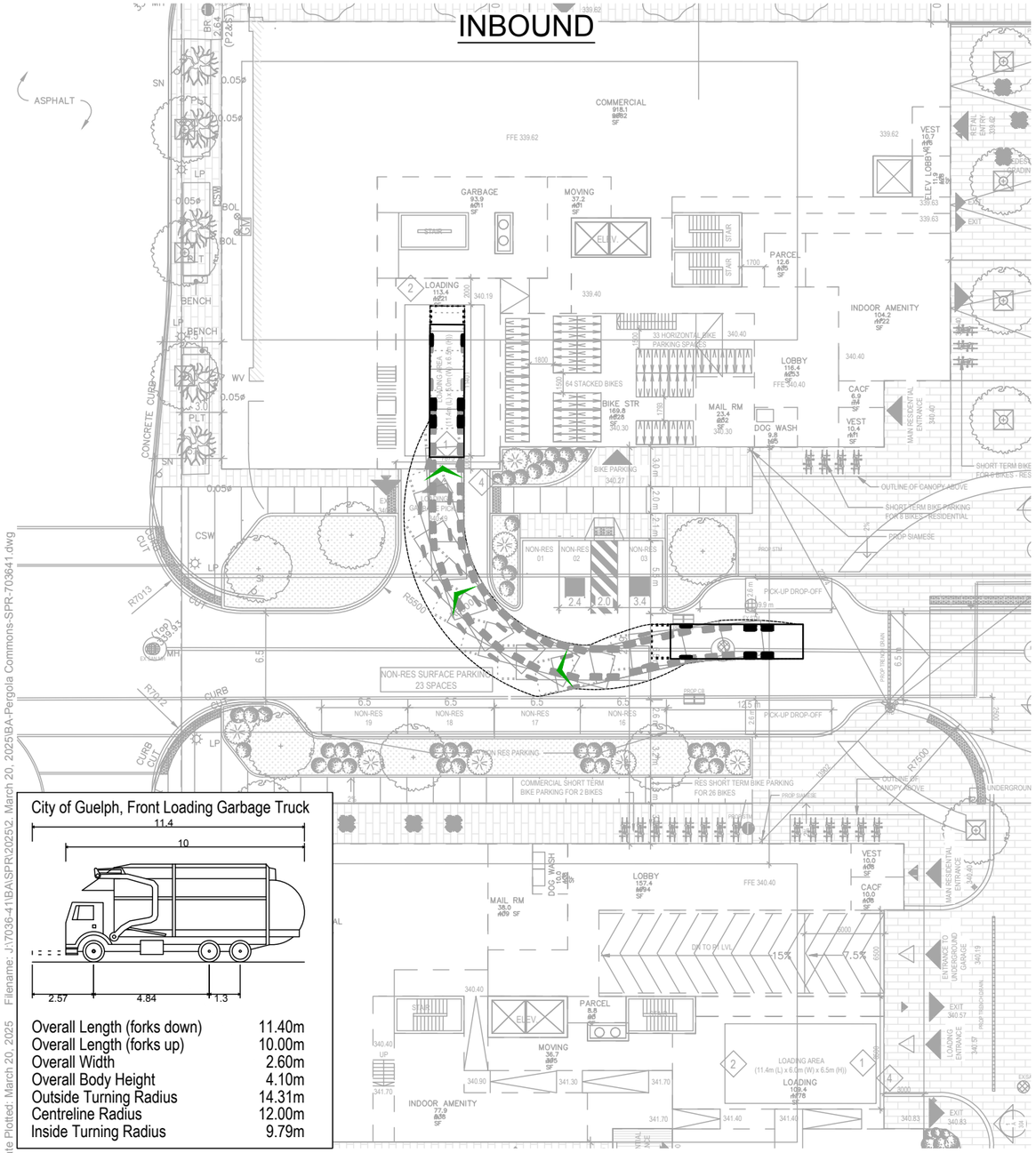
Vehicle Manoeuvring Diagram
TAC Heavy Single Unit (HSU) Truck
Building C

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

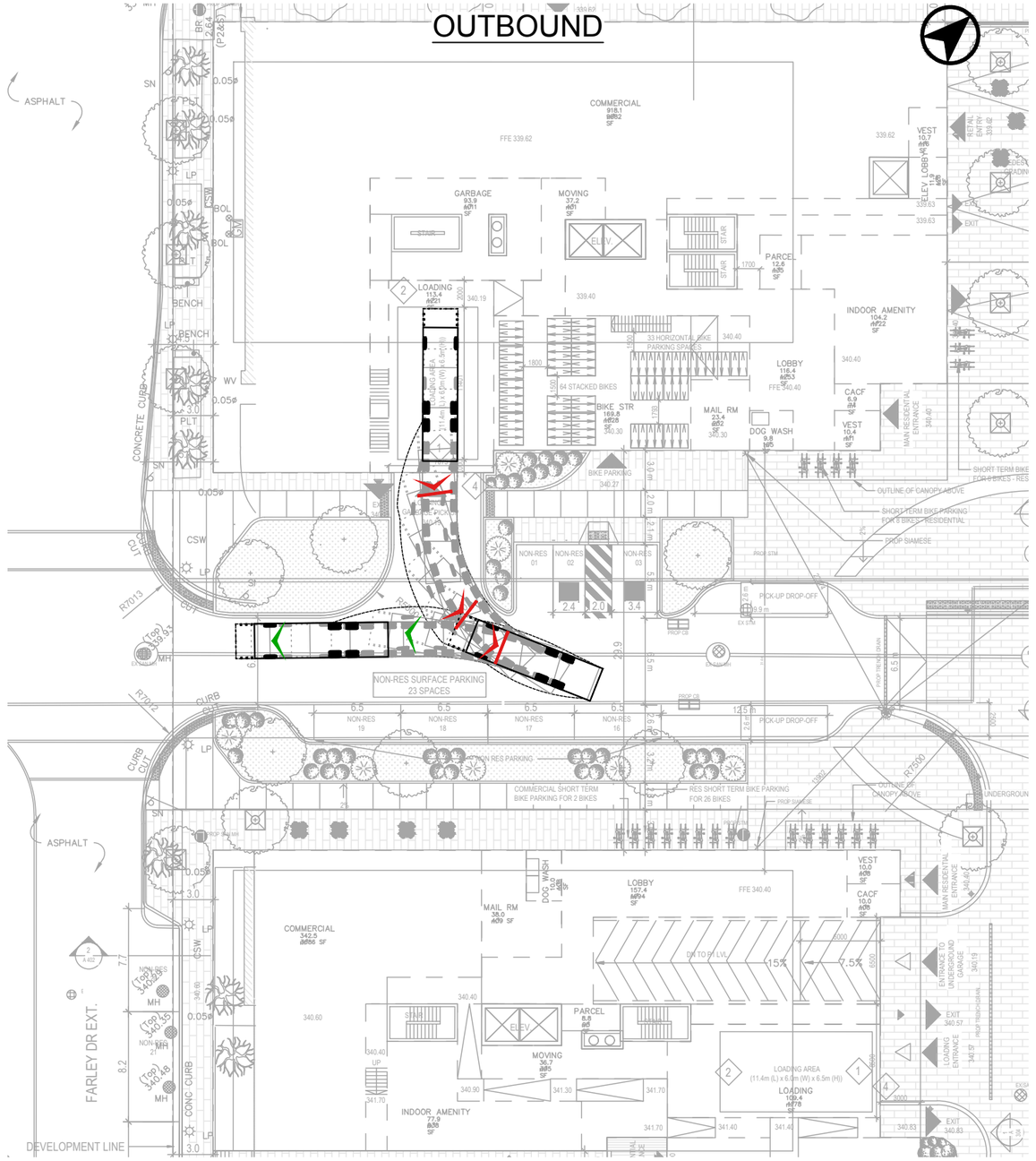
Scale 1:400 (0 2 4 6 8 10 20m)

Drawing No. VMD-06

INBOUND



OUTBOUND



City of Guelph, Front Loading Garbage Truck

Overall Length (forks down)	11.40m
Overall Length (forks up)	10.00m
Overall Width	2.60m
Overall Body Height	4.10m
Outside Turning Radius	14.31m
Centreline Radius	12.00m
Inside Turning Radius	9.79m

Date Plotted: March 20, 2025 Filename: J:\7036-41\BA\SPR\20252. March 20, 2025\BA-Pergola Commons-SPR-703641.dwg

BA Group

PERGOLA COMMONS

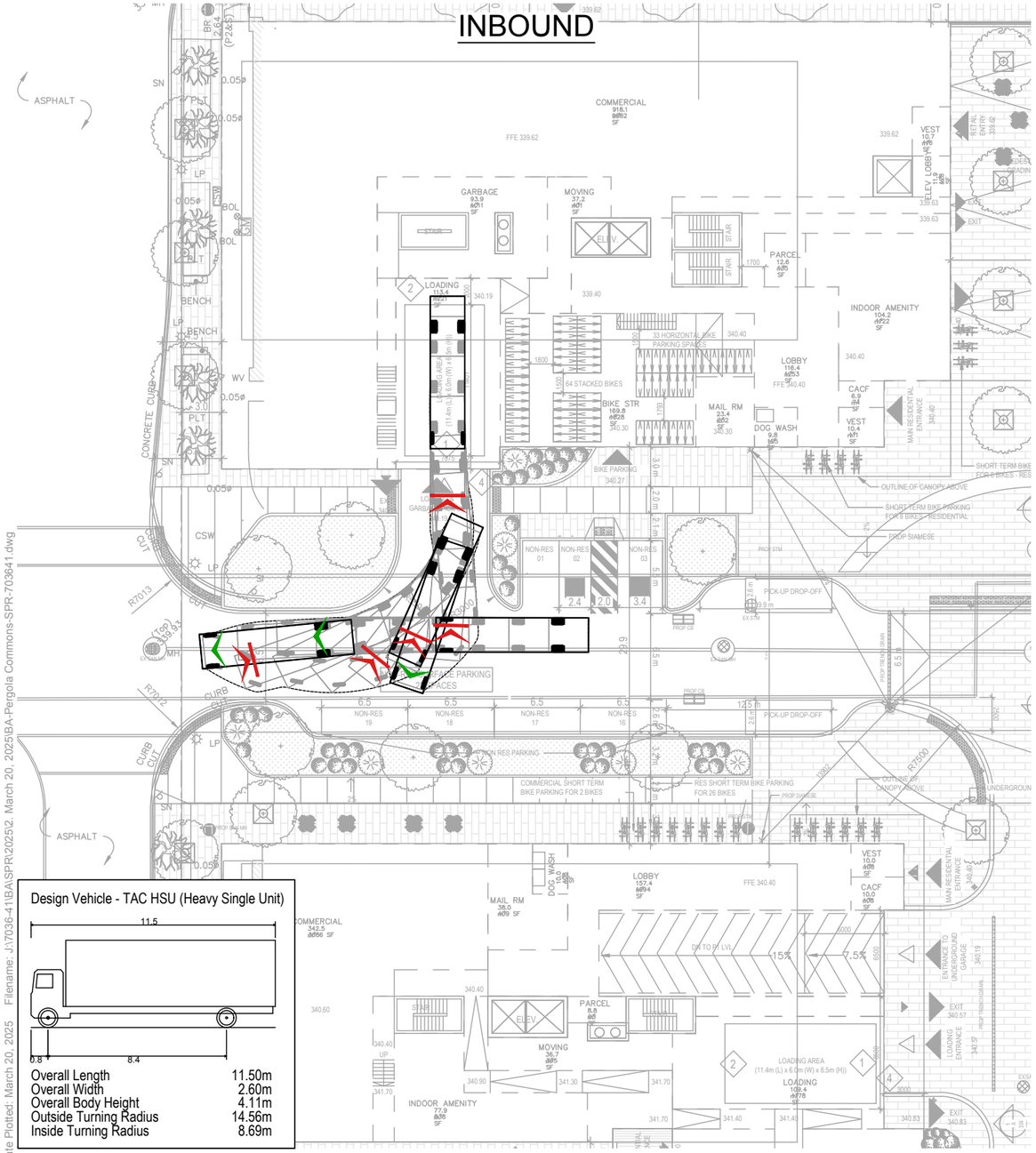
Vehicle Manoeuvring Diagram
City of Guelph Garbage Truck
Building D

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

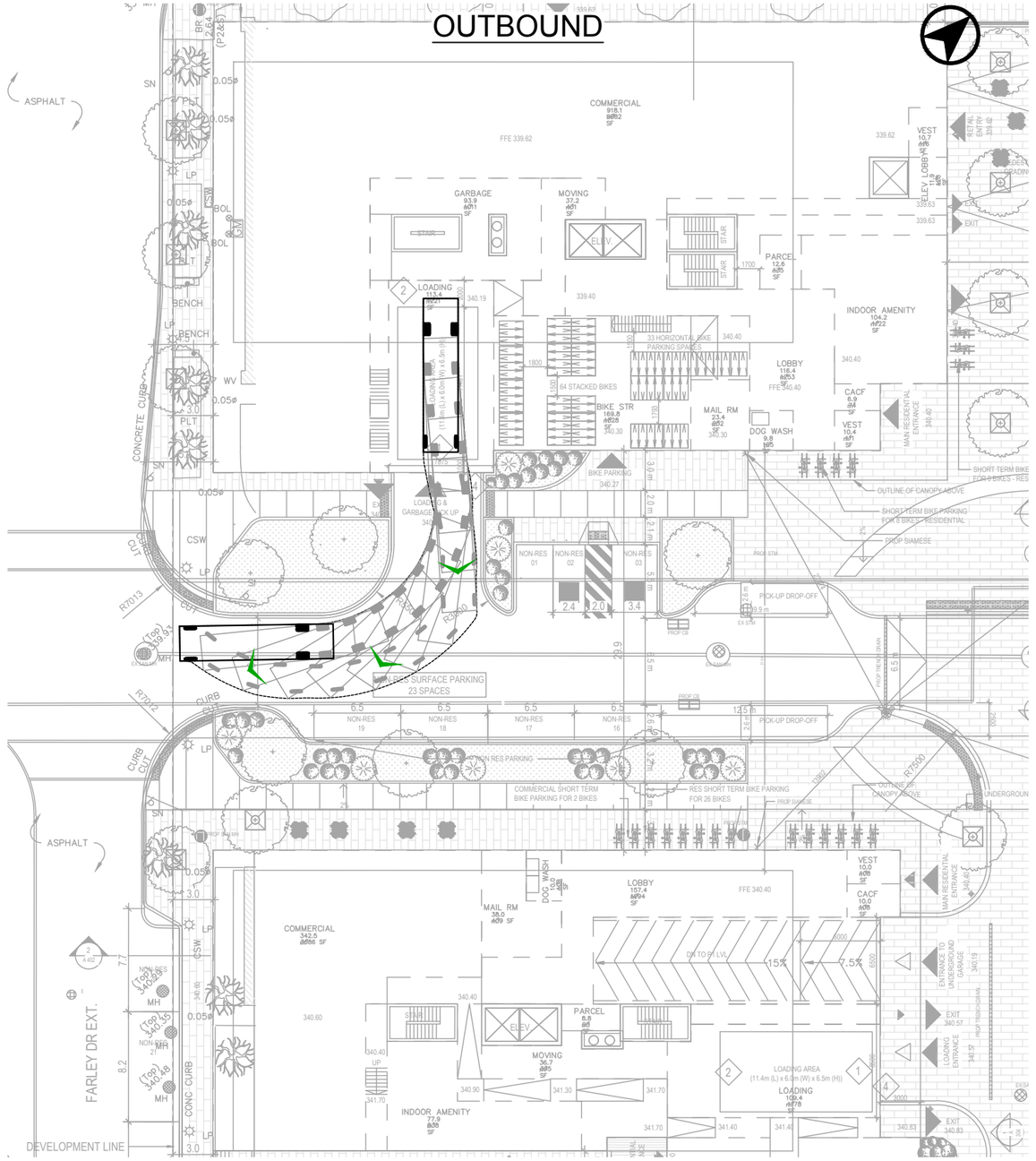
Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-07

INBOUND



OUTBOUND



Design Vehicle - TAC HSU (Heavy Single Unit)

Overall Length	11.50m
Overall Width	2.60m
Overall Body Height	4.11m
Outside Turning Radius	14.56m
Inside Turning Radius	8.69m

Date Plotted: March 20, 2025 Filename: J:\7036-41BA\SPR\20252. March 20, 2025\BA-Pergola Commons-SPR-703641.dwg

BA Group

PERGOLA COMMONS

Vehicle Manoeuvring Diagram
TAC Heavy Single Unit (HSU) Truck
Building D

Project:	Pergola Commons
Project No.	7036-41
Date:	November 9, 2023
Revised:	March 20, 2025

Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-08

Appendix D:
Site Interaction Assessment

Phase 1 & 2 (2028 Horizon) Interactions

AM

Phase 1 & 2 Interactions - AM	Outbound From: Reisdential	Retail						
Residential		2%						
Retail	17%							

Phase 1 & 2 Interactions - AM	Outbound From: Reisdential	Retail							Total Inbound Trips
Residential		1							35
Retail	4								25

Phase 1 & 2 Interactions - AM	Inbound To: Reisdential	Retail						
Residential		1%						
Retail	14%							

Phase 1 & 2 Interactions - AM	Inbound To: Reisdential	Retail							Total Outbound Trips
Residential		1							125
Retail	3								20

Phase 1 & 2 Interactions - AM	Outbound From: Reisdential	Retail							Total Inbound Trip Reduction
Residential		1							**1**
Retail	1								**1**

Total Outbound Trip Reduction	**1**	**1**	**0**	**0**					**2**
Rounded	**0**	**0**							**0**

PM

Phase 1 & 2 Interactions - PM	Residential	Retail						
Residential		46%						
Retail	10%							

Inbound To / **Outbound From**

Phase 1 & 2 Interactions - PM	Residential	Retail							Total Inbound Trips
Residential		48							105
Retail	6								55

Inbound To / **Outbound From**

Phase 1 & 2 Interactions - PM	Residential	Retail						
Residential		42%						
Retail	26%							

Outbound From / **Inbound To**

Phase 1 & 2 Interactions - PM	Residential	Retail							Total Outbound Trips
Residential		27							65
Retail	13								50

Outbound From / **Inbound To**

Phase 1 & 2 Interactions - PM	Residential	Retail							Total Inbound Trip Reduction
Residential		13							**13**
Retail	6								**6**
Total Outbound Trip Reduction	**6**	**13**	**0**	**0**					**19**
Rounded	**5**	**15**							**20**

SAT*

Phase 1 & 2 Interactions - SAT	Outbound From: Residential	Outbound From: Retail
Inbound To: Residential		46%
Inbound To: Retail	10%	

Phase 1 & 2 Interactions - SAT	Outbound From: Residential	Outbound From: Retail	Total Inbound Trips
Inbound To: Residential		39	85
Inbound To: Retail	8		80

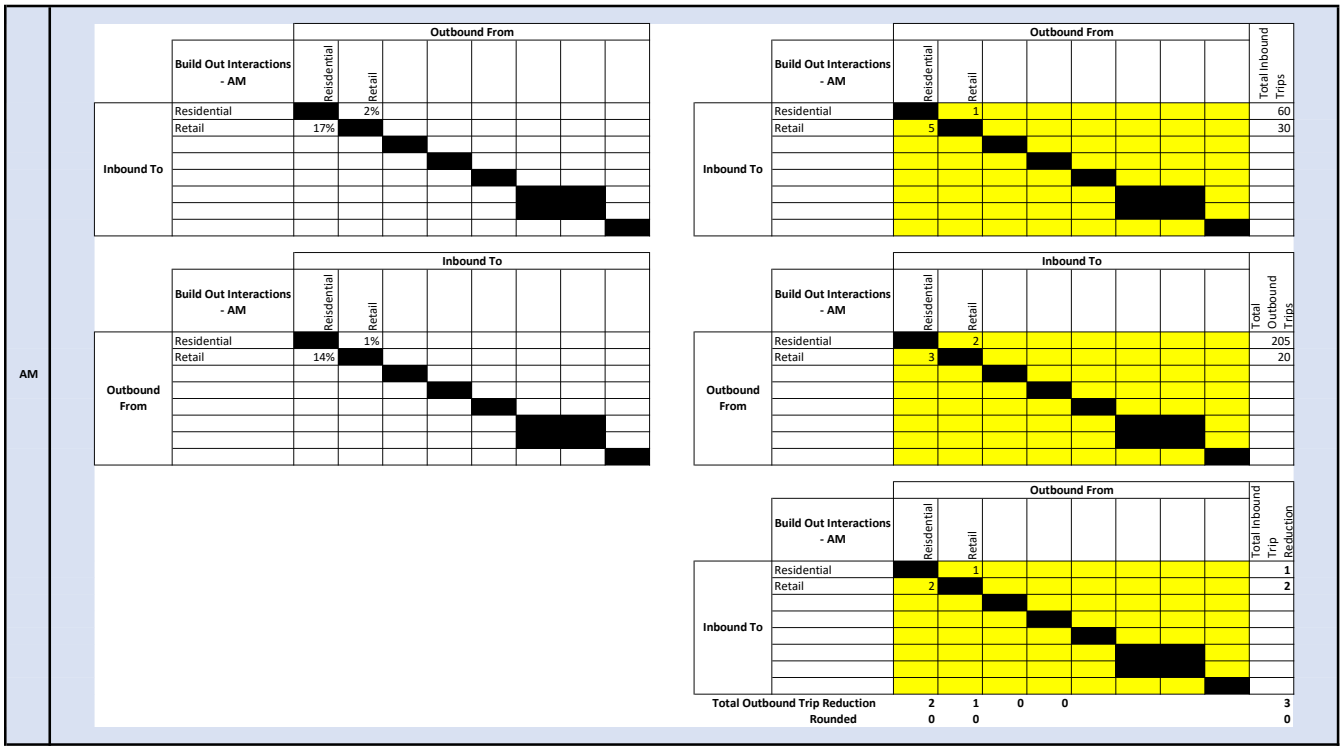
Phase 1 & 2 Interactions - SAT	Inbound To: Residential	Inbound To: Retail
Outbound From: Residential		42%
Outbound From: Retail	26%	

Phase 1 & 2 Interactions - SAT	Inbound To: Residential	Inbound To: Retail	Total Outbound Trips
Outbound From: Residential		34	80
Outbound From: Retail	18		70

Phase 1 & 2 Interactions - SAT	Outbound From: Residential	Outbound From: Retail	Total Inbound Trip Reduction
Inbound To: Residential		18	**18**
Inbound To: Retail	8		**8**
Total Outbound Trip Reduction	**8**	**18**	**26**
Rounded	**10**	**20**	**30**

*SAT interaction assumed to equal PM interaction

Build Out Interactions



PM

Build Out Interactions - PM	Residential	Retail						
Residential		46%						
Retail	10%							

Outbound From

Inbound To

Build Out Interactions - PM	Residential	Retail							Total Inbound Trips
Residential		78							170
Retail	11								110

Outbound From

Inbound To

Build Out Interactions - PM	Residential	Retail							Total Outbound Trips
Residential		42%							110
Retail	26%								110

Inbound To

Outbound From

Build Out Interactions - PM	Residential	Retail							Total Inbound Trip Reduction
Residential		29							**29**
Retail	11								**11**

Outbound From

Total Outbound Trip Reduction	**11**	**29**	**0**	**0**					**40**
Rounded	**10**	**30**							**40**

SAT*

Build Out Interactions - SAT	Outbound From: Reisdential	Outbound From: Retail
Inbound To: Residential		46%
Inbound To: Retail	10%	

Build Out Interactions - SAT	Outbound From: Reisdential	Outbound From: Retail	Total Inbound Trips
Inbound To: Residential		64	140
Inbound To: Retail	15		150

Build Out Interactions - SAT	Inbound To: Reisdential	Inbound To: Retail
Outbound From: Residential		42%
Outbound From: Retail	26%	

Build Out Interactions - SAT	Inbound To: Reisdential	Inbound To: Retail	Total Outbound Trips
Outbound From: Residential		57	135
Outbound From: Retail	39		150

Build Out Interactions - SAT	Outbound From: Reisdential	Outbound From: Retail	Total Inbound Trip Reduction
Inbound To: Residential		39	**39**
Inbound To: Retail	15		**15**
Total Outbound Trip Reduction	**15**	**39**	**54**
Rounded	**15**	**40**	**55**

*SAT interaction assumed to equal PM interaction

Appendix E:
Turning Movement Counts

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & FARLEY DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (2 . CLAIR RD E & FARLEY DR)

Start Time	N Approach FARLEY DRIVE						E Approach CLAIR ROAD						S Approach PLAZA DRIVEWAY						W Approach CLAIR ROAD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	21	0	3	0	1	24	4	69	0	0	1	73	0	1	3	0	2	4	2	41	7	0	0	50	151	
07:15:00	30	1	2	0	1	33	9	113	1	0	1	123	2	1	1	0	1	4	3	35	2	0	0	40	200	
07:30:00	30	2	9	0	0	41	7	108	1	0	0	116	1	2	8	0	1	11	6	37	3	0	1	46	214	
07:45:00	34	1	5	0	3	40	17	160	1	0	1	178	0	1	5	0	0	6	7	47	14	0	1	68	292	857
08:00:00	27	1	8	0	1	36	10	107	1	0	3	118	0	4	6	0	1	10	6	53	12	0	2	71	235	941
08:15:00	32	6	6	0	2	44	8	147	2	0	1	157	3	2	5	0	1	10	4	82	24	0	1	110	321	1062
08:30:00	40	6	14	0	4	60	11	161	4	0	3	176	2	3	6	0	4	11	13	71	22	0	6	106	353	1201
08:45:00	32	7	8	0	2	47	12	170	3	0	3	185	1	5	6	0	2	12	15	67	28	0	5	110	354	1263
09:00:00	21	8	6	0	0	35	16	102	4	0	1	122	1	5	7	0	2	13	15	61	21	1	2	98	268	1296
09:15:00	19	7	7	0	3	33	7	69	6	0	6	82	1	3	4	0	0	8	13	39	22	0	2	74	197	1172
09:30:00	19	7	7	0	3	33	13	60	2	0	2	75	1	5	8	0	1	14	7	60	22	0	5	89	211	1030
09:45:00	29	7	12	0	2	48	17	73	9	0	2	99	1	7	9	0	1	17	13	42	18	0	3	73	237	913
BREAK																										
10:00:00	20	5	10	1	3	36	13	59	7	0	1	79	3	8	10	0	1	21	14	58	21	0	7	93	229	
10:15:00	15	12	10	2	8	39	12	57	6	0	3	75	5	8	14	0	3	27	18	45	29	0	8	92	233	
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11:00:00	22	15	18	0	4	55	13	51	5	0	1	69	7	12	14	0	0	33	20	42	19	0	8	81	238	963
11:15:00	25	10	14	0	4	49	13	61	5	0	0	79	2	11	24	0	1	37	20	58	13	0	13	91	256	986
11:30:00	25	16	12	0	2	53	14	60	5	0	0	79	3	11	17	0	0	31	30	48	18	0	6	96	259	997
11:45:00	27	14	8	0	5	49	22	75	5	0	4	102	9	8	28	0	1	45	39	62	20	0	3	121	317	1070
12:00:00	24	14	12	0	3	50	13	59	10	0	8	82	6	12	36	0	7	54	38	54	29	0	5	121	307	1139
12:15:00	23	16	15	0	2	54	19	55	7	0	3	81	5	13	24	0	4	42	35	55	31	0	4	121	298	1181
12:30:00	39	12	17	0	1	68	16	65	6	0	2	87	5	13	35	0	2	53	34	69	24	0	5	127	335	1257
12:45:00	30	25	11	1	4	67	12	63	0	0	2	75	4	23	29	0	3	56	22	55	32	0	5	109	307	1247
13:00:00	26	16	15	0	1	57	18	57	7	0	2	82	4	12	22	0	1	38	15	55	24	0	6	94	271	1211
13:15:00	36	17	16	0	1	69	19	71	11	0	2	101	6	15	31	0	4	52	21	58	22	0	5	101	323	1236
13:30:00	19	20	19	0	4	58	13	59	4	0	8	76	13	12	25	0	5	50	25	71	18	0	9	114	298	1199
13:45:00	38	14	12	0	2	64	19	72	5	0	1	96	2	25	17	0	4	44	23	66	18	0	5	107	311	1203
14:00:00	28	10	12	1	4	51	20	62	4	0	3	86	4	15	18	0	1	37	21	70	26	0	2	117	291	1223
14:15:00	29	11	21	0	5	61	12	59	4	0	2	75	8	12	22	0	3	42	13	83	22	0	2	118	296	1196
14:30:00	27	13	13	0	6	53	8	78	3	0	6	89	8	8	10	0	2	26	16	91	21	0	5	128	296	1194
14:45:00	34	10	14	0	3	58	21	91	7	0	1	119	1	19	23	0	3	43	21	80	23	0	5	124	344	1227
BREAK																										
15:00:00	24	10	20	0	7	54	15	84	6	0	6	105	5	12	21	0	1	38	28	138	37	0	4	203	400	
15:15:00	28	18	16	1	10	63	18	85	6	0	5	109	4	18	20	0	5	42	18	82	27	1	4	128	342	
15:30:00	23	16	14	0	2	53	13	90	10	0	8	113	6	18	24	0	4	48	31	110	28	0	3	169	383	
15:45:00	29	11	13	0	4	53	13	85	5	0	4	103	12	6	22	0	3	40	20	106	30	0	7	156	352	1477
16:00:00	38	15	20	1	5	74	13	92	7	0	10	112	3	11	20	0	2	34	23	132	27	0	5	182	402	1479
16:15:00	40	16	21	1	3	78	17	109	5	0	8	131	7	13	14	0	1	34	40	110	33	0	19	183	426	1563
16:30:00	25	13	20	0	9	58	13	79	6	0	16	98	2	14	17	0	4	33	28	157	40	1	6	226	415	1595
16:45:00	39	13	15	0	7	67	14	90	18	0	9	122	13	12	16	0	5	41	28	133	42	0	10	203	433	1676
17:00:00	37	17	21	0	5	75	23	68	7	0	6	98	7	14	21	0	4	42	31	149	45	0	12	225	440	1714
17:15:00	32	16	19	0	3	67	16	98	13	0	8	127	6	21	25	0	3	52	37	124	42	0	7	203	449	1737
17:30:00	23	18	17	0	5	58	13	78	7	0	6	98	6	9	21	0	1	36	45	113	59	0	7	217	409	1731

17:45:00	30	18	14	0	6	62	16	103	16	0	7	135	4	14	20	0	5	38	33	100	43	0	14	176	411	1709
18:00:00	27	11	21	0	3	59	19	97	13	0	4	129	4	12	30	0	3	46	44	74	40	0	7	158	392	1661
18:15:00	28	19	25	0	9	72	8	79	5	0	14	92	3	11	27	0	6	41	29	105	33	0	9	167	372	1584
18:30:00	25	11	14	0	3	50	12	60	9	0	8	81	2	9	24	0	7	35	39	92	22	0	7	153	319	1494
18:45:00	13	19	18	1	10	51	16	74	8	0	8	98	13	16	25	0	5	54	29	71	23	0	1	123	326	1409
Grand Total	1332	556	641	10	181	2539	682	3984	286	0	209	4952	214	513	844	0	124	1571	1069	3651	1220	3	263	5943	**15005**	-
Approach%	52.5%	21.9%	25.2%	0.4%		-	13.8%	80.5%	5.8%	0%		-	13.6%	32.7%	53.7%	0%		-	18%	61.4%	20.5%	0.1%		-	**-**	-
Totals %	8.9%	3.7%	4.3%	0.1%		16.9%	4.5%	26.6%	1.9%	0%		33%	1.4%	3.4%	5.6%	0%		10.5%	7.1%	24.3%	8.1%	0%		39.6%	**-**	-
Heavy	19	4	41	0		-	6	299	3	0		-	3	0	10	0		-	13	317	25	0		-	**-**	-
Heavy %	1.4%	0.7%	6.4%	0%		-	0.9%	7.5%	1%	0%		-	1.4%	0%	1.2%	0%		-	1.2%	8.7%	2%	0%		-	**-**	-
Bicycles	3	5	2	0		-	3	18	0	0		-	0	5	0	0		-	1	13	0	0		-	**-**	-
Bicycle %	0.2%	0.9%	0.3%	0%		-	0.4%	0.5%	0%	0%		-	0%	1%	0%	0%		-	0.1%	0.4%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & FARLEY DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:15 AM - 09:15 AM Weather: Mist (3.59 °C)

Start Time	N Approach FARLEY DRIVE						E Approach CLAIR ROAD						S Approach PLAZA DRIVEWAY						W Approach CLAIR ROAD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:15:00	32	6	6	0	2	44	8	147	2	0	1	157	3	2	5	0	1	10	4	82	24	0	1	110	321
08:30:00	40	6	14	0	4	60	11	161	4	0	3	176	2	3	6	0	4	11	13	71	22	0	6	106	353
08:45:00	32	7	8	0	2	47	12	170	3	0	3	185	1	5	6	0	2	12	15	67	28	0	5	110	354
09:00:00	21	8	6	0	0	35	16	102	4	0	1	122	1	5	7	0	2	13	15	61	21	1	2	98	268
Grand Total	125	27	34	0	8	186	47	580	13	0	8	640	7	15	24	0	9	46	47	281	95	1	14	424	**1296**
Approach%	67.2%	14.5%	18.3%	0%		-	7.3%	90.6%	2%	0%		-	15.2%	32.6%	52.2%	0%		-	11.1%	66.3%	22.4%	0.2%		-	-
Totals %	9.6%	2.1%	2.6%	0%		14.4%	3.6%	44.8%	1%	0%		49.4%	0.5%	1.2%	1.9%	0%		3.5%	3.6%	21.7%	7.3%	0.1%		32.7%	-
PHF	0.78	0.84	0.61	0		0.78	0.73	0.85	0.81	0		0.86	0.58	0.75	0.86	0		0.88	0.78	0.86	0.85	0.25		0.96	-
Heavy	5	1	4	0		10	0	39	0	0		39	1	0	0	0		1	1	33	5	0		39	-
Heavy %	4%	3.7%	11.8%	0%		5.4%	0%	6.7%	0%	0%		6.1%	14.3%	0%	0%	0%		2.2%	2.1%	11.7%	5.3%	0%		9.2%	-
Lights	120	26	30	0		176	47	541	13	0		601	6	15	24	0		45	46	248	90	1		385	-
Lights %	96%	96.3%	88.2%	0%		94.6%	100%	93.3%	100%	0%		93.9%	85.7%	100%	100%	0%		97.8%	97.9%	88.3%	94.7%	100%		90.8%	-
Single-Unit Trucks	3	0	1	0		4	0	15	0	0		15	1	0	0	0		1	0	19	2	0		21	-
Single-Unit Trucks %	2.4%	0%	2.9%	0%		2.2%	0%	2.6%	0%	0%		2.3%	14.3%	0%	0%	0%		2.2%	0%	6.8%	2.1%	0%		5%	-
Buses	2	0	3	0		5	0	9	0	0		9	0	0	0	0		0	1	6	3	0		10	-
Buses %	1.6%	0%	8.8%	0%		2.7%	0%	1.6%	0%	0%		1.4%	0%	0%	0%	0%		0%	2.1%	2.1%	3.2%	0%		2.4%	-
Articulated Trucks	0	1	0	0		1	0	15	0	0		15	0	0	0	0		0	0	8	0	0		8	-
Articulated Trucks %	0%	3.7%	0%	0%		0.5%	0%	2.6%	0%	0%		2.3%	0%	0%	0%	0%		0%	0%	2.8%	0%	0%		1.9%	-
Pedestrians	-	-	-	-	8	-	-	-	-	-	8	-	-	-	-	-	9	-	-	-	-	-	13	-	-
Pedestrians%	-	-	-	-	20.5%		-	-	-	-	20.5%		-	-	-	-	23.1%		-	-	-	-	33.3%		-
Bicycles on Road	1	0	0	0	0	-	0	2	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	-
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	2.6%		-

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & FARLEY DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

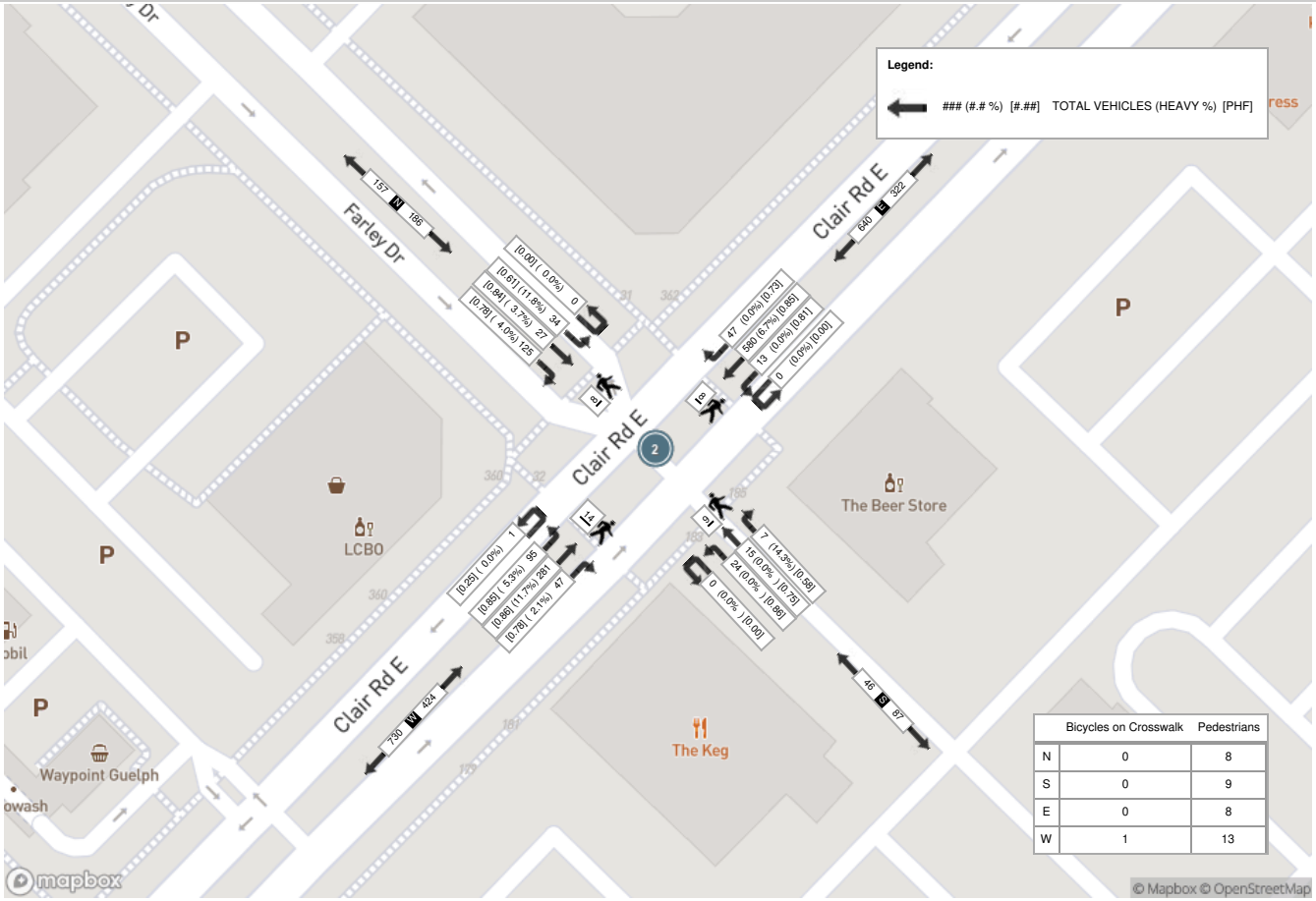
Peak Hour: 11:45 AM - 12:45 PM Weather:

Start Time	N Approach FARLEY DRIVE						E Approach CLAIR ROAD						S Approach PLAZA DRIVEWAY						W Approach CLAIR ROAD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
11:45:00	27	14	8	0	5	49	22	75	5	0	4	102	9	8	28	0	1	45	39	62	20	0	3	121	317
12:00:00	24	14	12	0	3	50	13	59	10	0	8	82	6	12	36	0	7	54	38	54	29	0	5	121	307
12:15:00	23	16	15	0	2	54	19	55	7	0	3	81	5	13	24	0	4	42	35	55	31	0	4	121	298
12:30:00	39	12	17	0	1	68	16	65	6	0	2	87	5	13	35	0	2	53	34	69	24	0	5	127	335
Grand Total	113	56	52	0	11	221	70	254	28	0	17	352	25	46	123	0	14	194	146	240	104	0	17	490	**1257**
Approach%	51.1%	25.3%	23.5%	0%		-	19.9%	72.2%	8%	0%		-	12.9%	23.7%	63.4%	0%		-	29.8%	49%	21.2%	0%		-	**-**
Totals %	9%	4.5%	4.1%	0%		17.6%	5.6%	20.2%	2.2%	0%		28%	2%	3.7%	9.8%	0%		15.4%	11.6%	19.1%	8.3%	0%		39%	**-**
PHF	0.72	0.88	0.76	0		0.81	0.8	0.85	0.7	0		0.86	0.69	0.88	0.85	0		0.9	0.94	0.87	0.84	0		0.96	**-**
Heavy	1	0	4	0		5	0	32	1	0		33	1	0	2	0		3	1	31	1	0		33	**-**
Heavy %	0.9%	0%	7.7%	0%		2.3%	0%	12.6%	3.6%	0%		9.4%	4%	0%	1.6%	0%		1.5%	0.7%	12.9%	1%	0%		6.7%	**-**
Lights	112	56	48	0		216	70	222	27	0		319	24	46	121	0		191	145	209	103	0		457	**-**
Lights %	99.1%	100%	92.3%	0%		97.7%	100%	87.4%	96.4%	0%		90.6%	96%	100%	98.4%	0%		98.5%	99.3%	87.1%	99%	0%		93.3%	**-**
Single-Unit Trucks	1	0	0	0		1	0	19	1	0		20	1	0	2	0		3	1	18	1	0		20	**-**
Single-Unit Trucks %	0.9%	0%	0%	0%		0.5%	0%	7.5%	3.6%	0%		5.7%	4%	0%	1.6%	0%		1.5%	0.7%	7.5%	1%	0%		4.1%	**-**
Buses	0	0	4	0		4	0	2	0	0		2	0	0	0	0		0	0	3	0	0		3	**-**
Buses %	0%	0%	7.7%	0%		1.8%	0%	0.8%	0%	0%		0.6%	0%	0%	0%	0%		0%	0%	1.3%	0%	0%		0.6%	**-**
Articulated Trucks	0	0	0	0		0	0	11	0	0		11	0	0	0	0		0	0	10	0	0		10	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	4.3%	0%	0%		3.1%	0%	0%	0%	0%		0%	0%	4.2%	0%	0%		2%	**-**
Pedestrians	-	-	-	-	11	-	-	-	-	-	15	-	-	-	-	-	13	-	-	-	-	-	15	-	**-**
Pedestrians%	-	-	-	-	18.6%		-	-	-	-	25.4%		-	-	-	-	22%		-	-	-	-	25.4%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	1	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	3.4%		-	-	-	-	1.7%		-	-	-	-	3.4%		**-**

Peak Hour: 04:30 PM - 05:30 PM Weather: Clear Sky (20.05 °C)

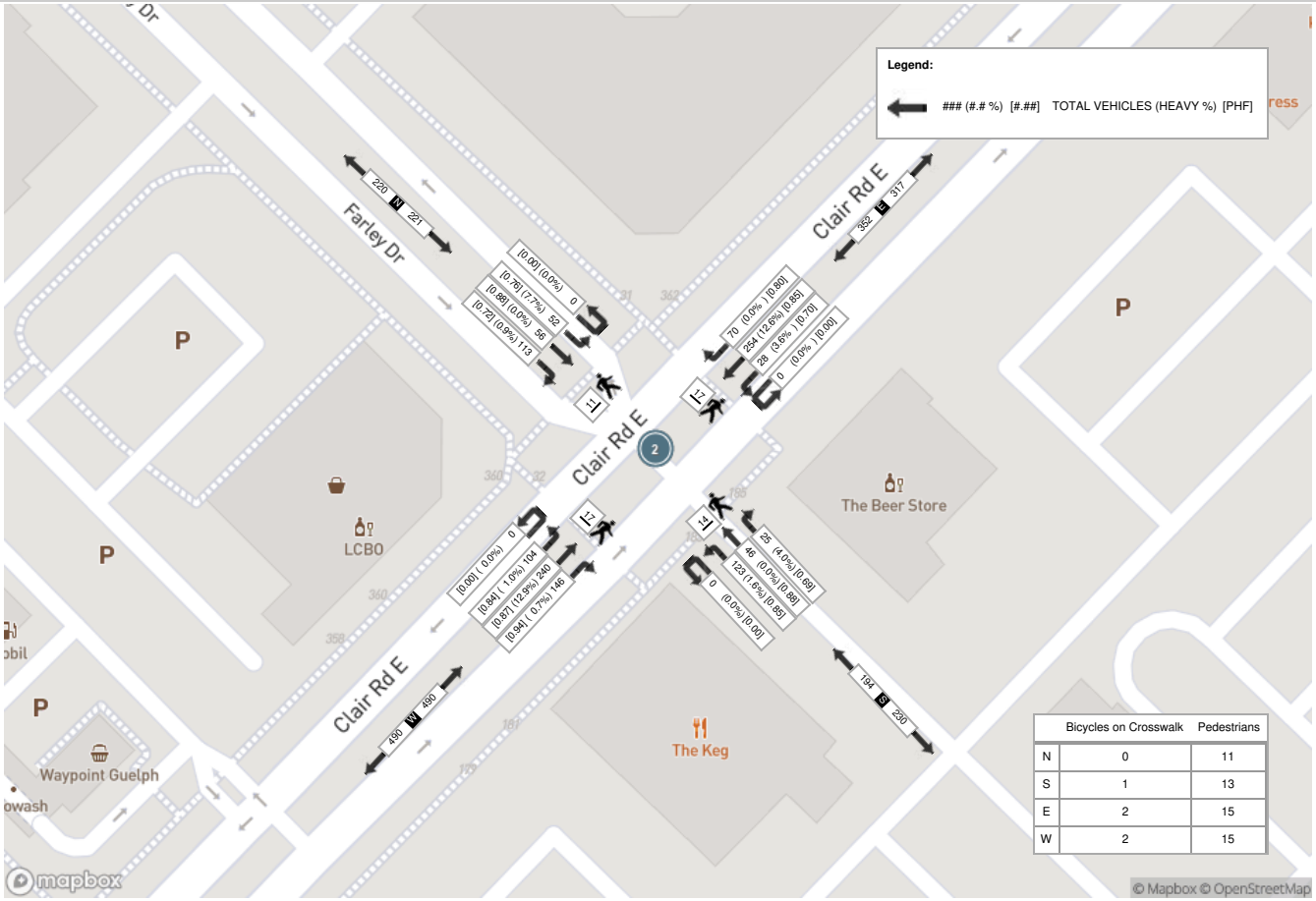
Start Time	N Approach FARLEY DRIVE						E Approach CLAIR ROAD						S Approach PLAZA DRIVEWAY						W Approach CLAIR ROAD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:30:00	25	13	20	0	9	58	13	79	6	0	16	98	2	14	17	0	4	33	28	157	40	1	6	226	415
16:45:00	39	13	15	0	7	67	14	90	18	0	9	122	13	12	16	0	5	41	28	133	42	0	10	203	433
17:00:00	37	17	21	0	5	75	23	68	7	0	6	98	7	14	21	0	4	42	31	149	45	0	12	225	440
17:15:00	32	16	19	0	3	67	16	98	13	0	8	127	6	21	25	0	3	52	37	124	42	0	7	203	449
Grand Total	133	59	75	0	24	267	66	335	44	0	39	445	28	61	79	0	16	168	124	563	169	1	35	857	**1737**
Approach%	49.8%	22.1%	28.1%	0%		-	14.8%	75.3%	9.9%	0%		-	16.7%	36.3%	47%	0%		-	14.5%	65.7%	19.7%	0.1%		-	**-**
Totals %	7.7%	3.4%	4.3%	0%		15.4%	3.8%	19.3%	2.5%	0%		25.6%	1.6%	3.5%	4.5%	0%		9.7%	7.1%	32.4%	9.7%	0.1%		49.3%	**-**
PHF	0.85	0.87	0.89	0		0.89	0.72	0.85	0.61	0		0.88	0.54	0.73	0.79	0		0.81	0.84	0.9	0.94	0.25		0.95	**-**
Heavy	0	0	3	0		3	0	6	0	0		6	0	0	0	0		0	1	20	0	0		21	**-**
Heavy %	0%	0%	4%	0%		1.1%	0%	1.8%	0%	0%		1.3%	0%	0%	0%	0%		0%	0.8%	3.6%	0%	0%		2.5%	**-**
Lights	133	59	72	0		264	66	329	44	0		439	28	61	79	0		168	123	543	169	1		836	**-**
Lights %	100%	100%	96%	0%		98.9%	100%	98.2%	100%	0%		98.7%	100%	100%	100%	0%		100%	99.2%	96.4%	100%	100%		97.5%	**-**
Single-Unit Trucks	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	1	10	0	0		11	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0.9%	0%	0%		0.7%	0%	0%	0%	0%		0%	0.8%	1.8%	0%	0%		1.3%	**-**
Buses	0	0	3	0		3	0	1	0	0		1	0	0	0	0		0	0	2	0	0		2	**-**
Buses %	0%	0%	4%	0%		1.1%	0%	0.3%	0%	0%		0.2%	0%	0%	0%	0%		0%	0%	0.4%	0%	0%		0.2%	**-**
Articulated Trucks	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	8	0	0		8	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0.6%	0%	0%		0.4%	0%	0%	0%	0%		0%	0%	1.4%	0%	0%		0.9%	**-**
Pedestrians	-	-	-	-	24	-	-	-	-	-	35	-	-	-	-	-	16	-	-	-	-	-	33	-	**-**
Pedestrians%	-	-	-	-	21.1%		-	-	-	-	30.7%		-	-	-	-	14%		-	-	-	-	28.9%		**-**
Bicycles on Road	0	0	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	0	2	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	3.5%		-	-	-	-	0%		-	-	-	-	1.8%		**-**

Peak Hour: 08:15 AM - 09:15 AM **Weather: Mist (3.59 °C)**

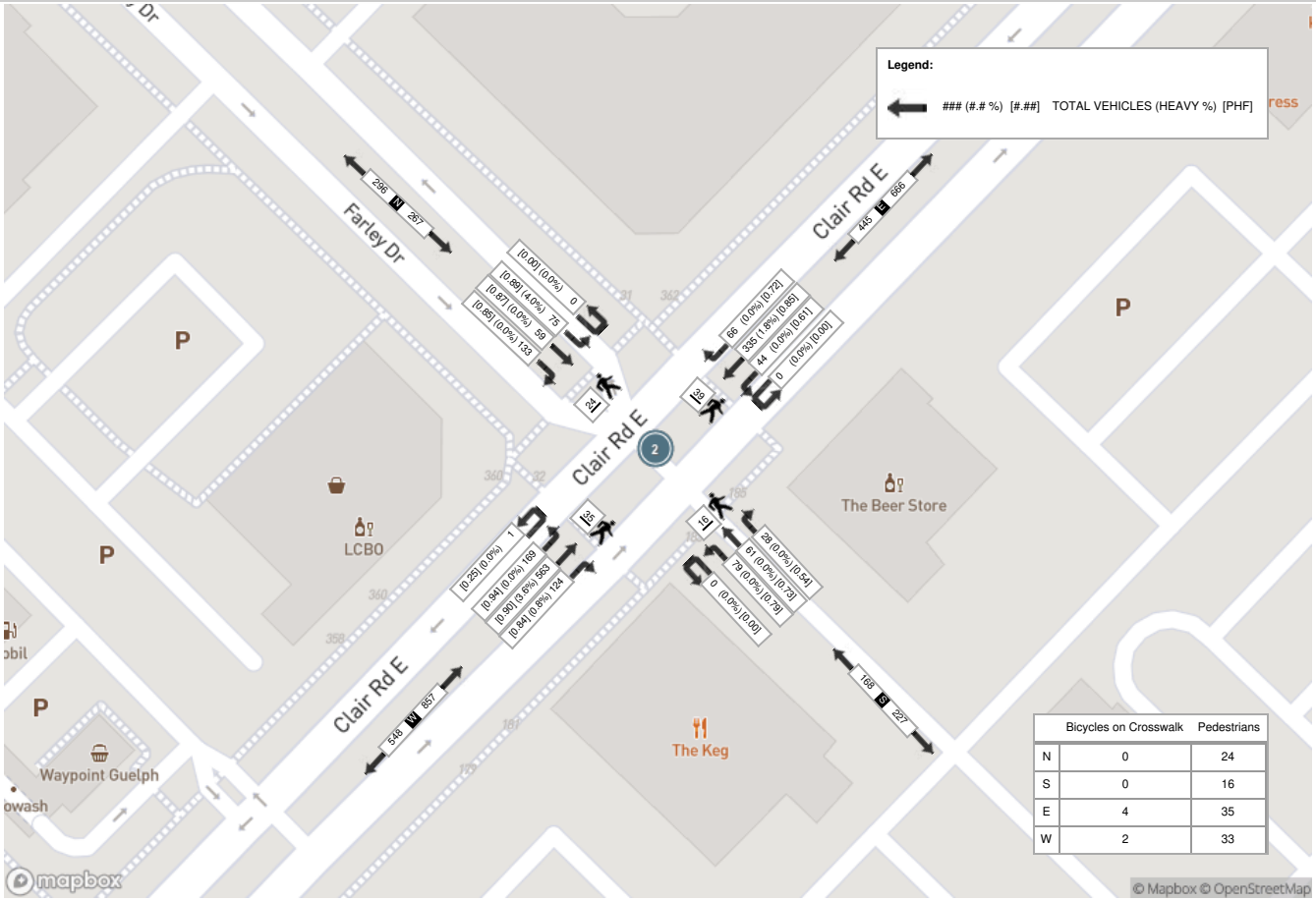


	Bicycles on Crosswalk	Pedestrians
N	0	8
S	0	9
E	0	8
W	1	13

Peak Hour: 11:45 AM - 12:45 PM **Weather:**



Peak Hour: 04:30 PM - 05:30 PM Weather: Clear Sky (20.05 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	24
S	0	16
E	4	35
W	2	33

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (1 . CLAIR RD E & GORDON ST)

Start Time	N Approach GORDON ST						E Approach CLAIR RD						S Approach GORDON ST						W Approach CLAIR RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	17	81	4	0	3	102	5	59	37	0	3	101	12	41	16	0	1	69	20	33	22	0	3	75	347	
07:15:00	42	108	12	0	3	162	11	92	38	0	1	141	14	45	14	0	3	73	25	19	10	0	2	54	430	
07:30:00	39	92	5	0	2	136	10	97	42	0	3	149	8	69	25	0	4	102	25	35	16	0	6	76	463	
07:45:00	37	96	10	0	3	143	8	146	40	0	2	194	19	93	23	1	4	136	20	45	28	0	4	93	566	1806
08:00:00	37	97	13	0	5	147	17	99	34	0	3	150	17	117	33	0	5	167	19	47	27	0	3	93	557	2016
08:15:00	40	76	10	1	11	127	13	136	37	0	6	186	31	107	36	0	3	174	32	76	23	0	3	131	618	2204
08:30:00	50	72	19	0	9	141	20	150	39	0	8	209	23	97	42	0	7	162	13	68	41	0	3	122	634	2375
08:45:00	56	80	24	0	6	160	13	165	36	0	4	214	18	124	32	0	7	174	25	77	49	0	3	151	699	2508
09:00:00	32	71	21	0	4	124	9	82	37	0	5	128	14	99	16	0	2	129	16	69	38	0	0	123	504	2455
09:15:00	25	82	19	0	3	126	9	56	32	1	8	98	17	75	16	0	1	108	17	40	32	0	2	89	421	2258
09:30:00	27	66	18	0	8	111	10	59	23	0	5	92	18	73	19	0	0	110	14	60	35	0	2	109	422	2046
09:45:00	21	62	10	0	5	93	14	61	39	0	4	114	15	79	19	0	6	113	13	52	31	0	5	96	416	1763
BREAK																										
10:00:00	27	78	19	0	7	124	10	49	30	0	5	89	29	90	19	0	4	138	20	49	33	0	2	102	453	
10:15:00	22	76	23	1	11	122	15	52	25	0	5	92	18	86	20	0	4	124	15	59	36	0	4	110	448	
10:30:00	25	68	18	0	1	111	24	58	33	0	2	115	18	83	16	0	5	117	17	54	34	0	4	105	448	
10:45:00	20	53	23	1	9	97	9	61	28	0	6	98	25	94	23	0	4	142	18	59	51	0	7	128	465	1814
11:00:00	26	76	14	1	4	117	7	57	27	0	3	91	21	83	24	0	1	128	11	52	59	0	4	122	458	1819
11:15:00	29	74	25	0	5	128	18	68	31	0	5	117	15	84	20	0	5	119	17	61	46	0	6	124	488	1859
11:30:00	37	76	26	1	4	140	10	73	34	0	6	117	20	89	25	0	2	134	21	56	48	0	2	125	516	1927
11:45:00	25	80	23	0	7	128	15	81	38	0	6	134	25	84	23	0	10	132	26	87	51	0	5	164	558	2020
12:00:00	29	101	23	0	14	153	20	81	30	0	11	131	22	92	32	0	11	146	22	88	55	0	2	165	595	2157
12:15:00	39	84	26	0	5	149	18	72	31	0	5	121	19	99	23	0	6	141	16	89	48	0	6	153	564	2233
12:30:00	43	85	29	0	2	157	18	100	31	0	11	149	15	79	18	0	7	112	20	98	51	0	11	169	587	2304
12:45:00	38	76	24	2	3	140	13	93	34	0	1	140	21	76	24	0	4	121	15	78	36	0	2	129	530	2276
13:00:00	24	70	20	0	4	114	14	86	19	0	2	119	17	86	31	0	5	134	19	64	35	0	4	118	485	2166
13:15:00	26	84	18	0	11	128	24	96	27	0	6	147	24	78	20	0	4	122	16	73	46	0	2	135	532	2134
13:30:00	34	88	32	1	5	155	24	78	21	0	2	123	20	111	13	0	0	144	14	68	40	0	3	122	544	2091
13:45:00	29	68	23	0	4	120	20	77	34	0	6	131	18	70	25	0	8	113	14	71	27	0	9	112	476	2037
14:00:00	25	79	30	1	10	135	17	71	24	1	5	113	17	78	25	0	5	120	12	83	32	0	5	127	495	2047
14:15:00	26	76	24	0	9	126	20	75	28	0	5	123	18	69	20	0	5	107	11	88	37	0	7	136	492	2007
14:30:00	35	95	25	0	11	155	12	74	34	0	8	120	23	71	26	0	5	120	21	87	37	0	9	145	540	2003
14:45:00	32	88	28	0	4	148	15	113	24	0	4	152	26	91	26	0	5	143	15	81	36	0	3	132	575	2102
BREAK																										
15:00:00	24	80	22	0	26	126	16	98	30	0	8	144	21	97	18	0	8	136	18	178	48	0	10	244	650	
15:15:00	22	95	27	1	12	145	21	88	26	0	10	135	25	98	36	1	10	160	26	84	45	0	4	155	595	
15:30:00	35	97	27	0	5	159	27	81	27	0	8	135	27	109	20	0	2	156	19	132	49	0	4	200	650	
15:45:00	30	96	31	0	8	157	22	78	44	0	6	144	36	113	32	0	7	181	16	102	31	0	4	149	631	2526
16:00:00	20	95	41	0	5	156	12	102	39	0	9	153	30	103	32	0	8	165	32	128	52	0	5	212	686	2562
16:15:00	15	109	34	2	9	160	18	104	36	0	9	158	35	105	49	0	4	189	13	132	44	0	2	189	696	2663
16:30:00	20	99	24	0	12	143	20	79	30	1	16	130	39	92	35	0	5	166	28	175	65	0	4	268	707	2720
16:45:00	25	134	34	0	16	193	19	79	42	0	9	140	23	107	34	0	5	164	25	157	62	0	5	244	741	2830
17:00:00	34	102	38	0	6	174	16	94	30	0	7	140	38	123	29	0	7	190	28	171	63	0	3	262	766	2910
17:15:00	29	101	36	1	9	167	29	97	29	0	9	155	29	124	34	0	5	187	21	146	59	0	3	226	735	2949
17:30:00	25	116	46	0	3	187	26	79	31	0	1	136	40	130	24	0	4	194	21	142	54	0	7	217	734	2976

17:45:00	32	127	33	0	10	192	23	107	31	0	10	161	32	102	32	0	9	166	18	126	34	0	7	178	697	2932
18:00:00	28	99	37	0	9	164	28	83	32	0	8	143	30	116	36	0	6	182	19	110	53	0	7	182	671	2837
18:15:00	21	94	36	0	14	151	24	79	39	0	5	142	33	102	32	0	6	167	15	110	50	0	6	175	635	2737
18:30:00	22	76	37	0	7	135	23	76	26	1	4	126	23	103	27	0	4	153	12	102	29	0	3	143	557	2560
18:45:00	27	74	35	0	11	136	24	70	13	0	6	107	28	100	27	0	9	155	23	67	38	0	10	128	526	2389
Grand Total	1423	4152	1176	13	354	6764	810	4111	1522	4	281	6447	1106	4436	1241	2	242	6785	913	4128	1966	0	217	7007	**27003**	-
Approach%	21%	61.4%	17.4%	0.2%		-	12.6%	63.8%	23.6%	0.1%		-	16.3%	65.4%	18.3%	0%		-	13%	58.9%	28.1%	0%		-	**-**	-
Totals %	5.3%	15.4%	4.4%	0%		25%	3%	15.2%	5.6%	0%		23.9%	4.1%	16.4%	4.6%	0%		25.1%	3.4%	15.3%	7.3%	0%		25.9%	**-**	-
Heavy	140	140	43	0		-	18	173	137	0		-	154	122	126	0		-	59	162	50	0		-	**-**	-
Heavy %	9.8%	3.4%	3.7%	0%		-	2.2%	4.2%	9%	0%		-	13.9%	2.8%	10.2%	0%		-	6.5%	3.9%	2.5%	0%		-	**-**	-
Bicycles	5	6	0	0		-	2	8	0	0		-	0	2	0	0		-	0	11	0	0		-	**-**	-
Bicycle %	0.4%	0.1%	0%	0%		-	0.2%	0.2%	0%	0%		-	0%	0%	0%	0%		-	0%	0.3%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM **Weather: Mist (3.59 °C)**

Start Time	N Approach GORDON ST						E Approach CLAIR RD						S Approach GORDON ST						W Approach CLAIR RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	37	97	13	0	5	147	17	99	34	0	3	150	17	117	33	0	5	167	19	47	27	0	3	93	557
08:15:00	40	76	10	1	11	127	13	136	37	0	6	186	31	107	36	0	3	174	32	76	23	0	3	131	618
08:30:00	50	72	19	0	9	141	20	150	39	0	8	209	23	97	42	0	7	162	13	68	41	0	3	122	634
08:45:00	56	80	24	0	6	160	13	165	36	0	4	214	18	124	32	0	7	174	25	77	49	0	3	151	699
Grand Total	183	325	66	1	31	575	63	550	146	0	21	759	89	445	143	0	22	677	89	268	140	0	12	497	**2508**
Approach%	31.8%	56.5%	11.5%	0.2%		-	8.3%	72.5%	19.2%	0%		-	13.1%	65.7%	21.1%	0%		-	17.9%	53.9%	28.2%	0%		-	**-**
Totals %	7.3%	13%	2.6%	0%		22.9%	2.5%	21.9%	5.8%	0%		30.3%	3.5%	17.7%	5.7%	0%		27%	3.5%	10.7%	5.6%	0%		19.8%	**-**
PHF	0.82	0.84	0.69	0.25		0.9	0.79	0.83	0.94	0		0.89	0.72	0.9	0.85	0		0.97	0.7	0.87	0.71	0		0.82	**-**
Heavy	16	7	3	0		26	4	19	17	0		40	19	20	15	0		54	7	17	11	0		35	**-**
Heavy %	8.7%	2.2%	4.5%	0%		4.5%	6.3%	3.5%	11.6%	0%		5.3%	21.3%	4.5%	10.5%	0%		8%	7.9%	6.3%	7.9%	0%		7%	**-**
Lights	167	318	63	1		549	59	531	129	0		719	70	425	128	0		623	82	251	129	0		462	**-**
Lights %	91.3%	97.8%	95.5%	100%		95.5%	93.7%	96.5%	88.4%	0%		94.7%	78.7%	95.5%	89.5%	0%		92%	92.1%	93.7%	92.1%	0%		93%	**-**
Single-Unit Trucks	3	4	1	0		8	1	5	5	0		11	12	9	5	0		26	4	8	9	0		21	**-**
Single-Unit Trucks %	1.6%	1.2%	1.5%	0%		1.4%	1.6%	0.9%	3.4%	0%		1.4%	13.5%	2%	3.5%	0%		3.8%	4.5%	3%	6.4%	0%		4.2%	**-**
Buses	12	3	2	0		17	2	11	0	0		13	3	8	8	0		19	0	8	1	0		9	**-**
Buses %	6.6%	0.9%	3%	0%		3%	3.2%	2%	0%	0%		1.7%	3.4%	1.8%	5.6%	0%		2.8%	0%	3%	0.7%	0%		1.8%	**-**
Articulated Trucks	1	0	0	0		1	1	3	12	0		16	4	3	2	0		9	3	1	1	0		5	**-**
Articulated Trucks %	0.5%	0%	0%	0%		0.2%	1.6%	0.5%	8.2%	0%		2.1%	4.5%	0.7%	1.4%	0%		1.3%	3.4%	0.4%	0.7%	0%		1%	**-**
Pedestrians	-	-	-	-	29	-	-	-	-	-	20	-	-	-	-	-	18	-	-	-	-	-	12	-	**-**
Pedestrians%	-	-	-	-	33.7%		-	-	-	-	23.3%		-	-	-	-	20.9%		-	-	-	-	14%		**-**
Bicycles on Road	0	2	0	0	0	-	0	1	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.3%		-	-	-	-	1.2%		-	-	-	-	4.7%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 11:45 AM - 12:45 PM **Weather:**

Start Time	N Approach GORDON ST						E Approach CLAIR RD						S Approach GORDON ST						W Approach CLAIR RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
11:45:00	25	80	23	0	7	128	15	81	38	0	6	134	25	84	23	0	10	132	26	87	51	0	5	164	558
12:00:00	29	101	23	0	14	153	20	81	30	0	11	131	22	92	32	0	11	146	22	88	55	0	2	165	595
12:15:00	39	84	26	0	5	149	18	72	31	0	5	121	19	99	23	0	6	141	16	89	48	0	6	153	564
12:30:00	43	85	29	0	2	157	18	100	31	0	11	149	15	79	18	0	7	112	20	98	51	0	11	169	587
Grand Total	136	350	101	0	28	587	71	334	130	0	33	535	81	354	96	0	34	531	84	362	205	0	24	651	**2304**
Approach%	23.2%	59.6%	17.2%	0%		-	13.3%	62.4%	24.3%	0%		-	15.3%	66.7%	18.1%	0%		-	12.9%	55.6%	31.5%	0%		-	**-**
Totals %	5.9%	15.2%	4.4%	0%		25.5%	3.1%	14.5%	5.6%	0%		23.2%	3.5%	15.4%	4.2%	0%		23%	3.6%	15.7%	8.9%	0%		28.3%	**-**
PHF	0.79	0.87	0.87	0		0.93	0.89	0.84	0.86	0		0.9	0.81	0.89	0.75	0		0.91	0.81	0.92	0.93	0		0.96	**-**
Heavy	12	18	3	0		33	1	16	14	0		31	16	10	7	0		33	9	16	2	0		27	**-**
Heavy %	8.8%	5.1%	3%	0%		5.6%	1.4%	4.8%	10.8%	0%		5.8%	19.8%	2.8%	7.3%	0%		6.2%	10.7%	4.4%	1%	0%		4.1%	**-**
Lights	124	332	98	0		554	70	318	116	0		504	65	344	89	0		498	75	346	203	0		624	**-**
Lights %	91.2%	94.9%	97%	0%		94.4%	98.6%	95.2%	89.2%	0%		94.2%	80.2%	97.2%	92.7%	0%		93.8%	89.3%	95.6%	99%	0%		95.9%	**-**
Single-Unit Trucks	5	7	1	0		13	1	10	6	0		17	9	4	4	0		17	6	12	2	0		20	**-**
Single-Unit Trucks %	3.7%	2%	1%	0%		2.2%	1.4%	3%	4.6%	0%		3.2%	11.1%	1.1%	4.2%	0%		3.2%	7.1%	3.3%	1%	0%		3.1%	**-**
Buses	6	7	2	0		15	0	2	0	0		2	0	3	3	0		6	0	1	0	0		1	**-**
Buses %	4.4%	2%	2%	0%		2.6%	0%	0.6%	0%	0%		0.4%	0%	0.8%	3.1%	0%		1.1%	0%	0.3%	0%	0%		0.2%	**-**
Articulated Trucks	1	4	0	0		5	0	4	8	0		12	7	3	0	0		10	3	3	0	0		6	**-**
Articulated Trucks %	0.7%	1.1%	0%	0%		0.9%	0%	1.2%	6.2%	0%		2.2%	8.6%	0.8%	0%	0%		1.9%	3.6%	0.8%	0%	0%		0.9%	**-**
Pedestrians	-	-	-	-	28	-	-	-	-	-	30	-	-	-	-	-	28	-	-	-	-	-	23	-	**-**
Pedestrians%	-	-	-	-	23.5%		-	-	-	-	25.2%		-	-	-	-	23.5%		-	-	-	-	19.3%		**-**
Bicycles on Road	0	2	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	2	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	6	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	2.5%		-	-	-	-	5%		-	-	-	-	0.8%		**-**

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (20.05 °C)

Start Time	N Approach GORDON ST						E Approach CLAIR RD						S Approach GORDON ST						W Approach CLAIR RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	25	134	34	0	16	193	19	79	42	0	9	140	23	107	34	0	5	164	25	157	62	0	5	244	741
17:00:00	34	102	38	0	6	174	16	94	30	0	7	140	38	123	29	0	7	190	28	171	63	0	3	262	766
17:15:00	29	101	36	1	9	167	29	97	29	0	9	155	29	124	34	0	5	187	21	146	59	0	3	226	735
17:30:00	25	116	46	0	3	187	26	79	31	0	1	136	40	130	24	0	4	194	21	142	54	0	7	217	734
Grand Total	113	453	154	1	34	721	90	349	132	0	26	571	130	484	121	0	21	735	95	616	238	0	18	949	**2976**
Approach%	15.7%	62.8%	21.4%	0.1%		-	15.8%	61.1%	23.1%	0%		-	17.7%	65.9%	16.5%	0%		-	10%	64.9%	25.1%	0%		-	**-**
Totals %	3.8%	15.2%	5.2%	0%		24.2%	3%	11.7%	4.4%	0%		19.2%	4.4%	16.3%	4.1%	0%		24.7%	3.2%	20.7%	8%	0%		31.9%	**-**
PHF	0.83	0.85	0.84	0.25		0.93	0.78	0.9	0.79	0		0.92	0.81	0.93	0.89	0		0.95	0.85	0.9	0.94	0		0.91	**-**
Heavy	12	11	2	0		25	0	5	3	0		8	7	10	8	0		25	2	9	0	0		11	**-**
Heavy %	10.6%	2.4%	1.3%	0%		3.5%	0%	1.4%	2.3%	0%		1.4%	5.4%	2.1%	6.6%	0%		3.4%	2.1%	1.5%	0%	0%		1.2%	**-**
Lights	101	442	152	1		696	90	344	129	0		563	123	474	113	0		710	93	607	238	0		938	**-**
Lights %	89.4%	97.6%	98.7%	100%		96.5%	100%	98.6%	97.7%	0%		98.6%	94.6%	97.9%	93.4%	0%		96.6%	97.9%	98.5%	100%	0%		98.8%	**-**
Single-Unit Trucks	2	5	0	0		7	0	4	1	0		5	3	3	4	0		10	1	6	0	0		7	**-**
Single-Unit Trucks %	1.8%	1.1%	0%	0%		1%	0%	1.1%	0.8%	0%		0.9%	2.3%	0.6%	3.3%	0%		1.4%	1.1%	1%	0%	0%		0.7%	**-**
Buses	9	5	2	0		16	0	1	0	0		1	0	7	4	0		11	0	0	0	0		0	**-**
Buses %	8%	1.1%	1.3%	0%		2.2%	0%	0.3%	0%	0%		0.2%	0%	1.4%	3.3%	0%		1.5%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	1	1	0	0		2	0	0	2	0		2	4	0	0	0		4	1	3	0	0		4	**-**
Articulated Trucks %	0.9%	0.2%	0%	0%		0.3%	0%	0%	1.5%	0%		0.4%	3.1%	0%	0%	0%		0.5%	1.1%	0.5%	0%	0%		0.4%	**-**
Pedestrians	-	-	-	-	31	-	-	-	-	-	23	-	-	-	-	-	14	-	-	-	-	-	16	-	**-**
Pedestrians%	-	-	-	-	31.3%		-	-	-	-	23.2%		-	-	-	-	14.1%		-	-	-	-	16.2%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	7	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	3%		-	-	-	-	3%		-	-	-	-	7.1%		-	-	-	-	2%		**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Mist (3.59 °C)**

Peak Hour: 11:45 AM - 12:45 PM **Weather:**

Peak Hour: 04:45 PM - 05:45 PM **Weather: Clear Sky (20.05 °C)**

	Bicycles on Crosswalk	Pedestrians
N	3	31
S	7	14
E	3	23
W	2	16

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (3 . CLAIR RD E & HAWKINS DR)

Start Time	E Approach CLAIR RD					S Approach HAWKINS DR					W Approach CLAIR RD					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:00:00	71	1	0	0	72	9	1	0	3	10	1	43	0	0	44	126	
07:15:00	114	5	0	0	119	3	5	0	2	8	0	38	0	0	38	165	
07:30:00	123	1	0	0	124	3	2	0	2	5	2	44	0	0	46	175	
07:45:00	157	8	0	0	165	5	3	0	1	8	3	48	0	0	51	224	690
08:00:00	124	5	0	0	129	10	0	0	0	10	0	59	0	0	59	198	762
08:15:00	134	1	0	0	135	8	5	0	3	13	1	90	0	0	91	239	836
08:30:00	180	8	0	0	188	9	5	0	0	14	3	81	0	0	84	286	947
08:45:00	169	9	0	0	178	6	2	0	2	8	3	70	0	0	73	259	982
09:00:00	113	5	0	0	118	2	2	0	0	4	4	61	0	0	65	187	971
09:15:00	79	5	0	0	84	6	1	0	3	7	0	46	0	0	46	137	869
09:30:00	75	4	0	0	79	3	2	0	3	5	1	66	0	0	67	151	734
09:45:00	91	3	0	0	94	5	3	0	0	8	1	52	0	0	53	155	630
BREAK																	
10:00:00	76	7	0	0	83	9	3	0	2	12	4	66	0	0	70	165	
10:15:00	80	5	0	0	85	6	2	0	2	8	1	58	0	0	59	152	
10:30:00	89	5	0	0	94	6	6	0	1	12	1	58	0	0	59	165	
10:45:00	69	6	0	0	75	6	3	0	1	9	2	61	0	0	63	147	629
11:00:00	68	3	0	0	71	4	3	0	1	7	2	64	0	0	66	144	608
11:15:00	72	10	0	0	82	7	3	0	1	10	2	68	0	0	70	162	618
11:30:00	72	11	0	0	83	15	4	0	0	19	3	59	0	0	62	164	617
11:45:00	96	9	0	0	105	10	5	0	3	15	3	75	0	1	78	198	668
12:00:00	84	13	0	0	97	12	3	1	2	16	2	66	0	0	68	181	705
12:15:00	67	7	0	0	74	16	4	0	4	20	3	70	0	0	73	167	710
12:30:00	79	4	0	0	83	9	6	0	2	15	2	86	0	0	88	186	732
12:45:00	70	11	0	0	81	15	3	1	2	19	4	60	0	0	64	164	698
13:00:00	80	5	0	0	85	6	5	0	0	11	1	76	0	0	77	173	690
13:15:00	90	13	0	0	103	12	2	0	1	14	2	72	0	0	74	191	714
13:30:00	72	9	0	0	81	15	2	0	4	17	8	92	0	0	100	198	726
13:45:00	96	3	0	0	99	16	0	0	4	16	6	72	0	0	78	193	755
14:00:00	82	13	0	0	95	12	3	0	4	15	3	79	0	0	82	192	774
14:15:00	76	6	0	0	82	12	1	0	0	13	1	108	0	0	109	204	787
14:30:00	92	8	0	0	100	6	3	0	2	9	4	103	0	1	107	216	805
14:45:00	115	13	0	0	128	15	1	0	1	16	1	92	0	0	93	237	849
BREAK																	

15:00:00	87	6	0	0	93	11	6	0	4	17	2	160	0	0	162	272	
15:15:00	109	9	0	0	118	10	5	0	3	15	4	96	0	0	100	233	
15:30:00	105	12	0	0	117	18	2	0	0	20	7	122	0	0	129	266	
15:45:00	104	8	0	0	112	6	3	0	2	9	5	126	0	0	131	252	1023
16:00:00	106	11	0	0	117	20	5	0	3	25	2	147	0	1	149	291	1042
16:15:00	124	7	0	0	131	31	0	0	0	31	3	130	0	0	133	295	1104
16:30:00	100	16	0	0	116	14	3	0	4	17	5	174	0	0	179	312	1150
16:45:00	115	13	0	0	128	16	2	0	6	18	6	151	0	0	157	303	1201
17:00:00	93	9	0	0	102	17	4	0	4	21	5	175	0	1	180	303	1213
17:15:00	119	15	0	0	134	22	2	0	3	24	4	143	0	0	147	305	1223
17:30:00	98	19	0	0	117	28	0	0	0	28	1	134	0	0	135	280	1191
17:45:00	130	11	0	0	141	22	4	0	6	26	2	114	0	1	116	283	1171
18:00:00	123	9	0	0	132	16	2	0	6	18	1	97	0	1	98	248	1116
18:15:00	85	6	0	0	91	15	4	0	3	19	6	127	0	0	133	243	1054
18:30:00	75	14	0	0	89	25	6	0	2	31	6	97	0	0	103	223	997
18:45:00	88	11	0	0	99	19	5	0	6	24	2	102	1	3	105	228	942
Grand Total	4716	392	0	0	5108	568	146	2	108	716	135	4278	1	9	4414	**10238**	-
Approach%	92.3%	7.7%	0%		-	79.3%	20.4%	0.3%		-	3.1%	96.9%	0%		-	**-**	-
Totals %	46.1%	3.8%	0%		49.9%	5.5%	1.4%	0%		7%	1.3%	41.8%	0%		43.1%	**-**	-
Heavy	210	6	0		-	8	7	0		-	1	248	0		-	**-**	-
Heavy %	4.5%	1.5%	0%		-	1.4%	4.8%	0%		-	0.7%	5.8%	0%		-	**-**	-
Bicycles	15	1	0		-	2	1	0		-	1	7	0		-	**-**	-
Bicycle %	0.3%	0.3%	0%		-	0.4%	0.7%	0%		-	0.7%	0.2%	0%		-	**-**	-

Peak Hour: 08:00 AM - 09:00 AM Weather: Mist (3.59 °C)

Start Time	E Approach CLAIR RD					S Approach HAWKINS DR					W Approach CLAIR RD					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
08:00:00	124	5	0	0	129	10	0	0	0	10	0	59	0	0	59	198
08:15:00	134	1	0	0	135	8	5	0	3	13	1	90	0	0	91	239
08:30:00	180	8	0	0	188	9	5	0	0	14	3	81	0	0	84	286
08:45:00	169	9	0	0	178	6	2	0	2	8	3	70	0	0	73	259
Grand Total	607	23	0	0	630	33	12	0	5	45	7	300	0	0	307	**982**
Approach%	96.3%	3.7%	0%		-	73.3%	26.7%	0%		-	2.3%	97.7%	0%		-	**-**
Totals %	61.8%	2.3%	0%		64.2%	3.4%	1.2%	0%		4.6%	0.7%	30.5%	0%		31.3%	**-**
PHF	0.84	0.64	0		0.84	0.83	0.6	0		0.8	0.58	0.83	0		0.84	**-**
Heavy	27	0	0		27	2	1	0		3	1	18	0		19	**-**
Heavy %	4.4%	0%	0%		4.3%	6.1%	8.3%	0%		6.7%	14.3%	6%	0%		6.2%	**-**
Lights	580	23	0		603	31	11	0		42	6	282	0		288	**-**
Lights %	95.6%	100%	0%		95.7%	93.9%	91.7%	0%		93.3%	85.7%	94%	0%		93.8%	**-**
Single-Unit Trucks	18	0	0		18	0	0	0		0	1	9	0		10	**-**
Single-Unit Trucks %	3%	0%	0%		2.9%	0%	0%	0%		0%	14.3%	3%	0%		3.3%	**-**
Buses	6	0	0		6	2	1	0		3	0	9	0		9	**-**
Buses %	1%	0%	0%		1%	6.1%	8.3%	0%		6.7%	0%	3%	0%		2.9%	**-**
Articulated Trucks	3	0	0		3	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0.5%	0%	0%		0.5%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	5	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	100%		-	-	-	0%		**-**
Bicycles on Road	2	1	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

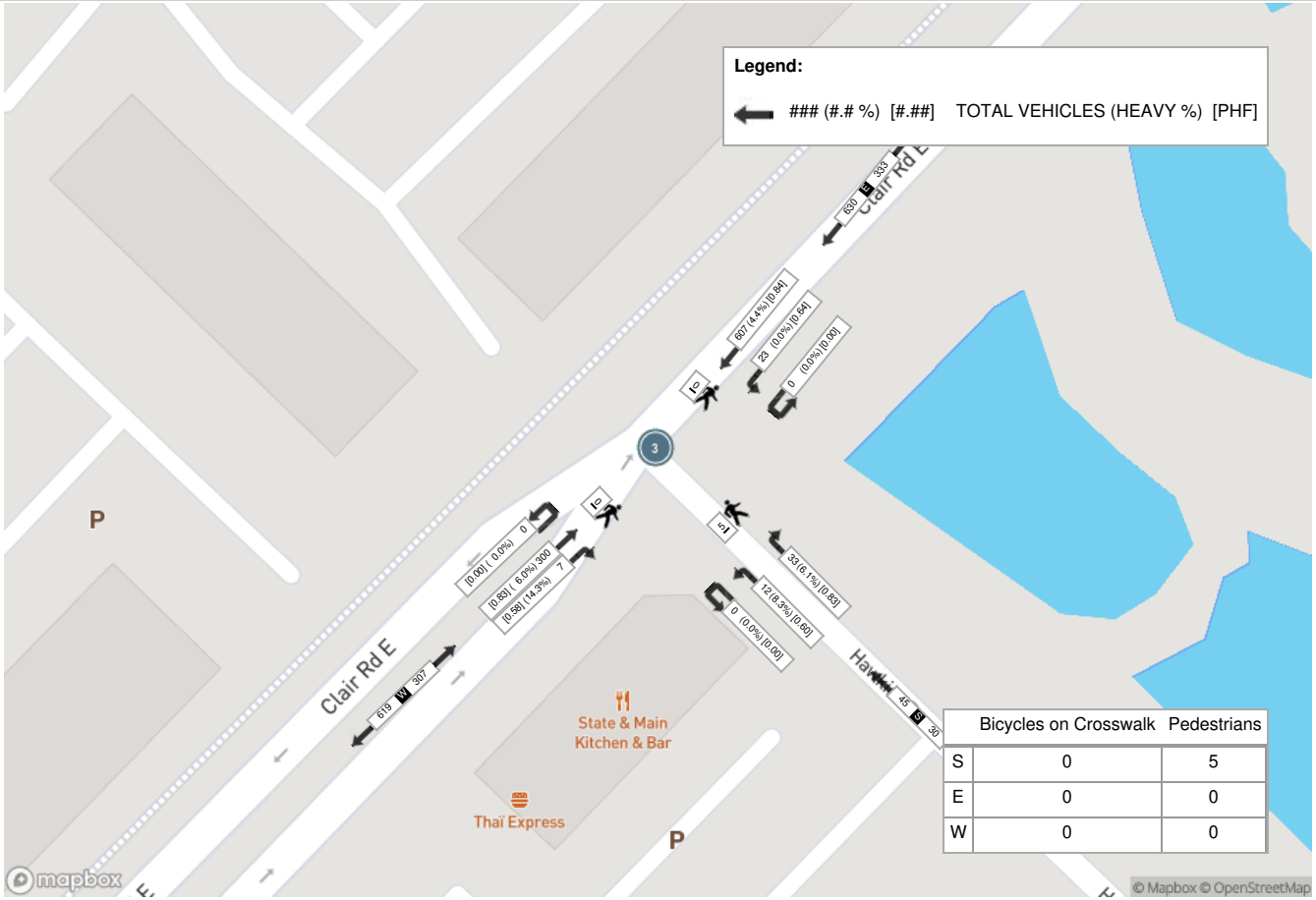
Peak Hour: 02:00 PM - 03:00 PM Weather:

Start Time	E Approach CLAIR RD					S Approach HAWKINS DR					W Approach CLAIR RD					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
14:00:00	82	13	0	0	95	12	3	0	4	15	3	79	0	0	82	192
14:15:00	76	6	0	0	82	12	1	0	0	13	1	108	0	0	109	204
14:30:00	92	8	0	0	100	6	3	0	2	9	4	103	0	1	107	216
14:45:00	115	13	0	0	128	15	1	0	1	16	1	92	0	0	93	237
Grand Total	365	40	0	0	405	45	8	0	7	53	9	382	0	1	391	**849**
Approach%	90.1%	9.9%	0%		-	84.9%	15.1%	0%		-	2.3%	97.7%	0%		-	**-**
Totals %	43%	4.7%	0%		47.7%	5.3%	0.9%	0%		6.2%	1.1%	45%	0%		46.1%	**-**
PHF	0.79	0.77	0		0.79	0.75	0.67	0		0.83	0.56	0.88	0		0.9	**-**
Heavy	16	0	0		16	1	0	0		1	0	26	0		26	**-**
Heavy %	4.4%	0%	0%		4%	2.2%	0%	0%		1.9%	0%	6.8%	0%		6.6%	**-**
Lights	349	40	0		389	44	8	0		52	9	356	0		365	**-**
Lights %	95.6%	100%	0%		96%	97.8%	100%	0%		98.1%	100%	93.2%	0%		93.4%	**-**
Single-Unit Trucks	12	0	0		12	1	0	0		1	0	15	0		15	**-**
Single-Unit Trucks %	3.3%	0%	0%		3%	2.2%	0%	0%		1.9%	0%	3.9%	0%		3.8%	**-**
Buses	4	0	0		4	0	0	0		0	0	11	0		11	**-**
Buses %	1.1%	0%	0%		1%	0%	0%	0%		0%	0%	2.9%	0%		2.8%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	7	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	87.5%		-	-	-	12.5%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 04:30 PM - 05:30 PM Weather: Clear Sky (20.05 °C)

Start Time	E Approach CLAIR RD					S Approach HAWKINS DR					W Approach CLAIR RD					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
16:30:00	100	16	0	0	116	14	3	0	4	17	5	174	0	0	179	312
16:45:00	115	13	0	0	128	16	2	0	6	18	6	151	0	0	157	303
17:00:00	93	9	0	0	102	17	4	0	4	21	5	175	0	1	180	303
17:15:00	119	15	0	0	134	22	2	0	3	24	4	143	0	0	147	305
Grand Total	427	53	0	0	480	69	11	0	17	80	20	643	0	1	663	**1223**
Approach%	89%	11%	0%		-	86.3%	13.8%	0%		-	3%	97%	0%		-	**-**
Totals %	34.9%	4.3%	0%		39.2%	5.6%	0.9%	0%		6.5%	1.6%	52.6%	0%		54.2%	**-**
PHF	0.9	0.83	0		0.9	0.78	0.69	0		0.83	0.83	0.92	0		0.92	**-**
Heavy	4	0	0		4	0	0	0		0	0	19	0		19	**-**
Heavy %	0.9%	0%	0%		0.8%	0%	0%	0%		0%	0%	3%	0%		2.9%	**-**
Lights	423	53	0		476	69	11	0		80	20	624	0		644	**-**
Lights %	99.1%	100%	0%		99.2%	100%	100%	0%		100%	100%	97%	0%		97.1%	**-**
Single-Unit Trucks	2	0	0		2	0	0	0		0	0	12	0		12	**-**
Single-Unit Trucks %	0.5%	0%	0%		0.4%	0%	0%	0%		0%	0%	1.9%	0%		1.8%	**-**
Buses	1	0	0		1	0	0	0		0	0	6	0		6	**-**
Buses %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.9%	0%		0.9%	**-**
Articulated Trucks	1	0	0		1	0	0	0		0	0	1	0		1	**-**
Articulated Trucks %	0.2%	0%	0%		0.2%	0%	0%	0%		0%	0%	0.2%	0%		0.2%	**-**
Pedestrians	-	-	-	0	-	-	-	-	15	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	83.3%		-	-	-	5.6%		**-**
Bicycles on Road	0	0	0	0	-	0	1	0	0	-	0	2	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	2	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	11.1%		-	-	-	0%		**-**

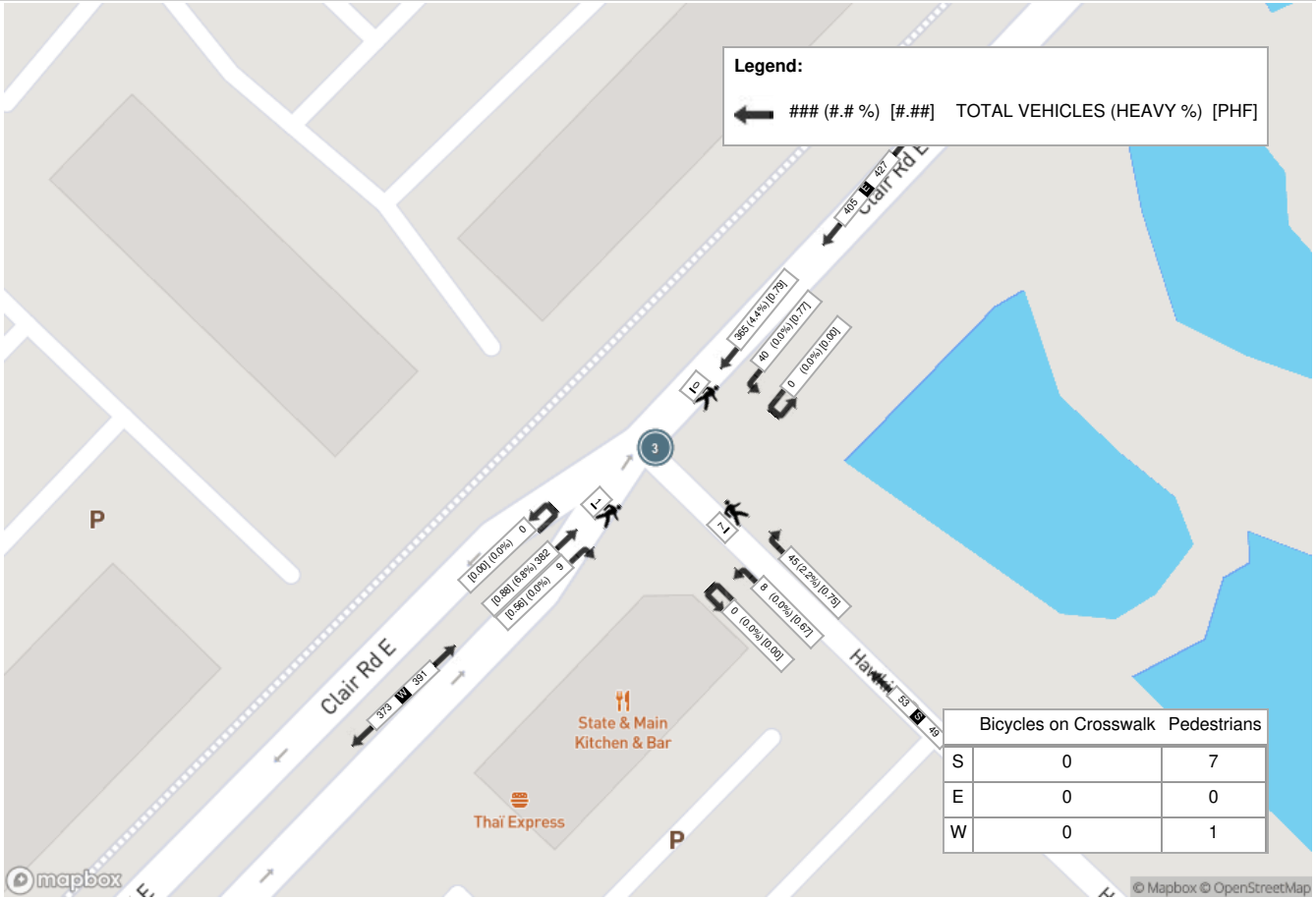
Peak Hour: 08:00 AM - 09:00 AM Weather: Mist (3.59 °C)



	Bicycles on Crosswalk	Pedestrians
S	0	5
E	0	0
W	0	0

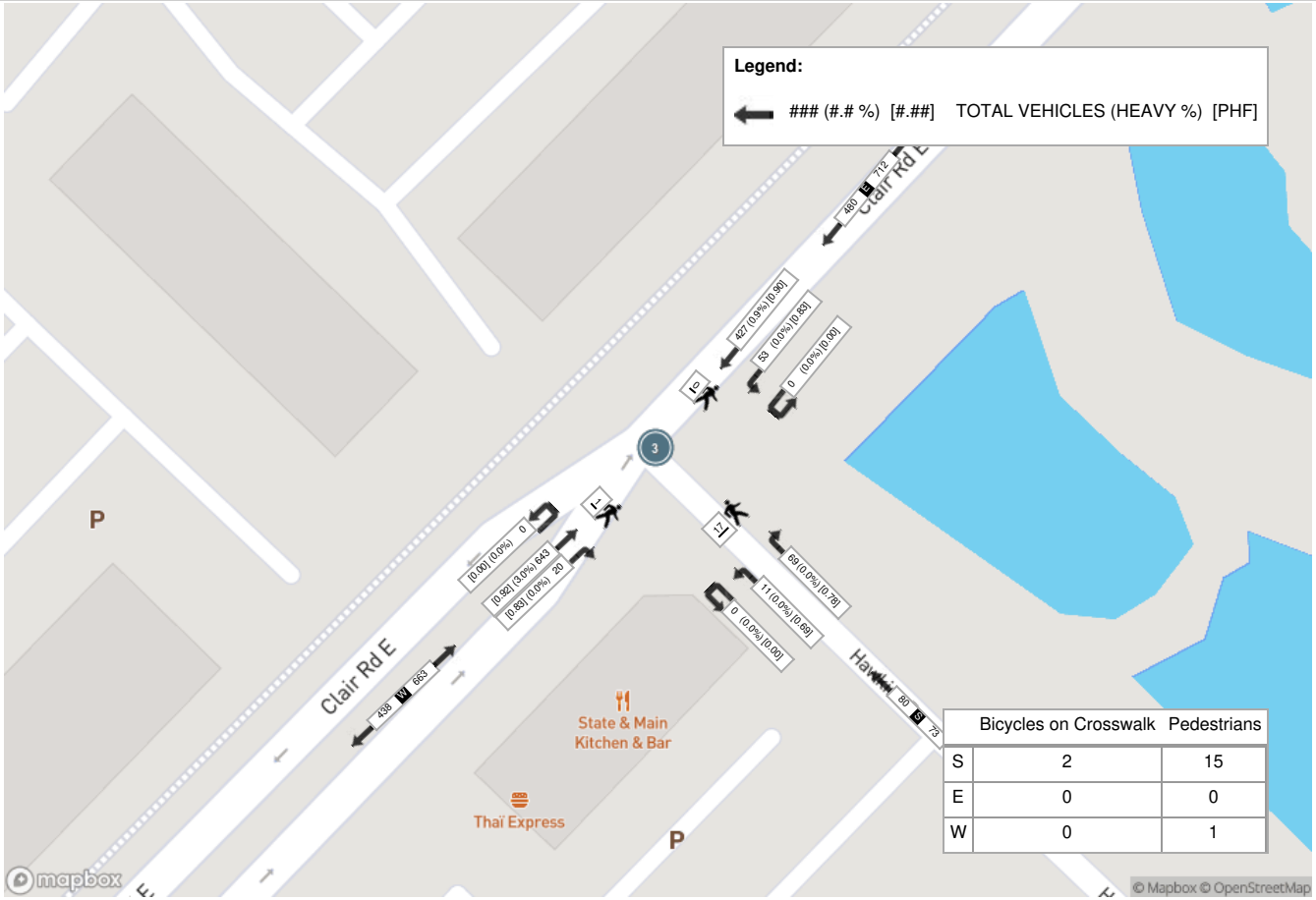
BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 02:00 PM - 03:00 PM Weather:



BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 04:30 PM - 05:30 PM Weather: Clear Sky (20.05 °C)



	Bicycles on Crosswalk	Pedestrians
S	2	15
E	0	0
W	0	1

Spectrum

Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (7 . FARLEY DR & NORTH INTERNAL INTERSECTION)

Start Time	N Approach FARLEY DR						E Approach BEER STORE DRIVEWAY						S Approach FARLEY DR						W Approach INTERNAL RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	2	0	0	0	0	2	0	0	0	0	0	0	1	1	0	0	0	2	0	2	3	0	0	5	9	
07:15:00	4	0	1	0	1	5	0	0	1	0	1	1	0	3	0	0	1	3	0	2	2	0	0	4	13	
07:30:00	7	2	0	0	0	9	1	1	0	0	0	2	0	0	0	0	0	0	0	0	9	0	1	9	20	
07:45:00	7	2	0	0	0	9	0	0	0	0	1	0	0	5	0	0	1	5	0	0	1	0	3	1	15	57
08:00:00	5	1	2	0	1	8	0	2	0	0	3	2	1	5	0	0	2	6	1	1	5	0	6	7	23	71
08:15:00	5	6	1	0	0	12	2	1	1	0	1	4	0	1	0	0	0	1	0	0	7	0	1	7	24	82
08:30:00	15	7	1	0	0	23	0	3	0	0	0	3	0	3	1	0	0	4	0	1	8	0	3	9	39	101
08:45:00	15	7	1	1	0	24	1	6	0	0	1	7	0	6	0	0	0	6	1	2	5	0	6	8	45	131
09:00:00	19	6	2	1	0	28	1	1	0	0	1	2	1	5	0	0	0	6	0	0	6	0	3	6	42	150
09:15:00	19	7	0	0	0	26	0	2	1	0	4	3	0	2	1	0	0	3	0	2	7	0	3	9	41	167
09:30:00	11	4	1	0	0	16	2	1	0	0	0	3	0	5	2	0	0	7	0	1	7	0	3	8	34	162
09:45:00	22	2	4	1	0	29	0	2	0	0	1	2	1	4	0	0	0	5	0	2	11	0	2	13	49	166
BREAK																										
10:00:00	23	2	1	0	0	26	4	4	2	0	0	10	0	8	1	0	0	9	0	3	10	0	3	13	58	
10:15:00	20	10	5	0	0	35	3	3	1	0	1	7	0	7	0	0	0	7	2	2	17	0	6	21	70	
10:30:00	23	1	5	0	2	29	4	2	1	0	2	7	0	8	1	0	0	9	0	2	19	0	7	21	66	
10:45:00	20	7	4	0	1	31	5	3	2	0	5	10	2	6	1	0	1	9	0	3	23	0	5	26	76	270
11:00:00	25	9	6	0	1	40	3	1	0	0	2	4	2	7	0	0	4	9	1	4	22	0	7	27	80	292
11:15:00	23	5	7	0	0	35	7	4	2	0	0	13	0	6	0	0	2	6	0	2	25	0	11	27	81	303
11:30:00	31	12	8	0	2	51	4	8	1	0	0	13	5	11	0	0	0	16	0	2	15	0	5	17	97	334
11:45:00	30	14	14	0	0	58	8	3	1	0	3	12	1	15	0	0	2	16	3	1	29	0	5	33	119	377
12:00:00	35	17	10	0	2	62	4	5	4	0	3	13	3	13	0	0	4	16	2	6	32	0	10	40	131	428
12:15:00	37	12	9	1	1	59	5	1	2	0	3	8	2	14	0	0	1	16	1	6	20	0	2	27	110	457
12:30:00	28	12	11	0	0	51	10	3	1	0	1	14	1	18	0	0	1	19	1	5	25	0	3	31	115	475
12:45:00	22	16	10	0	0	48	14	4	2	0	2	20	0	20	0	0	2	20	3	6	23	0	6	32	120	476
13:00:00	22	8	7	0	0	37	9	1	2	0	2	12	2	15	0	0	2	17	3	1	17	0	9	21	87	432
13:15:00	23	12	15	0	0	50	8	8	1	0	0	17	0	17	1	0	0	18	0	3	24	0	4	27	112	434
13:30:00	27	14	8	0	1	49	11	4	0	0	3	15	1	19	0	0	2	20	0	5	19	0	7	24	108	427
13:45:00	25	8	9	0	1	42	9	3	1	0	0	13	1	16	0	0	2	17	1	0	22	0	5	23	95	402
14:00:00	18	11	6	0	2	35	7	7	1	0	1	15	0	8	0	0	0	8	0	2	19	0	4	21	79	394
14:15:00	16	7	5	0	1	28	8	2	2	0	1	12	1	15	1	0	0	17	0	2	18	0	2	20	77	359
14:30:00	18	6	8	0	0	32	4	4	1	0	2	9	2	9	0	0	2	11	0	4	13	0	2	17	69	320
14:45:00	23	6	8	0	2	37	11	8	2	0	1	21	3	8	0	0	0	11	2	3	26	0	4	31	100	325
BREAK																										
15:00:00	25	14	7	0	4	46	6	3	1	0	4	10	2	7	0	0	3	9	1	3	26	0	6	30	95	
15:15:00	22	10	7	0	1	39	9	4	4	0	1	17	6	9	0	0	1	15	0	4	21	0	4	25	96	
15:30:00	38	8	13	0	2	59	15	5	2	0	3	22	4	11	1	0	5	16	0	5	23	0	9	28	125	
15:45:00	21	8	6	0	1	35	8	2	1	0	5	11	4	15	1	0	3	20	2	4	15	0	4	21	87	403
16:00:00	30	7	11	0	0	48	8	2	4	0	8	14	2	9	0	0	7	11	2	11	17	0	5	30	103	411
16:15:00	34	13	15	0	3	62	13	3	2	0	5	18	2	4	0	0	1	6	2	4	18	0	15	24	110	425
16:30:00	26	11	11	0	2	48	8	3	3	0	13	14	2	8	0	0	9	10	0	1	17	0	5	18	90	390
16:45:00	31	12	12	0	0	55	8	5	5	0	8	18	1	11	1	0	4	13	2	3	23	0	6	28	114	417
17:00:00	22	23	12	0	0	57	12	6	1	0	6	19	5	10	1	0	0	16	1	2	20	0	10	23	115	429
17:15:00	44	10	12	0	3	66	10	3	2	0	4	15	3	14	2	0	1	19	1	10	26	0	7	37	137	456
17:30:00	44	8	15	1	2	68	10	5	4	0	4	19	3	13	1	0	0	17	1	6	14	0	3	21	125	491

17:45:00	41	17	11	0	1	69	8	3	2	0	6	13	3	9	0	0	4	12	6	1	23	0	11	30	124	501
18:00:00	38	9	20	0	2	67	10	3	3	0	3	16	2	11	0	0	4	13	1	6	23	0	6	30	126	512
18:15:00	26	16	11	0	1	53	10	3	2	0	10	15	0	8	1	0	2	9	0	5	22	0	8	27	104	479
18:30:00	34	16	11	0	1	61	11	7	3	0	3	21	3	14	2	0	3	19	1	3	14	0	8	18	119	473
18:45:00	24	15	16	0	0	55	10	2	0	0	7	12	3	19	0	0	3	22	1	3	25	0	6	29	118	467
Grand Total	1120	430	359	5	41	1914	301	156	71	0	135	528	75	452	19	0	79	546	42	146	816	0	251	1004	**3992**	-
Approach%	58.5%	22.5%	18.8%	0.3%		-	57%	29.5%	13.4%	0%		-	13.7%	82.8%	3.5%	0%		-	4.2%	14.5%	81.3%	0%		-	**-**	-
Totals %	28.1%	10.8%	9%	0.1%		47.9%	7.5%	3.9%	1.8%	0%		13.2%	1.9%	11.3%	0.5%	0%		13.7%	1.1%	3.7%	20.4%	0%		25.2%	**-**	-
Heavy	3	5	8	0		-	3	2	1	0		-	2	4	0	0		-	1	1	5	0		-	**-**	-
Heavy %	0.3%	1.2%	2.2%	0%		-	1%	1.3%	1.4%	0%		-	2.7%	0.9%	0%	0%		-	2.4%	0.7%	0.6%	0%		-	**-**	-
Bicycles	2	2	1	0		-	1	1	0	0		-	2	1	1	0		-	1	4	0	0		-	**-**	-
Bicycle %	0.2%	0.5%	0.3%	0%		-	0.3%	0.6%	0%	0%		-	2.7%	0.2%	5.3%	0%		-	2.4%	2.7%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:30 AM - 09:30 AM Weather: Mist (3.59 °C)

Start Time	N Approach FARLEY DR						E Approach BEER STORE DRIVEWAY						S Approach FARLEY DR						W Approach INTERNAL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:30:00	15	7	1	0	0	23	0	3	0	0	0	3	0	3	1	0	0	4	0	1	8	0	3	9	39
08:45:00	15	7	1	1	0	24	1	6	0	0	1	7	0	6	0	0	0	6	1	2	5	0	6	8	45
09:00:00	19	6	2	1	0	28	1	1	0	0	1	2	1	5	0	0	0	6	0	0	6	0	3	6	42
09:15:00	19	7	0	0	0	26	0	2	1	0	4	3	0	2	1	0	0	3	0	2	7	0	3	9	41
Grand Total	68	27	4	2	0	101	2	12	1	0	6	15	1	16	2	0	0	19	1	5	26	0	15	32	**167**
Approach%	67.3%	26.7%	4%	2%		-	13.3%	80%	6.7%	0%		-	5.3%	84.2%	10.5%	0%		-	3.1%	15.6%	81.3%	0%		-	**-**
Totals %	40.7%	16.2%	2.4%	1.2%		60.5%	1.2%	7.2%	0.6%	0%		9%	0.6%	9.6%	1.2%	0%		11.4%	0.6%	3%	15.6%	0%		19.2%	**-**
PHF	0.89	0.96	0.5	0.5		0.9	0.5	0.5	0.25	0		0.54	0.25	0.67	0.5	0		0.79	0.25	0.63	0.81	0		0.89	**-**
Heavy	0	2	0	0		2	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	**-**
Heavy %	0%	7.4%	0%	0%		2%	0%	0%	0%	0%		0%	0%	6.3%	0%	0%		5.3%	0%	0%	0%	0%		0%	**-**
Lights	68	25	4	2		99	2	12	1	0		15	1	15	2	0		18	1	5	26	0		32	**-**
Lights %	100%	92.6%	100%	100%		98%	100%	100%	100%	0%		100%	100%	93.8%	100%	0%		94.7%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	6.3%	0%	0%		5.3%	0%	0%	0%	0%		0%	**-**
Buses	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	3.7%	0%	0%		1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	3.7%	0%	0%		1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	0	-	-	-	-	-	6	-	-	-	-	-	0	-	-	-	-	-	14	-	**-**
Pedestrians%	-	-	-	-	0%		-	-	-	-	28.6%		-	-	-	-	0%		-	-	-	-	66.7%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	4.8%		**-**

Spectrum

Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather:

Start Time	N Approach FARLEY DR						E Approach BEER STORE DRIVEWAY						S Approach FARLEY DR						W Approach INTERNAL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
12:00:00	35	17	10	0	2	62	4	5	4	0	3	13	3	13	0	0	4	16	2	6	32	0	10	40	131
12:15:00	37	12	9	1	1	59	5	1	2	0	3	8	2	14	0	0	1	16	1	6	20	0	2	27	110
12:30:00	28	12	11	0	0	51	10	3	1	0	1	14	1	18	0	0	1	19	1	5	25	0	3	31	115
12:45:00	22	16	10	0	0	48	14	4	2	0	2	20	0	20	0	0	2	20	3	6	23	0	6	32	120
Grand Total	122	57	40	1	3	220	33	13	9	0	9	55	6	65	0	0	8	71	7	23	100	0	21	130	**476**
Approach%	55.5%	25.9%	18.2%	0.5%		-	60%	23.6%	16.4%	0%		-	8.5%	91.5%	0%	0%		-	5.4%	17.7%	76.9%	0%		-	**-**
Totals %	25.6%	12%	8.4%	0.2%		46.2%	6.9%	2.7%	1.9%	0%		11.6%	1.3%	13.7%	0%	0%		14.9%	1.5%	4.8%	21%	0%		27.3%	**-**
PHF	0.82	0.84	0.91	0.25		0.89	0.59	0.65	0.56	0		0.69	0.5	0.81	0	0		0.89	0.58	0.96	0.78	0		0.81	**-**
Heavy	0	0	0	0		0	0	1	0	0		1	1	0	0	0		1	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	7.7%	0%	0%		1.8%	16.7%	0%	0%	0%		1.4%	0%	0%	0%	0%		0%	**-**
Lights	122	57	40	1		220	33	12	9	0		54	5	65	0	0		70	7	23	100	0		130	**-**
Lights %	100%	100%	100%	100%		100%	100%	92.3%	100%	0%		98.2%	83.3%	100%	0%	0%		98.6%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	1	0	0	0		1	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	7.7%	0%	0%		1.8%	16.7%	0%	0%	0%		1.4%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	3	-	-	-	-	-	8	-	-	-	-	-	7	-	-	-	-	-	19	-	**-**
Pedestrians%	-	-	-	-	7.3%		-	-	-	-	19.5%		-	-	-	-	17.1%		-	-	-	-	46.3%		**-**
Bicycles on Road	0	0	1	0	0	-	0	0	0	0	0	-	1	0	0	0	0	-	1	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	2.4%		-	-	-	-	2.4%		-	-	-	-	4.9%		**-**

Spectrum

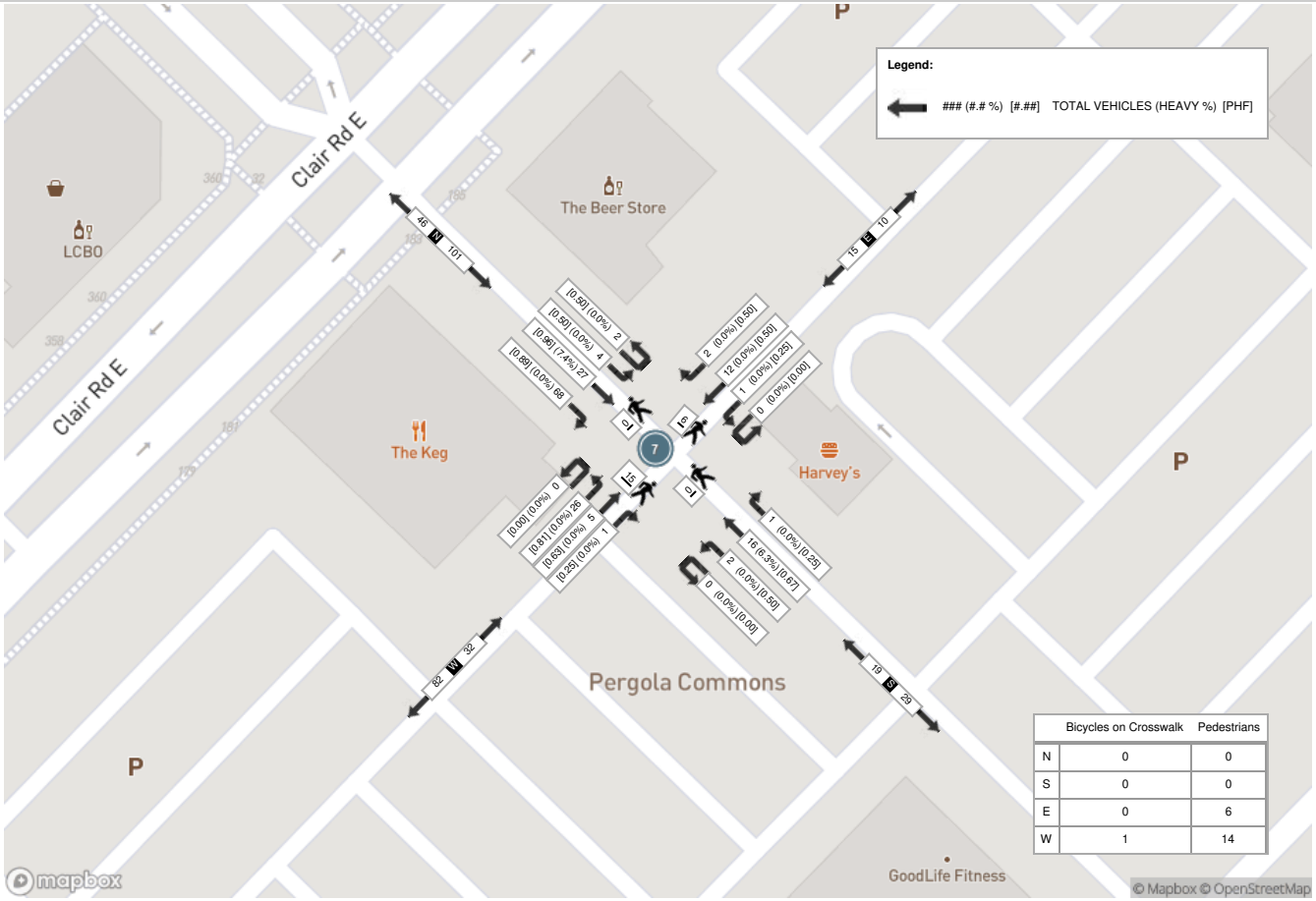
Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:15 PM - 06:15 PM Weather: Clear Sky (20.05 °C)

Start Time	N Approach FARLEY DR						E Approach BEER STORE DRIVEWAY						S Approach FARLEY DR						W Approach INTERNAL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:15:00	44	10	12	0	3	66	10	3	2	0	4	15	3	14	2	0	1	19	1	10	26	0	7	37	137
17:30:00	44	8	15	1	2	68	10	5	4	0	4	19	3	13	1	0	0	17	1	6	14	0	3	21	125
17:45:00	41	17	11	0	1	69	8	3	2	0	6	13	3	9	0	0	4	12	6	1	23	0	11	30	124
18:00:00	38	9	20	0	2	67	10	3	3	0	3	16	2	11	0	0	4	13	1	6	23	0	6	30	126
Grand Total	167	44	58	1	8	270	38	14	11	0	17	63	11	47	3	0	9	61	9	23	86	0	27	118	**512**
Approach%	61.9%	16.3%	21.5%	0.4%		-	60.3%	22.2%	17.5%	0%		-	18%	77%	4.9%	0%		-	7.6%	19.5%	72.9%	0%		-	**-**
Totals %	32.6%	8.6%	11.3%	0.2%		52.7%	7.4%	2.7%	2.1%	0%		12.3%	2.1%	9.2%	0.6%	0%		11.9%	1.8%	4.5%	16.8%	0%		23%	**-**
PHF	0.95	0.65	0.73	0.25		0.98	0.95	0.7	0.69	0		0.83	0.92	0.84	0.38	0		0.8	0.38	0.58	0.83	0		0.8	**-**
Heavy	0	1	1	0		2	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	2.3%	1.7%	0%		0.7%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	167	43	57	1		268	38	14	11	0		63	11	47	3	0		61	9	23	86	0		118	**-**
Lights %	100%	97.7%	98.3%	100%		99.3%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	1	1	0		2	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	2.3%	1.7%	0%		0.7%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	7	-	-	-	-	-	14	-	-	-	-	-	7	-	-	-	-	-	24	-	**-**
Pedestrians%	-	-	-	-	11.5%		-	-	-	-	23%		-	-	-	-	11.5%		-	-	-	-	39.3%		**-**
Bicycles on Road	1	0	0	0	0	-	0	0	0	0	0	-	1	0	0	0	0	-	0	2	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	3	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.6%		-	-	-	-	4.9%		-	-	-	-	3.3%		-	-	-	-	4.9%		**-**

Peak Hour: 08:30 AM - 09:30 AM **Weather: Mist (3.59 °C)**



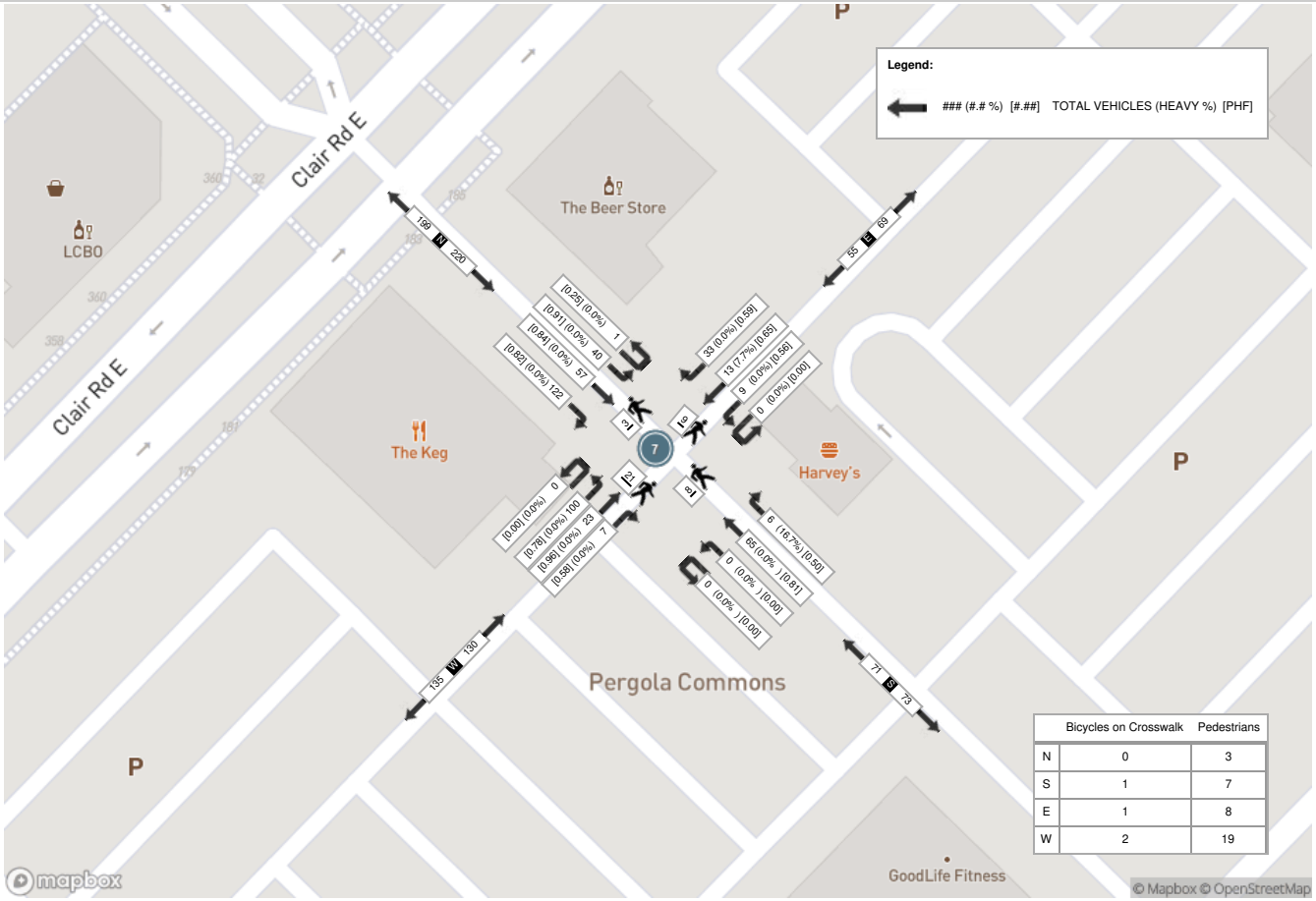
	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
E	0	6
W	1	14

Spectrum

Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM **Weather:**



	Bicycles on Crosswalk	Pedestrians
N	0	3
S	1	7
E	1	8
W	2	19

Peak Hour: 05:15 PM - 06:15 PM **Weather: Clear Sky (20.05 °C)**

Spectrum

Turning Movement Count
Location Name: FARLEY DR & SOUTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (8 . FARLEY DR & SOUTH INTERNAL INTERSECTION)

Start Time	N Approach FARLEY DR						E Approach SOUTH INTERNAL INTERSECTION						S Approach FARLEY DR						W Approach SOUTH INTERNAL INTERSECTION						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	0	0	0	1	0	0	0	0	0	1	0	0	2	0	0	5	2	2	0	0	0	10	2	4	
07:15:00	1	0	0	0	0	1	0	0	1	0	0	1	1	3	0	0	5	4	1	0	0	0	8	1	7	
07:30:00	1	1	0	0	0	2	0	0	1	0	0	1	1	0	1	0	0	2	0	0	0	0	11	0	5	
07:45:00	1	0	1	0	1	2	2	0	1	0	0	3	0	2	0	0	4	2	0	0	1	0	15	1	8	24
08:00:00	0	1	1	0	2	2	2	0	1	0	4	3	0	2	0	0	3	2	2	1	1	0	9	4	11	31
08:15:00	0	5	1	0	0	6	0	0	0	0	1	0	2	1	1	0	4	4	0	0	0	0	6	0	10	34
08:30:00	1	4	2	0	1	7	0	1	1	0	1	2	1	2	0	0	2	3	1	1	1	0	9	3	15	44
08:45:00	1	5	2	0	0	8	1	0	0	0	0	1	2	3	2	0	9	7	0	0	2	0	12	2	18	54
09:00:00	4	2	1	0	0	7	1	0	0	0	1	1	2	2	4	0	7	8	1	0	4	0	12	5	21	64
09:15:00	2	2	4	0	1	8	0	0	0	0	3	0	2	1	2	0	6	5	2	2	2	0	10	6	19	73
09:30:00	1	3	1	0	2	5	1	0	0	0	0	1	1	3	1	0	10	5	1	0	3	0	10	4	15	73
09:45:00	2	0	0	0	1	2	0	0	2	0	0	2	0	3	2	0	4	5	2	0	2	0	6	4	13	68
BREAK																										
10:00:00	0	1	3	0	1	4	0	1	0	0	0	1	2	1	1	0	7	4	1	1	7	0	7	9	18	
10:15:00	3	6	4	0	2	13	1	0	1	0	0	2	1	1	0	0	7	2	2	0	4	0	10	6	23	
10:30:00	0	2	0	0	2	2	5	2	4	0	1	11	2	2	1	0	16	5	0	0	2	0	9	2	20	
10:45:00	3	2	3	0	3	8	2	0	2	0	2	4	0	4	0	0	4	4	1	2	4	0	7	7	23	84
11:00:00	5	2	3	0	2	10	4	0	1	0	0	5	0	3	0	0	7	3	0	1	1	0	10	2	20	86
11:15:00	2	2	4	0	1	8	1	1	2	0	0	4	4	0	0	1	8	5	2	1	6	0	15	9	26	89
11:30:00	4	2	7	0	0	13	2	0	5	0	0	7	2	6	2	0	11	10	0	2	7	0	12	9	39	108
11:45:00	1	7	9	0	1	17	7	1	2	0	1	10	2	4	4	0	15	10	1	6	5	0	11	12	49	134
12:00:00	2	8	12	1	5	23	7	0	1	0	0	8	1	2	5	0	2	8	5	4	8	0	13	17	56	170
12:15:00	0	7	8	0	3	15	8	0	6	0	0	14	1	2	0	0	8	3	1	4	5	0	7	10	42	186
12:30:00	4	1	8	0	3	13	8	3	1	0	1	12	5	4	0	1	8	10	1	3	6	0	13	10	45	192
12:45:00	3	9	9	0	2	21	5	2	1	0	1	8	3	3	4	0	12	10	0	3	12	0	13	15	54	197
13:00:00	1	0	12	0	2	13	5	0	2	0	1	7	1	3	2	0	8	6	1	1	9	0	17	11	37	178
13:15:00	3	6	4	0	0	13	8	1	3	0	0	12	1	1	2	0	5	4	1	0	8	0	13	9	38	174
13:30:00	3	4	8	0	0	15	8	0	2	0	0	10	1	0	2	0	5	3	1	3	12	0	14	16	44	173
13:45:00	1	2	5	0	3	8	8	2	2	0	0	12	1	2	3	0	7	6	0	2	7	0	11	9	35	154
14:00:00	5	2	5	0	1	12	2	1	2	0	0	5	0	1	2	1	6	4	1	4	5	0	9	10	31	148
14:15:00	0	5	4	0	3	9	7	1	0	0	3	8	2	2	0	0	6	4	2	2	8	0	4	12	33	143
14:30:00	2	3	2	0	0	7	1	0	0	0	2	1	1	5	1	0	9	7	1	1	6	0	8	8	23	122
14:45:00	2	6	3	0	2	11	3	0	4	0	2	7	0	4	2	0	3	6	1	4	3	0	13	8	32	119
BREAK																										
15:00:00	3	7	8	0	0	18	3	0	4	0	3	7	1	4	2	0	4	7	2	1	4	0	9	7	39	
15:15:00	3	6	5	0	2	14	3	1	0	0	1	4	2	6	3	0	9	11	1	3	5	0	9	9	38	
15:30:00	1	7	1	1	1	10	3	2	2	0	0	7	2	7	1	0	9	10	2	2	6	0	15	10	37	
15:45:00	5	3	4	0	3	12	3	0	2	0	1	5	3	4	4	0	9	11	1	1	12	0	8	14	42	156
16:00:00	2	6	6	0	4	14	5	1	1	0	3	7	3	0	1	0	7	4	1	2	5	0	17	8	33	150
16:15:00	3	8	7	0	3	18	4	0	1	0	3	5	4	2	2	0	18	8	1	2	2	0	20	5	36	148
16:30:00	3	4	5	0	6	12	1	0	2	0	2	3	3	3	0	0	14	6	3	5	5	0	17	13	34	145
16:45:00	3	8	7	0	1	18	2	1	5	0	6	8	2	4	1	0	11	7	2	3	6	0	16	11	44	147
17:00:00	4	10	12	0	8	26	2	0	2	0	8	4	3	5	4	0	18	12	1	0	9	0	9	10	52	166
17:15:00	2	5	5	0	2	12	6	1	3	0	0	10	0	4	2	0	3	6	3	1	9	0	10	13	41	171
17:30:00	3	5	5	0	2	13	5	1	1	0	1	7	5	5	4	0	13	14	2	2	7	0	10	11	45	182

17:45:00	3	9	13	0	5	25	3	0	2	0	0	5	3	2	4	0	27	9	4	0	8	0	23	12	51	189
18:00:00	2	5	5	0	4	12	5	2	6	0	3	13	6	1	4	0	21	11	2	2	7	0	22	11	47	184
18:15:00	3	5	11	0	6	19	4	2	3	0	2	9	5	1	2	0	15	8	2	2	4	0	15	8	44	187
18:30:00	2	5	12	0	0	19	8	1	6	0	0	15	2	2	3	0	25	7	1	6	8	0	17	15	56	198
18:45:00	4	7	7	0	6	18	6	2	2	0	3	10	5	3	2	0	18	10	2	3	13	0	17	18	56	203
Grand Total	104	200	239	2	98	545	162	30	90	0	61	282	91	127	83	3	434	304	64	83	251	0	568	398	**1529**	-
Approach%	19.1%	36.7%	43.9%	0.4%		-	57.4%	10.6%	31.9%	0%		-	29.9%	41.8%	27.3%	1%		-	16.1%	20.9%	63.1%	0%		-	**-**	-
Totals %	6.8%	13.1%	15.6%	0.1%		35.6%	10.6%	2%	5.9%	0%		18.4%	6%	8.3%	5.4%	0.2%		19.9%	4.2%	5.4%	16.4%	0%		26%	**-**	-
Heavy	1	4	2	0		-	1	0	5	0		-	2	4	1	0		-	0	0	1	0		-	**-**	-
Heavy %	1%	2%	0.8%	0%		-	0.6%	0%	5.6%	0%		-	2.2%	3.1%	1.2%	0%		-	0%	0%	0.4%	0%		-	**-**	-
Bicycles	0	3	0	0		-	1	5	2	0		-	0	2	4	0		-	1	3	0	2		-	**-**	-
Bicycle %	0%	1.5%	0%	0%		-	0.6%	16.7%	2.2%	0%		-	0%	1.6%	4.8%	0%		-	1.6%	3.6%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: FARLEY DR & SOUTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:45 AM - 09:45 AM Weather: Mist (3.59 °C)

Start Time	N Approach FARLEY DR						E Approach SOUTH INTERNAL INTERSECTION						S Approach FARLEY DR						W Approach SOUTH INTERNAL INTERSECTION						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:45:00	1	5	2	0	0	8	1	0	0	0	0	1	2	3	2	0	9	7	0	0	2	0	12	2	18
09:00:00	4	2	1	0	0	7	1	0	0	0	1	1	2	2	4	0	7	8	1	0	4	0	12	5	21
09:15:00	2	2	4	0	1	8	0	0	0	0	3	0	2	1	2	0	6	5	2	2	2	0	10	6	19
09:30:00	1	3	1	0	2	5	1	0	0	0	0	1	1	3	1	0	10	5	1	0	3	0	10	4	15
Grand Total	8	12	8	0	3	28	3	0	0	0	4	3	7	9	9	0	32	25	4	2	11	0	44	17	**73**
Approach%	28.6%	42.9%	28.6%	0%		-	100%	0%	0%	0%		-	28%	36%	36%	0%		-	23.5%	11.8%	64.7%	0%		-	**-**
Totals %	11%	16.4%	11%	0%		38.4%	4.1%	0%	0%	0%		4.1%	9.6%	12.3%	12.3%	0%		34.2%	5.5%	2.7%	15.1%	0%		23.3%	**-**
PHF	0.5	0.6	0.5	0		0.88	0.75	0	0	0		0.75	0.88	0.75	0.56	0		0.78	0.5	0.25	0.69	0		0.71	**-**
Heavy	1	1	0	0		2	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	**-**
Heavy %	12.5%	8.3%	0%	0%		7.1%	0%	0%	0%	0%		0%	0%	11.1%	0%	0%		4%	0%	0%	0%	0%		0%	**-**
Lights	7	11	8	0		26	3	0	0	0		3	7	8	9	0		24	4	2	11	0		17	**-**
Lights %	87.5%	91.7%	100%	0%		92.9%	100%	0%	0%	0%		100%	100%	88.9%	100%	0%		96%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	11.1%	0%	0%		4%	0%	0%	0%	0%		0%	**-**
Buses	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	8.3%	0%	0%		3.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	12.5%	0%	0%	0%		3.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	3	-	-	-	-	-	4	-	-	-	-	-	32	-	-	-	-	-	44	-	**-**
Pedestrians%	-	-	-	-	3.6%		-	-	-	-	4.8%		-	-	-	-	38.6%		-	-	-	-	53%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: FARLEY DR & SOUTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather:

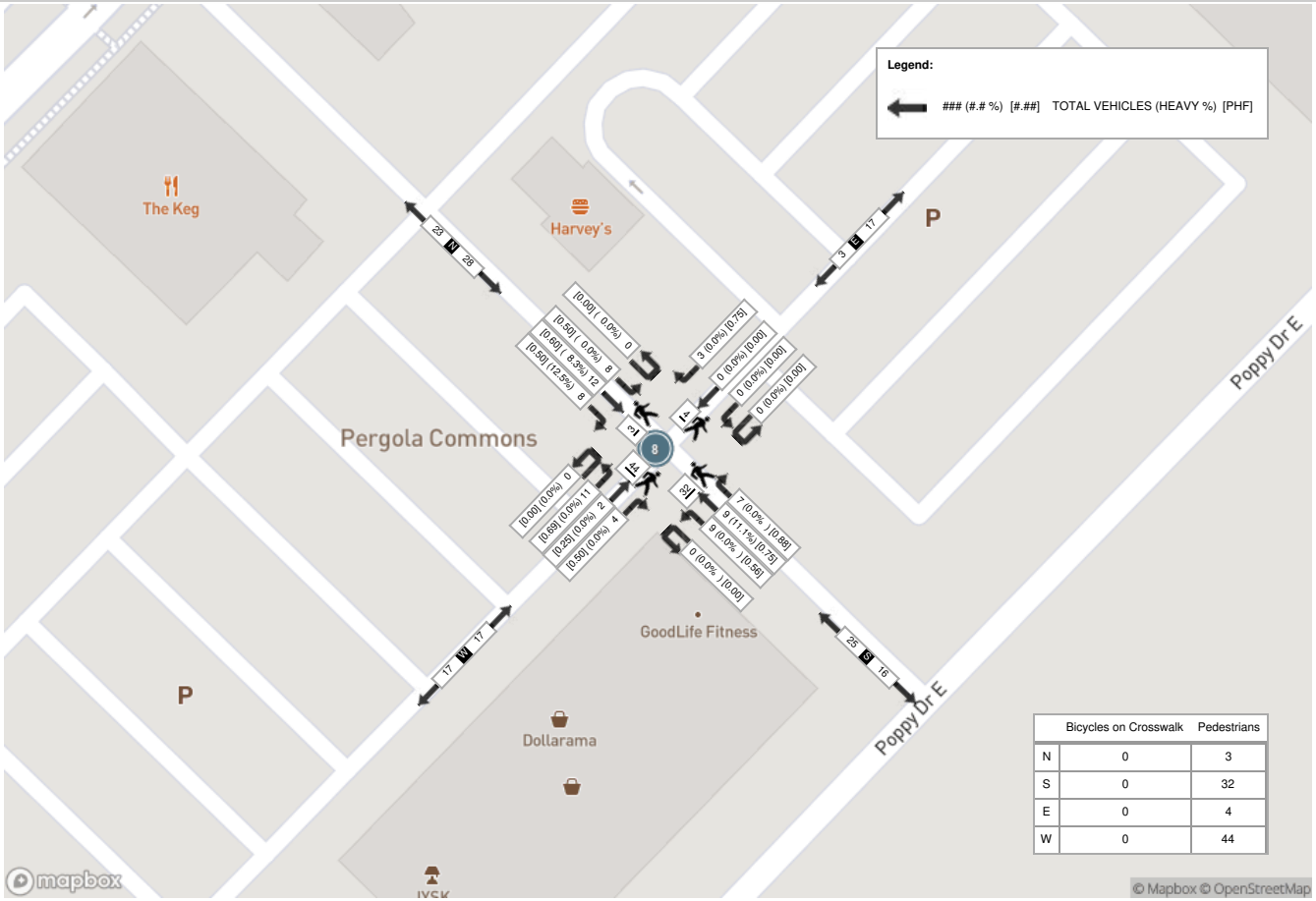
Start Time	N Approach FARLEY DR						E Approach SOUTH INTERNAL INTERSECTION						S Approach FARLEY DR						W Approach SOUTH INTERNAL INTERSECTION						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
12:00:00	2	8	12	1	5	23	7	0	1	0	0	8	1	2	5	0	2	8	5	4	8	0	13	17	56
12:15:00	0	7	8	0	3	15	8	0	6	0	0	14	1	2	0	0	8	3	1	4	5	0	7	10	42
12:30:00	4	1	8	0	3	13	8	3	1	0	1	12	5	4	0	1	8	10	1	3	6	0	13	10	45
12:45:00	3	9	9	0	2	21	5	2	1	0	1	8	3	3	4	0	12	10	0	3	12	0	13	15	54
Grand Total	9	25	37	1	13	72	28	5	9	0	2	42	10	11	9	1	30	31	7	14	31	0	46	52	**197**
Approach%	12.5%	34.7%	51.4%	1.4%		-	66.7%	11.9%	21.4%	0%		-	32.3%	35.5%	29%	3.2%		-	13.5%	26.9%	59.6%	0%		-	**-**
Totals %	4.6%	12.7%	18.8%	0.5%		36.5%	14.2%	2.5%	4.6%	0%		21.3%	5.1%	5.6%	4.6%	0.5%		15.7%	3.6%	7.1%	15.7%	0%		26.4%	**-**
PHF	0.56	0.69	0.77	0.25		0.78	0.88	0.42	0.38	0		0.75	0.5	0.69	0.45	0.25		0.78	0.35	0.88	0.65	0		0.76	**-**
Heavy	0	0	0	0		0	0	0	1	0		1	0	1	0	0		1	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	11.1%	0%		2.4%	0%	9.1%	0%	0%		3.2%	0%	0%	0%	0%		0%	**-**
Lights	9	25	37	1		72	28	5	8	0		41	10	10	9	1		30	7	14	31	0		52	**-**
Lights %	100%	100%	100%	100%		100%	100%	100%	88.9%	0%		97.6%	100%	90.9%	100%	100%		96.8%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	1	0		1	0	1	0	0		1	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	11.1%	0%		2.4%	0%	9.1%	0%	0%		3.2%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	13	-	-	-	-	-	2	-	-	-	-	-	30	-	-	-	-	-	44	-	**-**
Pedestrians%	-	-	-	-	14.3%		-	-	-	-	2.2%		-	-	-	-	33%		-	-	-	-	48.4%		**-**
Bicycles on Road	0	1	0	0	0	-	0	0	1	0	0	-	0	1	1	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	2.2%		**-**

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 06:00 PM - 07:00 PM Weather: Clear Sky (20.05 °C)

Start Time	N Approach FARLEY DR						E Approach SOUTH INTERNAL INTERSECTION						S Approach FARLEY DR						W Approach SOUTH INTERNAL INTERSECTION						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
18:00:00	2	5	5	0	4	12	5	2	6	0	3	13	6	1	4	0	21	11	2	2	7	0	22	11	47
18:15:00	3	5	11	0	6	19	4	2	3	0	2	9	5	1	2	0	15	8	2	2	4	0	15	8	44
18:30:00	2	5	12	0	0	19	8	1	6	0	0	15	2	2	3	0	25	7	1	6	8	0	17	15	56
18:45:00	4	7	7	0	6	18	6	2	2	0	3	10	5	3	2	0	18	10	2	3	13	0	17	18	56
Grand Total	11	22	35	0	16	68	23	7	17	0	8	47	18	7	11	0	79	36	7	13	32	0	71	52	**203**
Approach%	16.2%	32.4%	51.5%	0%		-	48.9%	14.9%	36.2%	0%		-	50%	19.4%	30.6%	0%		-	13.5%	25%	61.5%	0%		-	**-**
Totals %	5.4%	10.8%	17.2%	0%		33.5%	11.3%	3.4%	8.4%	0%		23.2%	8.9%	3.4%	5.4%	0%		17.7%	3.4%	6.4%	15.8%	0%		25.6%	**-**
PHF	0.69	0.79	0.73	0		0.89	0.72	0.88	0.71	0		0.78	0.75	0.58	0.69	0		0.82	0.88	0.54	0.62	0		0.72	**-**
Heavy	0	0	1	0		1	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	2.9%	0%		1.5%	0%	0%	5.9%	0%		2.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	11	22	34	0		67	23	7	16	0		46	18	7	11	0		36	7	13	32	0		52	**-**
Lights %	100%	100%	97.1%	0%		98.5%	100%	100%	94.1%	0%		97.9%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	1	0		1	0	0	1	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	2.9%	0%		1.5%	0%	0%	5.9%	0%		2.1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	16	-	-	-	-	-	8	-	-	-	-	-	77	-	-	-	-	-	68	-	**-**
Pedestrians%	-	-	-	-	9.2%		-	-	-	-	4.6%		-	-	-	-	44.3%		-	-	-	-	39.1%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	2	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	3	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	1.1%		-	-	-	-	1.7%		**-**

Peak Hour: 08:45 AM - 09:45 AM **Weather: Mist (3.59 °C)**



	Bicycles on Crosswalk	Pedestrians
N	0	3
S	0	32
E	0	4
W	0	44

Spectrum

Turning Movement Count
Location Name: FARLEY DR & SOUTH INTERNAL INTERSECTION
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM **Weather:**

	Bicycles on Crosswalk	Pedestrians
N	0	13
S	0	30
E	0	2
W	2	44

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 06:00 PM - 07:00 PM **Weather: Clear Sky (20.05 °C)**

	Bicycles on Crosswalk	Pedestrians
N	0	16
S	2	77
E	0	8
W	3	68

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (9 . HAWKINS DR & NORTH INTERNAL RD)

Start Time	N Approach HAWKINS DR					S Approach HAWKINS DR					W Approach NORTH INTERNAL RD					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	0	2	0	0	2	5	0	0	0	5	0	6	0	2	6	13	
07:15:00	2	3	0	0	5	3	0	0	0	3	0	4	0	0	4	12	
07:30:00	1	2	0	0	3	5	0	0	0	5	0	0	0	1	0	8	
07:45:00	2	9	0	0	11	8	0	0	0	8	0	0	0	2	0	19	52
08:00:00	3	3	0	0	6	8	0	0	0	8	0	2	0	1	2	16	55
08:15:00	0	2	0	0	2	13	1	0	0	14	1	0	0	2	1	17	60
08:30:00	5	6	0	0	11	12	0	0	0	12	0	2	0	5	2	25	77
08:45:00	6	6	0	0	12	6	0	0	0	6	0	2	0	4	2	20	78
09:00:00	2	6	0	0	8	4	0	0	0	4	0	0	0	1	0	12	74
09:15:00	2	4	0	0	6	4	0	0	0	4	0	3	0	4	3	13	70
09:30:00	2	4	0	0	6	3	1	0	0	4	0	2	0	5	2	12	57
09:45:00	4	0	0	0	4	6	0	0	0	6	0	2	0	1	2	12	49
BREAK																	
10:00:00	6	5	0	0	11	6	1	0	0	7	2	6	0	2	8	26	
10:15:00	5	2	0	0	7	6	0	0	0	6	0	2	0	1	2	15	
10:30:00	4	2	0	0	6	10	0	0	0	10	0	3	0	1	3	19	
10:45:00	3	3	0	0	6	5	1	0	0	6	0	4	0	1	4	16	76
11:00:00	1	5	0	0	6	4	1	0	0	5	0	4	0	1	4	15	65
11:15:00	10	2	0	0	12	7	1	0	0	8	0	3	0	2	3	23	73
11:30:00	9	7	0	0	16	9	0	0	0	9	2	10	0	0	12	37	91
11:45:00	9	4	0	0	13	7	0	0	0	7	0	8	0	1	8	28	103
12:00:00	12	3	0	0	15	3	1	0	0	4	1	14	0	3	15	34	122
12:15:00	3	6	1	0	10	7	3	0	0	10	1	13	0	3	14	34	133
12:30:00	2	4	0	0	6	7	0	0	0	7	2	9	0	2	11	24	120
12:45:00	10	4	0	0	14	8	0	0	0	8	1	9	0	4	10	32	124
13:00:00	3	3	0	0	6	8	0	0	0	8	0	3	0	1	3	17	107
13:15:00	12	3	0	0	15	9	0	0	0	9	0	8	0	0	8	32	105
13:30:00	10	7	0	0	17	5	0	0	0	5	2	10	0	3	12	34	115
13:45:00	3	6	1	0	10	6	0	0	0	6	0	8	0	0	8	24	107
14:00:00	8	8	0	0	16	7	0	0	0	7	0	9	0	1	9	32	122
14:15:00	3	5	0	0	8	3	1	0	0	4	0	9	0	0	9	21	111
14:30:00	6	6	0	0	12	3	0	0	0	3	2	6	0	1	8	23	100
14:45:00	9	4	0	0	13	4	0	0	0	4	0	11	0	2	11	28	104
BREAK																	

15:00:00	2	6	0	0	8	10	0	0	0	10	1	7	0	1	8	26	
15:15:00	9	4	0	0	13	11	1	1	0	13	4	4	0	2	8	34	
15:30:00	8	11	0	0	19	10	0	0	0	10	2	10	0	1	12	41	
15:45:00	5	8	0	1	13	7	0	0	0	7	1	3	0	1	4	24	125
16:00:00	6	6	0	0	12	8	0	0	0	8	3	16	0	3	19	39	138
16:15:00	3	8	0	0	11	18	0	0	0	18	2	14	0	3	16	45	149
16:30:00	10	11	0	0	21	9	1	0	0	10	1	7	0	1	8	39	147
16:45:00	13	6	0	0	19	9	0	0	0	9	0	10	0	3	10	38	161
17:00:00	8	6	0	0	14	9	2	0	0	11	1	12	0	1	13	38	160
17:15:00	12	7	0	0	19	10	0	0	0	10	3	15	0	3	18	47	162
17:30:00	11	8	0	0	19	11	0	0	0	11	2	16	0	1	18	48	171
17:45:00	5	7	0	0	12	14	0	0	0	14	1	14	0	6	15	41	174
18:00:00	10	1	0	0	11	12	0	0	0	12	1	9	0	3	10	33	169
18:15:00	5	7	0	0	12	10	1	0	0	11	2	11	0	0	13	36	158
18:30:00	11	9	0	0	20	9	0	0	0	9	0	19	0	3	19	48	158
18:45:00	5	7	1	0	13	12	1	0	0	13	1	11	0	4	12	38	155
Grand Total	280	248	3	1	531	370	17	1	0	388	39	350	0	93	389	**1308**	-
Approach%	52.7%	46.7%	0.6%		-	95.4%	4.4%	0.3%		-	10%	90%	0%		-	**-**	-
Totals %	21.4%	19%	0.2%		40.6%	28.3%	1.3%	0.1%		29.7%	3%	26.8%	0%		29.7%	**-**	-
Heavy	3	2	0		-	10	1	0		-	2	4	0		-	**-**	-
Heavy %	1.1%	0.8%	0%		-	2.7%	5.9%	0%		-	5.1%	1.1%	0%		-	**-**	-
Bicycles	0	1	0		-	2	1	0		-	2	0	0		-	**-**	-
Bicycle %	0%	0.4%	0%		-	0.5%	5.9%	0%		-	5.1%	0%	0%		-	**-**	-

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Mist (3.59 °C)

Start Time	N Approach HAWKINS DR					S Approach HAWKINS DR					W Approach NORTH INTERNAL RD					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
08:00:00	3	3	0	0	6	8	0	0	0	8	0	2	0	1	2	16
08:15:00	0	2	0	0	2	13	1	0	0	14	1	0	0	2	1	17
08:30:00	5	6	0	0	11	12	0	0	0	12	0	2	0	5	2	25
08:45:00	6	6	0	0	12	6	0	0	0	6	0	2	0	4	2	20
Grand Total	14	17	0	0	31	39	1	0	0	40	1	6	0	12	7	**78**
Approach%	45.2%	54.8%	0%		-	97.5%	2.5%	0%		-	14.3%	85.7%	0%		-	**-**
Totals %	17.9%	21.8%	0%		39.7%	50%	1.3%	0%		51.3%	1.3%	7.7%	0%		9%	**-**
PHF	0.58	0.71	0		0.65	0.75	0.25	0		0.71	0.25	0.75	0		0.88	**-**
Heavy	0	0	0		0	2	0	0		2	1	1	0		2	**-**
Heavy %	0%	0%	0%		0%	5.1%	0%	0%		5%	100%	16.7%	0%		28.6%	**-**
Lights	14	17	0		31	37	1	0		38	0	5	0		5	**-**
Lights %	100%	100%	0%		100%	94.9%	100%	0%		95%	0%	83.3%	0%		71.4%	**-**
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	0	0	0		0	2	0	0		2	1	1	0		2	**-**
Buses %	0%	0%	0%		0%	5.1%	0%	0%		5%	100%	16.7%	0%		28.6%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	11	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	91.7%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	8.3%		**-**

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

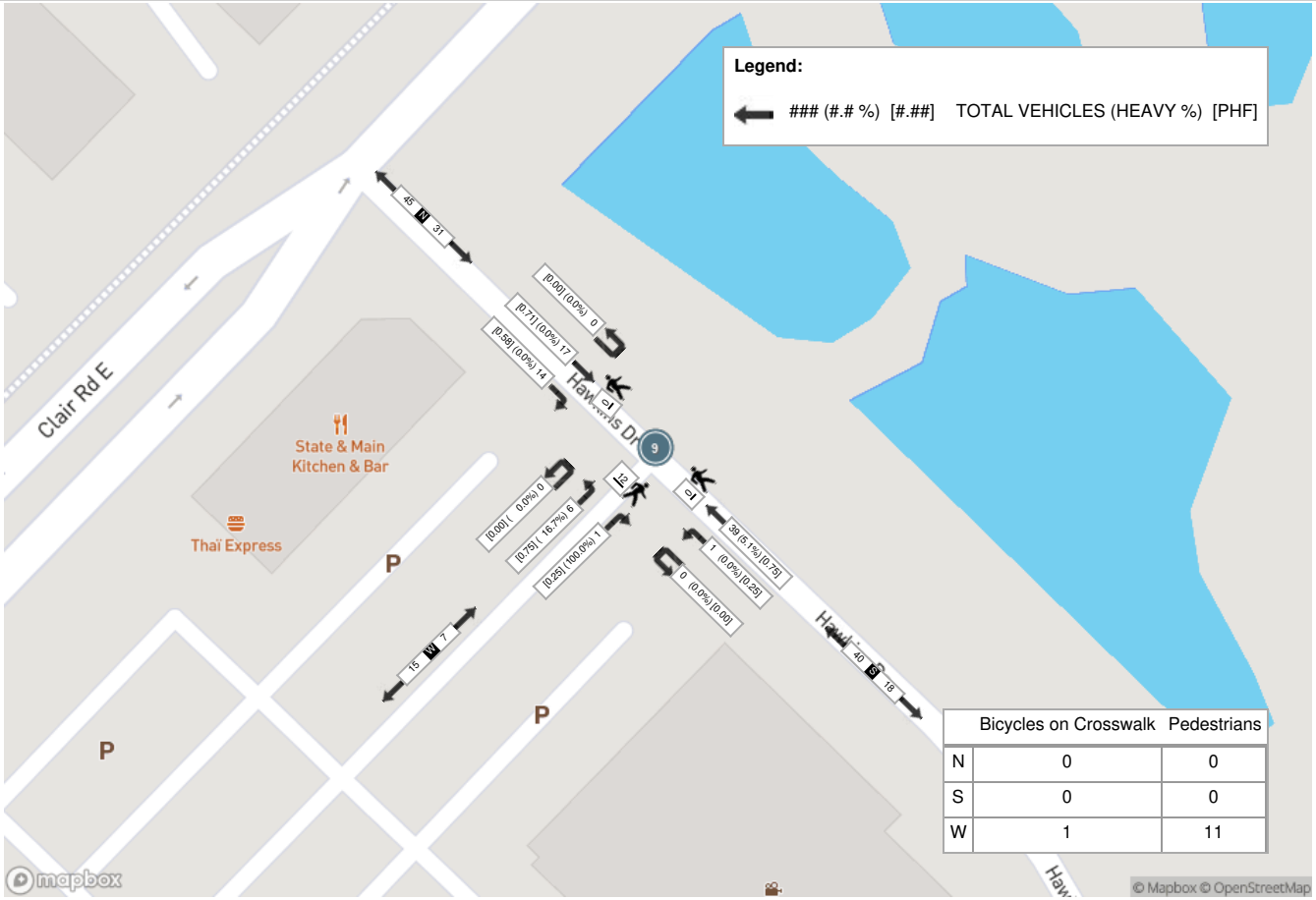
Peak Hour: 11:30 AM - 12:30 PM Weather:

Start Time	N Approach HAWKINS DR					S Approach HAWKINS DR					W Approach NORTH INTERNAL RD					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
11:30:00	9	7	0	0	16	9	0	0	0	9	2	10	0	0	12	37
11:45:00	9	4	0	0	13	7	0	0	0	7	0	8	0	1	8	28
12:00:00	12	3	0	0	15	3	1	0	0	4	1	14	0	3	15	34
12:15:00	3	6	1	0	10	7	3	0	0	10	1	13	0	3	14	34
Grand Total	33	20	1	0	54	26	4	0	0	30	4	45	0	7	49	**133**
Approach%	61.1%	37%	1.9%		-	86.7%	13.3%	0%		-	8.2%	91.8%	0%		-	**-**
Totals %	24.8%	15%	0.8%		40.6%	19.5%	3%	0%		22.6%	3%	33.8%	0%		36.8%	**-**
PHF	0.69	0.71	0.25		0.84	0.72	0.33	0		0.75	0.5	0.8	0		0.82	**-**
Heavy	0	0	0		0	0	0	0		0	0	1	0		1	**-**
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	0%	2.2%	0%		2%	**-**
Lights	33	20	1		54	26	4	0		30	4	44	0		48	**-**
Lights %	100%	100%	100%		100%	100%	100%	0%		100%	100%	97.8%	0%		98%	**-**
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	1	0		1	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	2.2%	0%		2%	**-**
Buses	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	7	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	100%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

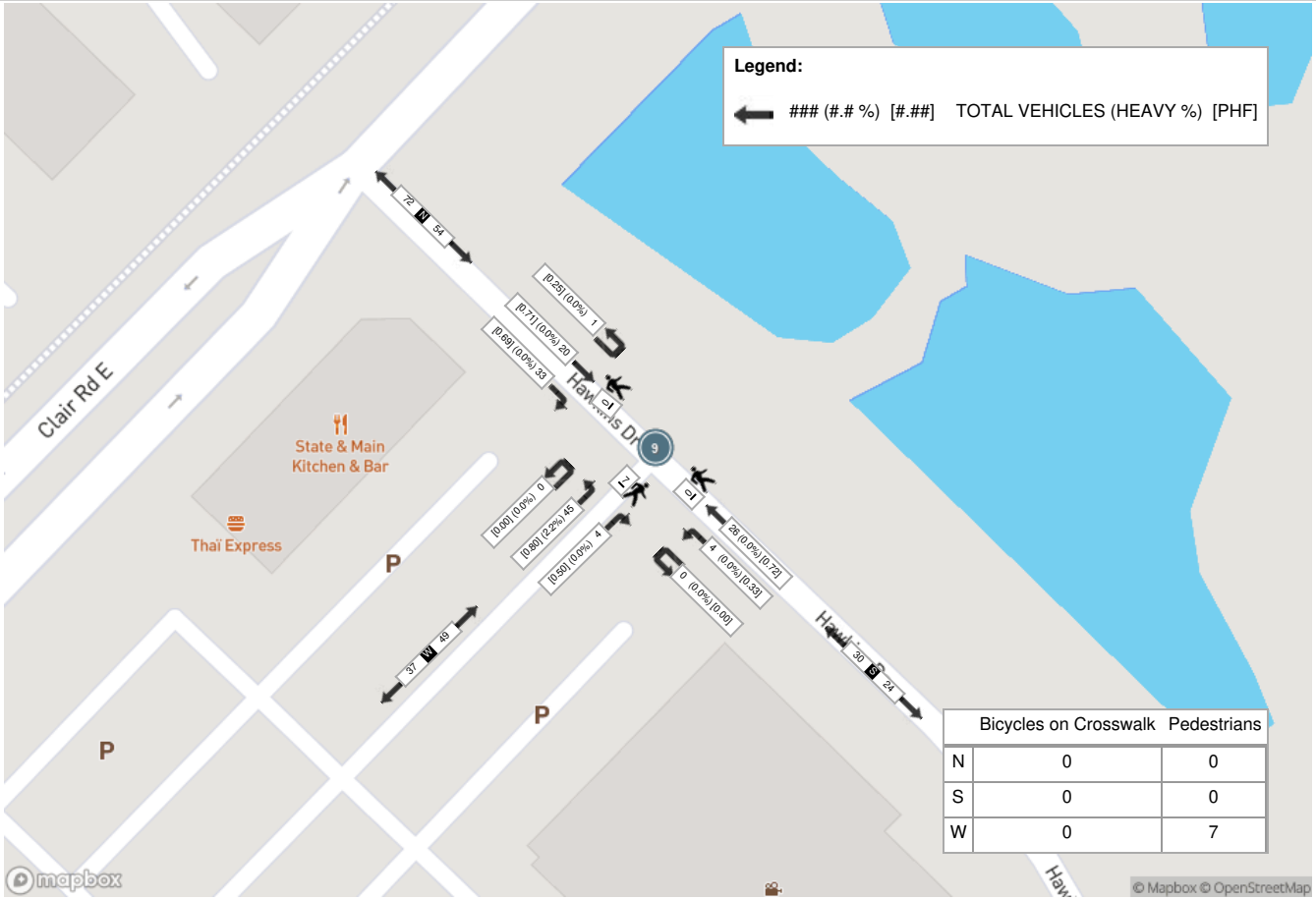
Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (20.05 °C)

Start Time	N Approach HAWKINS DR					S Approach HAWKINS DR					W Approach NORTH INTERNAL RD					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
17:00:00	8	6	0	0	14	9	2	0	0	11	1	12	0	1	13	38
17:15:00	12	7	0	0	19	10	0	0	0	10	3	15	0	3	18	47
17:30:00	11	8	0	0	19	11	0	0	0	11	2	16	0	1	18	48
17:45:00	5	7	0	0	12	14	0	0	0	14	1	14	0	6	15	41
Grand Total	36	28	0	0	64	44	2	0	0	46	7	57	0	11	64	**174**
Approach%	56.3%	43.8%	0%		-	95.7%	4.3%	0%		-	10.9%	89.1%	0%		-	**-**
Totals %	20.7%	16.1%	0%		36.8%	25.3%	1.1%	0%		26.4%	4%	32.8%	0%		36.8%	**-**
PHF	0.75	0.88	0		0.84	0.79	0.25	0		0.82	0.58	0.89	0		0.89	**-**
Heavy	0	0	0		0	0	0	0		0	1	1	0		2	**-**
Heavy %	0%	0%	0%		0%	0%	0%	0%		0%	14.3%	1.8%	0%		3.1%	**-**
Lights	36	28	0		64	44	2	0		46	6	56	0		62	**-**
Lights %	100%	100%	0%		100%	100%	100%	0%		100%	85.7%	98.2%	0%		96.9%	**-**
Single-Unit Trucks	0	0	0		0	0	0	0		0	1	1	0		2	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	14.3%	1.8%	0%		3.1%	**-**
Buses	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	11	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	100%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM Weather: Mist (3.59 °C)

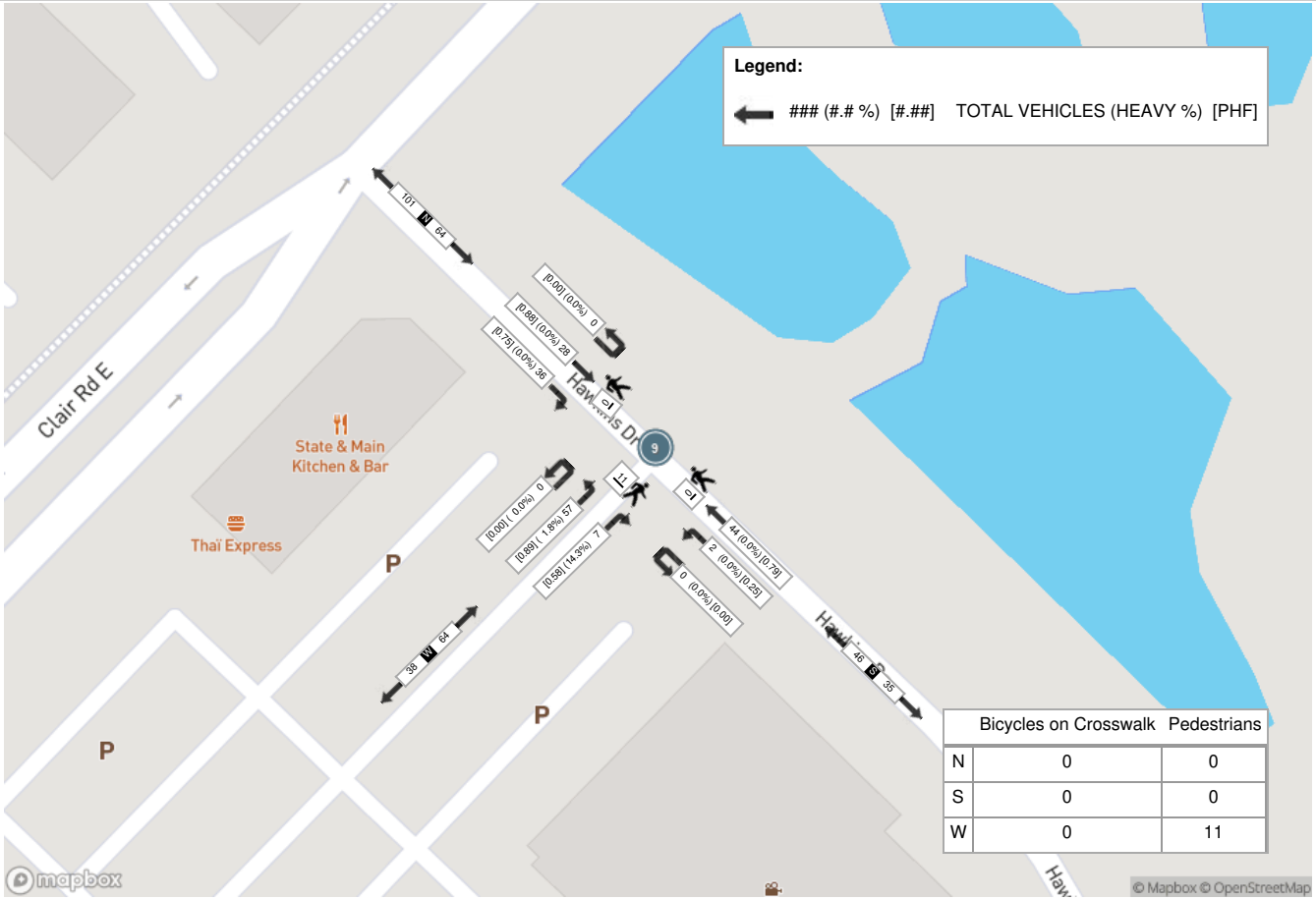


Peak Hour: 11:30 AM - 12:30 PM Weather:



	Bicycles on Crosswalk	Pedestrians
N	0	0
S	0	0
W	0	7

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (20.05 °C)



BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (1 . POPPY DR E & 1888 GORDON ST (ACCESS))

Start Time	E Approach POPPY DR E					S Approach 1888 GORDON ST (ACCESS)					W Approach POPPY DR E					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
07:00:00	15	2	0	1	17	1	1	0	0	2	1	9	0	0	10	29	
07:15:00	18	0	0	0	18	1	7	0	0	8	3	1	0	0	4	30	
07:30:00	16	1	0	1	17	0	3	0	0	3	1	5	0	0	6	26	
07:45:00	18	2	0	2	20	5	11	0	0	16	1	5	0	0	6	42	127
08:00:00	24	0	0	0	24	4	9	0	0	13	1	4	0	0	5	42	140
08:15:00	26	1	0	3	27	3	7	0	0	10	1	8	0	0	9	46	156
08:30:00	27	0	0	1	27	1	12	0	0	13	1	10	0	0	11	51	181
08:45:00	17	1	0	0	18	1	6	0	0	7	2	4	0	0	6	31	170
09:00:00	14	0	0	0	14	5	3	0	0	8	0	8	0	0	8	30	158
09:15:00	13	4	0	0	17	1	6	0	0	7	4	4	0	0	8	32	144
09:30:00	8	1	0	2	9	2	6	0	0	8	5	7	0	0	12	29	122
09:45:00	8	1	0	3	9	3	5	0	0	8	3	6	0	0	9	26	117
10:00:00	6	0	0	2	6	0	7	0	0	7	4	9	0	0	13	26	113
10:15:00	10	2	0	0	12	3	4	0	0	7	3	3	0	0	6	25	106
10:30:00	12	2	0	2	14	3	7	0	0	10	5	8	0	0	13	37	114
10:45:00	12	3	0	1	15	2	3	0	0	5	2	11	0	1	13	33	121
11:00:00	13	0	0	0	13	4	4	0	0	8	3	5	0	0	8	29	124
11:15:00	21	3	0	2	24	4	6	0	0	10	5	14	0	0	19	53	152
11:30:00	12	2	0	3	14	4	5	0	2	9	7	10	0	2	17	40	155
11:45:00	12	0	0	0	12	1	6	0	0	7	5	12	0	0	17	36	158
12:00:00	11	2	0	4	13	2	7	0	2	9	6	9	0	2	15	37	166
12:15:00	10	0	0	1	10	1	4	0	0	5	5	9	0	0	14	29	142
12:30:00	14	1	0	0	15	0	9	0	0	9	6	13	0	0	19	43	145
12:45:00	7	0	0	1	7	0	5	0	0	5	5	9	0	0	14	26	135
13:00:00	12	2	0	2	14	3	9	0	0	12	7	14	0	0	21	47	145
13:15:00	12	0	0	1	12	1	5	0	0	6	6	12	0	0	18	36	152
13:30:00	12	0	0	0	12	1	2	0	2	3	4	16	0	1	20	35	144
13:45:00	10	0	0	7	10	0	3	0	0	3	4	17	0	0	21	34	152
14:00:00	19	0	0	2	19	0	2	0	0	2	7	20	0	0	27	48	153
14:15:00	14	0	0	3	14	1	5	0	0	6	4	10	0	0	14	34	151
14:30:00	14	1	1	2	16	5	5	0	0	10	6	11	0	0	17	43	159
14:45:00	11	2	0	2	13	2	4	0	0	6	7	13	0	0	20	39	164
15:00:00	11	3	0	1	14	1	8	0	0	9	6	17	0	0	23	46	162
15:15:00	15	2	0	6	17	1	4	0	0	5	11	22	0	0	33	55	183

15:30:00	9	2	0	1	11	1	1	0	1	2	12	18	0	1	30	43	183
15:45:00	12	1	0	0	13	1	6	0	0	7	10	21	0	0	31	51	195
16:00:00	16	3	0	2	19	0	1	0	0	1	9	28	0	0	37	57	206
16:15:00	20	3	0	3	23	2	5	0	1	7	1	20	0	1	21	51	202
16:30:00	13	3	0	3	16	2	2	0	1	4	10	28	0	1	38	58	217
16:45:00	20	2	0	2	22	1	3	0	0	4	6	20	0	0	26	52	218
17:00:00	13	3	0	0	16	2	3	0	0	5	3	27	0	0	30	51	212
17:15:00	20	1	0	1	21	3	7	0	0	10	9	24	0	0	33	64	225
17:30:00	15	1	0	5	16	0	4	0	0	4	11	31	0	0	42	62	229
17:45:00	15	4	0	2	19	3	6	0	0	9	6	29	0	0	35	63	240
18:00:00	10	0	0	5	10	2	7	0	1	9	12	28	0	2	40	59	248
18:15:00	20	3	0	1	23	3	10	0	0	13	5	29	0	0	34	70	254
18:30:00	26	4	0	9	30	0	5	0	0	5	9	21	0	0	30	65	257
18:45:00	15	2	0	4	17	0	3	0	0	3	7	25	0	0	32	52	246
Grand Total	698	70	1	93	769	86	253	0	10	339	251	684	0	11	935	**2043**	-
Approach%	90.8%	9.1%	0.1%		-	25.4%	74.6%	0%		-	26.8%	73.2%	0%		-	**-**	-
Totals %	34.2%	3.4%	0%		37.6%	4.2%	12.4%	0%		16.6%	12.3%	33.5%	0%		45.8%	**-**	-
Heavy	36	8	0		-	5	12	0		-	10	19	0		-	**-**	-
Heavy %	5.2%	11.4%	0%		-	5.8%	4.7%	0%		-	4%	2.8%	0%		-	**-**	-
Bicycles	2	0	0		-	0	1	0		-	2	1	0		-	**-**	-
Bicycle %	0.3%	0%	0%		-	0%	0.4%	0%		-	0.8%	0.1%	0%		-	**-**	-

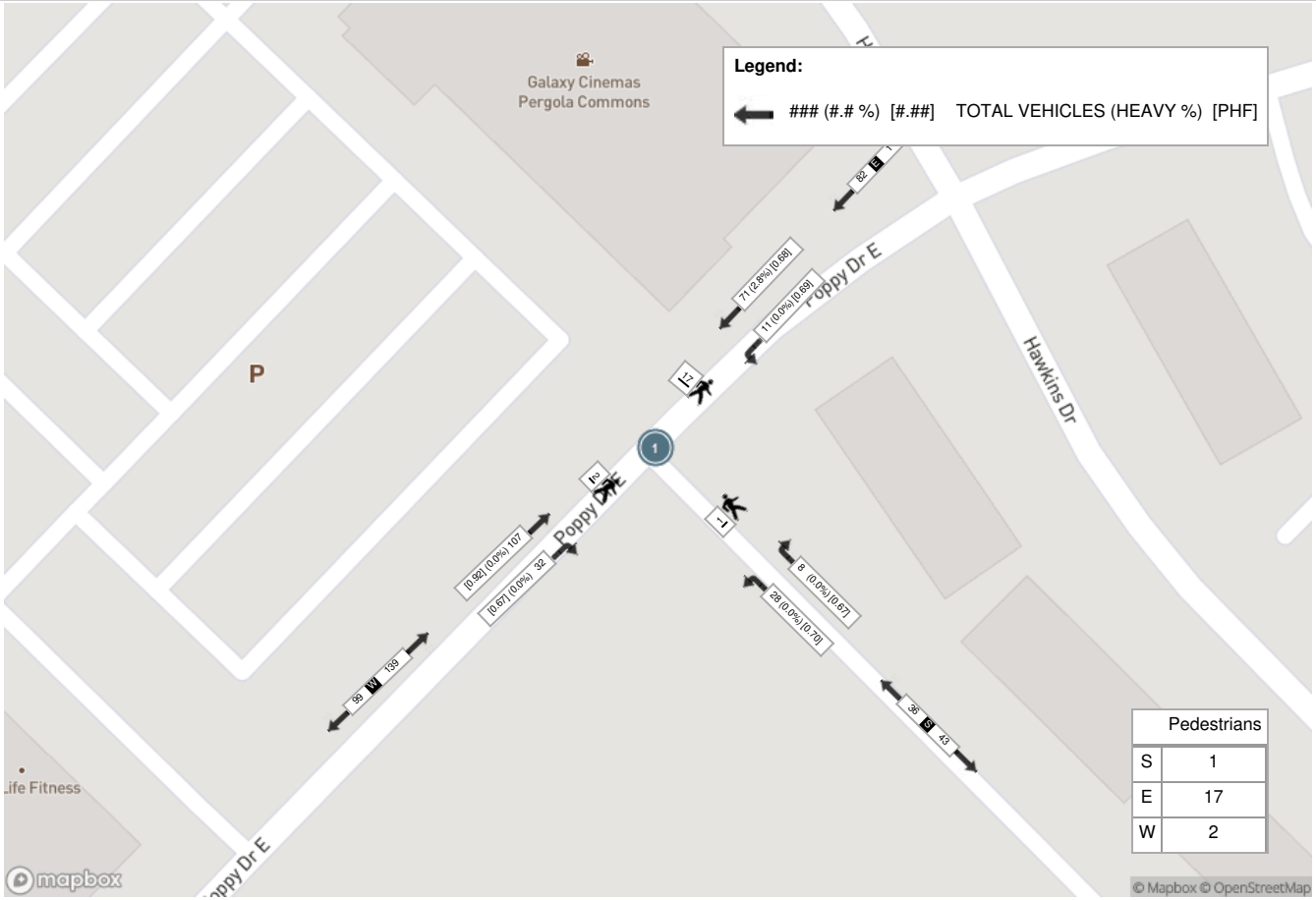
Peak Hour: 05:45 PM - 06:45 PM Weather: Overcast Clouds (0.71 °C)

Start Time	E Approach POPPY DR E					S Approach 1888 GORDON ST (ACCESS)					W Approach POPPY DR E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
17:45:00	15	4	0	2	19	3	6	0	0	9	6	29	0	0	35	63
18:00:00	10	0	0	5	10	2	7	0	1	9	12	28	0	2	40	59
18:15:00	20	3	0	1	23	3	10	0	0	13	5	29	0	0	34	70
18:30:00	26	4	0	9	30	0	5	0	0	5	9	21	0	0	30	65
Grand Total	71	11	0	17	82	8	28	0	1	36	32	107	0	2	139	**257**
Approach%	86.6%	13.4%	0%		-	22.2%	77.8%	0%		-	23%	77%	0%		-	**-**
Totals %	27.6%	4.3%	0%		31.9%	3.1%	10.9%	0%		14%	12.5%	41.6%	0%		54.1%	**-**
PHF	0.68	0.69	0		0.68	0.67	0.7	0		0.69	0.67	0.92	0		0.87	**-**
Heavy	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Heavy %	2.8%	0%	0%		2.4%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Lights	69	11	0		80	8	28	0		36	32	107	0		139	**-**
Lights %	97.2%	100%	0%		97.6%	100%	100%	0%		100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Buses	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Buses %	2.8%	0%	0%		2.4%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	17	-	-	-	-	1	-	-	-	-	2	-	**-**
Pedestrians%	-	-	-	85%		-	-	-	5%		-	-	-	10%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Selected Hour: 07:45 AM - 08:45 AM Weather:

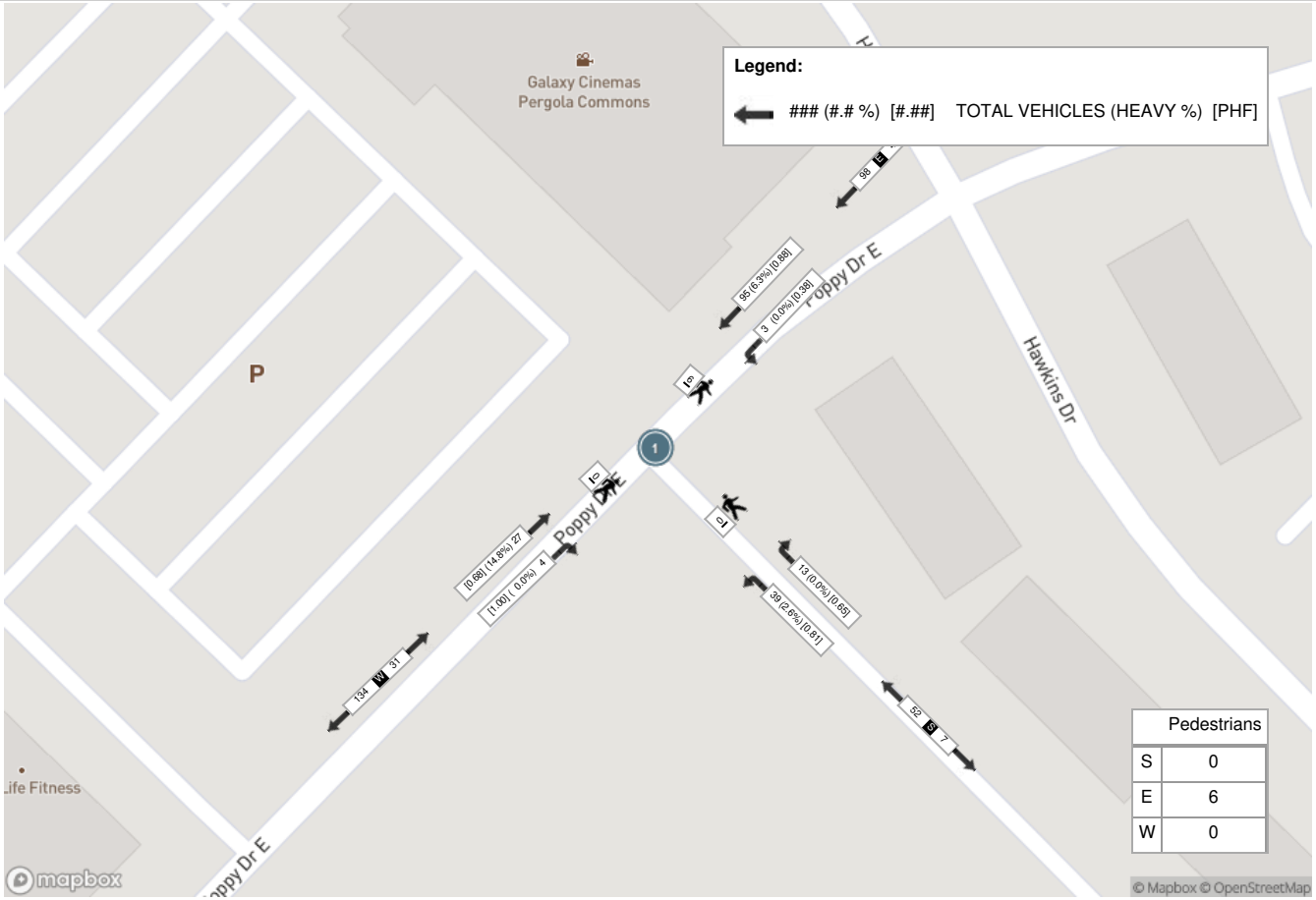
Start Time	E Approach POPPY DR E					S Approach 1888 GORDON ST (ACCESS)					W Approach POPPY DR E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
07:45:00	18	2	0	2	20	5	11	0	0	16	1	5	0	0	6	42
08:00:00	24	0	0	0	24	4	9	0	0	13	1	4	0	0	5	42
08:15:00	26	1	0	3	27	3	7	0	0	10	1	8	0	0	9	46
08:30:00	27	0	0	1	27	1	12	0	0	13	1	10	0	0	11	51
Grand Total	95	3	0	6	98	13	39	0	0	52	4	27	0	0	31	**181**
Approach%	96.9%	3.1%	0%		-	25%	75%	0%		-	12.9%	87.1%	0%		-	**-**
Totals %	52.5%	1.7%	0%		54.1%	7.2%	21.5%	0%		28.7%	2.2%	14.9%	0%		17.1%	**-**
PHF	0.88	0.38	0		0.91	0.65	0.81	0		0.81	1	0.68	0		0.7	**-**
Heavy	6	0	0		6	0	1	0		1	0	4	0		4	**-**
Heavy %	6.3%	0%	0%		6.1%	0%	2.6%	0%		1.9%	0%	14.8%	0%		12.9%	**-**
Lights	89	3	0		92	13	38	0		51	4	23	0		27	**-**
Lights %	93.7%	100%	0%		93.9%	100%	97.4%	0%		98.1%	100%	85.2%	0%		87.1%	**-**
Single-Unit Trucks	1	0	0		1	0	1	0		1	0	0	0		0	**-**
Single-Unit Trucks %	1.1%	0%	0%		1%	0%	2.6%	0%		1.9%	0%	0%	0%		0%	**-**
Buses	5	0	0		5	0	0	0		0	0	4	0		4	**-**
Buses %	5.3%	0%	0%		5.1%	0%	0%	0%		0%	0%	14.8%	0%		12.9%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	6	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 05:45 PM - 06:45 PM Weather: Overcast Clouds (0.71 °C)



	Pedestrians
S	1
E	17
W	2

Selected Hour: 07:45 AM - 08:45 AM Weather:



BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (5 . POPPY DR E & FARLEY DR)

Start Time	N Approach FARLEY DR					E Approach POPPY DR E					W Approach POPPY DR E					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	2	1	0	2	3	1	19	0	0	20	7	2	0	0	9	32	
07:15:00	2	1	0	2	3	1	24	0	0	25	6	2	0	0	8	36	
07:30:00	1	1	0	0	2	2	25	0	0	27	6	0	0	0	6	35	
07:45:00	1	0	0	1	1	2	33	0	1	35	10	0	0	0	10	46	149
08:00:00	4	0	0	2	4	2	31	0	0	33	5	0	0	0	5	42	159
08:15:00	3	2	0	0	5	1	30	0	0	31	7	3	0	0	10	46	169
08:30:00	0	5	0	5	5	3	21	0	0	24	13	1	0	0	14	43	177
08:45:00	1	4	0	1	5	2	19	0	0	21	4	6	0	0	10	36	167
09:00:00	0	3	0	3	3	3	18	0	0	21	6	5	0	0	11	35	160
09:15:00	3	1	0	5	4	2	16	0	0	18	8	3	0	0	11	33	147
09:30:00	2	2	0	0	4	4	15	0	0	19	7	0	0	0	7	30	134
09:45:00	1	3	0	0	4	4	18	0	0	22	7	1	1	0	9	35	133
BREAK																	
10:00:00	1	1	0	1	2	2	13	0	0	15	11	2	0	0	13	30	
10:15:00	3	6	0	3	9	1	9	0	0	10	12	1	0	0	13	32	
10:30:00	5	1	0	1	6	2	14	0	0	16	16	3	0	0	19	41	
10:45:00	3	2	0	5	5	2	14	0	0	16	5	2	0	0	7	28	131
11:00:00	2	0	0	1	2	1	14	0	0	15	2	2	0	0	4	21	122
11:15:00	7	1	0	2	8	0	13	0	0	13	10	4	0	0	14	35	125
11:30:00	6	1	0	1	7	6	20	0	0	26	15	6	1	0	22	55	139
11:45:00	8	2	0	2	10	3	11	0	0	14	13	5	0	0	18	42	153
12:00:00	6	7	0	5	13	4	13	0	0	17	15	4	0	0	19	49	181
12:15:00	10	4	0	0	14	1	16	0	0	17	18	2	0	1	20	51	197
12:30:00	3	1	0	7	4	2	18	0	0	20	10	6	0	1	16	40	182
12:45:00	3	6	0	2	9	4	11	0	0	15	11	7	0	0	18	42	182
13:00:00	3	0	0	4	3	0	12	0	0	12	15	6	0	0	21	36	169
13:15:00	6	2	0	3	8	0	9	0	0	9	14	4	2	0	20	37	155
13:30:00	5	3	0	4	8	0	13	0	0	13	7	3	0	0	10	31	146
13:45:00	3	1	0	2	4	3	11	0	0	14	13	2	0	0	15	33	137
14:00:00	5	1	0	0	6	1	17	0	0	18	16	3	0	0	19	43	144
14:15:00	4	3	0	5	7	2	11	0	0	13	8	2	0	0	10	30	137
14:30:00	4	1	0	1	5	3	11	0	0	14	12	5	0	0	17	36	142
14:45:00	7	3	0	2	10	2	16	0	0	18	8	4	0	0	12	40	149
BREAK																	

15:00:00	4	7	0	4	11	1	13	0	0	14	15	7	0	0	22	47	
15:15:00	1	6	0	4	7	2	16	0	0	18	25	9	0	0	34	59	
15:30:00	4	5	0	1	9	4	14	0	0	18	25	6	0	0	31	58	
15:45:00	3	6	0	2	9	4	13	0	0	17	23	6	0	0	29	55	219
16:00:00	4	3	0	8	7	1	18	0	0	19	21	3	0	0	24	50	222
16:15:00	8	3	0	3	11	5	14	0	0	19	32	3	0	0	35	65	228
16:30:00	6	3	0	2	9	3	13	0	0	16	27	3	0	0	30	55	225
16:45:00	12	4	0	3	16	3	15	0	0	18	23	4	0	0	27	61	231
17:00:00	7	5	0	6	12	4	14	0	0	18	31	8	0	0	39	69	250
17:15:00	5	6	0	5	11	5	10	0	0	15	39	2	0	0	41	67	252
17:30:00	4	4	0	1	8	5	22	0	0	27	35	8	0	0	43	78	275
17:45:00	8	7	0	2	15	3	18	0	0	21	41	6	0	0	47	83	297
18:00:00	7	6	0	6	13	4	26	0	0	30	27	7	0	1	34	77	305
18:15:00	4	6	0	5	10	2	19	0	0	21	24	6	0	0	30	61	299
18:30:00	9	3	0	4	12	4	17	1	0	22	18	3	0	0	21	55	276
18:45:00	6	5	0	4	11	2	12	0	0	14	20	8	0	0	28	53	246
Grand Total	206	148	0	132	354	118	789	1	1	908	743	185	4	3	932	**2194**	-
Approach%	58.2%	41.8%	0%		-	13%	86.9%	0.1%		-	79.7%	19.8%	0.4%		-	**-**	-
Totals %	9.4%	6.7%	0%		16.1%	5.4%	36%	0%		41.4%	33.9%	8.4%	0.2%		42.5%	**-**	-
Heavy	9	1	0		-	1	44	0		-	30	6	0		-	**-**	-
Heavy %	4.4%	0.7%	0%		-	0.8%	5.6%	0%		-	4%	3.2%	0%		-	**-**	-
Bicycles	0	2	0		-	3	1	0		-	3	1	0		-	**-**	-
Bicycle %	0%	1.4%	0%		-	2.5%	0.1%	0%		-	0.4%	0.5%	0%		-	**-**	-

Peak Hour: 07:45 AM - 08:45 AM Weather: Mist (3.59 °C)

Start Time	N Approach FARLEY DR					E Approach POPPY DR E					W Approach POPPY DR E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
07:45:00	1	0	0	1	1	2	33	0	1	35	10	0	0	0	10	46
08:00:00	4	0	0	2	4	2	31	0	0	33	5	0	0	0	5	42
08:15:00	3	2	0	0	5	1	30	0	0	31	7	3	0	0	10	46
08:30:00	0	5	0	5	5	3	21	0	0	24	13	1	0	0	14	43
Grand Total	8	7	0	8	15	8	115	0	1	123	35	4	0	0	39	**177**
Approach%	53.3%	46.7%	0%		-	6.5%	93.5%	0%		-	89.7%	10.3%	0%		-	**-**
Totals %	4.5%	4%	0%		8.5%	4.5%	65%	0%		69.5%	19.8%	2.3%	0%		22%	**-**
PHF	0.5	0.35	0		0.75	0.67	0.87	0		0.88	0.67	0.33	0		0.7	**-**
Heavy	0	1	0		1	0	6	0		6	4	2	0		6	**-**
Heavy %	0%	14.3%	0%		6.7%	0%	5.2%	0%		4.9%	11.4%	50%	0%		15.4%	**-**
Lights	8	6	0		14	8	109	0		117	31	2	0		33	**-**
Lights %	100%	85.7%	0%		93.3%	100%	94.8%	0%		95.1%	88.6%	50%	0%		84.6%	**-**
Single-Unit Trucks	0	1	0		1	0	1	0		1	2	0	0		2	**-**
Single-Unit Trucks %	0%	14.3%	0%		6.7%	0%	0.9%	0%		0.8%	5.7%	0%	0%		5.1%	**-**
Buses	0	0	0		0	0	5	0		5	2	2	0		4	**-**
Buses %	0%	0%	0%		0%	0%	4.3%	0%		4.1%	5.7%	50%	0%		10.3%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	8	-	-	-	-	1	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	88.9%		-	-	-	11.1%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

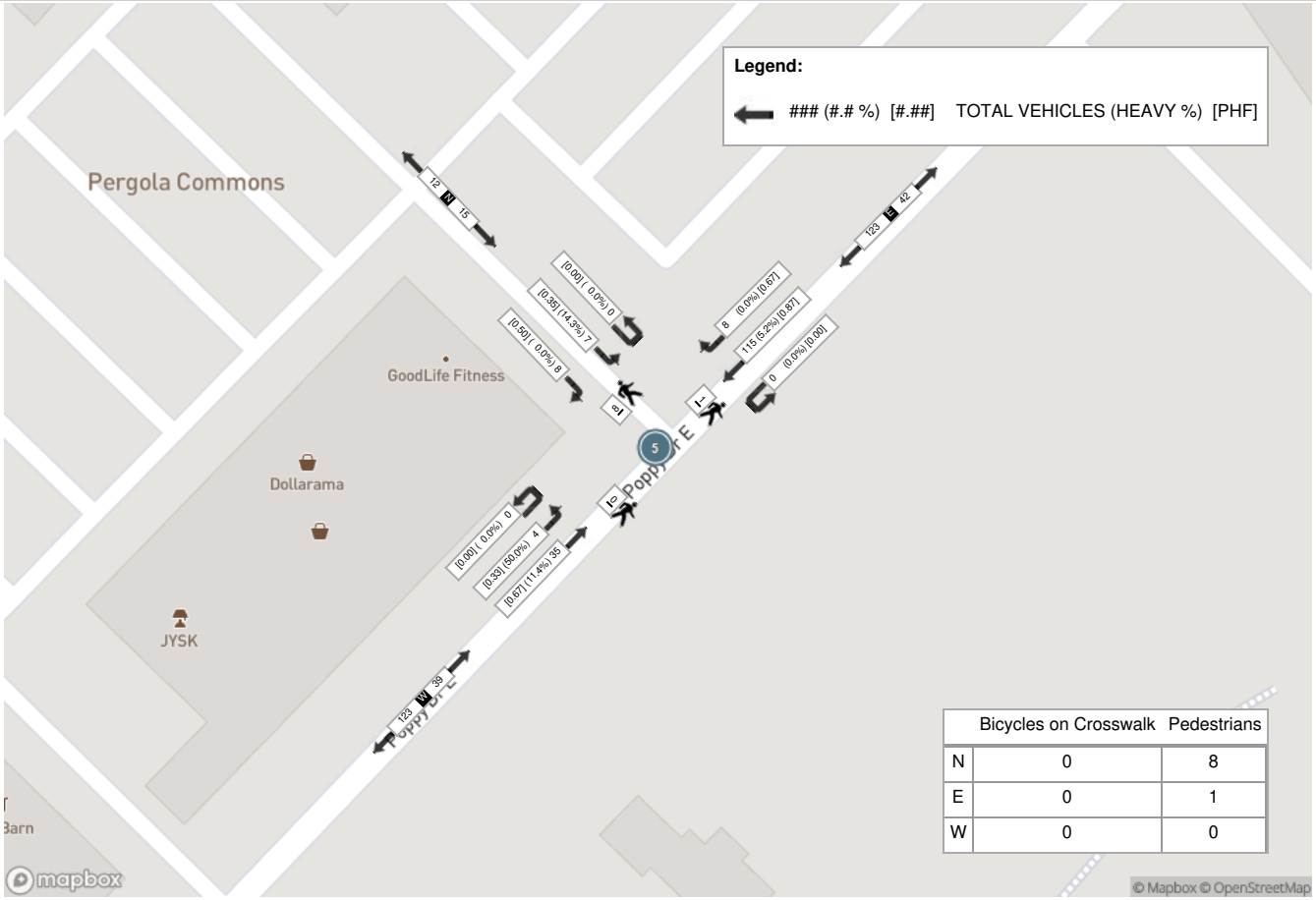
Peak Hour: 11:30 AM - 12:30 PM Weather:

Start Time	N Approach FARLEY DR					E Approach POPPY DR E					W Approach POPPY DR E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
11:30:00	6	1	0	1	7	6	20	0	0	26	15	6	1	0	22	55
11:45:00	8	2	0	2	10	3	11	0	0	14	13	5	0	0	18	42
12:00:00	6	7	0	5	13	4	13	0	0	17	15	4	0	0	19	49
12:15:00	10	4	0	0	14	1	16	0	0	17	18	2	0	1	20	51
Grand Total	30	14	0	8	44	14	60	0	0	74	61	17	1	1	79	**197**
Approach%	68.2%	31.8%	0%		-	18.9%	81.1%	0%		-	77.2%	21.5%	1.3%		-	**-**
Totals %	15.2%	7.1%	0%		22.3%	7.1%	30.5%	0%		37.6%	31%	8.6%	0.5%		40.1%	**-**
PHF	0.75	0.5	0		0.79	0.58	0.75	0		0.71	0.85	0.71	0.25		0.9	**-**
Heavy	4	0	0		4	1	4	0		5	6	0	0		6	**-**
Heavy %	13.3%	0%	0%		9.1%	7.1%	6.7%	0%		6.8%	9.8%	0%	0%		7.6%	**-**
Lights	26	14	0		40	13	56	0		69	55	17	1		73	**-**
Lights %	86.7%	100%	0%		90.9%	92.9%	93.3%	0%		93.2%	90.2%	100%	100%		92.4%	**-**
Single-Unit Trucks	3	0	0		3	1	2	0		3	6	0	0		6	**-**
Single-Unit Trucks %	10%	0%	0%		6.8%	7.1%	3.3%	0%		4.1%	9.8%	0%	0%		7.6%	**-**
Buses	0	0	0		0	0	2	0		2	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	3.3%	0%		2.7%	0%	0%	0%		0%	**-**
Articulated Trucks	1	0	0		1	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	3.3%	0%	0%		2.3%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	8	-	-	-	-	0	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	88.9%		-	-	-	0%		-	-	-	11.1%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 05:15 PM - 06:15 PM Weather: Clear Sky (20.05 °C)

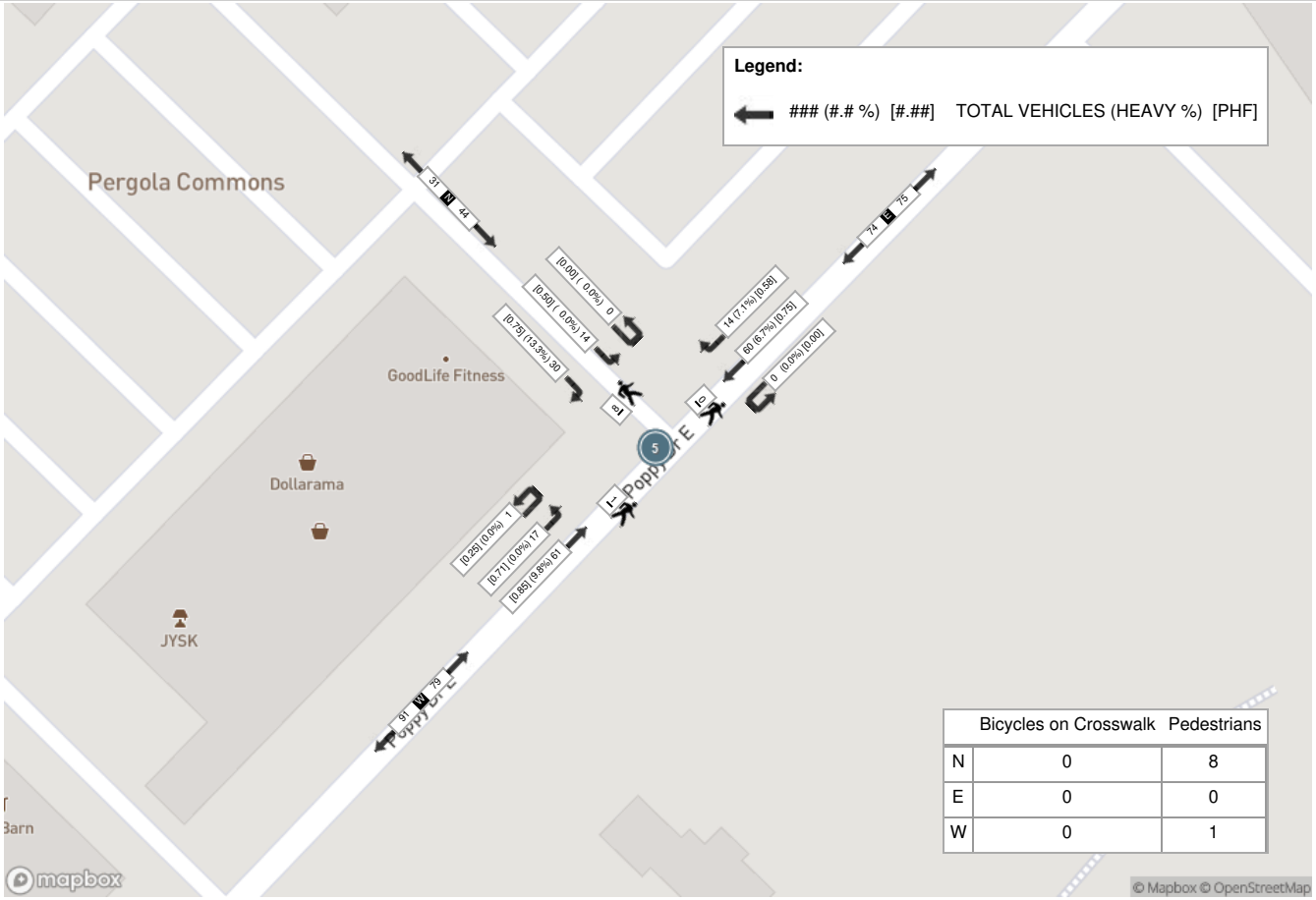
Start Time	N Approach FARLEY DR					E Approach POPPY DR E					W Approach POPPY DR E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
17:15:00	5	6	0	5	11	5	10	0	0	15	39	2	0	0	41	67
17:30:00	4	4	0	1	8	5	22	0	0	27	35	8	0	0	43	78
17:45:00	8	7	0	2	15	3	18	0	0	21	41	6	0	0	47	83
18:00:00	7	6	0	6	13	4	26	0	0	30	27	7	0	1	34	77
Grand Total	24	23	0	14	47	17	76	0	0	93	142	23	0	1	165	**305**
Approach%	51.1%	48.9%	0%		-	18.3%	81.7%	0%		-	86.1%	13.9%	0%		-	**-**
Totals %	7.9%	7.5%	0%		15.4%	5.6%	24.9%	0%		30.5%	46.6%	7.5%	0%		54.1%	**-**
PHF	0.75	0.82	0		0.78	0.85	0.73	0		0.78	0.87	0.72	0		0.88	**-**
Heavy	0	0	0		0	0	3	0		3	1	0	0		1	**-**
Heavy %	0%	0%	0%		0%	0%	3.9%	0%		3.2%	0.7%	0%	0%		0.6%	**-**
Lights	24	23	0		47	17	73	0		90	141	23	0		164	**-**
Lights %	100%	100%	0%		100%	100%	96.1%	0%		96.8%	99.3%	100%	0%		99.4%	**-**
Single-Unit Trucks	0	0	0		0	0	1	0		1	1	0	0		1	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	1.3%	0%		1.1%	0.7%	0%	0%		0.6%	**-**
Buses	0	0	0		0	0	2	0		2	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	2.6%	0%		2.2%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	14	-	-	-	-	0	-	-	-	-	1	-	**-**
Pedestrians%	-	-	-	93.3%		-	-	-	0%		-	-	-	6.7%		**-**
Bicycles on Road	0	0	0	0	-	2	0	0	0	-	1	1	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 07:45 AM - 08:45 AM Weather: Mist (3.59 °C)



	Bicycles on Crosswalk	Pedestrians
N	0	8
E	0	1
W	0	0

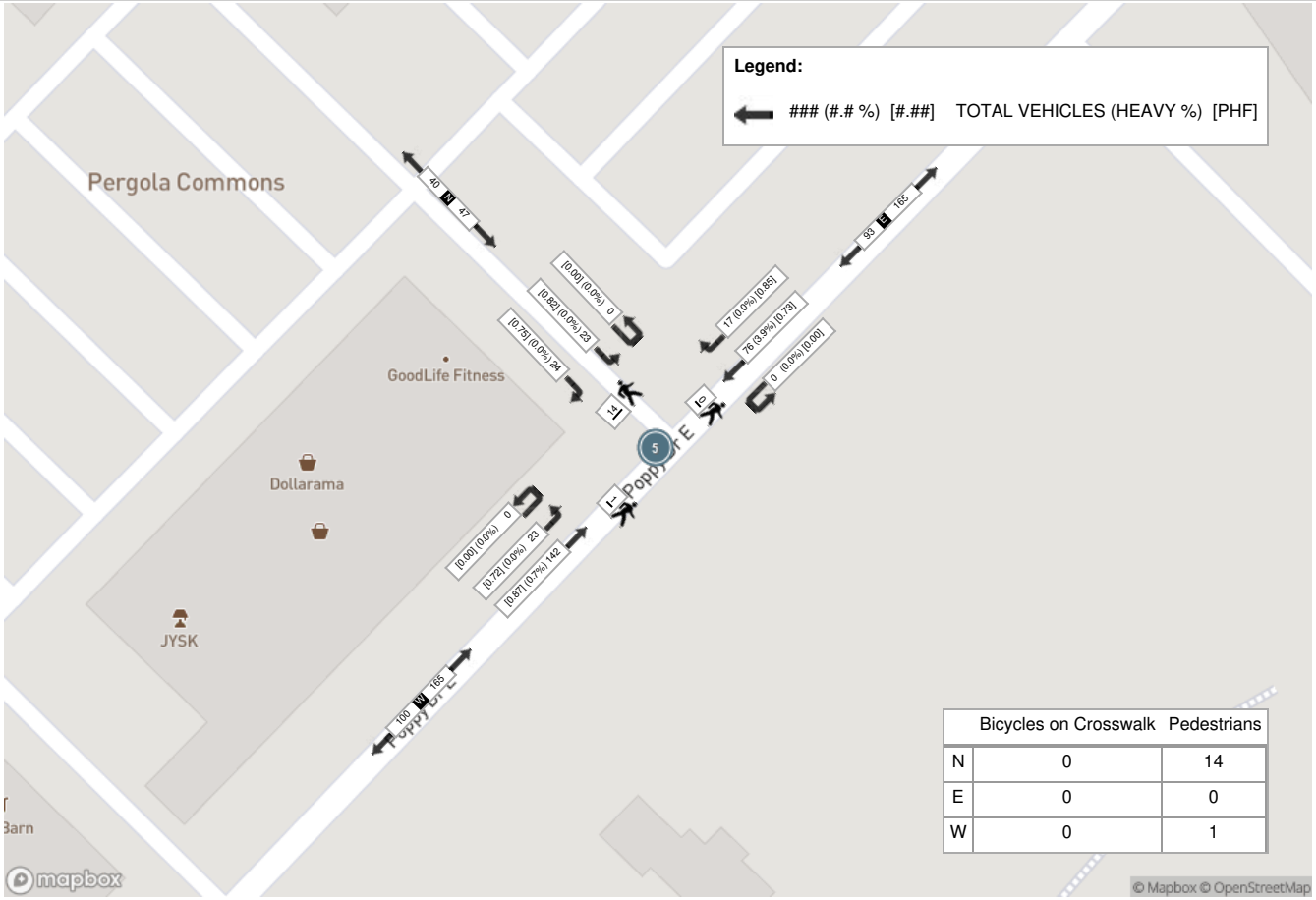
Peak Hour: 11:30 AM - 12:30 PM Weather:



	Bicycles on Crosswalk	Pedestrians
N	0	8
E	0	0
W	0	1

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:15 PM - 06:15 PM Weather: Clear Sky (20.05 °C)



Spectrum

Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (4 . POPPY DR E & GORDON ST)

Start Time	N Approach GORDON ST						E Approach POPPY DR E						S Approach GORDON ST						W Approach POPPY DR E						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	1	132	3	0	1	136	13	0	9	0	1	22	6	52	5	0	2	63	3	1	0	0	1	4	225	
07:15:00	0	166	3	0	1	169	7	1	22	0	1	30	4	67	3	0	1	74	6	1	1	0	0	8	281	
07:30:00	0	154	4	0	0	158	12	0	12	0	4	24	2	91	2	0	0	95	5	0	1	0	0	6	283	
07:45:00	1	151	4	0	0	156	18	2	17	0	1	37	9	120	1	0	0	130	2	1	1	0	0	4	327	1116
08:00:00	0	142	3	1	0	146	26	2	11	0	2	39	3	147	1	0	1	151	3	2	2	0	1	7	343	1234
08:15:00	1	139	6	0	1	146	27	1	7	0	1	35	5	150	2	0	1	157	3	3	2	0	1	8	346	1299
08:30:00	3	114	5	0	1	122	16	1	7	0	2	24	6	147	6	0	0	159	1	3	2	0	0	6	311	1327
08:45:00	1	132	10	0	2	143	15	2	7	0	3	24	4	157	3	0	0	164	1	1	2	0	1	4	335	1335
09:00:00	0	119	9	0	2	128	17	1	7	0	0	25	4	114	5	0	0	123	3	1	2	0	1	6	282	1274
09:15:00	0	108	5	1	1	114	9	6	5	0	5	20	6	94	8	0	2	108	3	1	2	0	0	6	248	1176
09:30:00	1	91	6	1	1	99	14	3	6	0	5	23	4	97	5	0	0	106	2	0	4	0	0	6	234	1099
09:45:00	1	99	1	0	2	101	15	2	7	0	6	24	8	95	4	0	2	107	2	1	2	0	1	5	237	1001
BREAK																										
10:00:00	2	108	10	0	1	120	15	1	6	0	3	22	5	124	5	0	1	134	2	1	2	0	1	5	281	
10:15:00	0	100	11	0	1	111	8	2	9	0	5	19	7	118	4	0	0	129	2	2	3	0	0	7	266	
10:30:00	0	105	11	1	1	117	15	1	10	0	1	26	12	99	2	0	1	113	4	1	2	0	2	7	263	
10:45:00	2	87	5	1	1	95	14	4	8	0	1	26	5	123	5	0	0	133	0	1	4	0	0	5	259	1069
11:00:00	1	106	1	0	2	108	7	4	10	0	5	21	4	123	4	0	0	131	1	0	5	0	1	6	266	1054
11:15:00	0	98	10	2	1	110	17	0	7	0	3	24	7	102	4	0	2	113	3	3	3	0	3	9	256	1044
11:30:00	2	104	13	0	0	119	16	3	13	0	9	32	11	124	3	0	0	138	4	4	1	0	0	9	298	1079
11:45:00	2	114	18	1	35	135	18	7	13	0	3	38	13	114	8	0	2	135	5	3	4	0	0	12	320	1140
12:00:00	1	131	16	1	3	149	17	3	11	0	3	31	10	128	8	0	1	146	5	5	3	0	2	13	339	1213
12:15:00	1	101	17	1	0	120	21	6	12	0	4	39	8	124	5	0	0	137	3	2	3	0	1	8	304	1261
12:30:00	2	114	12	1	2	129	19	4	12	0	3	35	14	95	3	0	1	112	9	2	2	0	1	13	289	1252
12:45:00	2	104	13	0	3	119	18	4	11	0	2	33	10	104	10	0	1	124	2	2	5	0	1	9	285	1217
13:00:00	0	88	10	2	1	100	20	4	7	0	3	31	17	114	5	0	0	136	3	5	4	0	0	12	279	1157
13:15:00	1	105	11	1	5	118	11	6	13	0	5	30	6	113	8	0	1	127	2	3	5	0	1	10	285	1138
13:30:00	1	110	7	1	2	119	12	5	11	0	3	28	11	134	6	0	0	151	6	3	1	0	2	10	308	1157
13:45:00	4	96	7	1	2	108	12	6	4	0	2	22	7	95	5	0	0	107	2	0	7	0	1	9	246	1118
14:00:00	0	96	12	0	1	108	16	6	7	0	2	29	11	103	5	0	3	119	2	4	0	0	3	6	262	1101
14:15:00	2	99	5	3	1	109	13	0	9	0	1	22	6	96	5	0	0	107	3	4	1	0	0	8	246	1062
14:30:00	2	130	13	0	2	145	10	5	8	0	1	23	8	112	2	0	4	122	1	0	1	0	2	2	292	1046
14:45:00	1	110	8	1	2	120	11	2	11	0	0	24	7	127	5	0	0	139	3	4	6	0	0	13	296	1096
BREAK																										
15:00:00	3	106	14	1	9	124	11	10	8	0	2	29	10	128	5	0	1	143	5	2	2	0	0	9	305	
15:15:00	2	112	18	0	1	132	18	3	7	0	3	28	21	145	10	0	1	176	5	3	4	0	2	12	348	
15:30:00	2	118	18	0	2	138	8	6	12	0	3	26	11	154	13	0	0	178	4	7	1	0	0	12	354	
15:45:00	2	128	15	2	3	147	16	2	11	0	5	29	12	167	6	0	2	185	3	6	3	0	0	12	373	1380
16:00:00	2	140	17	0	3	159	16	9	7	0	9	32	13	144	8	0	2	165	4	4	3	0	1	11	367	1442
16:15:00	0	138	13	0	4	151	19	4	9	0	7	32	19	165	10	0	0	194	2	6	7	0	0	15	392	1486
16:30:00	2	121	15	1	1	139	10	5	9	0	1	24	10	165	7	0	0	182	4	8	3	0	0	15	360	1492
16:45:00	1	169	13	1	5	184	17	9	14	0	7	40	17	150	11	0	0	178	2	6	3	0	1	11	413	1532
17:00:00	1	120	26	2	4	149	12	5	18	0	3	35	20	174	14	0	1	208	6	3	2	0	2	11	403	1568
17:15:00	5	119	25	1	6	150	11	4	9	0	4	24	18	174	9	0	2	201	3	8	7	0	2	18	393	1569
17:30:00	3	131	14	0	3	148	18	2	11	0	3	31	32	173	13	0	0	218	8	4	4	0	1	16	413	1622

17:45:00	1	142	24	1	2	168	23	2	11	0	2	36	20	140	5	0	0	165	2	7	5	0	1	14	383	1592
18:00:00	3	110	22	0	2	135	25	5	18	0	3	48	18	159	5	0	2	182	1	6	7	0	3	14	379	1568
18:15:00	3	98	22	1	0	124	28	4	8	0	2	40	10	136	3	0	0	149	6	6	4	0	1	16	329	1504
18:30:00	3	84	14	0	2	101	23	4	9	0	5	36	8	135	5	0	1	148	2	4	0	0	1	6	291	1382
18:45:00	1	86	19	0	5	106	20	2	6	0	4	28	17	130	3	0	1	150	2	2	4	0	3	8	292	1291
Grand Total	69	5575	558	30	130	6232	754	170	476	0	153	1400	496	6042	274	0	39	6812	155	146	142	0	45	443	**14887**	-
Approach%	1.1%	89.5%	9%	0.5%		-	53.9%	12.1%	34%	0%		-	7.3%	88.7%	4%	0%		-	35%	33%	32.1%	0%		-	**-**	-
Totals %	0.5%	37.4%	3.7%	0.2%		41.9%	5.1%	1.1%	3.2%	0%		9.4%	3.3%	40.6%	1.8%	0%		45.8%	1%	1%	1%	0%		3%	**-**	-
Heavy	4	312	17	0		-	42	8	16	0		-	19	326	12	0		-	6	8	36	0		-	**-**	-
Heavy %	5.8%	5.6%	3%	0%		-	5.6%	4.7%	3.4%	0%		-	3.8%	5.4%	4.4%	0%		-	3.9%	5.5%	25.4%	0%		-	**-**	-
Bicycles	0	5	0	0		-	0	1	0	0		-	2	5	0	0		-	0	1	0	0		-	**-**	-
Bicycle %	0%	0.1%	0%	0%		-	0%	0.6%	0%	0%		-	0.4%	0.1%	0%	0%		-	0%	0.7%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 08:00 AM - 09:00 AM Weather: Mist (3.59 °C)

Start Time	N Approach GORDON ST						E Approach POPPY DR E						S Approach GORDON ST						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
08:00:00	0	142	3	1	0	146	26	2	11	0	2	39	3	147	1	0	1	151	3	2	2	0	1	7	343
08:15:00	1	139	6	0	1	146	27	1	7	0	1	35	5	150	2	0	1	157	3	3	2	0	1	8	346
08:30:00	3	114	5	0	1	122	16	1	7	0	2	24	6	147	6	0	0	159	1	3	2	0	0	6	311
08:45:00	1	132	10	0	2	143	15	2	7	0	3	24	4	157	3	0	0	164	1	1	2	0	1	4	335
Grand Total	5	527	24	1	4	557	84	6	32	0	8	122	18	601	12	0	2	631	8	9	8	0	3	25	**1335**
Approach%	0.9%	94.6%	4.3%	0.2%		-	68.9%	4.9%	26.2%	0%		-	2.9%	95.2%	1.9%	0%		-	32%	36%	32%	0%		-	**-**
Totals %	0.4%	39.5%	1.8%	0.1%		41.7%	6.3%	0.4%	2.4%	0%		9.1%	1.3%	45%	0.9%	0%		47.3%	0.6%	0.7%	0.6%	0%		1.9%	**-**
PHF	0.42	0.93	0.6	0.25		0.95	0.78	0.75	0.73	0		0.78	0.75	0.96	0.5	0		0.96	0.67	0.75	1	0		0.78	**-**
Heavy	1	31	1	0		33	5	3	0	0		8	3	43	1	0		47	0	2	6	0		8	**-**
Heavy %	20%	5.9%	4.2%	0%		5.9%	6%	50%	0%	0%		6.6%	16.7%	7.2%	8.3%	0%		7.4%	0%	22.2%	75%	0%		32%	**-**
Lights	4	496	23	1		524	79	3	32	0		114	15	558	11	0		584	8	7	2	0		17	**-**
Lights %	80%	94.1%	95.8%	100%		94.1%	94%	50%	100%	0%		93.4%	83.3%	92.8%	91.7%	0%		92.6%	100%	77.8%	25%	0%		68%	**-**
Single-Unit Trucks	1	13	1	0		15	2	1	0	0		3	1	22	1	0		24	0	0	2	0		2	**-**
Single-Unit Trucks %	20%	2.5%	4.2%	0%		2.7%	2.4%	16.7%	0%	0%		2.5%	5.6%	3.7%	8.3%	0%		3.8%	0%	0%	25%	0%		8%	**-**
Buses	0	3	0	0		3	3	2	0	0		5	2	13	0	0		15	0	2	3	0		5	**-**
Buses %	0%	0.6%	0%	0%		0.5%	3.6%	33.3%	0%	0%		4.1%	11.1%	2.2%	0%	0%		2.4%	0%	22.2%	37.5%	0%		20%	**-**
Articulated Trucks	0	15	0	0		15	0	0	0	0		0	0	8	0	0		8	0	0	1	0		1	**-**
Articulated Trucks %	0%	2.8%	0%	0%		2.7%	0%	0%	0%	0%		0%	0%	1.3%	0%	0%		1.3%	0%	0%	12.5%	0%		4%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	2	-	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	-	23.5%		-	-	-	-	47.1%		-	-	-	-	11.8%		-	-	-	-	17.6%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 11:30 AM - 12:30 PM Weather:

Start Time	N Approach GORDON ST						E Approach POPPY DR E						S Approach GORDON ST						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
11:30:00	2	104	13	0	0	119	16	3	13	0	9	32	11	124	3	0	0	138	4	4	1	0	0	9	298
11:45:00	2	114	18	1	35	135	18	7	13	0	3	38	13	114	8	0	2	135	5	3	4	0	0	12	320
12:00:00	1	131	16	1	3	149	17	3	11	0	3	31	10	128	8	0	1	146	5	5	3	0	2	13	339
12:15:00	1	101	17	1	0	120	21	6	12	0	4	39	8	124	5	0	0	137	3	2	3	0	1	8	304
Grand Total	6	450	64	3	38	523	72	19	49	0	19	140	42	490	24	0	3	556	17	14	11	0	3	42	**1261**
Approach%	1.1%	86%	12.2%	0.6%		-	51.4%	13.6%	35%	0%		-	7.6%	88.1%	4.3%	0%		-	40.5%	33.3%	26.2%	0%		-	**-**
Totals %	0.5%	35.7%	5.1%	0.2%		41.5%	5.7%	1.5%	3.9%	0%		11.1%	3.3%	38.9%	1.9%	0%		44.1%	1.3%	1.1%	0.9%	0%		3.3%	**-**
PHF	0.75	0.86	0.89	0.75		0.88	0.86	0.68	0.94	0		0.9	0.81	0.96	0.75	0		0.95	0.85	0.7	0.69	0		0.81	**-**
Heavy	0	35	5	0		40	3	3	5	0		11	3	32	1	0		36	1	0	3	0		4	**-**
Heavy %	0%	7.8%	7.8%	0%		7.6%	4.2%	15.8%	10.2%	0%		7.9%	7.1%	6.5%	4.2%	0%		6.5%	5.9%	0%	27.3%	0%		9.5%	**-**
Lights	6	415	59	3		483	69	16	44	0		129	39	458	23	0		520	16	14	8	0		38	**-**
Lights %	100%	92.2%	92.2%	100%		92.4%	95.8%	84.2%	89.8%	0%		92.1%	92.9%	93.5%	95.8%	0%		93.5%	94.1%	100%	72.7%	0%		90.5%	**-**
Single-Unit Trucks	0	16	5	0		21	1	2	4	0		7	2	15	1	0		18	1	0	0	0		1	**-**
Single-Unit Trucks %	0%	3.6%	7.8%	0%		4%	1.4%	10.5%	8.2%	0%		5%	4.8%	3.1%	4.2%	0%		3.2%	5.9%	0%	0%	0%		2.4%	**-**
Buses	0	5	0	0		5	2	0	0	0		2	0	3	0	0		3	0	0	2	0		2	**-**
Buses %	0%	1.1%	0%	0%		1%	2.8%	0%	0%	0%		1.4%	0%	0.6%	0%	0%		0.5%	0%	0%	18.2%	0%		4.8%	**-**
Articulated Trucks	0	14	0	0		14	0	1	1	0		2	1	14	0	0		15	0	0	1	0		1	**-**
Articulated Trucks %	0%	3.1%	0%	0%		2.7%	0%	5.3%	2%	0%		1.4%	2.4%	2.9%	0%	0%		2.7%	0%	0%	9.1%	0%		2.4%	**-**
Pedestrians	-	-	-	-	36	-	-	-	-	-	19	-	-	-	-	-	3	-	-	-	-	-	2	-	**-**
Pedestrians%	-	-	-	-	57.1%		-	-	-	-	30.2%		-	-	-	-	4.8%		-	-	-	-	3.2%		**-**
Bicycles on Road	0	3	0	0	0	-	0	0	0	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	3.2%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	1.6%		**-**

Spectrum

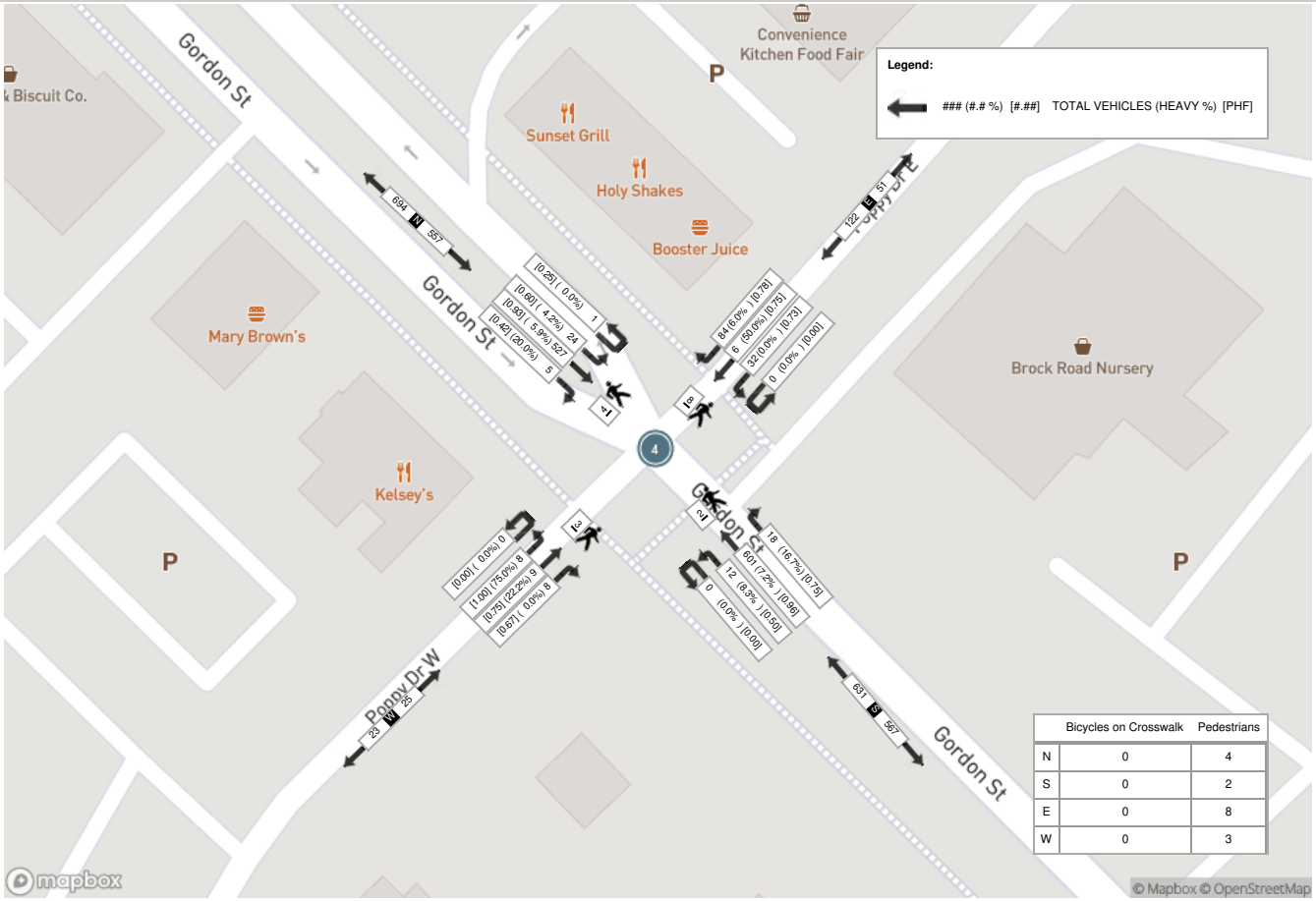
Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

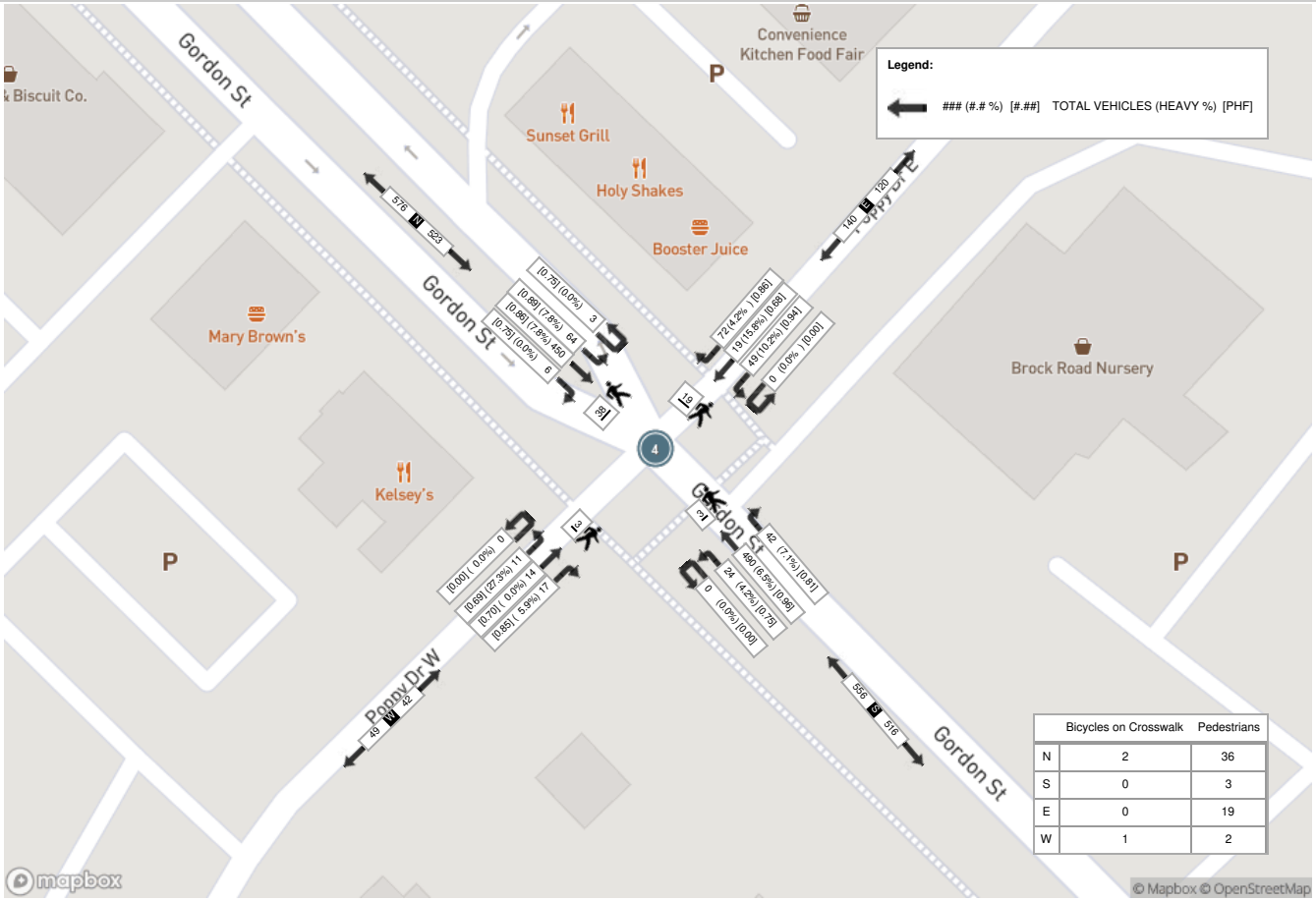
Peak Hour: 04:45 PM - 05:45 PM Weather: Clear Sky (20.05 °C)

Start Time	N Approach GORDON ST						E Approach POPPY DR E						S Approach GORDON ST						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
16:45:00	1	169	13	1	5	184	17	9	14	0	7	40	17	150	11	0	0	178	2	6	3	0	1	11	413
17:00:00	1	120	26	2	4	149	12	5	18	0	3	35	20	174	14	0	1	208	6	3	2	0	2	11	403
17:15:00	5	119	25	1	6	150	11	4	9	0	4	24	18	174	9	0	2	201	3	8	7	0	2	18	393
17:30:00	3	131	14	0	3	148	18	2	11	0	3	31	32	173	13	0	0	218	8	4	4	0	1	16	413
Grand Total	10	539	78	4	18	631	58	20	52	0	17	130	87	671	47	0	3	805	19	21	16	0	6	56	**1622**
Approach%	1.6%	85.4%	12.4%	0.6%		-	44.6%	15.4%	40%	0%		-	10.8%	83.4%	5.8%	0%		-	33.9%	37.5%	28.6%	0%		-	**-**
Totals %	0.6%	33.2%	4.8%	0.2%		38.9%	3.6%	1.2%	3.2%	0%		8%	5.4%	41.4%	2.9%	0%		49.6%	1.2%	1.3%	1%	0%		3.5%	**-**
PHF	0.5	0.8	0.75	0.5		0.86	0.81	0.56	0.72	0		0.81	0.68	0.96	0.84	0		0.92	0.59	0.66	0.57	0		0.78	**-**
Heavy	0	15	1	0		16	2	0	1	0		3	1	19	1	0		21	0	0	3	0		3	**-**
Heavy %	0%	2.8%	1.3%	0%		2.5%	3.4%	0%	1.9%	0%		2.3%	1.1%	2.8%	2.1%	0%		2.6%	0%	0%	18.8%	0%		5.4%	**-**
Lights	10	524	77	4		615	56	20	51	0		127	86	652	46	0		784	19	21	13	0		53	**-**
Lights %	100%	97.2%	98.7%	100%		97.5%	96.6%	100%	98.1%	0%		97.7%	98.9%	97.2%	97.9%	0%		97.4%	100%	100%	81.3%	0%		94.6%	**-**
Single-Unit Trucks	0	6	1	0		7	0	0	1	0		1	0	8	0	0		8	0	0	1	0		1	**-**
Single-Unit Trucks %	0%	1.1%	1.3%	0%		1.1%	0%	0%	1.9%	0%		0.8%	0%	1.2%	0%	0%		1%	0%	0%	6.3%	0%		1.8%	**-**
Buses	0	5	0	0		5	2	0	0	0		2	0	7	0	0		7	0	0	2	0		2	**-**
Buses %	0%	0.9%	0%	0%		0.8%	3.4%	0%	0%	0%		1.5%	0%	1%	0%	0%		0.9%	0%	0%	12.5%	0%		3.6%	**-**
Articulated Trucks	0	4	0	0		4	0	0	0	0		0	1	4	1	0		6	0	0	0	0		0	**-**
Articulated Trucks %	0%	0.7%	0%	0%		0.6%	0%	0%	0%	0%		0%	1.1%	0.6%	2.1%	0%		0.7%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	17	-	-	-	-	-	15	-	-	-	-	-	3	-	-	-	-	-	6	-	**-**
Pedestrians%	-	-	-	-	38.6%		-	-	-	-	34.1%		-	-	-	-	6.8%		-	-	-	-	13.6%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.3%		-	-	-	-	4.5%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 08:00 AM - 09:00 AM **Weather: Mist (3.59 °C)**

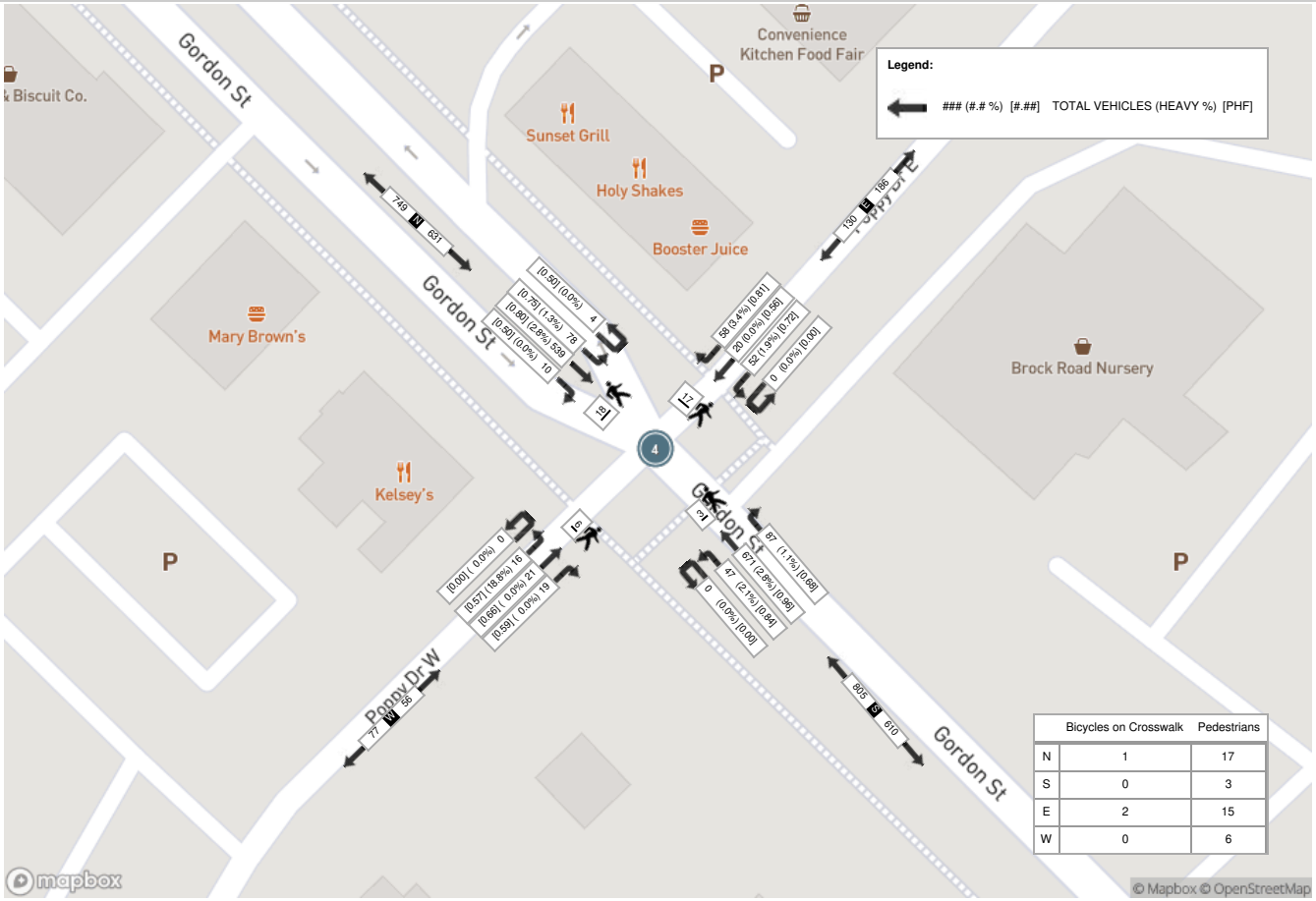


Peak Hour: 11:30 AM - 12:30 PM Weather:



	Bicycles on Crosswalk	Pedestrians
N	2	36
S	0	3
E	0	19
W	1	2

Peak Hour: 04:45 PM - 05:45 PM **Weather: Clear Sky (20.05 °C)**



Spectrum

Turning Movement Count
Location Name: POPPY DR E & HAWKINS DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (6 . POPPY DR E & HAWKINS DR)

Start Time	N Approach HAWKINS DR						E Approach POPPY DR E						S Approach HAWKINS DR						W Approach POPPY DR E						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
07:00:00	1	0	1	0	4	2	3	15	0	0	0	18	0	0	1	0	0	1	2	3	2	0	1	7	28	
07:15:00	3	0	0	0	0	3	1	18	1	0	0	20	0	1	1	0	0	2	0	5	1	0	1	6	31	
07:30:00	0	1	1	0	0	2	1	20	0	0	1	21	1	0	3	1	1	5	0	5	4	0	0	9	37	
07:45:00	6	0	3	0	0	9	0	20	1	0	1	21	0	2	3	0	1	5	0	3	6	0	2	9	44	140
08:00:00	2	0	1	0	15	3	1	18	0	0	3	19	0	2	2	0	4	4	0	2	7	0	9	9	35	147
08:15:00	2	1	0	1	5	4	3	21	0	0	6	24	0	2	2	0	10	4	1	4	5	0	5	10	42	158
08:30:00	3	0	3	0	3	6	3	15	1	0	3	19	1	3	3	0	0	7	0	12	6	0	0	18	50	171
08:45:00	3	0	3	0	1	6	2	11	0	0	5	13	0	0	2	0	1	2	0	5	4	0	1	9	30	157
09:00:00	3	1	2	0	2	6	1	15	0	0	0	16	1	0	1	0	1	2	1	8	3	0	1	12	36	158
09:15:00	4	0	0	0	5	4	0	14	0	0	5	14	0	2	0	0	7	2	2	5	2	0	3	9	29	145
09:30:00	2	1	0	0	5	3	1	4	0	0	0	5	0	1	1	0	2	2	0	7	2	0	4	9	19	114
09:45:00	0	0	1	0	0	1	3	16	0	0	0	19	0	0	2	0	2	2	1	3	3	0	0	7	29	113
BREAK																										
10:00:00	2	1	3	0	3	6	1	10	0	0	0	11	0	3	1	0	7	4	1	5	2	0	3	8	29	
10:15:00	1	1	1	0	7	3	1	8	0	0	1	9	0	1	0	0	2	1	1	6	4	0	1	11	24	
10:30:00	1	1	0	0	5	2	4	7	0	0	0	11	1	2	2	0	6	5	2	10	3	0	1	15	33	
10:45:00	2	0	2	0	3	4	1	11	0	0	0	12	1	1	1	0	2	3	1	3	4	0	3	8	27	113
11:00:00	3	0	2	0	1	5	1	7	0	0	1	8	0	2	3	0	6	5	1	1	2	0	2	4	22	106
11:15:00	0	0	2	0	0	2	4	8	0	0	2	12	0	0	1	0	3	1	0	3	4	0	2	7	22	104
11:30:00	5	0	3	0	2	8	2	11	0	0	0	13	0	0	3	0	1	3	0	10	7	0	0	17	41	112
11:45:00	3	1	0	0	1	4	2	5	0	0	0	7	0	2	2	0	2	4	4	7	3	0	0	14	29	114
12:00:00	1	1	2	0	4	4	2	8	0	0	0	10	0	1	2	0	1	3	2	9	1	0	3	12	29	121
12:15:00	4	0	3	0	2	7	3	9	0	0	1	12	1	0	0	0	1	1	0	13	6	0	3	19	39	138
12:30:00	2	0	4	0	7	6	3	13	0	0	1	16	1	0	0	0	1	1	0	8	4	0	2	12	35	132
12:45:00	1	1	4	0	6	6	3	6	1	0	1	10	0	2	2	0	3	4	0	10	4	0	5	14	34	137
13:00:00	1	1	0	0	0	2	3	7	0	0	0	10	0	2	0	0	2	2	3	7	2	0	3	12	26	134
13:15:00	2	0	1	0	1	3	2	8	0	0	0	10	1	0	0	0	2	1	1	8	6	0	0	15	29	124
13:30:00	5	2	2	0	6	9	0	6	0	0	0	6	0	2	1	0	2	3	0	6	3	0	2	9	27	116
13:45:00	1	1	4	0	1	6	1	10	0	0	0	11	0	1	1	0	2	2	2	9	4	0	2	15	34	116
14:00:00	5	0	3	0	4	8	1	9	0	0	0	10	0	3	1	0	0	4	3	8	3	0	1	14	36	126
14:15:00	2	1	1	0	5	4	1	7	0	0	0	8	0	0	1	0	0	1	0	4	3	0	1	7	20	117
14:30:00	2	3	3	0	2	8	1	11	0	0	1	12	0	1	1	0	1	2	0	7	1	0	1	8	30	120
14:45:00	3	0	1	0	3	4	1	12	0	0	0	13	0	0	1	0	4	1	0	6	4	0	3	10	28	114
BREAK																										
15:00:00	3	2	2	0	6	7	3	10	1	0	1	14	0	0	0	0	4	0	1	11	6	0	0	18	39	
15:15:00	3	1	4	0	1	8	2	9	0	0	1	11	0	1	2	0	5	3	0	18	10	0	3	28	50	
15:30:00	4	3	5	0	1	12	3	11	0	0	3	14	0	1	0	0	5	1	1	14	7	0	3	22	49	
15:45:00	5	2	3	0	8	10	2	14	0	0	2	16	0	0	1	0	19	1	1	15	5	0	2	21	48	186
16:00:00	4	2	4	0	4	10	2	10	1	0	2	13	0	0	3	0	10	3	1	9	5	0	2	15	41	188
16:15:00	3	4	1	0	7	8	1	9	0	0	0	10	0	0	3	0	4	3	3	9	18	0	3	30	51	189
16:30:00	6	3	3	0	7	12	1	11	0	0	0	12	1	0	1	0	3	2	4	13	8	0	0	25	51	191
16:45:00	3	0	3	0	11	6	1	10	0	0	0	11	0	1	2	0	2	3	1	14	7	1	1	23	43	186
17:00:00	3	2	2	0	7	7	3	10	0	0	4	13	0	2	4	0	2	6	2	22	6	0	4	30	56	201
17:15:00	2	0	8	0	10	10	0	6	1	0	0	7	1	2	5	0	4	8	4	29	8	0	3	41	66	216
17:30:00	8	0	2	0	5	10	1	13	1	0	0	15	0	0	1	0	5	1	1	18	13	0	0	32	58	223

17:45:00	5	2	1	0	6	8	1	16	0	0	4	17	1	1	3	0	2	5	4	23	10	0	8	37	67	247
18:00:00	2	0	0	0	1	2	1	18	0	0	4	19	0	1	3	0	3	4	3	13	12	0	6	28	53	244
18:15:00	1	3	5	0	3	9	0	13	1	0	2	14	0	3	4	0	2	7	2	19	7	0	1	28	58	236
18:30:00	4	1	4	0	10	9	3	14	0	0	0	17	0	1	1	0	4	2	1	13	6	0	5	20	48	226
18:45:00	5	4	0	0	9	9	3	11	0	0	2	14	0	3	1	0	3	4	2	10	7	0	4	19	46	205
Grand Total	136	47	103	1	199	287	83	545	9	0	57	637	11	52	78	1	154	142	59	452	250	1	110	762	**1828**	-
Approach%	47.4%	16.4%	35.9%	0.3%		-	13%	85.6%	1.4%	0%		-	7.7%	36.6%	54.9%	0.7%		-	7.7%	59.3%	32.8%	0.1%		-	**-**	-
Totals %	7.4%	2.6%	5.6%	0.1%		15.7%	4.5%	29.8%	0.5%	0%		34.8%	0.6%	2.8%	4.3%	0.1%		7.8%	3.2%	24.7%	13.7%	0.1%		41.7%	**-**	-
Heavy	6	0	0	0		-	5	26	0	0		-	1	0	1	0		-	2	6	12	0		-	**-**	-
Heavy %	4.4%	0%	0%	0%		-	6%	4.8%	0%	0%		-	9.1%	0%	1.3%	0%		-	3.4%	1.3%	4.8%	0%		-	**-**	-
Bicycles	0	0	1	0		-	1	7	0	0		-	0	0	1	0		-	0	7	0	0		-	**-**	-
Bicycle %	0%	0%	1%	0%		-	1.2%	1.3%	0%	0%		-	0%	0%	1.3%	0%		-	0%	1.5%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: POPPY DR E & HAWKINS DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 07:45 AM - 08:45 AM Weather: Mist (3.59 °C)

Start Time	N Approach HAWKINS DR						E Approach POPPY DR E						S Approach HAWKINS DR						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
07:45:00	6	0	3	0	0	9	0	20	1	0	1	21	0	2	3	0	1	5	0	3	6	0	2	9	44
08:00:00	2	0	1	0	15	3	1	18	0	0	3	19	0	2	2	0	4	4	0	2	7	0	9	9	35
08:15:00	2	1	0	1	5	4	3	21	0	0	6	24	0	2	2	0	10	4	1	4	5	0	5	10	42
08:30:00	3	0	3	0	3	6	3	15	1	0	3	19	1	3	3	0	0	7	0	12	6	0	0	18	50
Grand Total	13	1	7	1	23	22	7	74	2	0	13	83	1	9	10	0	15	20	1	21	24	0	16	46	**171**
Approach%	59.1%	4.5%	31.8%	4.5%		-	8.4%	89.2%	2.4%	0%		-	5%	45%	50%	0%		-	2.2%	45.7%	52.2%	0%		-	**-**
Totals %	7.6%	0.6%	4.1%	0.6%		12.9%	4.1%	43.3%	1.2%	0%		48.5%	0.6%	5.3%	5.8%	0%		11.7%	0.6%	12.3%	14%	0%		26.9%	**-**
PHF	0.54	0.25	0.58	0.25		0.61	0.58	0.88	0.5	0		0.86	0.25	0.75	0.83	0		0.71	0.25	0.44	0.86	0		0.64	**-**
Heavy	1	0	0	0		1	0	3	0	0		3	0	0	0	0		0	0	2	3	0		5	**-**
Heavy %	7.7%	0%	0%	0%		4.5%	0%	4.1%	0%	0%		3.6%	0%	0%	0%	0%		0%	0%	9.5%	12.5%	0%		10.9%	**-**
Lights	12	1	7	1		21	7	71	2	0		80	1	9	10	0		20	1	19	21	0		41	**-**
Lights %	92.3%	100%	100%	100%		95.5%	100%	95.9%	100%	0%		96.4%	100%	100%	100%	0%		100%	100%	90.5%	87.5%	0%		89.1%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	1	0	0		1	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	4.8%	0%	0%		2.2%	**-**
Buses	1	0	0	0		1	0	3	0	0		3	0	0	0	0		0	0	1	3	0		4	**-**
Buses %	7.7%	0%	0%	0%		4.5%	0%	4.1%	0%	0%		3.6%	0%	0%	0%	0%		0%	0%	4.8%	12.5%	0%		8.7%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	22	-	-	-	-	-	13	-	-	-	-	-	15	-	-	-	-	-	16	-	**-**
Pedestrians%	-	-	-	-	32.8%		-	-	-	-	19.4%		-	-	-	-	22.4%		-	-	-	-	23.9%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.5%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: POPPY DR E & HAWKINS DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 11:30 AM - 12:30 PM Weather:

Start Time	N Approach HAWKINS DR						E Approach POPPY DR E						S Approach HAWKINS DR						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
11:30:00	5	0	3	0	2	8	2	11	0	0	0	13	0	0	3	0	1	3	0	10	7	0	0	17	41
11:45:00	3	1	0	0	1	4	2	5	0	0	0	7	0	2	2	0	2	4	4	7	3	0	0	14	29
12:00:00	1	1	2	0	4	4	2	8	0	0	0	10	0	1	2	0	1	3	2	9	1	0	3	12	29
12:15:00	4	0	3	0	2	7	3	9	0	0	1	12	1	0	0	0	1	1	0	13	6	0	3	19	39
Grand Total	13	2	8	0	9	23	9	33	0	0	1	42	1	3	7	0	5	11	6	39	17	0	6	62	**138**
Approach%	56.5%	8.7%	34.8%	0%		-	21.4%	78.6%	0%	0%		-	9.1%	27.3%	63.6%	0%		-	9.7%	62.9%	27.4%	0%		-	**-**
Totals %	9.4%	1.4%	5.8%	0%		16.7%	6.5%	23.9%	0%	0%		30.4%	0.7%	2.2%	5.1%	0%		8%	4.3%	28.3%	12.3%	0%		44.9%	**-**
PHF	0.65	0.5	0.67	0		0.72	0.75	0.75	0	0		0.81	0.25	0.38	0.58	0		0.69	0.38	0.75	0.61	0		0.82	**-**
Heavy	0	0	0	0		0	0	3	0	0		3	1	0	1	0		2	2	2	0	0		4	**-**
Heavy %	0%	0%	0%	0%		0%	0%	9.1%	0%	0%		7.1%	100%	0%	14.3%	0%		18.2%	33.3%	5.1%	0%	0%		6.5%	**-**
Lights	13	2	8	0		23	9	30	0	0		39	0	3	6	0		9	4	37	17	0		58	**-**
Lights %	100%	100%	100%	0%		100%	100%	90.9%	0%	0%		92.9%	0%	100%	85.7%	0%		81.8%	66.7%	94.9%	100%	0%		93.5%	**-**
Single-Unit Trucks	0	0	0	0		0	0	1	0	0		1	1	0	1	0		2	2	2	0	0		4	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	3%	0%	0%		2.4%	100%	0%	14.3%	0%		18.2%	33.3%	5.1%	0%	0%		6.5%	**-**
Buses	0	0	0	0		0	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	6.1%	0%	0%		4.8%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	8	-	-	-	-	-	1	-	-	-	-	-	5	-	-	-	-	-	6	-	**-**
Pedestrians%	-	-	-	-	38.1%		-	-	-	-	4.8%		-	-	-	-	23.8%		-	-	-	-	28.6%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	4.8%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: POPPY DR E & HAWKINS DR
Date: Wed, Sep 20, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 05:00 PM - 06:00 PM Weather: Clear Sky (20.05 °C)

Start Time	N Approach HAWKINS DR						E Approach POPPY DR E						S Approach HAWKINS DR						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
17:00:00	3	2	2	0	7	7	3	10	0	0	4	13	0	2	4	0	2	6	2	22	6	0	4	30	56
17:15:00	2	0	8	0	10	10	0	6	1	0	0	7	1	2	5	0	4	8	4	29	8	0	3	41	66
17:30:00	8	0	2	0	5	10	1	13	1	0	0	15	0	0	1	0	5	1	1	18	13	0	0	32	58
17:45:00	5	2	1	0	6	8	1	16	0	0	4	17	1	1	3	0	2	5	4	23	10	0	8	37	67
Grand Total	18	4	13	0	28	35	5	45	2	0	8	52	2	5	13	0	13	20	11	92	37	0	15	140	**247**
Approach%	51.4%	11.4%	37.1%	0%		-	9.6%	86.5%	3.8%	0%		-	10%	25%	65%	0%		-	7.9%	65.7%	26.4%	0%		-	**-**
Totals %	7.3%	1.6%	5.3%	0%		14.2%	2%	18.2%	0.8%	0%		21.1%	0.8%	2%	5.3%	0%		8.1%	4.5%	37.2%	15%	0%		56.7%	**-**
PHF	0.56	0.5	0.41	0		0.88	0.42	0.7	0.5	0		0.76	0.5	0.63	0.65	0		0.63	0.69	0.79	0.71	0		0.85	**-**
Heavy	1	0	0	0		1	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	5.6%	0%	0%	0%		2.9%	0%	2.2%	0%	0%		1.9%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	17	4	13	0		34	5	44	2	0		51	2	5	13	0		20	11	92	37	0		140	**-**
Lights %	94.4%	100%	100%	0%		97.1%	100%	97.8%	100%	0%		98.1%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	5.6%	0%	0%	0%		2.9%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	0%	0%	0%	0%		0%	0%	2.2%	0%	0%		1.9%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	14	-	-	-	-	-	8	-	-	-	-	-	13	-	-	-	-	-	15	-	**-**
Pedestrians%	-	-	-	-	21.9%		-	-	-	-	12.5%		-	-	-	-	20.3%		-	-	-	-	23.4%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Crosswalk	-	-	-	-	14	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	21.9%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 07:45 AM - 08:45 AM **Weather: Mist (3.59 °C)**

Peak Hour: 11:30 AM - 12:30 PM **Weather:**

	Bicycles on Crosswalk	Pedestrians
N	1	8
S	0	5
E	0	1
W	0	6

Peak Hour: 05:00 PM - 06:00 PM **Weather: Clear Sky (20.05 °C)**

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & FARLEY DR
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (2 . CLAIR RD E & FARLEY DR)

Start Time	N Approach FARLEY DRIVE						E Approach CLAIR ROAD						S Approach PLAZA DRIVEWAY						W Approach CLAIR ROAD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	35	9	10	0	5	54	12	74	9	0	0	95	2	18	10	0	0	30	11	55	26	0	1	92	271	
10:15:00	22	11	12	0	2	45	18	69	6	0	2	93	5	19	17	0	0	41	25	44	23	0	1	92	271	
10:30:00	40	13	18	0	0	71	16	83	5	0	0	104	5	17	21	0	0	43	25	55	21	0	1	101	319	
10:45:00	34	13	13	0	2	60	22	69	5	0	4	96	7	16	33	0	0	56	38	64	25	0	1	127	339	1200
11:00:00	34	12	24	0	2	70	8	60	7	0	1	75	6	21	19	0	1	46	27	62	32	0	1	121	312	1241
11:15:00	31	24	12	1	0	68	8	74	7	0	3	89	4	27	22	0	0	53	30	50	28	0	4	108	318	1288
11:30:00	33	9	17	1	3	60	14	79	6	0	3	99	10	15	28	0	2	53	35	74	26	0	2	135	347	1316
11:45:00	30	27	12	0	1	69	11	77	10	0	2	98	8	18	39	0	5	65	42	58	22	0	4	122	354	1331
12:00:00	31	24	18	0	1	73	14	77	12	0	3	103	9	10	31	0	2	50	43	64	32	0	6	139	365	1384
12:15:00	30	20	11	0	0	61	14	78	16	0	2	108	4	19	20	0	2	43	33	81	22	0	4	136	348	1414
12:30:00	36	18	17	0	0	71	12	83	5	0	1	100	13	22	31	0	5	66	36	76	26	1	8	139	376	1443
12:45:00	29	18	18	0	2	65	25	70	10	0	3	105	5	20	22	0	2	47	36	75	36	0	4	147	364	1453
13:00:00	40	22	16	0	5	78	15	73	10	0	2	98	6	25	29	0	4	60	34	65	28	0	9	127	363	1451
13:15:00	27	20	11	0	5	58	14	66	11	0	3	91	7	18	29	0	2	54	31	51	30	0	3	112	315	1418
13:30:00	26	23	17	0	1	66	11	64	13	0	0	88	7	17	32	0	0	56	36	79	23	0	8	138	348	1390
13:45:00	31	18	13	0	2	62	12	76	11	0	4	99	11	23	35	0	0	69	23	69	36	0	0	128	358	1384
14:00:00	27	8	20	0	1	55	15	75	11	0	2	101	6	20	26	1	1	53	31	73	36	0	3	140	349	1370
14:15:00	39	20	13	0	0	72	13	77	9	0	4	99	6	21	25	0	1	52	33	58	21	0	3	112	335	1390
14:30:00	24	17	18	0	1	59	16	68	4	0	3	88	7	13	22	0	2	42	41	82	24	0	6	147	336	1378
14:45:00	38	14	24	0	5	76	15	83	6	0	6	104	7	19	28	0	4	54	35	81	29	0	7	145	379	1399
15:00:00	30	16	16	0	5	62	14	52	12	0	2	78	10	13	23	0	1	46	29	69	24	0	5	122	308	1358
15:15:00	36	19	17	0	3	72	20	75	10	0	5	105	10	16	31	0	1	57	41	80	41	0	3	162	396	1419
15:30:00	36	17	22	1	4	76	18	65	6	0	8	89	9	24	42	0	3	75	45	64	23	0	8	132	372	1455
15:45:00	27	19	24	0	4	70	16	86	7	0	4	109	12	29	26	0	1	67	39	66	30	0	16	135	381	1457
Grand Total	766	411	393	3	54	1573	353	1753	208	0	67	2314	176	460	641	1	39	1278	799	1595	664	1	108	3059	**8224**	-
Approach%	48.7%	26.1%	25%	0.2%		-	15.3%	75.8%	9%	0%		-	13.8%	36%	50.2%	0.1%		-	26.1%	52.1%	21.7%	0%		-	**-**	-
Totals %	9.3%	5%	4.8%	0%		19.1%	4.3%	21.3%	2.5%	0%		28.1%	2.1%	5.6%	7.8%	0%		15.5%	9.7%	19.4%	8.1%	0%		37.2%	**-**	-
Heavy	2	0	1	0		-	0	36	0	0		-	0	0	4	0		-	2	40	5	0		-	**-**	-
Heavy %	0.3%	0%	0.3%	0%		-	0%	2.1%	0%	0%		-	0%	0%	0.6%	0%		-	0.3%	2.5%	0.8%	0%		-	**-**	-
Bicycles	0	0	0	0		-	0	1	0	0		-	0	1	0	0		-	0	0	0	0		-	**-**	-
Bicycle %	0%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0.2%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Spectrum

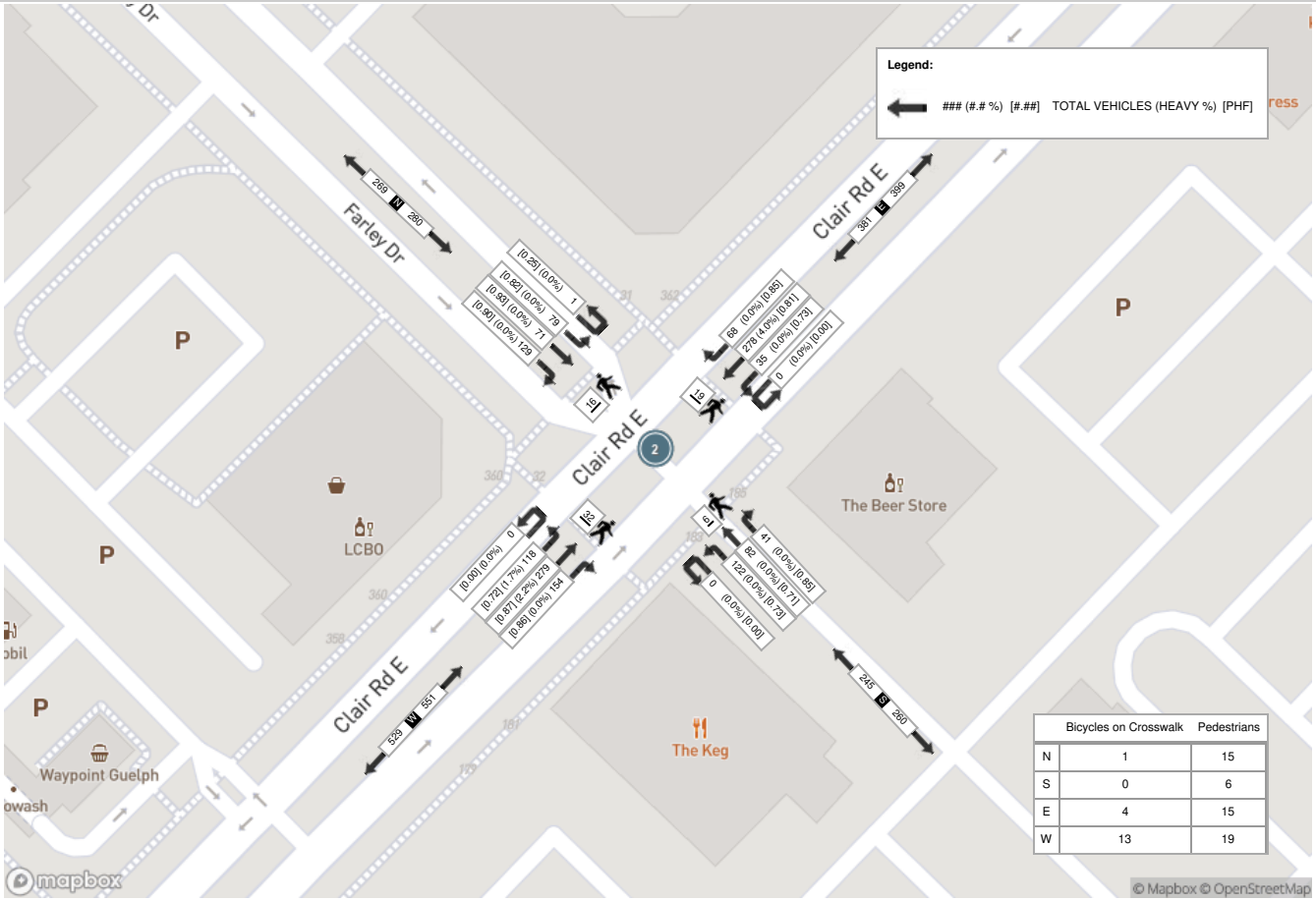
Turning Movement Count
Location Name: CLAIR RD E & FARLEY DR
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach FARLEY DRIVE						E Approach CLAIR ROAD						S Approach PLAZA DRIVEWAY						W Approach CLAIR ROAD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
15:00:00	30	16	16	0	5	62	14	52	12	0	2	78	10	13	23	0	1	46	29	69	24	0	5	122	308
15:15:00	36	19	17	0	3	72	20	75	10	0	5	105	10	16	31	0	1	57	41	80	41	0	3	162	396
15:30:00	36	17	22	1	4	76	18	65	6	0	8	89	9	24	42	0	3	75	45	64	23	0	8	132	372
15:45:00	27	19	24	0	4	70	16	86	7	0	4	109	12	29	26	0	1	67	39	66	30	0	16	135	381
Grand Total	129	71	79	1	16	280	68	278	35	0	19	381	41	82	122	0	6	245	154	279	118	0	32	551	**1457**
Approach%	46.1%	25.4%	28.2%	0.4%		-	17.8%	73%	9.2%	0%		-	16.7%	33.5%	49.8%	0%		-	27.9%	50.6%	21.4%	0%		-	**-**
Totals %	8.9%	4.9%	5.4%	0.1%		19.2%	4.7%	19.1%	2.4%	0%		26.1%	2.8%	5.6%	8.4%	0%		16.8%	10.6%	19.1%	8.1%	0%		37.8%	**-**
PHF	0.9	0.93	0.82	0.25		0.92	0.85	0.81	0.73	0		0.87	0.85	0.71	0.73	0		0.82	0.86	0.87	0.72	0		0.85	**-**
Heavy	0	0	0	0		0	0	11	0	0		11	0	0	0	0		0	0	6	2	0		8	**-**
Heavy %	0%	0%	0%	0%		0%	0%	4%	0%	0%		2.9%	0%	0%	0%	0%		0%	0%	2.2%	1.7%	0%		1.5%	**-**
Lights	129	71	79	1		280	68	267	35	0		370	41	82	122	0		245	154	273	116	0		543	**-**
Lights %	100%	100%	100%	100%		100%	100%	96%	100%	0%		97.1%	100%	100%	100%	0%		100%	100%	97.8%	98.3%	0%		98.5%	**-**
Single-Unit Trucks	0	0	0	0		0	0	3	0	0		3	0	0	0	0		0	0	2	2	0		4	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	1.1%	0%	0%		0.8%	0%	0%	0%	0%		0%	0%	0.7%	1.7%	0%		0.7%	**-**
Buses	0	0	0	0		0	0	4	0	0		4	0	0	0	0		0	0	4	0	0		4	**-**
Buses %	0%	0%	0%	0%		0%	0%	1.4%	0%	0%		1%	0%	0%	0%	0%		0%	0%	1.4%	0%	0%		0.7%	**-**
Articulated Trucks	0	0	0	0		0	0	4	0	0		4	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	1.4%	0%	0%		1%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	15	-	-	-	-	-	15	-	-	-	-	-	6	-	-	-	-	-	19	-	**-**
Pedestrians%	-	-	-	-	20.5%		-	-	-	-	20.5%		-	-	-	-	8.2%		-	-	-	-	26%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	13	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.4%		-	-	-	-	5.5%		-	-	-	-	0%		-	-	-	-	17.8%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)



Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (1 . CLAIR RD E & GORDON ST)

Start Time	N Approach GORDON ST						E Approach CLAIR RD						S Approach GORDON ST						W Approach CLAIR RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	24	76	19	0	4	119	14	71	32	0	3	117	16	80	16	0	0	112	12	65	37	0	1	114	462	
10:15:00	18	74	16	0	4	108	11	81	27	0	0	119	12	81	22	0	4	115	13	65	44	0	3	122	464	
10:30:00	31	84	28	0	1	143	23	80	38	0	1	141	14	90	25	0	2	129	10	68	46	0	1	124	537	
10:45:00	31	104	27	0	6	162	24	86	26	0	0	136	20	87	13	0	0	120	19	81	41	0	3	141	559	2022
11:00:00	19	112	25	0	1	156	20	67	28	0	3	115	25	87	22	0	0	134	13	81	59	0	0	153	558	2118
11:15:00	13	100	31	0	4	144	18	73	39	0	2	130	16	93	31	0	6	140	17	71	55	0	3	143	557	2211
11:30:00	25	97	31	0	11	153	19	76	44	0	10	139	22	94	19	0	3	135	20	87	44	0	3	151	578	2252
11:45:00	24	103	42	0	4	169	22	87	35	0	2	144	9	85	29	0	2	123	12	75	41	0	3	128	564	2257
12:00:00	23	105	40	1	3	169	28	81	35	0	5	144	17	87	22	0	4	126	17	89	57	0	1	163	602	2301
12:15:00	17	116	33	0	5	166	16	79	36	0	2	131	18	90	18	0	5	126	27	92	55	0	2	174	597	2341
12:30:00	27	100	40	0	2	167	24	92	32	0	6	148	19	110	22	0	3	151	13	84	42	0	0	139	605	2368
12:45:00	19	99	41	0	13	159	22	75	38	0	6	135	16	91	28	0	2	135	13	87	48	0	1	148	577	2381
13:00:00	16	107	34	0	10	157	20	75	45	0	5	140	15	101	27	0	1	143	15	78	61	0	5	154	594	2373
13:15:00	21	104	32	0	12	157	22	77	34	0	6	133	15	74	27	0	2	116	22	74	43	0	3	139	545	2321
13:30:00	21	110	35	1	4	167	22	78	27	0	0	127	17	64	21	0	0	102	18	101	42	0	0	161	557	2273
13:45:00	24	115	32	0	11	171	26	85	43	0	6	154	18	93	23	0	1	134	12	89	37	0	10	138	597	2293
14:00:00	27	97	35	0	2	159	22	79	38	0	0	139	21	95	35	0	3	151	18	89	56	1	4	164	613	2312
14:15:00	19	99	35	0	1	153	19	87	46	0	5	152	13	102	26	0	2	141	17	71	46	0	0	134	580	2347
14:30:00	15	101	32	0	5	148	23	59	29	0	4	111	22	103	16	0	1	141	21	102	59	0	2	182	582	2372
14:45:00	19	102	41	1	13	163	21	82	42	0	7	145	19	85	25	0	8	129	21	90	37	0	6	148	585	2360
15:00:00	19	103	35	0	9	157	24	58	38	0	3	120	16	98	23	0	2	137	13	89	41	0	5	143	557	2304
15:15:00	17	112	41	1	8	171	15	71	38	0	5	124	26	96	25	1	12	148	10	101	43	0	7	154	597	2321
15:30:00	10	111	40	0	6	161	35	86	36	0	4	157	16	101	17	0	4	134	18	88	43	0	3	149	601	2340
15:45:00	19	123	37	1	7	180	28	86	35	1	5	150	16	81	25	0	3	122	12	80	37	0	0	129	581	2336
Grand Total	498	2454	802	5	146	3759	518	1871	861	1	90	3251	418	2168	557	1	70	3144	383	1997	1114	1	66	3495	**13649**	-
Approach%	13.2%	65.3%	21.3%	0.1%		-	15.9%	57.6%	26.5%	0%		-	13.3%	69%	17.7%	0%		-	11%	57.1%	31.9%	0%		-	**-**	-
Totals %	3.6%	18%	5.9%	0%		27.5%	3.8%	13.7%	6.3%	0%		23.8%	3.1%	15.9%	4.1%	0%		23%	2.8%	14.6%	8.2%	0%		25.6%	**-**	-
Heavy	20	12	13	0		-	0	14	13	0		-	13	11	27	0		-	1	4	1	0		-	**-**	-
Heavy %	4%	0.5%	1.6%	0%		-	0%	0.7%	1.5%	0%		-	3.1%	0.5%	4.8%	0%		-	0.3%	0.2%	0.1%	0%		-	**-**	-
Bicycles	1	1	0	0		-	0	1	0	0		-	0	3	0	0		-	0	0	0	0		-	**-**	-
Bicycle %	0.2%	0%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0.1%	0%	0%		-	0%	0%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach GORDON ST						E Approach CLAIR RD						S Approach GORDON ST						W Approach CLAIR RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
12:00:00	23	105	40	1	3	169	28	81	35	0	5	144	17	87	22	0	4	126	17	89	57	0	1	163	602
12:15:00	17	116	33	0	5	166	16	79	36	0	2	131	18	90	18	0	5	126	27	92	55	0	2	174	597
12:30:00	27	100	40	0	2	167	24	92	32	0	6	148	19	110	22	0	3	151	13	84	42	0	0	139	605
12:45:00	19	99	41	0	13	159	22	75	38	0	6	135	16	91	28	0	2	135	13	87	48	0	1	148	577
Grand Total	86	420	154	1	23	661	90	327	141	0	19	558	70	378	90	0	14	538	70	352	202	0	4	624	**2381**
Approach%	13%	63.5%	23.3%	0.2%		-	16.1%	58.6%	25.3%	0%		-	13%	70.3%	16.7%	0%		-	11.2%	56.4%	32.4%	0%		-	**-**
Totals %	3.6%	17.6%	6.5%	0%		27.8%	3.8%	13.7%	5.9%	0%		23.4%	2.9%	15.9%	3.8%	0%		22.6%	2.9%	14.8%	8.5%	0%		26.2%	**-**
PHF	0.8	0.91	0.94	0.25		0.98	0.8	0.89	0.93	0		0.94	0.92	0.86	0.8	0		0.89	0.65	0.96	0.89	0		0.9	**-**
Heavy	4	1	2	0		7	0	1	1	0		2	2	1	5	0		8	0	0	0	0		0	**-**
Heavy %	4.7%	0.2%	1.3%	0%		1.1%	0%	0.3%	0.7%	0%		0.4%	2.9%	0.3%	5.6%	0%		1.5%	0%	0%	0%	0%		0%	**-**
Lights	82	419	152	1		654	90	326	140	0		556	68	377	85	0		530	70	352	202	0		624	**-**
Lights %	95.3%	99.8%	98.7%	100%		98.9%	100%	99.7%	99.3%	0%		99.6%	97.1%	99.7%	94.4%	0%		98.5%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	1	0		1	1	0	1	0		2	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0.7%	0%		0.2%	1.4%	0%	1.1%	0%		0.4%	0%	0%	0%	0%		0%	**-**
Buses	4	1	2	0		7	0	1	0	0		1	0	1	4	0		5	0	0	0	0		0	**-**
Buses %	4.7%	0.2%	1.3%	0%		1.1%	0%	0.3%	0%	0%		0.2%	0%	0.3%	4.4%	0%		0.9%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	1	0	0	0		1	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	1.4%	0%	0%	0%		0.2%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	22	-	-	-	-	-	19	-	-	-	-	-	13	-	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	-	36.7%		-	-	-	-	31.7%		-	-	-	-	21.7%		-	-	-	-	5%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1.7%		-	-	-	-	0%		-	-	-	-	1.7%		-	-	-	-	1.7%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: CLAIR RD E & GORDON ST
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Light Rain (8.22 °C)

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (3 . CLAIR RD E & HAWKINS DR)

Start Time	E Approach CLAIR RD					S Approach HAWKINS DR					W Approach CLAIR RD					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
10:00:00	89	12	0	0	101	11	5	0	0	16	5	62	0	0	67	184	
10:15:00	92	12	1	0	105	8	0	0	2	8	4	57	0	0	61	174	
10:30:00	108	7	0	0	115	10	3	0	0	13	3	71	0	0	74	202	
10:45:00	84	15	0	0	99	11	3	0	0	14	4	79	0	0	83	196	756
11:00:00	75	8	0	0	83	14	3	0	0	17	4	85	0	1	89	189	761
11:15:00	86	12	0	0	98	14	3	0	0	17	4	63	0	0	67	182	769
11:30:00	98	8	0	0	106	10	5	0	3	15	6	92	0	1	98	219	786
11:45:00	92	11	0	0	103	6	2	0	0	8	3	74	0	0	77	188	778
12:00:00	100	13	1	0	114	15	3	0	0	18	4	87	0	0	91	223	812
12:15:00	103	12	0	0	115	15	4	0	1	19	5	89	0	0	94	228	858
12:30:00	103	15	0	0	118	14	2	0	0	16	4	101	0	0	105	239	878
12:45:00	94	15	0	0	109	8	8	0	1	16	4	93	0	0	97	222	912
13:00:00	97	10	0	1	107	15	1	0	1	16	2	83	0	0	85	208	897
13:15:00	84	14	0	0	98	15	3	0	0	18	5	64	0	0	69	185	854
13:30:00	85	13	0	0	98	19	2	0	1	21	8	94	0	0	102	221	836
13:45:00	101	16	0	0	117	10	2	0	0	12	4	89	0	0	93	222	836
14:00:00	91	11	0	0	102	15	4	0	0	19	5	96	0	0	101	222	850
14:15:00	96	9	0	0	105	17	6	0	0	23	1	76	0	0	77	205	870
14:30:00	87	14	0	0	101	17	3	0	1	20	5	101	0	0	106	227	876
14:45:00	101	14	0	0	115	12	2	0	2	14	3	107	0	0	110	239	893
15:00:00	73	21	0	0	94	17	6	0	2	23	1	95	0	0	96	213	884
15:15:00	96	15	0	0	111	17	3	0	1	20	7	98	0	0	105	236	915
15:30:00	85	24	0	0	109	22	5	0	1	27	4	88	0	0	92	228	916
15:45:00	102	22	0	0	124	25	4	0	0	29	7	97	0	0	104	257	934
Grand Total	2222	323	2	1	2547	337	82	0	16	419	102	2041	0	2	2143	**5109**	-
Approach%	87.2%	12.7%	0.1%		-	80.4%	19.6%	0%		-	4.8%	95.2%	0%		-	**-**	-
Totals %	43.5%	6.3%	0%		49.9%	6.6%	1.6%	0%		8.2%	2%	39.9%	0%		41.9%	**-**	-
Heavy	23	2	0		-	0	0	0		-	1	31	0		-	**-**	-
Heavy %	1%	0.6%	0%		-	0%	0%	0%		-	1%	1.5%	0%		-	**-**	-
Bicycles	2	0	0		-	0	0	0		-	0	0	0		-	**-**	-
Bicycle %	0.1%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	**-**	-

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Start Time	E Approach CLAIR RD					S Approach HAWKINS DR					W Approach CLAIR RD					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
15:00:00	73	21	0	0	94	17	6	0	2	23	1	95	0	0	96	213
15:15:00	96	15	0	0	111	17	3	0	1	20	7	98	0	0	105	236
15:30:00	85	24	0	0	109	22	5	0	1	27	4	88	0	0	92	228
15:45:00	102	22	0	0	124	25	4	0	0	29	7	97	0	0	104	257
Grand Total	356	82	0	0	438	81	18	0	4	99	19	378	0	0	397	**934**
Approach%	81.3%	18.7%	0%		-	81.8%	18.2%	0%		-	4.8%	95.2%	0%		-	**-**
Totals %	38.1%	8.8%	0%		46.9%	8.7%	1.9%	0%		10.6%	2%	40.5%	0%		42.5%	**-**
PHF	0.87	0.85	0		0.88	0.81	0.75	0		0.85	0.68	0.96	0		0.95	**-**
Heavy	9	2	0		11	0	0	0		0	0	5	0		5	**-**
Heavy %	2.5%	2.4%	0%		2.5%	0%	0%	0%		0%	0%	1.3%	0%		1.3%	**-**
Lights	347	80	0		427	81	18	0		99	19	373	0		392	**-**
Lights %	97.5%	97.6%	0%		97.5%	100%	100%	0%		100%	100%	98.7%	0%		98.7%	**-**
Single-Unit Trucks	5	1	0		6	0	0	0		0	0	1	0		1	**-**
Single-Unit Trucks %	1.4%	1.2%	0%		1.4%	0%	0%	0%		0%	0%	0.3%	0%		0.3%	**-**
Buses	4	1	0		5	0	0	0		0	0	4	0		4	**-**
Buses %	1.1%	1.2%	0%		1.1%	0%	0%	0%		0%	0%	1.1%	0%		1%	**-**
Pedestrians	-	-	-	0	-	-	-	-	4	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	100%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Spectrum

Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (7 . FARLEY DR & NORTH INTERNAL INTERSECTION)

Start Time	N Approach FARLEY DR						E Approach BEER STORE DRIVEWAY						S Approach FARLEY DR						W Approach INTERNAL RD						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	20	4	5	0	0	29	8	3	0	0	0	11	0	7	0	0	1	7	1	3	17	1	0	22	69	
10:15:00	30	4	8	0	0	42	5	4	2	0	0	11	0	7	0	0	0	7	1	3	28	0	1	32	92	
10:30:00	31	3	10	0	1	44	3	2	2	0	3	7	2	8	0	0	0	10	1	3	32	0	2	36	97	
10:45:00	31	8	17	0	0	56	7	6	3	0	2	16	1	16	0	0	1	17	1	1	34	0	1	36	125	383
11:00:00	30	7	9	0	0	46	14	4	3	0	0	21	0	12	0	0	0	12	2	6	18	0	2	26	105	419
11:15:00	44	8	9	0	0	61	11	5	1	0	1	17	3	14	0	0	0	17	1	4	30	0	6	35	130	457
11:30:00	27	10	13	0	3	50	7	4	3	0	1	14	2	16	0	0	1	18	0	3	30	0	3	33	115	475
11:45:00	48	15	16	0	0	79	11	1	1	0	1	13	2	21	0	0	2	23	1	4	33	0	3	38	153	503
12:00:00	41	12	27	0	0	80	11	2	1	0	3	14	1	17	0	0	1	18	0	4	22	0	7	26	138	536
12:15:00	38	14	16	0	2	68	10	4	2	0	3	16	0	7	0	0	0	7	2	3	25	0	1	30	121	527
12:30:00	33	10	16	0	0	59	11	5	3	0	2	19	1	18	0	0	3	19	0	5	38	0	9	43	140	552
12:45:00	32	16	15	0	1	63	12	6	2	0	4	20	1	11	0	0	4	12	3	3	26	0	5	32	127	526
13:00:00	41	14	12	0	1	67	15	6	5	0	2	26	4	17	1	0	0	22	2	3	28	0	5	33	148	536
13:15:00	32	15	15	0	0	62	8	5	1	0	3	14	0	19	1	0	0	20	0	4	26	0	3	30	126	541
13:30:00	46	13	11	0	0	70	13	3	4	0	5	20	2	16	2	0	3	20	1	2	32	0	5	35	145	546
13:45:00	33	11	10	0	0	54	9	7	4	0	4	20	4	13	0	0	4	17	2	4	40	0	2	46	137	556
14:00:00	30	12	13	0	0	55	12	5	1	0	3	18	3	18	0	0	1	21	2	3	31	0	3	36	130	538
14:15:00	33	16	13	0	2	62	13	3	0	0	2	16	0	13	0	0	0	13	1	5	26	0	5	32	123	535
14:30:00	34	11	17	0	2	62	9	3	1	0	5	13	0	10	0	0	0	10	2	4	20	0	4	26	111	501
14:45:00	31	12	11	0	0	54	10	4	4	0	4	18	3	17	0	0	1	20	4	3	27	0	7	34	126	490
15:00:00	29	12	17	0	1	58	16	9	6	0	3	31	4	19	0	0	0	23	1	5	17	0	5	23	135	495
15:15:00	36	17	17	0	3	70	9	3	4	0	8	16	2	15	1	0	3	18	3	9	29	0	3	41	145	517
15:30:00	27	15	25	0	2	67	19	8	4	0	7	31	2	28	0	0	2	30	1	3	33	0	11	37	165	571
15:45:00	30	16	19	0	1	65	23	6	4	0	1	33	3	10	0	0	7	13	0	5	31	0	16	36	147	592
Grand Total	807	275	341	0	19	1423	266	108	61	0	67	435	40	349	5	0	34	394	32	92	673	1	109	798	**3050**	-
Approach%	56.7%	19.3%	24%	0%		-	61.1%	24.8%	14%	0%		-	10.2%	88.6%	1.3%	0%		-	4%	11.5%	84.3%	0.1%		-	**-**	-
Totals %	26.5%	9%	11.2%	0%		46.7%	8.7%	3.5%	2%	0%		14.3%	1.3%	11.4%	0.2%	0%		12.9%	1%	3%	22.1%	0%		26.2%	**-**	-
Heavy	1	1	0	0		-	2	0	0	0		-	0	0	0	0		-	0	0	1	0		-	**-**	-
Heavy %	0.1%	0.4%	0%	0%		-	0.8%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0.1%	0%		-	**-**	-
Bicycles	0	1	0	0		-	0	0	0	0		-	0	1	0	0		-	0	1	0	0		-	**-**	-
Bicycle %	0%	0.4%	0%	0%		-	0%	0%	0%	0%		-	0%	0.3%	0%	0%		-	0%	1.1%	0%	0%		-	**-**	-

Spectrum

Turning Movement Count
Location Name: FARLEY DR & NORTH INTERNAL INTERSECTION
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach FARLEY DR						E Approach BEER STORE DRIVEWAY						S Approach FARLEY DR						W Approach INTERNAL RD						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
15:00:00	29	12	17	0	1	58	16	9	6	0	3	31	4	19	0	0	0	23	1	5	17	0	5	23	135
15:15:00	36	17	17	0	3	70	9	3	4	0	8	16	2	15	1	0	3	18	3	9	29	0	3	41	145
15:30:00	27	15	25	0	2	67	19	8	4	0	7	31	2	28	0	0	2	30	1	3	33	0	11	37	165
15:45:00	30	16	19	0	1	65	23	6	4	0	1	33	3	10	0	0	7	13	0	5	31	0	16	36	147
Grand Total	122	60	78	0	7	260	67	26	18	0	19	111	11	72	1	0	12	84	5	22	110	0	35	137	**592**
Approach%	46.9%	23.1%	30%	0%		-	60.4%	23.4%	16.2%	0%		-	13.1%	85.7%	1.2%	0%		-	3.6%	16.1%	80.3%	0%		-	**-**
Totals %	20.6%	10.1%	13.2%	0%		43.9%	11.3%	4.4%	3%	0%		18.8%	1.9%	12.2%	0.2%	0%		14.2%	0.8%	3.7%	18.6%	0%		23.1%	**-**
PHF	0.85	0.88	0.78	0		0.93	0.73	0.72	0.75	0		0.84	0.69	0.64	0.25	0		0.7	0.42	0.61	0.83	0		0.84	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	122	60	78	0		260	67	26	18	0		111	11	72	1	0		84	5	22	110	0		137	**-**
Lights %	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	7	-	-	-	-	-	15	-	-	-	-	-	8	-	-	-	-	-	20	-	**-**
Pedestrians%	-	-	-	-	9.6%		-	-	-	-	20.5%		-	-	-	-	11%		-	-	-	-	27.4%		**-**
Bicycles on Crosswalk	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	4	-	-	-	-	-	15	-	**-**
Bicycles on Crosswalk%	-	-	-	-	0%		-	-	-	-	5.5%		-	-	-	-	5.5%		-	-	-	-	20.5%		**-**
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Peak Hour: 03:00 PM - 04:00 PM **Weather: Light Rain (8.22 °C)**

Spectrum

Turning Movement Count
Location Name: FARLEY DR & SOUTH INTERNAL INTERSECTION
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (8 . FARLEY DR & SOUTH INTERNAL INTERSECTION)

Start Time	N Approach FARLEY DR						E Approach SOUTH INTERNAL INTERSECTION						S Approach FARLEY DR						W Approach SOUTH INTERNAL INTERSECTION						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	3	2	1	0	3	6	1	0	0	0	1	1	1	1	2	0	4	4	1	3	3	0	8	7	18	
10:15:00	1	3	3	0	2	7	1	1	2	0	1	4	1	1	2	0	5	4	1	0	5	0	7	6	21	
10:30:00	1	2	2	0	1	5	1	0	5	0	3	6	2	2	0	0	18	4	3	0	6	0	6	9	24	
10:45:00	5	6	1	1	2	13	6	1	3	0	0	10	1	4	2	1	14	8	2	1	7	0	9	10	41	104
11:00:00	2	6	3	0	0	11	2	0	1	0	0	3	2	4	4	0	11	10	1	3	7	0	5	11	35	121
11:15:00	5	5	1	0	1	11	3	0	0	0	0	3	2	6	2	0	6	10	4	1	7	0	9	12	36	136
11:30:00	5	3	5	0	1	13	4	0	2	0	0	6	2	4	1	0	10	7	2	1	8	0	13	11	37	149
11:45:00	4	6	6	0	2	16	10	0	1	0	0	11	1	6	0	0	17	7	5	2	9	0	16	16	50	158
12:00:00	1	4	8	0	4	13	2	0	3	0	1	5	6	3	0	0	7	9	4	2	13	0	9	19	46	169
12:15:00	4	3	8	0	1	15	5	1	2	0	1	8	7	1	1	0	9	9	4	0	1	0	10	5	37	170
12:30:00	2	5	8	0	4	15	11	3	8	0	1	22	5	2	1	0	10	8	1	1	6	0	11	8	53	186
12:45:00	5	5	11	1	1	22	5	1	1	0	3	7	1	2	3	0	16	6	3	6	4	0	9	13	48	184
13:00:00	3	7	11	0	1	21	5	2	3	0	4	10	4	5	2	0	6	11	1	4	13	0	7	18	60	198
13:15:00	5	2	9	0	2	16	5	3	1	0	0	9	3	1	0	0	13	4	5	3	14	1	4	23	52	213
13:30:00	5	3	9	0	3	17	5	1	2	0	0	8	4	5	2	0	10	11	2	1	9	0	4	12	48	208
13:45:00	6	7	5	0	5	18	4	0	2	0	2	6	3	6	1	0	13	10	2	2	7	0	3	11	45	205
14:00:00	1	5	8	1	4	15	5	2	0	0	0	7	2	1	3	0	11	6	2	2	12	0	11	16	44	189
14:15:00	4	5	7	0	0	16	5	0	4	0	0	9	2	2	2	0	9	6	3	1	5	0	10	9	40	177
14:30:00	5	6	3	0	3	14	3	3	1	0	4	7	1	1	2	1	10	5	2	4	6	0	8	12	38	167
14:45:00	9	5	6	0	0	20	4	1	3	0	3	8	1	6	1	0	4	8	5	0	10	0	16	15	51	173
15:00:00	4	5	8	0	0	17	6	0	2	0	1	8	4	5	3	0	14	12	5	1	11	0	9	17	54	183
15:15:00	7	7	11	0	3	25	4	1	2	0	1	7	4	3	1	0	6	8	3	4	12	0	7	19	59	202
15:30:00	4	8	9	0	2	21	19	2	3	0	3	24	9	4	0	0	25	13	2	5	7	0	11	14	72	236
15:45:00	3	6	12	0	2	21	4	3	3	0	1	10	2	2	2	0	8	6	1	4	6	0	15	11	48	233
Grand Total	94	116	155	3	47	368	120	25	54	0	30	199	70	77	37	2	256	186	64	51	188	1	217	304	**1057**	-
Approach%	25.5%	31.5%	42.1%	0.8%		-	60.3%	12.6%	27.1%	0%		-	37.6%	41.4%	19.9%	1.1%		-	21.1%	16.8%	61.8%	0.3%		-	-	-
Totals %	8.9%	11%	14.7%	0.3%		34.8%	11.4%	2.4%	5.1%	0%		18.8%	6.6%	7.3%	3.5%	0.2%		17.6%	6.1%	4.8%	17.8%	0.1%		28.8%	-	-
Heavy	0	0	1	0		-	0	0	1	0		-	0	0	0	0		-	0	0	0	0		-	-	-
Heavy %	0%	0%	0.6%	0%		-	0%	0%	1.9%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-
Bicycles	4	0	0	0		-	0	0	0	0		-	0	0	1	0		-	0	0	0	0		-	-	-
Bicycle %	4.3%	0%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	2.7%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: FARLEY DR & SOUTH INTERNAL INTERSECTION
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 02:45 PM - 03:45 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach FARLEY DR						E Approach SOUTH INTERNAL INTERSECTION						S Approach FARLEY DR						W Approach SOUTH INTERNAL INTERSECTION						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
14:45:00	9	5	6	0	0	20	4	1	3	0	3	8	1	6	1	0	4	8	5	0	10	0	16	15	51
15:00:00	4	5	8	0	0	17	6	0	2	0	1	8	4	5	3	0	14	12	5	1	11	0	9	17	54
15:15:00	7	7	11	0	3	25	4	1	2	0	1	7	4	3	1	0	6	8	3	4	12	0	7	19	59
15:30:00	4	8	9	0	2	21	19	2	3	0	3	24	9	4	0	0	25	13	2	5	7	0	11	14	72
Grand Total	24	25	34	0	5	83	33	4	10	0	8	47	18	18	5	0	49	41	15	10	40	0	43	65	**236**
Approach%	28.9%	30.1%	41%	0%		-	70.2%	8.5%	21.3%	0%		-	43.9%	43.9%	12.2%	0%		-	23.1%	15.4%	61.5%	0%		-	**-**
Totals %	10.2%	10.6%	14.4%	0%		35.2%	14%	1.7%	4.2%	0%		19.9%	7.6%	7.6%	2.1%	0%		17.4%	6.4%	4.2%	16.9%	0%		27.5%	**-**
PHF	0.67	0.78	0.77	0		0.83	0.43	0.5	0.83	0		0.49	0.5	0.75	0.42	0		0.79	0.75	0.5	0.83	0		0.86	**-**
Heavy	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	24	25	34	0		83	33	4	10	0		47	18	18	5	0		41	15	10	40	0		65	**-**
Lights %	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	4	-	-	-	-	-	8	-	-	-	-	-	49	-	-	-	-	-	39	-	**-**
Pedestrians%	-	-	-	-	3.8%		-	-	-	-	7.6%		-	-	-	-	46.7%		-	-	-	-	37.1%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	4	-	**-**
Bicycles on Crosswalk%	-	-	-	-	1%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	3.8%		**-**
Bicycles on Road	3	0	0	0	0	-	0	0	0	0	0	-	0	0	1	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 02:45 PM - 03:45 PM **Weather: Light Rain (8.22 °C)**

	Bicycles on Crosswalk	Pedestrians
N	1	4
S	0	49
E	0	8
W	4	39

Spectrum

Turning Movement Count
Location Name: HAWKINS DR & NORTH INTERNAL RD
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (9 . HAWKINS DR & NORTH INTERNAL RD)

Start Time	N Approach HAWKINS DR					S Approach HAWKINS DR					W Approach NORTH INTERNAL RD					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	UTurn N:N	Peds N:	Approach Total	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	7	9	0	0	16	8	1	0	0	9	0	8	0	1	8	33	
10:15:00	7	8	0	0	15	4	0	0	0	4	0	4	0	1	4	23	
10:30:00	5	7	0	0	12	4	1	0	0	5	1	9	0	0	10	27	
10:45:00	13	7	0	0	20	5	0	0	0	5	0	8	0	0	8	33	116
11:00:00	7	6	0	0	13	4	0	0	0	4	1	12	0	0	13	30	113
11:15:00	13	3	0	0	16	7	0	0	0	7	0	11	0	0	11	34	124
11:30:00	9	5	0	0	14	7	1	0	0	8	0	9	0	0	9	31	128
11:45:00	10	3	0	0	13	1	0	0	0	1	0	7	0	2	7	21	116
12:00:00	15	4	0	0	19	7	0	0	0	7	1	11	0	0	12	38	124
12:15:00	11	6	0	0	17	10	0	0	0	10	0	8	0	0	8	35	125
12:30:00	11	7	0	0	18	5	1	0	0	6	1	10	0	4	11	35	129
12:45:00	16	5	0	0	21	7	0	0	0	7	2	8	0	4	10	38	146
13:00:00	10	3	0	0	13	6	1	0	0	7	3	13	0	0	16	36	144
13:15:00	10	8	0	0	18	8	0	0	0	8	1	12	0	1	13	39	148
13:30:00	16	6	0	0	22	8	1	0	0	9	0	13	0	0	13	44	157
13:45:00	14	6	0	0	20	4	0	0	0	4	2	9	0	1	11	35	154
14:00:00	11	5	0	0	16	3	1	0	0	4	1	15	0	0	16	36	154
14:15:00	6	3	0	0	9	6	0	0	0	6	2	17	0	0	19	34	149
14:30:00	10	8	0	0	18	5	1	0	0	6	0	16	0	0	16	40	145
14:45:00	14	4	0	0	18	1	1	1	0	3	0	16	0	0	16	37	147
15:00:00	18	5	0	0	23	9	1	0	0	10	0	14	0	0	14	47	158
15:15:00	16	5	0	0	21	7	0	0	0	7	2	13	0	0	15	43	167
15:30:00	23	5	0	0	28	7	1	0	0	8	0	21	0	0	21	57	184
15:45:00	23	8	0	0	31	8	2	0	0	10	2	22	0	0	24	65	212
Grand Total	295	136	0	0	431	141	13	1	0	155	19	286	0	14	305	**891**	-
Approach%	68.4%	31.6%	0%		-	91%	8.4%	0.6%		-	6.2%	93.8%	0%		-	**-**	-
Totals %	33.1%	15.3%	0%		48.4%	15.8%	1.5%	0.1%		17.4%	2.1%	32.1%	0%		34.2%	**-**	-
Heavy	0	1	0		-	0	0	0		-	1	0	0		-	**-**	-
Heavy %	0%	0.7%	0%		-	0%	0%	0%		-	5.3%	0%	0%		-	**-**	-
Bicycles	0	0	0		-	1	0	0		-	0	2	0		-	**-**	-
Bicycle %	0%	0%	0%		-	0.7%	0%	0%		-	0%	0.7%	0%		-	**-**	-

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach HAWKINS DR					S Approach HAWKINS DR					W Approach NORTH INTERNAL RD					Int. Total (15 min)
	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	
15:00:00	18	5	0	0	23	9	1	0	0	10	0	14	0	0	14	47
15:15:00	16	5	0	0	21	7	0	0	0	7	2	13	0	0	15	43
15:30:00	23	5	0	0	28	7	1	0	0	8	0	21	0	0	21	57
15:45:00	23	8	0	0	31	8	2	0	0	10	2	22	0	0	24	65
Grand Total	80	23	0	0	103	31	4	0	0	35	4	70	0	0	74	**212**
Approach%	77.7%	22.3%	0%		-	88.6%	11.4%	0%		-	5.4%	94.6%	0%		-	**-**
Totals %	37.7%	10.8%	0%		48.6%	14.6%	1.9%	0%		16.5%	1.9%	33%	0%		34.9%	**-**
PHF	0.87	0.72	0		0.83	0.86	0.5	0		0.88	0.5	0.8	0		0.77	**-**
Heavy	0	1	0		1	0	0	0		0	0	0	0		0	**-**
Heavy %	0%	4.3%	0%		1%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Lights	80	22	0		102	31	4	0		35	4	70	0		74	**-**
Lights %	100%	95.7%	0%		99%	100%	100%	0%		100%	100%	100%	0%		100%	**-**
Single-Unit Trucks	0	1	0		1	0	0	0		0	0	0	0		0	**-**
Single-Unit Trucks %	0%	4.3%	0%		1%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Spectrum

Turning Movement Count
Location Name: POPPY DR E & 1888 GORDON ST (ACCESS)
Date: Sat, Nov 04, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (1 . POPPY DR E & 1888 GORDON ST (ACCESS))

Start Time	E Approach POPPY DR E					S Approach 1888 GORDON ST (ACCESS)					W Approach POPPY DR E					Int. Total (15 min)	Int. Total (1 hr)
	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	UTurn W:W	Peds W:	Approach Total		
12:00:00	19	3	1	3	23	1	6	0	0	7	7	9	0	0	16	46	
12:15:00	14	1	0	2	15	5	5	0	1	10	7	20	0	2	27	52	
12:30:00	16	1	0	0	17	4	9	0	0	13	0	14	0	1	14	44	
12:45:00	14	0	0	1	14	3	1	0	0	4	4	17	0	0	21	39	181
13:00:00	16	2	0	0	18	3	5	0	0	8	7	10	1	0	18	44	179
13:15:00	13	2	0	2	15	0	4	0	0	4	4	13	0	0	17	36	163
13:30:00	10	2	0	0	12	0	5	0	0	5	0	19	0	0	19	36	155
13:45:00	14	2	0	2	16	5	5	0	0	10	4	17	0	0	21	47	163
14:00:00	12	1	0	2	13	1	4	0	3	5	6	15	0	4	21	39	158
14:15:00	11	5	0	0	16	1	4	0	0	5	5	14	0	0	19	40	162
14:30:00	9	3	0	0	12	3	2	0	0	5	5	18	0	0	23	40	166
14:45:00	18	1	0	3	19	0	3	0	0	3	3	11	0	0	14	36	155
15:00:00	9	4	0	0	13	0	1	0	0	1	6	15	0	0	21	35	151
15:15:00	12	2	0	2	14	0	5	0	0	5	8	19	0	0	27	46	157
15:30:00	16	3	0	1	19	2	1	0	0	3	7	9	0	0	16	38	155
15:45:00	19	1	0	0	20	1	7	0	0	8	4	19	0	0	23	51	170
Grand Total	222	33	1	18	256	29	67	0	4	96	77	239	1	7	317	**669**	-
Approach%	86.7%	12.9%	0.4%		-	30.2%	69.8%	0%		-	24.3%	75.4%	0.3%		-	**-**	-
Totals %	33.2%	4.9%	0.1%		38.3%	4.3%	10%	0%		14.3%	11.5%	35.7%	0.1%		47.4%	**-**	-
Heavy	9	0	0		-	0	1	0		-	0	1	0		-	**-**	-
Heavy %	4.1%	0%	0%		-	0%	1.5%	0%		-	0%	0.4%	0%		-	**-**	-
Bicycles	5	0	0		-	0	0	0		-	0	0	0		-	**-**	-
Bicycle %	2.3%	0%	0%		-	0%	0%	0%		-	0%	0%	0%		-	**-**	-

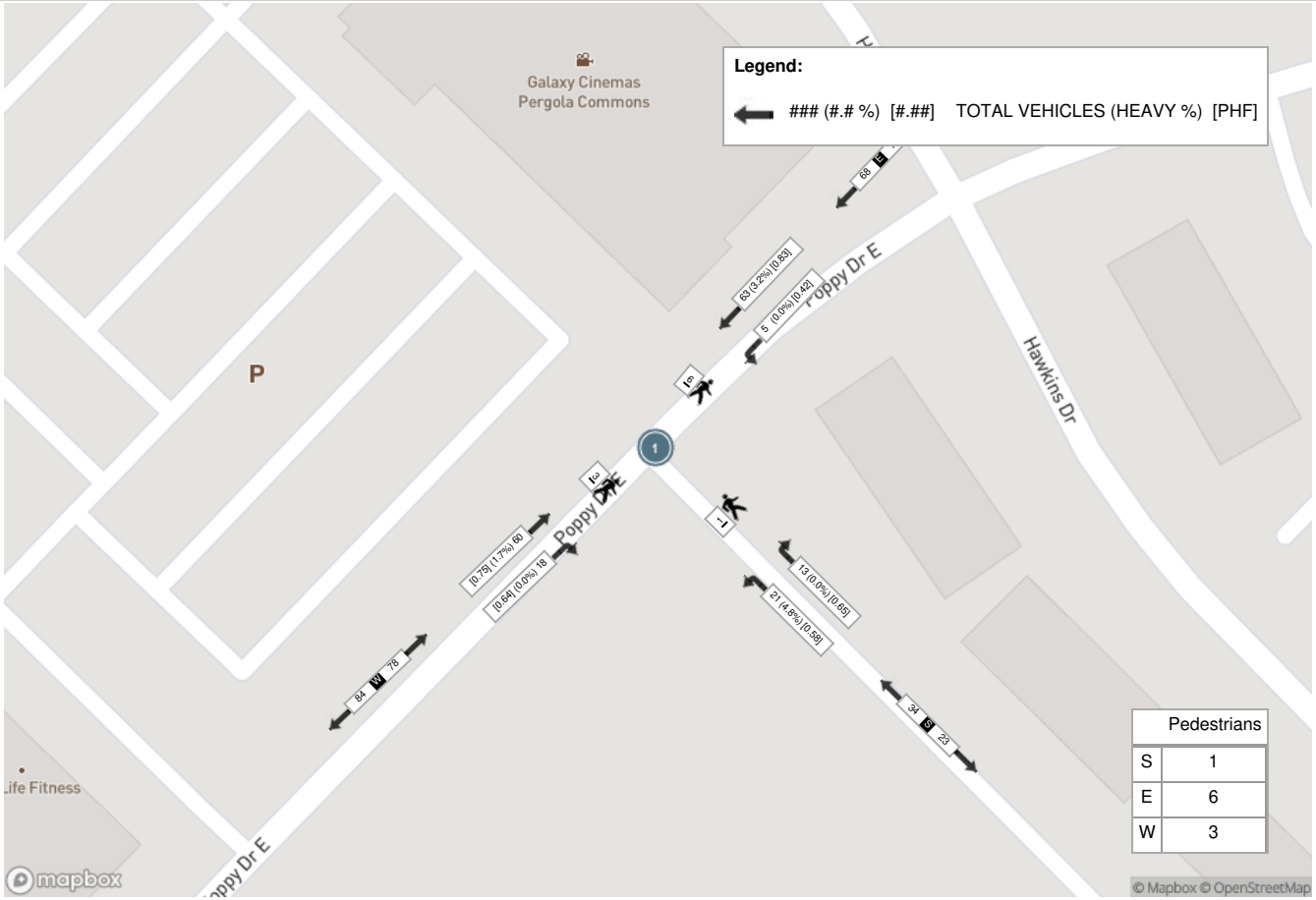
BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (8.61 °C)

Start Time	E Approach POPPY DR E					S Approach 1888 GORDON ST (ACCESS)					W Approach POPPY DR E					Int. Total (15 min)
	Thru	Left	UTurn	Peds	Approach Total	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	
12:00:00	19	3	1	3	23	1	6	0	0	7	7	9	0	0	16	46
12:15:00	14	1	0	2	15	5	5	0	1	10	7	20	0	2	27	52
12:30:00	16	1	0	0	17	4	9	0	0	13	0	14	0	1	14	44
12:45:00	14	0	0	1	14	3	1	0	0	4	4	17	0	0	21	39
Grand Total	63	5	1	6	69	13	21	0	1	34	18	60	0	3	78	**181**
Approach%	91.3%	7.2%	1.4%		-	38.2%	61.8%	0%		-	23.1%	76.9%	0%		-	**-**
Totals %	34.8%	2.8%	0.6%		38.1%	7.2%	11.6%	0%		18.8%	9.9%	33.1%	0%		43.1%	**-**
PHF	0.83	0.42	0.25		0.75	0.65	0.58	0		0.65	0.64	0.75	0		0.72	**-**
Heavy	2	0	0		2	0	1	0		1	0	1	0		1	**-**
Heavy %	3.2%	0%	0%		2.9%	0%	4.8%	0%		2.9%	0%	1.7%	0%		1.3%	**-**
Lights	61	5	1		67	13	20	0		33	18	59	0		77	**-**
Lights %	96.8%	100%	100%		97.1%	100%	95.2%	0%		97.1%	100%	98.3%	0%		98.7%	**-**
Single-Unit Trucks	0	0	0		0	0	1	0		1	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%		0%	0%	4.8%	0%		2.9%	0%	0%	0%		0%	**-**
Buses	2	0	0		2	0	0	0		0	0	0	0		0	**-**
Buses %	3.2%	0%	0%		2.9%	0%	0%	0%		0%	0%	0%	0%		0%	**-**
Articulated Trucks	0	0	0		0	0	0	0		0	0	1	0		1	**-**
Articulated Trucks %	0%	0%	0%		0%	0%	0%	0%		0%	0%	1.7%	0%		1.3%	**-**
Pedestrians	-	-	-	6	-	-	-	-	1	-	-	-	-	3	-	**-**
Pedestrians%	-	-	-	60%		-	-	-	10%		-	-	-	30%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 12:00 PM - 01:00 PM Weather: Overcast Clouds (8.61 °C)



	Pedestrians
S	1
E	6
W	3

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (5 . POPPY DR E & FARLEY DR)

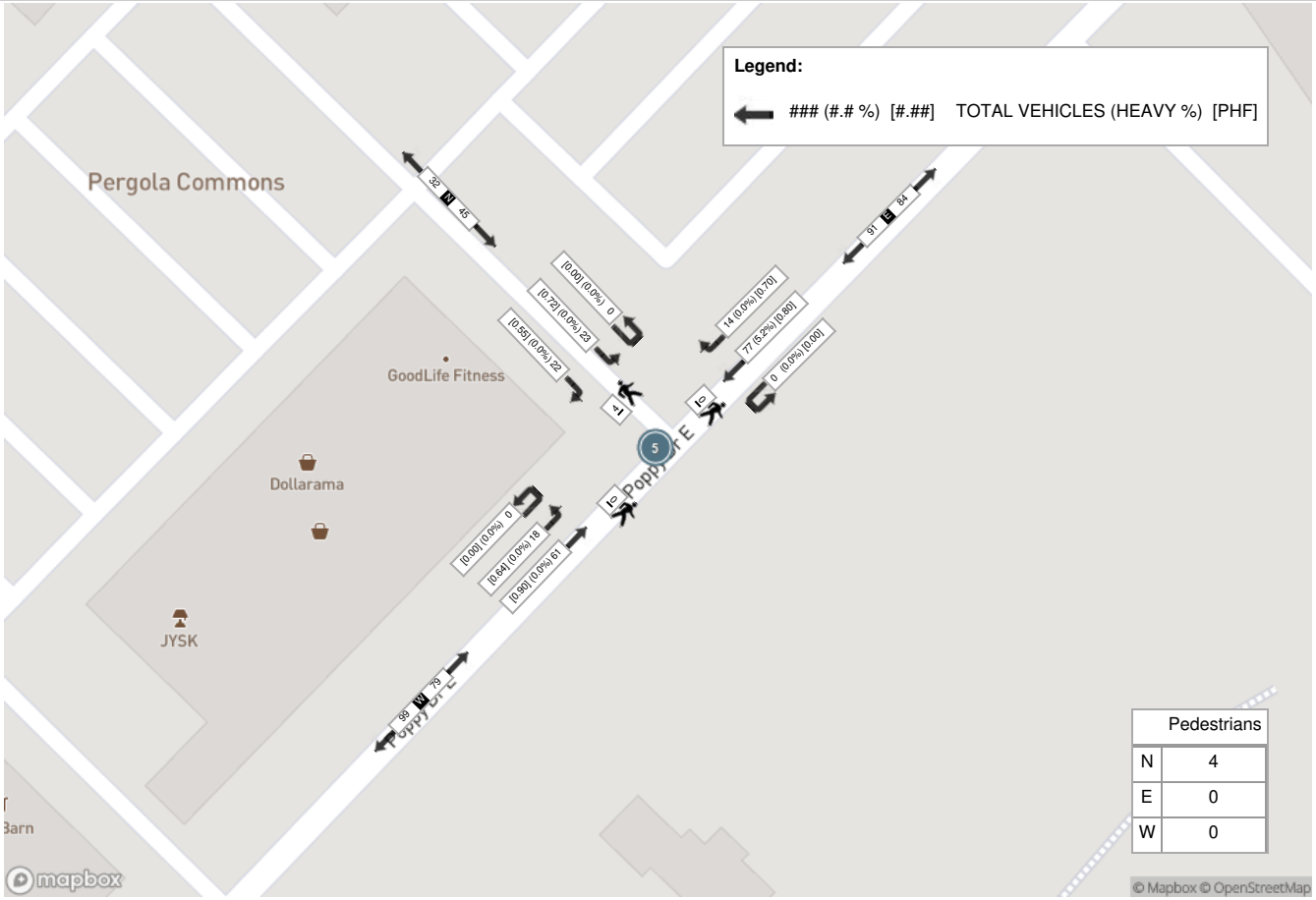
Start Time	N Approach FARLEY DR					E Approach POPPY DR E					W Approach POPPY DR E					Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	UTurn E:E	Peds E:	Approach Total	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	2	1	0	1	3	1	15	0	0	16	8	3	0	0	11	30	
10:15:00	4	2	0	1	6	2	18	0	0	20	10	2	0	0	12	38	
10:30:00	7	3	0	3	10	3	25	0	0	28	13	1	0	0	14	52	
10:45:00	5	6	0	0	11	7	8	0	0	15	5	1	0	0	6	32	152
11:00:00	6	3	0	1	9	3	15	0	0	18	9	6	0	0	15	42	164
11:15:00	7	2	0	1	9	4	16	0	0	20	11	5	0	0	16	45	171
11:30:00	5	2	0	0	7	4	18	0	0	22	13	4	0	0	17	46	165
11:45:00	3	8	0	2	11	3	24	0	0	27	13	2	0	0	15	53	186
12:00:00	5	6	0	2	11	5	19	0	0	24	17	7	0	0	24	59	203
12:15:00	4	5	0	0	9	2	17	0	0	19	16	6	0	0	22	50	208
12:30:00	10	4	0	0	14	4	17	0	0	21	15	3	0	0	18	53	215
12:45:00	3	5	0	1	8	4	17	0	0	21	9	5	0	0	14	43	205
13:00:00	9	3	0	2	12	2	16	0	0	18	14	6	0	0	20	50	196
13:15:00	4	3	0	0	7	2	15	0	0	17	15	3	0	0	18	42	188
13:30:00	4	3	0	6	7	3	18	0	0	21	17	8	0	0	25	53	188
13:45:00	5	7	0	2	12	2	13	0	0	15	17	9	0	0	26	53	198
14:00:00	3	3	0	3	6	4	15	0	0	19	9	2	0	0	11	36	184
14:15:00	6	5	0	1	11	1	17	0	0	18	19	3	0	0	22	51	193
14:30:00	5	6	0	3	11	2	18	0	0	20	15	2	0	0	17	48	188
14:45:00	9	4	0	3	13	6	16	0	0	22	8	2	1	0	11	46	181
15:00:00	5	6	0	4	11	6	13	0	0	19	17	7	0	0	24	54	199
15:15:00	10	2	0	4	12	2	17	0	0	19	19	5	0	0	24	55	203
15:30:00	9	4	0	4	13	2	13	0	0	15	19	12	0	0	31	59	214
15:45:00	5	4	0	1	9	4	13	0	0	17	12	1	0	0	13	39	207
Grand Total	135	97	0	45	232	78	393	0	0	471	320	105	1	0	426	**1129**	-
Approach%	58.2%	41.8%	0%		-	16.6%	83.4%	0%		-	75.1%	24.6%	0.2%		-	**-**	-
Totals %	12%	8.6%	0%		20.5%	6.9%	34.8%	0%		41.7%	28.3%	9.3%	0.1%		37.7%	**-**	-
Heavy	0	0	0		-	0	15	0		-	0	0	0		-	**-**	-
Heavy %	0%	0%	0%		-	0%	3.8%	0%		-	0%	0%	0%		-	**-**	-
Bicycles	0	0	0		-	0	0	0		-	0	1	0		-	**-**	-
Bicycle %	0%	0%	0%		-	0%	0%	0%		-	0%	1%	0%		-	**-**	-

Peak Hour: 11:45 AM - 12:45 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach FARLEY DR					E Approach POPPY DR E					W Approach POPPY DR E					Int. Total (15 min)
	Right	Left	UTurn	Peds	Approach Total	Right	Thru	UTurn	Peds	Approach Total	Thru	Left	UTurn	Peds	Approach Total	
11:45:00	3	8	0	2	11	3	24	0	0	27	13	2	0	0	15	53
12:00:00	5	6	0	2	11	5	19	0	0	24	17	7	0	0	24	59
12:15:00	4	5	0	0	9	2	17	0	0	19	16	6	0	0	22	50
12:30:00	10	4	0	0	14	4	17	0	0	21	15	3	0	0	18	53
Grand Total	22	23	0	4	45	14	77	0	0	91	61	18	0	0	79	**215**
Approach%	48.9%	51.1%	0%		-	15.4%	84.6%	0%		-	77.2%	22.8%	0%		-	**-**
Totals %	10.2%	10.7%	0%		20.9%	6.5%	35.8%	0%		42.3%	28.4%	8.4%	0%		36.7%	**-**
PHF	0.55	0.72	0		0.8	0.7	0.8	0		0.84	0.9	0.64	0		0.82	**-**
Heavy	0	0	0		0	0	4	0		4	0	0	0		0	**-**
Heavy %	0%	0%	0%		0%	0%	5.2%	0%		4.4%	0%	0%	0%		0%	**-**
Lights	22	23	0		45	14	73	0		87	61	18	0		79	**-**
Lights %	100%	100%	0%		100%	100%	94.8%	0%		95.6%	100%	100%	0%		100%	**-**
Buses	0	0	0		0	0	4	0		4	0	0	0		0	**-**
Buses %	0%	0%	0%		0%	0%	5.2%	0%		4.4%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	4	-	-	-	-	0	-	-	-	-	0	-	**-**
Pedestrians%	-	-	-	100%		-	-	-	0%		-	-	-	0%		**-**
Bicycles on Road	0	0	0	0	-	0	0	0	0	-	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	0%		-	-	-	0%		-	-	-	0%		**-**

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 11:45 AM - 12:45 PM Weather: Light Rain (8.22 °C)



Spectrum

Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (4 . POPPY DR E & GORDON ST)

Start Time	N Approach GORDON ST						E Approach POPPY DR E						S Approach GORDON ST						W Approach POPPY DR E						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	0	103	10	0	1	113	15	4	8	0	0	27	5	106	4	1	0	116	5	2	2	0	0	9	265	
10:15:00	1	103	8	1	1	113	19	2	8	0	4	29	5	97	4	0	1	106	2	3	4	0	1	9	257	
10:30:00	5	104	10	2	0	121	17	2	13	0	1	32	7	119	7	0	0	133	2	1	1	0	0	4	290	
10:45:00	1	131	5	0	0	137	10	5	6	0	0	21	4	114	6	0	0	124	1	3	3	0	0	7	289	1101
11:00:00	0	130	7	3	1	140	20	7	6	0	0	33	9	122	4	0	1	135	5	2	3	0	1	10	318	1154
11:15:00	3	134	9	1	0	147	18	5	8	0	1	31	7	125	4	0	3	136	6	3	2	0	3	11	325	1222
11:30:00	5	123	15	0	0	143	17	6	14	0	1	37	7	119	3	0	0	129	1	1	6	0	1	8	317	1249
11:45:00	1	124	16	0	1	141	21	4	12	0	2	37	7	108	12	0	0	127	6	3	2	0	0	11	316	1276
12:00:00	2	124	19	1	0	146	15	7	13	0	3	35	10	121	7	0	1	138	8	2	1	0	0	11	330	1288
12:15:00	2	145	20	2	2	169	16	3	15	0	1	34	9	122	5	0	0	136	2	2	5	0	0	9	348	1311
12:30:00	3	113	11	0	0	127	19	7	13	0	0	39	10	140	5	0	1	155	5	1	4	0	1	10	331	1325
12:45:00	4	130	10	0	0	144	22	0	10	0	7	32	8	108	5	0	1	121	3	2	6	0	1	11	308	1317
13:00:00	2	134	16	2	3	154	21	3	10	0	2	34	9	136	2	0	0	147	3	2	5	0	0	10	345	1332
13:15:00	2	144	16	2	2	164	15	3	10	0	0	28	7	103	5	1	0	116	4	4	4	0	2	12	320	1304
13:30:00	1	123	19	0	4	143	18	5	19	0	4	42	13	89	7	0	6	109	4	3	0	0	4	7	301	1274
13:45:00	1	148	9	1	1	159	18	1	14	0	0	33	12	116	4	0	2	132	5	7	6	0	2	18	342	1308
14:00:00	3	131	11	2	0	147	14	0	10	0	5	24	5	139	9	0	1	153	10	0	3	0	0	13	337	1300
14:15:00	1	124	15	2	0	142	16	6	14	0	1	36	12	128	4	0	0	144	4	2	2	0	2	8	330	1310
14:30:00	2	139	10	0	3	151	18	4	13	0	4	35	9	125	6	0	0	140	2	3	2	0	0	7	333	1342
14:45:00	0	135	14	1	1	150	22	2	9	0	2	33	8	116	7	0	1	131	5	2	3	0	4	10	324	1324
15:00:00	2	128	10	3	4	143	15	3	17	0	3	35	10	121	5	0	4	136	1	3	1	0	3	5	319	1306
15:15:00	2	137	17	1	7	157	16	6	13	0	0	35	12	142	13	0	1	167	7	6	6	0	2	19	378	1354
15:30:00	2	135	17	2	2	156	11	5	13	0	5	29	17	126	8	1	0	152	4	5	3	0	1	12	349	1370
15:45:00	2	140	16	1	1	159	19	3	8	0	1	30	1	103	11	0	0	115	6	3	3	0	0	12	316	1362
Grand Total	47	3082	310	27	34	3466	412	93	276	0	47	781	203	2845	147	3	23	3198	101	65	77	0	28	243	**7688**	-
Approach%	1.4%	88.9%	8.9%	0.8%		-	52.8%	11.9%	35.3%	0%		-	6.3%	89%	4.6%	0.1%		-	41.6%	26.7%	31.7%	0%		-	-	-
Totals %	0.6%	40.1%	4%	0.4%		45.1%	5.4%	1.2%	3.6%	0%		10.2%	2.6%	37%	1.9%	0%		41.6%	1.3%	0.8%	1%	0%		3.2%	-	-
Heavy	0	23	0	0		-	14	0	0	0		-	0	25	1	0		-	1	0	13	0		-	-	-
Heavy %	0%	0.7%	0%	0%		-	3.4%	0%	0%	0%		-	0%	0.9%	0.7%	0%		-	1%	0%	16.9%	0%		-	-	-
Bicycles	0	0	0	1		-	0	0	0	0		-	1	1	0	0		-	0	0	0	0		-	-	-
Bicycle %	0%	0%	0%	3.7%		-	0%	0%	0%	0%		-	0.5%	0%	0%	0%		-	0%	0%	0%	0%		-	-	-

Spectrum

Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 02:45 PM - 03:45 PM Weather: Light Rain (8.22 °C)

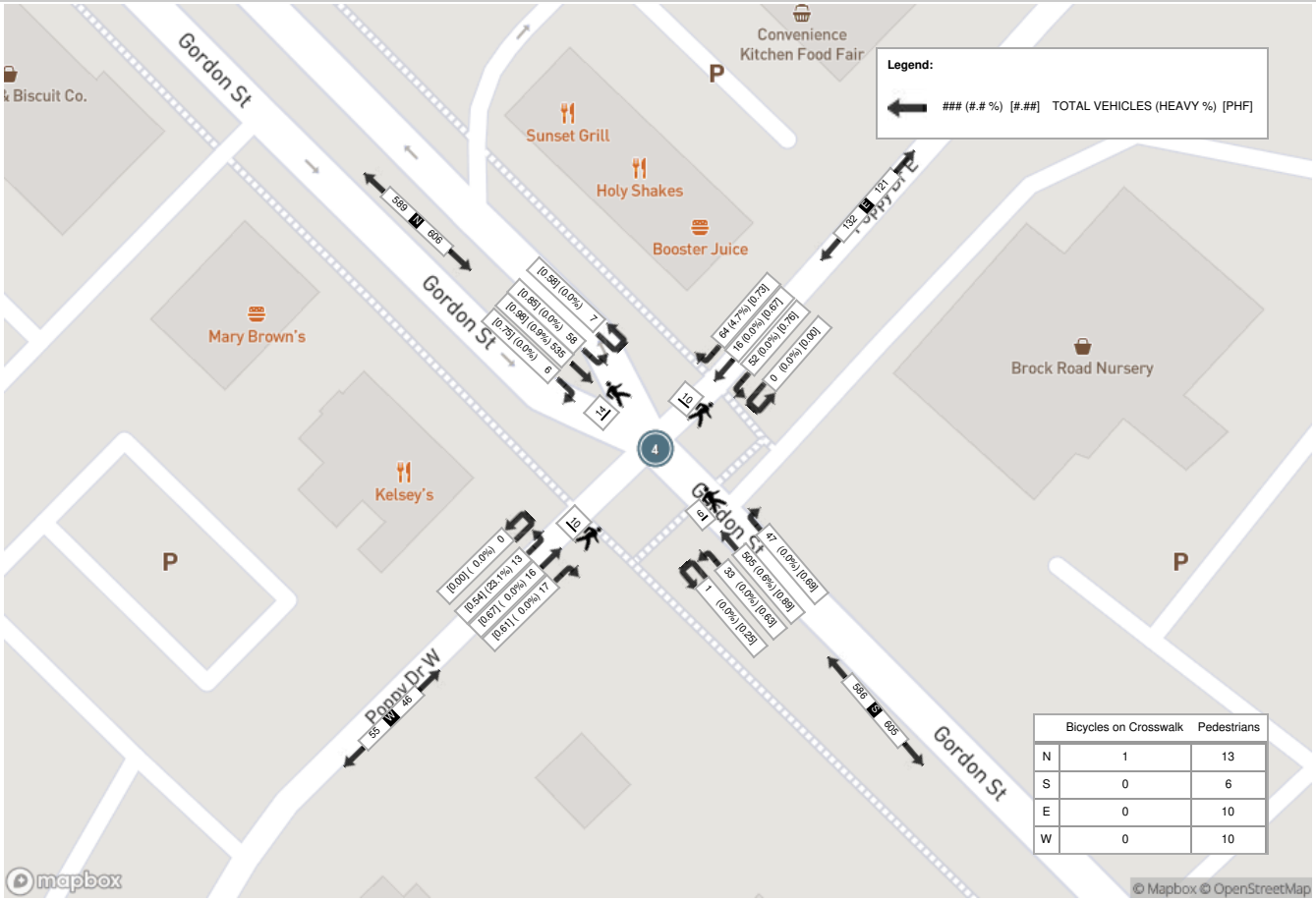
Start Time	N Approach GORDON ST						E Approach POPPY DR E						S Approach GORDON ST						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
14:45:00	0	135	14	1	1	150	22	2	9	0	2	33	8	116	7	0	1	131	5	2	3	0	4	10	324
15:00:00	2	128	10	3	4	143	15	3	17	0	3	35	10	121	5	0	4	136	1	3	1	0	3	5	319
15:15:00	2	137	17	1	7	157	16	6	13	0	0	35	12	142	13	0	1	167	7	6	6	0	2	19	378
15:30:00	2	135	17	2	2	156	11	5	13	0	5	29	17	126	8	1	0	152	4	5	3	0	1	12	349
Grand Total	6	535	58	7	14	606	64	16	52	0	10	132	47	505	33	1	6	586	17	16	13	0	10	46	**1370**
Approach%	1%	88.3%	9.6%	1.2%		-	48.5%	12.1%	39.4%	0%		-	8%	86.2%	5.6%	0.2%		-	37%	34.8%	28.3%	0%		-	**-**
Totals %	0.4%	39.1%	4.2%	0.5%		44.2%	4.7%	1.2%	3.8%	0%		9.6%	3.4%	36.9%	2.4%	0.1%		42.8%	1.2%	1.2%	0.9%	0%		3.4%	**-**
PHF	0.75	0.98	0.85	0.58		0.96	0.73	0.67	0.76	0		0.94	0.69	0.89	0.63	0.25		0.88	0.61	0.67	0.54	0		0.61	**-**
Heavy	0	5	0	0		5	3	0	0	0		3	0	3	0	0		3	0	0	3	0		3	**-**
Heavy %	0%	0.9%	0%	0%		0.8%	4.7%	0%	0%	0%		2.3%	0%	0.6%	0%	0%		0.5%	0%	0%	23.1%	0%		6.5%	**-**
Lights	6	530	58	7		601	61	16	52	0		129	47	502	33	1		583	17	16	10	0		43	**-**
Lights %	100%	99.1%	100%	100%		99.2%	95.3%	100%	100%	0%		97.7%	100%	99.4%	100%	100%		99.5%	100%	100%	76.9%	0%		93.5%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	0	2	0	0		2	3	0	0	0		3	0	2	0	0		2	0	0	3	0		3	**-**
Buses %	0%	0.4%	0%	0%		0.3%	4.7%	0%	0%	0%		2.3%	0%	0.4%	0%	0%		0.3%	0%	0%	23.1%	0%		6.5%	**-**
Articulated Trucks	0	3	0	0		3	0	0	0	0		0	0	1	0	0		1	0	0	0	0		0	**-**
Articulated Trucks %	0%	0.6%	0%	0%		0.5%	0%	0%	0%	0%		0%	0%	0.2%	0%	0%		0.2%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	13	-	-	-	-	-	10	-	-	-	-	-	6	-	-	-	-	-	10	-	**-**
Pedestrians%	-	-	-	-	32.5%		-	-	-	-	25%		-	-	-	-	15%		-	-	-	-	25%		**-**
Bicycles on Crosswalk	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	**-**
Bicycles on Crosswalk%	-	-	-	-	2.5%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**
Bicycles on Road	0	0	0	1	0	-	0	0	0	0	0	-	1	1	0	0	0	-	0	0	0	0	0	-	**-**
Bicycles on Road%	-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		-	-	-	-	0%		**-**

Spectrum

Turning Movement Count
Location Name: POPPY DR E & GORDON ST
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Peak Hour: 02:45 PM - 03:45 PM **Weather: Light Rain (8.22 °C)**



Spectrum

Turning Movement Count
Location Name: POPPY DR E & HAWKINS DR
Date: Sat, Oct 14, 2023 Deployment Lead: David Chu

BA Group
300 45 ST. CLAIR AVE W
TORONTO ONTARIO, M4V 1K9
CANADA

Turning Movement Count (6 . POPPY DR E & HAWKINS DR)

Start Time	N Approach HAWKINS DR						E Approach POPPY DR E						S Approach HAWKINS DR						W Approach POPPY DR E						Int. Total (15 min)	Int. Total (1 hr)
	Right N:W	Thru N:S	Left N:E	UTurn N:N	Peds N:	Approach Total	Right E:N	Thru E:W	Left E:S	UTurn E:E	Peds E:	Approach Total	Right S:E	Thru S:N	Left S:W	UTurn S:S	Peds S:	Approach Total	Right W:S	Thru W:E	Left W:N	UTurn W:W	Peds W:	Approach Total		
10:00:00	5	1	3	0	1	9	4	7	0	0	0	11	0	1	2	0	3	3	0	5	4	0	0	9	32	
10:15:00	2	0	6	1	2	9	1	12	1	0	2	14	0	1	0	0	0	1	2	4	2	0	1	8	32	
10:30:00	4	1	2	0	3	7	1	15	0	0	0	16	0	1	3	0	4	4	3	7	2	0	1	12	39	
10:45:00	2	1	3	0	2	6	1	8	0	0	0	9	0	2	0	0	1	2	1	4	2	0	1	7	24	127
11:00:00	4	0	3	0	2	7	0	9	1	0	1	10	0	1	1	0	0	2	2	3	4	0	3	9	28	123
11:15:00	1	1	1	0	1	3	0	13	1	0	0	14	1	3	4	0	1	8	3	3	3	0	0	9	34	125
11:30:00	1	1	3	0	1	5	3	13	0	0	0	16	1	2	2	0	1	5	1	5	3	0	2	9	35	121
11:45:00	0	1	2	0	0	3	1	15	1	0	0	17	0	0	3	0	1	3	1	12	0	0	2	13	36	133
12:00:00	0	1	4	0	2	5	1	14	0	0	1	15	0	1	1	0	1	2	2	10	6	0	1	18	40	145
12:15:00	1	1	4	0	0	6	4	9	0	0	0	13	0	2	3	0	0	5	3	12	4	0	0	19	43	154
12:30:00	6	0	2	0	0	8	1	10	0	0	1	11	0	1	1	1	0	3	0	8	5	0	4	13	35	154
12:45:00	1	1	5	0	4	7	4	11	1	0	1	16	1	2	2	0	2	5	1	7	1	0	2	9	37	155
13:00:00	1	1	3	0	1	5	0	15	0	0	0	15	0	1	1	0	4	2	2	5	6	0	4	13	35	150
13:15:00	3	2	4	0	1	9	2	8	1	0	0	11	0	0	1	0	5	1	2	7	6	0	2	15	36	143
13:30:00	1	1	4	0	8	6	2	14	0	0	2	16	0	0	5	0	2	5	2	10	7	0	1	19	46	154
13:45:00	4	1	3	0	2	8	1	6	0	0	0	7	0	1	5	0	0	6	2	11	2	0	1	15	36	153
14:00:00	1	0	4	0	1	5	0	13	0	0	0	13	1	1	1	0	7	3	1	7	3	0	2	11	32	150
14:15:00	3	1	2	0	2	6	2	7	0	0	0	9	0	0	2	0	1	2	1	14	4	0	0	19	36	150
14:30:00	2	2	4	0	2	8	0	12	1	0	2	13	0	0	2	0	5	2	1	10	5	1	4	17	40	144
14:45:00	3	2	0	0	2	5	0	16	0	0	1	16	0	0	1	0	0	1	0	7	2	0	0	9	31	139
15:00:00	3	0	2	0	2	5	3	12	0	0	1	15	0	1	0	0	3	1	1	10	6	0	2	17	38	145
15:15:00	4	2	1	0	3	7	3	11	1	0	0	15	0	0	1	0	3	1	2	10	4	1	0	17	40	149
15:30:00	1	1	3	0	5	5	3	10	0	0	1	13	0	1	3	0	5	4	2	11	4	0	4	17	39	148
15:45:00	5	1	4	0	5	10	3	10	0	0	0	13	0	2	1	0	1	3	0	9	4	0	0	13	39	156
Grand Total	58	23	72	1	52	154	40	270	8	0	13	318	4	24	45	1	50	74	35	191	89	2	37	317	**863**	-
Approach%	37.7%	14.9%	46.8%	0.6%		-	12.6%	84.9%	2.5%	0%		-	5.4%	32.4%	60.8%	1.4%		-	11%	60.3%	28.1%	0.6%		-	**-**	-
Totals %	6.7%	2.7%	8.3%	0.1%		17.8%	4.6%	31.3%	0.9%	0%		36.8%	0.5%	2.8%	5.2%	0.1%		8.6%	4.1%	22.1%	10.3%	0.2%		36.7%	**-**	-
Heavy	3	0	0	0		-	0	11	0	0		-	0	0	0	0		-	0	0	0	0		-	**-**	-
Heavy %	5.2%	0%	0%	0%		-	0%	4.1%	0%	0%		-	0%	0%	0%	0%		-	0%	0%	0%	0%		-	**-**	-
Bicycles	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-
Bicycle %	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	-	-	-	-		-	**-**	-

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Start Time	N Approach HAWKINS DR						E Approach POPPY DR E						S Approach HAWKINS DR						W Approach POPPY DR E						Int. Total (15 min)
	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	Right	Thru	Left	UTurn	Peds	Approach Total	
15:00:00	3	0	2	0	2	5	3	12	0	0	1	15	0	1	0	0	3	1	1	10	6	0	2	17	38
15:15:00	4	2	1	0	3	7	3	11	1	0	0	15	0	0	1	0	3	1	2	10	4	1	0	17	40
15:30:00	1	1	3	0	5	5	3	10	0	0	1	13	0	1	3	0	5	4	2	11	4	0	4	17	39
15:45:00	5	1	4	0	5	10	3	10	0	0	0	13	0	2	1	0	1	3	0	9	4	0	0	13	39
Grand Total	13	4	10	0	15	27	12	43	1	0	2	56	0	4	5	0	12	9	5	40	18	1	6	64	**156**
Approach%	48.1%	14.8%	37%	0%		-	21.4%	76.8%	1.8%	0%		-	0%	44.4%	55.6%	0%		-	7.8%	62.5%	28.1%	1.6%		-	**-**
Totals %	8.3%	2.6%	6.4%	0%		17.3%	7.7%	27.6%	0.6%	0%		35.9%	0%	2.6%	3.2%	0%		5.8%	3.2%	25.6%	11.5%	0.6%		41%	**-**
PHF	0.65	0.5	0.63	0		0.68	1	0.9	0.25	0		0.93	0	0.5	0.42	0		0.56	0.63	0.91	0.75	0.25		0.94	**-**
Heavy	2	0	0	0		2	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	**-**
Heavy %	15.4%	0%	0%	0%		7.4%	0%	4.7%	0%	0%		3.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Lights	11	4	10	0		25	12	41	1	0		54	0	4	5	0		9	5	40	18	1		64	**-**
Lights %	84.6%	100%	100%	0%		92.6%	100%	95.3%	100%	0%		96.4%	0%	100%	100%	0%		100%	100%	100%	100%	100%		100%	**-**
Single-Unit Trucks	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Single-Unit Trucks %	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Buses	1	0	0	0		1	0	2	0	0		2	0	0	0	0		0	0	0	0	0		0	**-**
Buses %	7.7%	0%	0%	0%		3.7%	0%	4.7%	0%	0%		3.6%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Articulated Trucks	1	0	0	0		1	0	0	0	0		0	0	0	0	0		0	0	0	0	0		0	**-**
Articulated Trucks %	7.7%	0%	0%	0%		3.7%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	0%	0%	0%	0%		0%	**-**
Pedestrians	-	-	-	-	15	-	-	-	-	-	2	-	-	-	-	-	12	-	-	-	-	-	6	-	**-**
Pedestrians%	-	-	-	-	42.9%		-	-	-	-	5.7%		-	-	-	-	34.3%		-	-	-	-	17.1%		**-**

Peak Hour: 03:00 PM - 04:00 PM Weather: Light Rain (8.22 °C)

Appendix F:
Existing Queue Study

Project No: 7036-41
Project: Pergola Commons
Study Location: Clair Rd E & Farley
Municipality: City of Guelph
Study Date: Wednesday September 20, 2023
Study Time: 7:00 - 10:00

Queue at Max Study

Left Lane **AM Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	30	45%	45%
1	30	45%	91%
2	3	5%	95%
3	3	5%	100%
4	0	0%	100%
5	0	0%	100%
Total	66	100%	

Minimum	0
Average	1
85th Percentile	1
95th Percentile	2
Maximum	3

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	30	45%	45%
1	30	45%	91%
2	3	5%	95%
3	3	5%	100%
4	0	0%	100%
5	0	0%	100%
Total	66	100%	

Minimum	0
Average	1
85th Percentile	1
95th Percentile	2
Maximum	3

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	66	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
Total	66	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Curb Lane **AM Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	56	85%	85%
1	7	11%	95%
2	3	5%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
Total	66	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	1
Maximum	2

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	56	85%	85%
1	7	11%	95%
2	3	5%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
Total	66	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	1
Maximum	2

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	66	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
Total	66	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Project No: 7036-41
Project: Pergola Commons
Study Location: Clair Rd E & Farley
Municipality: City of Guelph
Study Date: Wednesday September 20, 2023
Study Time: 10:00 - 15:00

Queue at Max Study

Left Lane **Mid Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	32	17%	17%
1	58	31%	48%
2	73	39%	87%
3	23	12%	99%
4	1	1%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	187	100%	

Minimum	0
Average	1
85th Percentile	2
95th Percentile	3
Maximum	4

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	32	17%	17%
1	51	27%	44%
2	44	24%	68%
3	27	14%	82%
4	19	10%	93%
5	9	5%	97%
6	3	2%	99%
7	2	1%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	187	100%	

Minimum	0
Average	2
85th Percentile	4
95th Percentile	5
Maximum	7

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	187	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	187	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Curb Lane **Mid Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	177	95%	95%
1	9	5%	99%
2	1	1%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	187	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	1
Maximum	2

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	177	95%	95%
1	9	5%	99%
2	1	1%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	187	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	1
Maximum	2

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	187	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	187	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Project No: 7036-41
Project: Pergola Commons
Study Location: Clair Rd E & Farley
Municipality: City of Guelph
Study Date: Wednesday September 20, 2023
Study Time: 15:00 - 19:00

Queue at Max Study

Left Lane **PM Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	20	13%	13%
1	43	28%	41%
2	71	46%	86%
3	21	14%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	155	100%	

Minimum	0
Average	2
85th Percentile	2
95th Percentile	3
Maximum	3

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	20	13%	13%
1	39	25%	38%
2	47	30%	68%
3	30	19%	88%
4	12	8%	95%
5	7	5%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	155	100%	

Minimum	0
Average	2
85th Percentile	3
95th Percentile	4
Maximum	5

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	155	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	155	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Curb Lane **PM Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	141	91%	91%
1	12	8%	99%
2	2	1%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	155	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	1
Maximum	2

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	141	91%	91%
1	12	8%	99%
2	2	1%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	155	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	1
Maximum	2

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	155	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	155	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Project No: 7036-41
Project: Pergola Commons
Study Location: Clair Rd E & Farley
Municipality: City of Guelph
Study Date: Saturday October 14, 2023
Study Time: 15:00 - 19:00

Queue at Max Study

Left Lane **PM Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	14	7%	7%
1	34	16%	23%
2	104	50%	73%
3	55	26%	100%
4	1	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	208	100%	

Minimum	0
Average	2
85th Percentile	3
95th Percentile	3
Maximum	4

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	13	6%	6%
1	33	16%	22%
2	57	27%	50%
3	49	24%	73%
4	24	12%	85%
5	22	11%	95%
6	8	4%	99%
7	2	1%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	208	100%	

Minimum	0
Average	3
85th Percentile	5
95th Percentile	5
Maximum	7

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	208	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	208	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Curb Lane **PM Period**

Start of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	200	96%	96%
1	7	3%	100%
2	1	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	208	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	2

Maximum Queue

Queue Size	Frequency	Distribution %	Cumulative %
0	200	96%	96%
1	7	3%	100%
2	1	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	208	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	2

End of Green

Queue Size	Frequency	Distribution %	Cumulative %
0	208	100%	100%
1	0	0%	100%
2	0	0%	100%
3	0	0%	100%
4	0	0%	100%
5	0	0%	100%
6	0	0%	100%
7	0	0%	100%
8	0	0%	100%
9	0	0%	100%
10	0	0%	100%
Total	208	100%	

Minimum	0
Average	0
85th Percentile	0
95th Percentile	0
Maximum	0

Appendix G:
Site Distribution Mode Split Queries

Project:	**Pergola Commons**
Project No:	**7036-41**
Location:	**1 Clair Road East**
Date:	**2023-12-13**
Peak Period:	**AM Peak Hour**
Direction:	**Outbound**

Planning District TTS Query

Cross Tabulation Query Form - Trip - 2016 v1.1
Row: Planning district of destination - pd_dest
Column: 2006 GTA zone of origin - gta06_orig
Filters:
Start time of trip - start_time In 700-1000
and
Primary travel mode of trip - mode_prime In d m p t u
and
Trip purpose of origin - purp_orig In h
and
2006 GTA zone of origin - gta06_orig In 8205 8070 8075 8072 8207 8076

2006 GTA Zone TTS Query

Cross Tabulation Query Form - Trip - 2016 v1.1
Row: 2006 GTA zone of destination - gta06_dest
Column: 2006 GTA zone of origin - gta06_orig
Filters:
Start time of trip - start_time In 700-1000
and
Primary travel mode of trip - mode_prime In d m p t u
and
Trip purpose of origin - purp_orig In h
and
2006 GTA zone of origin - gta06_orig In 8205 8070 8075 8072 8207 8076
and
Planning district of destination - pd_dest In 70

Traffic Volume Allocation

Zone	Trips	%	NORTH Gordon Street	SOUTH Gordon Street	EAST Clair Road East	WEST Clair Road West	TOTAL
PD 7 of Toronto	1	1%		100%			100.00%
PD 10 of Toronto	1	1%		100%			100.00%
Brampton	3	3%		100%			100.00%
Mississauga	4	3%		100%			100.00%
Oakville	1	1%		100%			100.00%
Burlington	3	3%		100%			100.00%
Stoney Creek	1	1%		100%			100.00%
Hamilton	1	1%		100%			100.00%
Waterloo	4	3%		25%		75%	100.00%
Kitchener	7	6%		25%		75%	100.00%
Cambridge	10	8%		25%		75%	100.00%
Guelph	76	64%					0.00%
8007	1	1%			100%		100.00%
8015	1	1%			100%		100.00%
8022	2	2%			100%		100.00%
8026	1	1%			100%		100.00%
8035	1	1%	50%		50%		100.00%
8039	1	1%	50%		50%		100.00%
8045	1	1%	25%		75%		100.00%
8048	1	1%	25%		75%		100.00%
8057	10	8%	100%				100.00%
8059	2	2%	100%				100.00%
8062	1	1%	100%				100.00%
8064	1	1%	100%				100.00%
8072	2	2%	50%		50%		100.00%
8073	1	1%			100%		100.00%
8074	1	1%	100%				100.00%
8080	1	1%	100%				100.00%
8082	2	2%	100%				100.00%
8083	2	2%	100%				100.00%

8084	1	1%	100%				100.00%
8086	1	1%				100%	100.00%
8095	1	1%	100%				100.00%
8101	2	2%	25%			75%	100.00%
8107	6	5%	50%			50%	100.00%
8111	2	2%	100%				100.00%
8114	2	2%	100%				100.00%
8115	2	2%	100%				100.00%
8117	2	2%	75%		25%		100.00%
8121	2	2%	75%			25%	100.00%
8135	1	1%	25%		75%		100.00%
8136	1	1%	25%		75%		100.00%
8142	2	2%				100%	100.00%
8149	2	2%	25%			75%	100.00%
8154	1	1%	25%			75%	100.00%
8168	1	1%				100%	100.00%
8172	2	2%				100%	100.00%
8175	1	1%				100%	100.00%
8191	1	1%				100%	100.00%
8193	1	1%				100%	100.00%
8194	1	1%				100%	100.00%
8196	3	3%		50%		50%	100.00%
8199	4	3%		50%		50%	100.00%
8204	1	1%			100%		100.00%
8205	1	1%	25%	25%	25%	25%	100.00%
Puslinch	2	2%		50%	50%		100.00%
Centre Wellington	1	1%			75%	25%	100.00%
Oxford	1	1%		100%			100.00%
Haldimand-Norfolk	1	1%		100%			100.00%
Brantford	1	1%		100%			100.00%
TOTAL TRIPS	118	100%					

Route Split Totals

Zone	NORTH Gordon Street	SOUTH Gordon Street	EAST Clair Road East	WEST Clair Road West	TOTAL
PD 7 of Toronto	0.00%	0.85%	0.00%	0.00%	0.8%
PD 10 of Toronto	0.00%	0.85%	0.00%	0.00%	0.8%
Brampton	0.00%	2.54%	0.00%	0.00%	2.5%
Mississauga	0.00%	3.39%	0.00%	0.00%	3.4%
Oakville	0.00%	0.85%	0.00%	0.00%	0.8%
Burlington	0.00%	2.54%	0.00%	0.00%	2.5%
Stoney Creek	0.00%	0.85%	0.00%	0.00%	0.8%
Hamilton	0.00%	0.85%	0.00%	0.00%	0.8%
Waterloo	0.00%	0.85%	0.00%	2.54%	3.4%
Kitchener	0.00%	1.48%	0.00%	4.45%	5.9%
Cambridge	0.00%	2.12%	0.00%	6.36%	8.5%
Guelph					0.0%
8007	0.00%	0.00%	0.85%	0.00%	0.8%
8015	0.00%	0.00%	0.85%	0.00%	0.8%
8022	0.00%	0.00%	1.69%	0.00%	1.7%
8026	0.00%	0.00%	0.85%	0.00%	0.8%
8035	0.42%	0.00%	0.42%	0.00%	0.8%
8039	0.42%	0.00%	0.42%	0.00%	0.8%
8045	0.21%	0.00%	0.64%	0.00%	0.8%
8048	0.21%	0.00%	0.64%	0.00%	0.8%
8057	8.47%	0.00%	0.00%	0.00%	8.5%
8059	1.69%	0.00%	0.00%	0.00%	1.7%
8062	0.85%	0.00%	0.00%	0.00%	0.8%
8064	0.85%	0.00%	0.00%	0.00%	0.8%
8072	0.85%	0.00%	0.85%	0.00%	1.7%
8073	0.00%	0.00%	0.85%	0.00%	0.8%
8074	0.85%	0.00%	0.00%	0.00%	0.8%
8080	0.85%	0.00%	0.00%	0.00%	0.8%
8082	1.69%	0.00%	0.00%	0.00%	1.7%
8083	1.69%	0.00%	0.00%	0.00%	1.7%

8084	0.85%	0.00%	0.00%	0.00%	0.8%
8086	0.00%	0.00%	0.00%	0.85%	0.8%
8095	0.85%	0.00%	0.00%	0.00%	0.8%
8101	0.42%	0.00%	0.00%	1.27%	1.7%
8107	2.54%	0.00%	0.00%	2.54%	5.1%
8111	1.69%	0.00%	0.00%	0.00%	1.7%
8114	1.69%	0.00%	0.00%	0.00%	1.7%
8115	1.69%	0.00%	0.00%	0.00%	1.7%
8117	1.27%	0.00%	0.42%	0.00%	1.7%
8121	1.27%	0.00%	0.00%	0.42%	1.7%
8135	0.21%	0.00%	0.64%	0.00%	0.8%
8136	0.21%	0.00%	0.64%	0.00%	0.8%
8142	0.00%	0.00%	0.00%	1.69%	1.7%
8149	0.42%	0.00%	0.00%	1.27%	1.7%
8154	0.21%	0.00%	0.00%	0.64%	0.8%
8168	0.00%	0.00%	0.00%	0.85%	0.8%
8172	0.00%	0.00%	0.00%	1.69%	1.7%
8175	0.00%	0.00%	0.00%	0.85%	0.8%
8191	0.00%	0.00%	0.00%	0.85%	0.8%
8193	0.00%	0.00%	0.00%	0.85%	0.8%
8194	0.00%	0.00%	0.00%	0.85%	0.8%
8196	0.00%	1.27%	0.00%	1.27%	2.5%
8199	0.00%	1.69%	0.00%	1.69%	3.4%
8204	0.00%	0.00%	0.85%	0.00%	0.8%
8205	0.21%	0.21%	0.21%	0.21%	0.8%
Puslinch	0.00%	0.85%	0.85%	0.00%	1.7%
Centre Wellington	0.00%	0.00%	0.64%	0.21%	0.8%
Oxford	0.00%	0.85%	0.00%	0.00%	0.8%
Haldimand-Norfolk	0.00%	0.85%	0.00%	0.00%	0.8%
Brantford	0.00%	0.85%	0.00%	0.00%	0.8%
TOTAL TRIPS	**33%**	**24%**	**12%**	**31%**	100.0%

Note: Distribution percentages rounded to the nearest 5% for analysis.

Project:	**Pergola Commons**
Project No:	**7036-41**
Location:	**1 Clair Road East**
Date:	**2023-12-13**
Peak Period:	**PM Peak Hour**
Direction:	**Inbound**

Planning District TTS Query

Cross Tabulation Query Form - Trip - 2016 v1.1
Row: Planning district of origin - pd_orig
Column: 2006 GTA zone of destination - gta06_dest
Filters:
Start time of trip - start_time In 1500-1900
and
Primary travel mode of trip - mode_prime In d m p t u
and
Trip purpose of destination - purp_dest In H
and
2006 GTA zone of destination - gta06_dest In 8205 8070 8075 8072 8207 8076

2006 GTA Zone TTS Query

Cross Tabulation Query Form - Trip - 2016 v1.1
Row: 2006 GTA zone of origin - gta06_orig
Column: 2006 GTA zone of destination - gta06_dest
Filters:
Start time of trip - start_time In 1500-1900
and
Primary travel mode of trip - mode_prime In d m p t u
and
Trip purpose of destination - purp_dest In H
and
2006 GTA zone of destination - gta06_dest In 8205 8070 8075 8072 8207 8076
and
Planning district of origin - pd_orig In 70

			Traffic Volume Allocation				
			NORTH	SOUTH	EAST	WEST	TOTAL
Zone	**Trips**	**%**	Gordon Street	Gordon Street	Clair Road East	Clair Road West	
PD 9 of Toronto	1	1%		100%			100.00%
PD 10 of Toronto	1	1%		100%			100.00%
PD 13 of Toronto	1	1%		100%			100.00%
Brampton	6	5%		100%			100.00%
Mississauga	10	8%		100%			100.00%
Oakville	2	2%		100%			100.00%
Burlington	1	1%		100%			100.00%
Flamborough	2	2%		100%			100.00%
Waterloo	6	5%		75%		25%	100.00%
Kitchener	4	3%		75%		25%	100.00%
Cambridge	8	6%		75%		25%	100.00%
Woolwich	1	1%				100%	100.00%
City of Guelph	81	62%					0.00%
8007	1	1%			100%		100.00%
8008	1	1%			100%		100.00%
8035	1	1%	50%		50%		100.00%
8045	2	2%			100%		100.00%
8047	1	1%	25%		75%		100.00%
8048	1	1%	25%		75%		100.00%
8057	12	9%	50%		50%		100.00%
8062	1	1%	100%				100.00%
8064	1	1%	100%				100.00%
8065	1	1%	75%		25%		100.00%
8066	2	2%	75%		25%		100.00%
8069	2	2%	50%		50%		100.00%
8072	3	2%			100%		100.00%
8073	1	1%			100%		100.00%
8075	2	2%	50%			50%	100.00%
8079	4	3%	100%				100.00%
8082	2	2%	100%				100.00%

8083	2	2%	75%		25%		100.00%
8084	1	1%	75%		25%		100.00%
8086	1	1%				100%	100.00%
8095	1	1%	50%		25%	25%	100.00%
8107	2	2%	75%			25%	100.00%
8109	2	2%	100%				100.00%
8114	1	1%	75%		25%		100.00%
8115	3	2%	50%		50%		100.00%
8121	2	2%	50%		50%		100.00%
8122	1	1%	50%			50%	100.00%
8140	2	2%	50%			50%	100.00%
8142	1	1%	50%			50%	100.00%
8143	1	1%	50%			50%	100.00%
8151	1	1%				100%	100.00%
8161	2	2%	75%			25%	100.00%
8165	1	1%	25%			75%	100.00%
8168	1	1%				100%	100.00%
8172	2	2%				100%	100.00%
8175	1	1%	25%			75%	100.00%
8186	1	1%	25%			75%	100.00%
8187	1	1%	25%			75%	100.00%
8191	2	2%	25%			75%	100.00%
8193	1	1%				100%	100.00%
8194	1	1%		25%		75%	100.00%
8199	6	5%				100%	100.00%
8204	1	1%			100%		100.00%
8205	2	2%		50%	50%		100.00%
Puslinch	2	2%		100%			100.00%
Centre Wellington	1	1%			100%		100.00%
Oxford	1	1%		75%		25%	100.00%
Collingwood	2	2%			100%		100.00%
TOTAL TRIPS	130	100%					

Route Split Totals

Zone	NORTH Gordon Street	SOUTH Gordon Street	EAST Clair Road East	WEST Clair Road West	TOTAL
PD 9 of Toronto	0.00%	0.77%	0.00%	0.00%	0.8%
PD 10 of Toronto	0.00%	0.77%	0.00%	0.00%	0.8%
PD 13 of Toronto	0.00%	0.77%	0.00%	0.00%	0.8%
Brampton	0.00%	4.62%	0.00%	0.00%	4.6%
Mississauga	0.00%	7.69%	0.00%	0.00%	7.7%
Oakville	0.00%	1.54%	0.00%	0.00%	1.5%
Burlington	0.00%	0.77%	0.00%	0.00%	0.8%
Flamborough	0.00%	1.54%	0.00%	0.00%	1.5%
Waterloo	0.00%	3.46%	0.00%	1.15%	4.6%
Kitchener	0.00%	2.31%	0.00%	0.77%	3.1%
Cambridge	0.00%	4.62%	0.00%	1.54%	6.2%
Woolwich	0.00%	0.00%	0.00%	0.77%	0.8%
City of Guelph	0.00%	0.00%	0.00%	0.00%	0.0%
8007	0.00%	0.00%	0.77%	0.00%	0.8%
8008	0.00%	0.00%	0.77%	0.00%	0.8%
8035	0.38%	0.00%	0.38%	0.00%	0.8%
8045	0.00%	0.00%	1.54%	0.00%	1.5%
8047	0.19%	0.00%	0.58%	0.00%	0.8%
8048	0.19%	0.00%	0.58%	0.00%	0.8%
8057	4.62%	0.00%	4.62%	0.00%	9.2%
8062	0.77%	0.00%	0.00%	0.00%	0.8%
8064	0.77%	0.00%	0.00%	0.00%	0.8%
8065	0.58%	0.00%	0.19%	0.00%	0.8%
8066	1.15%	0.00%	0.38%	0.00%	1.5%
8069	0.77%	0.00%	0.77%	0.00%	1.5%
8072	0.00%	0.00%	2.31%	0.00%	2.3%
8073	0.00%	0.00%	0.77%	0.00%	0.8%
8075	0.77%	0.00%	0.00%	0.77%	1.5%
8079	3.08%	0.00%	0.00%	0.00%	3.1%
8082	1.54%	0.00%	0.00%	0.00%	1.5%

8083	1.15%	0.00%	0.38%	0.00%	1.5%
8084	0.58%	0.00%	0.19%	0.00%	0.8%
8086	0.00%	0.00%	0.00%	0.77%	0.8%
8095	0.38%	0.00%	0.19%	0.19%	0.8%
8107	1.15%	0.00%	0.00%	0.38%	1.5%
8109	1.54%	0.00%	0.00%	0.00%	1.5%
8114	0.58%	0.00%	0.19%	0.00%	0.8%
8115	1.15%	0.00%	1.15%	0.00%	2.3%
8121	0.77%	0.00%	0.77%	0.00%	1.5%
8122	0.38%	0.00%	0.00%	0.38%	0.8%
8140	0.77%	0.00%	0.00%	0.77%	1.5%
8142	0.38%	0.00%	0.00%	0.38%	0.8%
8143	0.38%	0.00%	0.00%	0.38%	0.8%
8151	0.00%	0.00%	0.00%	0.77%	0.8%
8161	1.15%	0.00%	0.00%	0.38%	1.5%
8165	0.19%	0.00%	0.00%	0.58%	0.8%
8168	0.00%	0.00%	0.00%	0.77%	0.8%
8172	0.00%	0.00%	0.00%	1.54%	1.5%
8175	0.19%	0.00%	0.00%	0.58%	0.8%
8186	0.19%	0.00%	0.00%	0.58%	0.8%
8187	0.19%	0.00%	0.00%	0.58%	0.8%
8191	0.38%	0.00%	0.00%	1.15%	1.5%
8193	0.00%	0.00%	0.00%	0.77%	0.8%
8194	0.00%	0.19%	0.00%	0.58%	0.8%
8199	0.00%	0.00%	0.00%	4.62%	4.6%
8204	0.00%	0.00%	0.77%	0.00%	0.8%
8205	0.00%	0.77%	0.77%	0.00%	1.5%
Puslinch	0.00%	1.54%	0.00%	0.00%	1.5%
Centre Wellington	0.00%	0.00%	0.77%	0.00%	0.8%
Oxford	0.00%	0.58%	0.00%	0.19%	0.8%
Collingwood	0.00%	0.00%	1.54%	0.00%	1.5%
TOTAL TRIPS	**26%**	**32%**	**20%**	**21%**	100.0%

Note: Distribution percentages rounded to the nearest 5% for analysis.

Appendix H:
Signal Timing Plans

CITY OF GUELPH

Traffic Signal Timing Parameters

Database Date			Prepared Date:	Friday, April 27, 2018
Database Rev			Completed By:	I.T.
Timing Card / Field rev	From Controller		Checked By:	

Location:	Gordon Street at Poppy Drive						TIME PERIOD (sec.) (Green+Amber+All Red)		
Phase #	Direction	Vehicle Minimum (sec.)	Pedestrian Minimum (sec.)		Amber (sec.)	All Red (sec.)	AM MAX	OFF MAX	PM MAX
			WALK	FDWALK					
1	SBLT P+P	7.0			3.0		10.0	10.0	10.0
2	NB Gordong St.	10.0	17.0	12.0	4.0	2.0	50.0	50.0	50.0
3	Not in use								
4	WB Poppy Dr.	7.0	8.0	16.0	4.0	2.0	30.0	30.0	30.0
5	NBLT P+P	7.0			3.0		10.0	10.0	10.0
6	SB Gordon St.	10.0	17.0	12.0	4.0	2.0	50.0	50.0	50.0
7	Not in use								
8	EB Poppy Dr.	7.0	8.0	16.0	4.0	2.0	30.0	30.0	30.0

System Control	Yes
Local Control	No
Semi-Actuated Mode	Yes

Note: P+P = Protected Permissive Phase
Prot. = Fully Protected Phase

TIME (M-F)	PEAK	CYCLE LENGTH (sec.)	OFFSET (sec.)
07:00-09:00	AM	90	84
9:00 - 15:00	OFF	90	73
15:00 - 21:00	PM	90	57

CITY OF GUELPH

Traffic Signal Timing Parameters

Database Date			Prepared Date:	November 7, 2023
Database Rev			Completed By:	I.T.
Timing Card / Field rev	From Controller		Checked By:	

Location: Clair Road East at Fairley Drive

Phase #	Direction	Vehicle Minimum (sec.)	Pedestrian Minimum (sec.)		Amber (sec.)	All Red (sec.)	TIME PERIOD (sec.) (Green+Amber+All Red)		
			WALK	FDWALK			AM MAX	OFF MAX	PM MAX
1	EBLT - Clair Road East - P+P	7.0			3.0		10.0	10.0	10.0
2	EB - Clair Road East	10.0	11.0	18.0	4.0	2.0	48.0	48.0	48.0
3	Not in use								
4	NB - Farley Drive	7.0	8.0	18.0	4.0	2.0	32.0	32.0	32.0
5	WBLT - Clair Road East - P+P	7.0			3.0		10.0	10.0	10.0
6	WB - Clair Road East	10.0	11.0	18.0	4.0	2.0	48.0	48.0	48.0
7	Not in use								
8	SB - Farley Drive	7.0	8.0	18.0	4.0	2.0	32.0	32.0	32.0

System Control	Yes
Local Control	No
Semi-Actuated Mode	Yes

Note: P+P = Protected Permissive Phase

Prot. = Fully Protected Phase

TIME (M-F)	PEAK	CYCLE LENGTH (sec.)	OFFSET (sec.)
07:00-09:00	AM	90	45
9:00 - 15:00	OFF	90	32
15:00 - 21:00	PM	90	5
21:00 - 07:00	Free	Varies	N/A

CITY OF GUELPH

Traffic Signal Timing Parameters

Database Date			Prepared Date:	Friday, June 21, 2019
Database Rev			Completed By:	I.T.
Timing Card / Field rev	From Controller		Checked By:	

Location: Gordon Street at Clair Road

Phase #	Direction	Vehicle Minimum (sec.)	Pedestrian Minimum (sec.)		Amber (sec.)	All Red (sec.)	TIME PERIOD (sec.) (Green+Amber+All Red)		
			WALK	FDWALK			AM MAX	OFF MAX	PM MAX
1	SBLT P+P	7.0			3.0		10.0	10.0	10.0
2	NB Gordong St.	10.0	10.0	19.0	4.0	2.0	35.0	35.0	35.0
3	EBLT P+P	7.0			3.0		10.0	10.0	10.0
4	WB Clair Rd.	10.0	9.0	19.0	4.0	2.0	35.0	35.0	35.0
5	NBLT P+P	7.0			3.0		10.0	10.0	10.0
6	SB Gordon St.	10.0	10.0	19.0	4.0	2.0	35.0	35.0	35.0
7	WBLT P+P	7.0			3.0		10.0	10.0	10.0
8	EB Clair Rd.	10.0	9.0	19.0	4.0	2.0	35.0	35.0	35.0

System Control	No
Local Control	Yes
Semi-Actuated Mode	Yes

TIME (M-F)	PEAK	CYCLE LENGTH (sec.)	OFFSET (sec.)
07:00-09:00	AM	90	80
9:00 - 15:00	OFF	90	70
15:00 - 21:00	PM	90	45

Note: P+P = Protected Permissive Phase

Prot. = Fully Protected Phase

Appendix I:
Left-Turn Lane Warrant

EX			
AM			
Left Turn Volume	25	Signal Warranted?	No
Opposing Volume	300	Storage Length	0 m

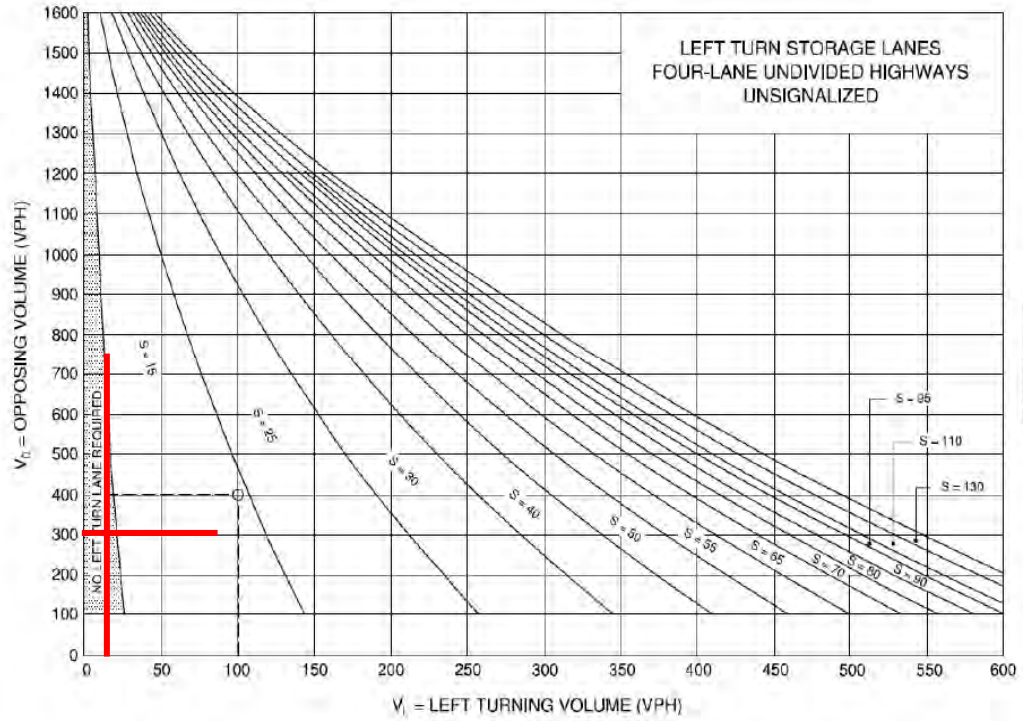
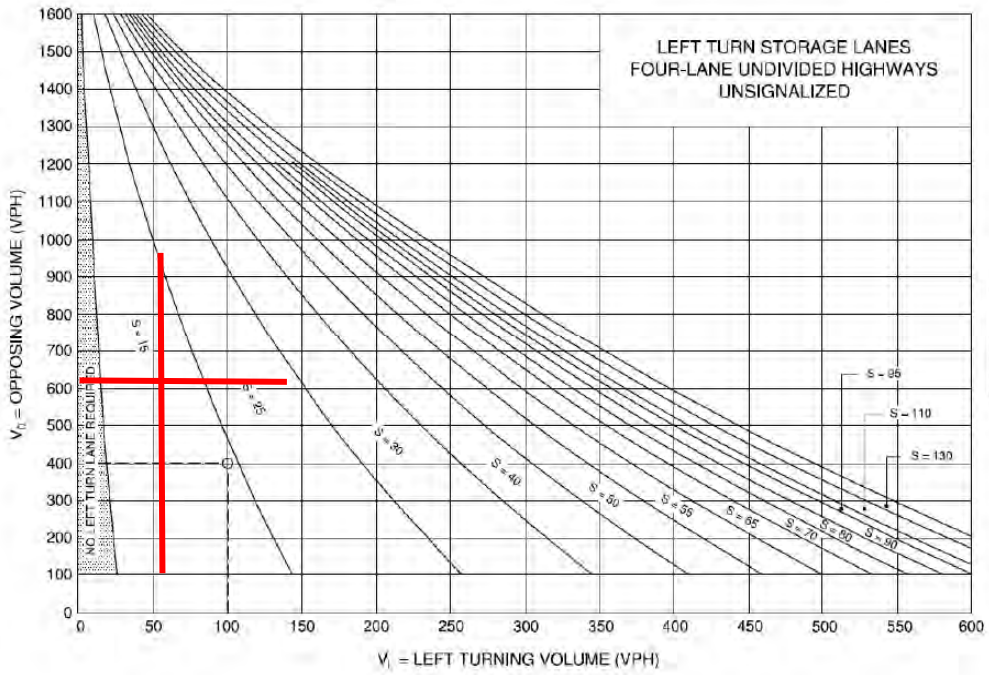


Exhibit-9A-31

EX			
PM			
Left Turn Volume	55	Signal Warranted?	Yes
Opposing Volume	605	Storage Length	15 m



EX			
SAT			
Left Turn Volume	75	Signal Warranted?	Yes
Opposing Volume	390	Storage Length	15 m

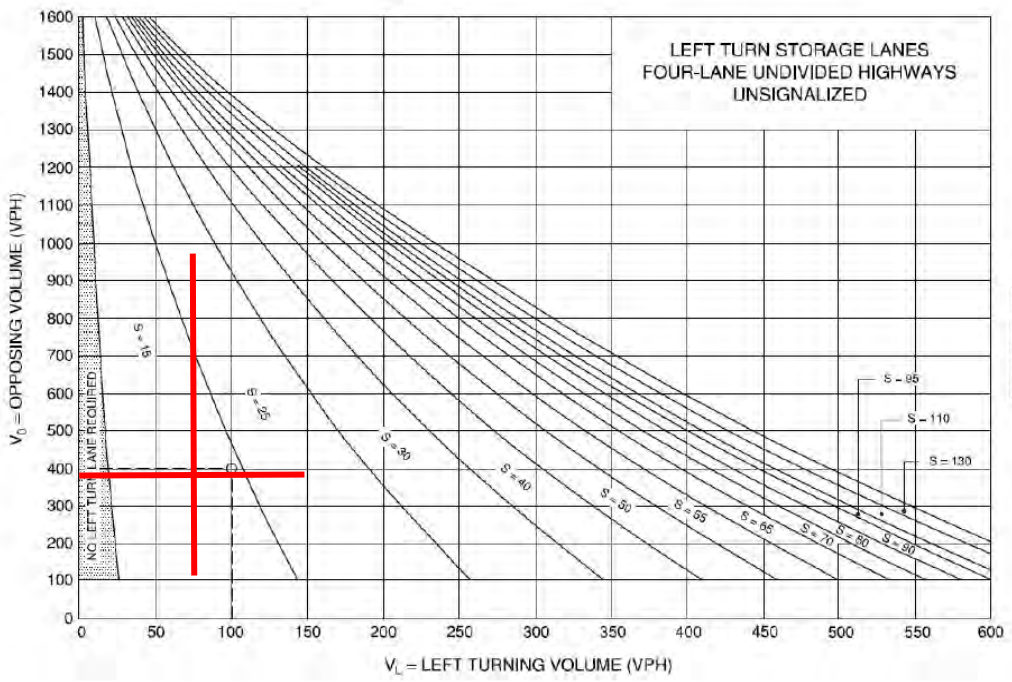


Exhibit-9A-31

2028 FB			
AM			
Left Turn Volume	30	Signal Warranted?	Yes
Opposing Volume	395	Storage Length	15 m

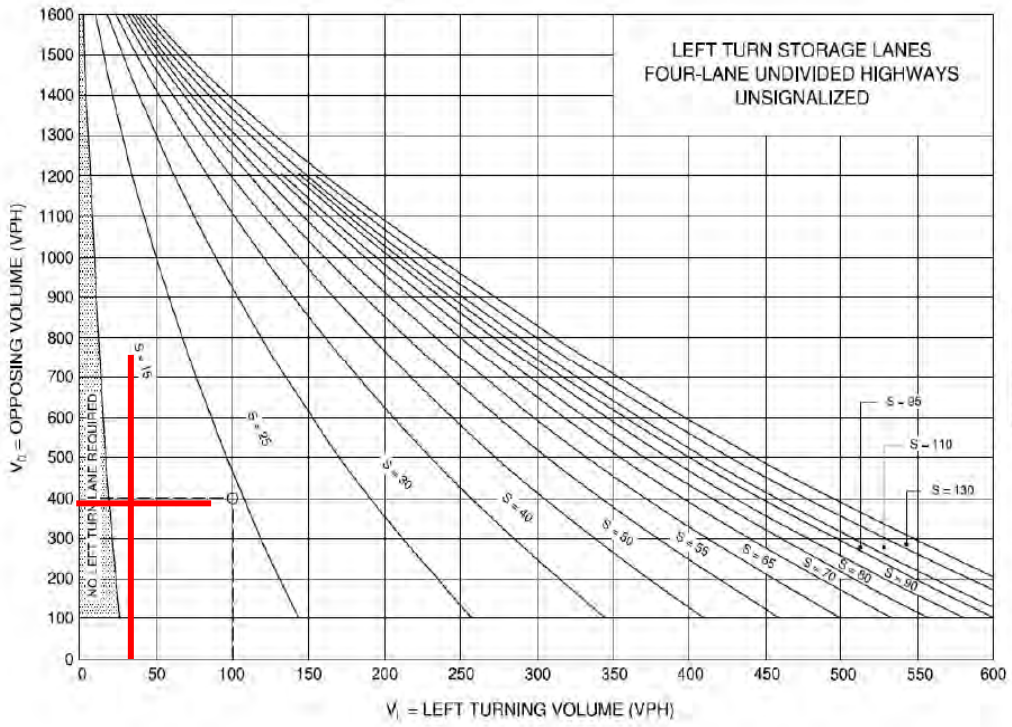


Exhibit-9A-31

2028 FB			
PM			
Left Turn Volume	65	Signal Warranted?	Yes
Opposing Volume	820	Storage Length	25 m

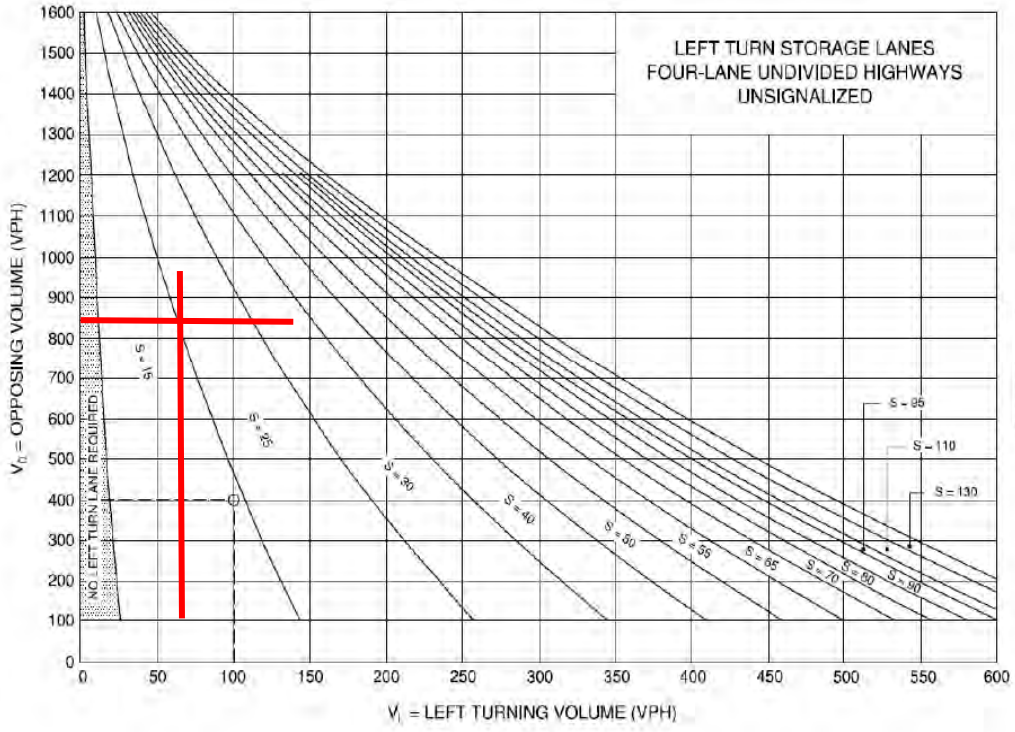


Exhibit 9A-31

2028 FB			
SAT			
Left Turn Volume	90	Signal Warranted?	Yes
Opposing Volume	545	Storage Length	25 m

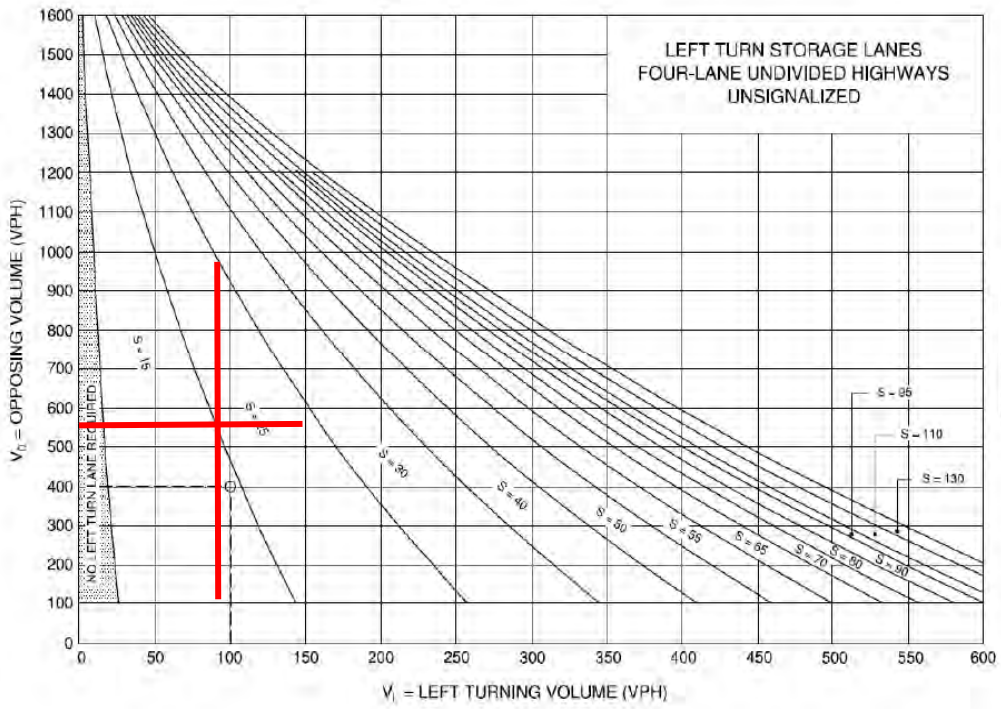
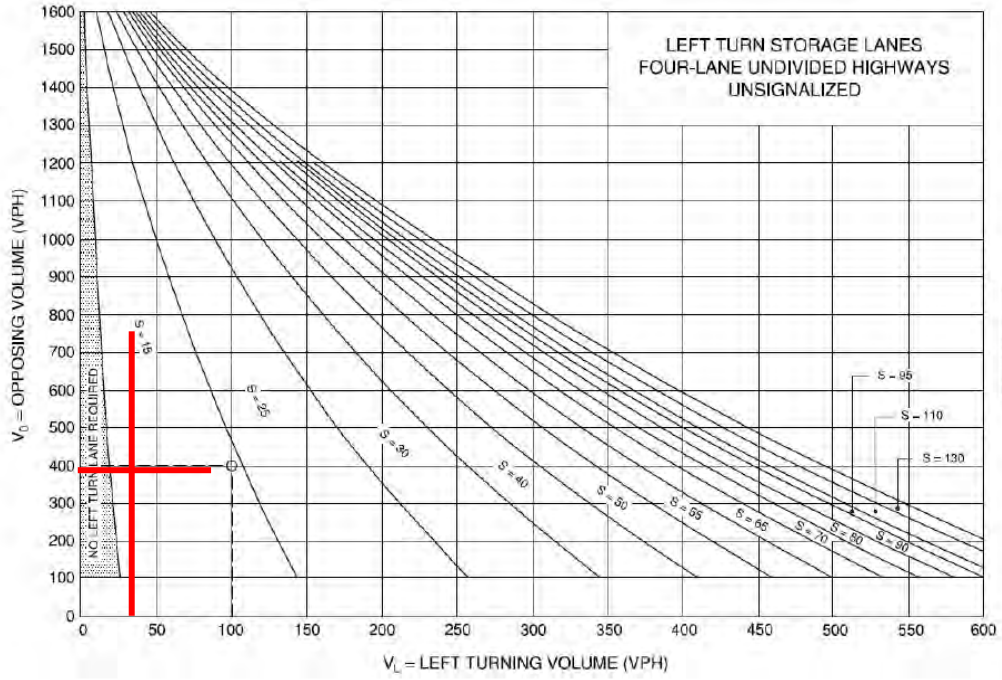


Exhibit-9A-31

2028 FT			
AM			
Left Turn Volume	35	Signal Warranted?	Yes
Opposing Volume	395	Storage Length	15 m



2028 FT			
PM			
Left Turn Volume	65	Signal Warranted?	Yes
Opposing Volume	820	Storage Length	25 m

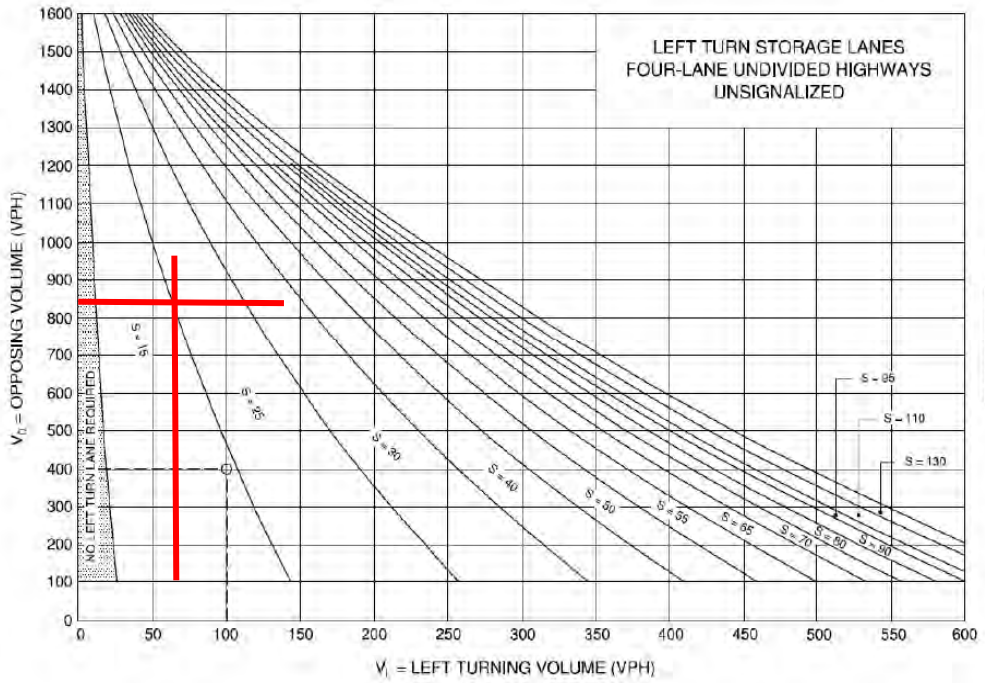
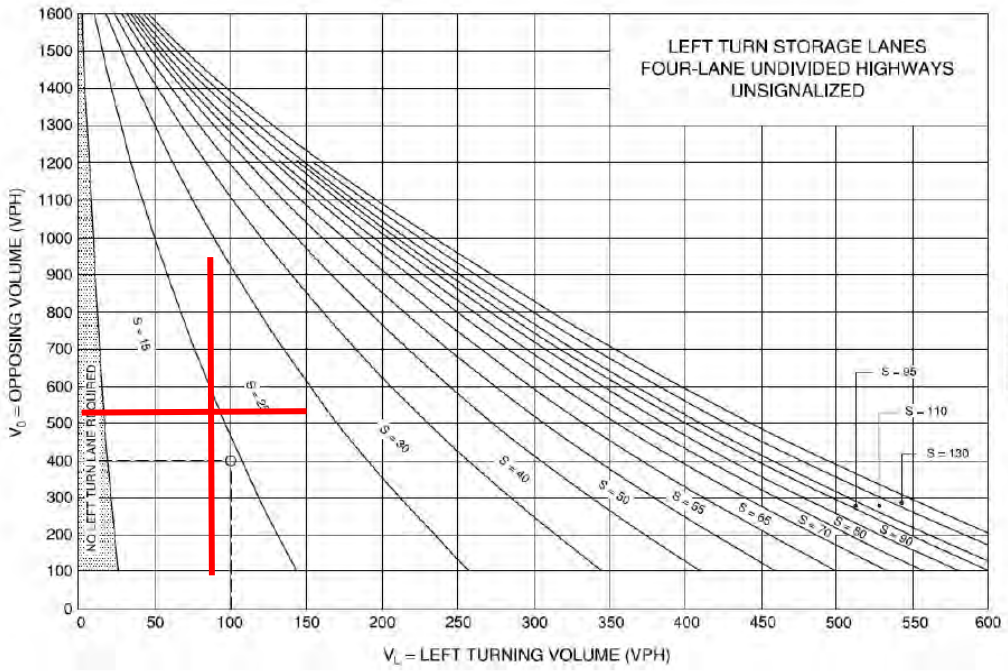


Exhibit 9A-31

2028 FT			
SAT			
Left Turn Volume	80	Signal Warranted?	Yes
Opposing Volume	545	Storage Length	15 m



Appendix J:
Signal Warrant

Input Data Sheet

Analysis Sheet | Results Sheet | Proposed Collision

GO TO Justification:

What are the intersecting roadways? Clair Road East / Hawkins Drive

What is the direction of the Main Road street? East-West

When was the data collected? 2023-09-20 2023-09-20

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road? 2 or more

b.- Number of lanes on the Minor Road? 1

c.- How many approaches? 3

d.- What is the operating environment? Urban Population >= 10,000 AND Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Eastbound Approach			Minor Northbound Approach			Main Westbound Approach			Minor Southbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
9:00	0	430	10	25	0	70	55	890	0				0
13:00	0	420	24	40	0	78	56	427	0				0
14:00	0	465	37	23	0	74	48	483	0				0
15:00	0	569	20	20	0	68	64	520	0				0
16:00	0	751	39	40	0	69	56	578	0				0
17:00	0	899	35	28	0	122	76	635	0				0
18:00	0	846	26	18	0	137	103	597	0				0
19:00	0	634	35	31	0	117	77	509	0				0
Total	**0**	**5,014**	**227**	**224**	**0**	**736**	**536**	**4,638**	**0**	**0**	**0**	**0**	**0**

Justification 5: Collision Experience

Preceding Months	Number of Collisions*
1-12	
13-24	
25-36	

* Include only collisions that are susceptable to correction through the installation of traffic signal control

Justification 6: Pedestrian Volume

a.- Please fill in table below summarizing total pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

	Zone 1		Zone 2		Zone 3 (if needed)		Zone 4 (if needed)		Total
	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	
Total 8 hour pedestrian volume	0	0	0	0	0	0	0	0	
Factored 8 hour pedestrian volume	0		0		0		0		
% Assigned to crossing rate	100%		50%		0%		0%		
Net 8 Hour Pedestrian Volume at Crossing									0
Net 8 Hour Vehicular Volume on Street Being Crossed									

b.- Please fill in table below summarizing delay to pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

	Zone 1		Zone 2		Zone 3 (if needed)		Zone 4 (if needed)		Total
	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	
Total 8 hour pedestrian volume	0	0	0	0	0	0	0	0	
Total 8 hour pedestrians delayed greater than 10 seconds									
Factored volume of total pedestrians	0		0		0		0		
Factored volume of delayed pedestrians	0		0		0		0		
% Assigned to Crossing Rate	100%		50%		0%		0%		
Net 8 Hour Volume of Total Pedestrians									0
Net 8 Hour Volume of Delayed Pedestrians									0

Analysis Sheet

Input Sheet | Results Sheet | Proposed Collision | GO TO Justification:

Intersection: Clair Road East / Hawkins Drive Count Date: 2023-09-20

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 Lanes		2 or More Lanes		Hour Ending									
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☐	RESTR. FLOW ☑	9:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00		
1A	480	720	600	900	1,480	1,046	1,129	1,261	1,534	1,793	1,728	1,403		
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100
1B	180	255	180	255	95	118	96	88	109	149	156	148		
	COMPLIANCE %				37	46	38	34	43	59	61	58	376	47

Restricted Flow Signal Justification 1:

Both 1A and 1B 100% Fulfilled each of 8 hours — Yes ☐ No ☑

Lesser of 1A or 1B at least 80% fulfilled each of 8 hours — Yes ☐ No ☑

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 lanes		2 or More lanes		Hour Ending									
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☐	RESTR. FLOW ☑	9:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00		
2A	480	720	600	900	1,385	928	1,033	1,173	1,425	1,644	1,573	1,255		
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100
2B	50	75	50	75	25	40	23	20	40	28	18	31		
	COMPLIANCE %				33	53	30	27	53	37	24	41	299	37

Restricted Flow Signal Justification 2:

Both 2A and 2B 100% fulfilled each of 8 hours — Yes ☐ No ☑

Lesser of 2A or 2B at least 80% fulfilled each of 8 hours — Yes ☐ No ☑

Justification 3: Combination

Combination Justification 1 and 2

	Justification Satisfied 80% or More			Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicle Volume	YES ☐	NO ☑	YES ☐	NO ☑
Justification 2	Delay Cross Traffic	YES ☐	NO ☑		NOT JUSTIFIED

Per Ontario Traffic Manual Book 12 Figure 21 - Minimum Hour Hour Justification, Restricted Flow, the lower minimum threshold of 80 VPH has been adopted in place of the upper minimum threshold of 115 VPH to account for the 2-lane major street + 1-lane minor street configuration. It is noted that MTO's spreadsheet does not account for the reduced minimim threshold under these configuration conditions. Application of the 80 VPH threshold results in a signal warranted under 2033 FB conditions.

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	1,385	95	115	83 %	94 %
	16:00	1,425	109	115	95 %	
	17:00	1,644	149	115	100 %	
	18:00	1,573	156	115	100 %	

Justification 5: Collision Experience

Justification	Preceding Months	% Fulfillment	Overall % Compliance
Justification 5	1-12	0 %	0 %
	13-24	0 %	

	25-36	0 %	

Justification 6: Pedestrian Volume

Pedestrian Volume Analysis

8 Hour Vehicular Volume V_8		Net 8 Hour Pedestrian Volume				
		< 200	200 - 275	276 - 475	476 - 1000	>1000
Justification 6A	< 1440	Not Justified				
	1440 - 2600					
	2601 - 7000					
	> 7000					

Pedestrian Delay Analysis

Net Total 8 Hour Volume of Total Pedestrians		Net Total 8 Hour Volume of Delayed Pedestrians		
		< 75	75 - 130	> 130
Justification 6B	< 200	Not Justified		
	200 - 300			
	> 300			

Results Sheet

Input Sheet | Analysis Sheet | Proposed Collision

GO TO Justification:

Intersection: Clair Road East / Hawkins Drive Count Date: 2023-09-20

Summary Results

Justification			Compliance	Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	100 %	☐	☑
	B	Crossing Volume	47 %		
2. Delay to Cross Traffic	A	Main Road	100 %	☐	☑
	B	Crossing Road	37 %		
3. Combination	A	Justificaton 1	47 %	☐	☑
	B	Justification 2	37 %		
4. 4-Hr Volume			94 %	☐	☑
5. Collision Experience			0 %	☐	☑
6. Pedestrians	A	Volume	Justification not met	☐	☑
	B	Delay	Justification not met		

Input Data Sheet

Analysis Sheet | Results Sheet | Proposed Collision

GO TO Justification:

What are the intersecting roadways? Clair Road East / Hawkins Drive

What is the direction of the Main Road street? East-West

When was the data collected? 2023-09-20 2023-09-20

Justification 1 - 4: Volume Warrants

a.- Number of lanes on the Main Road? 2 or more

b.- Number of lanes on the Minor Road? 1

c.- How many approaches? 3

d.- What is the operating environment? Urban Population >= 10,000 AND Speed < 70 km/hr

e.- What is the eight hour vehicle volume at the intersection? (Please fill in table below)

Hour Ending	Main Eastbound Approach			Minor Northbound Approach			Main Westbound Approach			Minor Southbound Approach			Pedestrians Crossing Main Road
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
9:00	0	520	15	35	0	105	90	995	0				0
13:00	0	483	34	70	0	78	100	469	0				0
14:00	0	535	53	39	0	74	86	530	0				0
15:00	0	655	28	35	0	68	114	571	0				0
16:00	0	864	56	70	0	69	100	635	0				0
17:00	0	1,033	50	48	0	122	134	698	0				0
18:00	0	973	38	32	0	137	184	656	0				0
19:00	0	729	50	54	0	117	136	559	0				0
Total	**0**	**5,792**	**324**	**383**	**0**	**771**	**944**	**5,114**	**0**	**0**	**0**	**0**	**0**

Justification 5: Collision Experience

Preceding Months	Number of Collisions*
1-12	
13-24	
25-36	

* Include only collisions that are susceptable to correction through the installation of traffic signal control

Justification 6: Pedestrian Volume

a.- Please fill in table below summarizing total pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

	Zone 1		Zone 2		Zone 3 (if needed)		Zone 4 (if needed)		Total
	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	
Total 8 hour pedestrian volume	0	0	0	0	0	0	0	0	
Factored 8 hour pedestrian volume	0		0		0		0		
% Assigned to crossing rate	100%		50%		0%		0%		
Net 8 Hour Pedestrian Volume at Crossing									0
Net 8 Hour Vehicular Volume on Street Being Crossed									

b.- Please fill in table below summarizing delay to pedestrians crossing major roadway at the intersection or in proximity to the intersection (zones). Please reference Section 4.8 of the Manual for further explanation and graphical representation.

	Zone 1		Zone 2		Zone 3 (if needed)		Zone 4 (if needed)		Total
	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	Assisted	Unassisted	
Total 8 hour pedestrian volume	0	0	0	0	0	0	0	0	
Total 8 hour pedestrians delayed greater than 10 seconds									
Factored volume of total pedestrians	0		0		0		0		
Factored volume of delayed pedestrians	0		0		0		0		
% Assigned to Crossing Rate	100%		50%		0%		0%		
Net 8 Hour Volume of Total Pedestrians									0
Net 8 Hour Volume of Delayed Pedestrians									0

Analysis Sheet

Input Sheet | Results Sheet | Proposed Collision | GO TO Justification:

Intersection: Clair Road East / Hawkins Drive Count Date: 2023-09-20

Justification 1: Minimum Vehicle Volumes

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 Lanes		2 or More Lanes		Hour Ending									
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☐	RESTR. FLOW ☑	9:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00		
1A	480	720	600	900	1,760	1,235	1,317	1,471	1,794	2,086	2,020	1,646		
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100
1B	180	255	180	255	140	148	113	103	139	170	169	171		
	COMPLIANCE %				55	58	44	40	55	67	66	67	453	57
Restricted Flow Signal Justification 1:					Both 1A and 1B 100% Fulfilled each of 8 hours					Yes ☐		No ☑		
					Lesser of 1A or 1B at least 80% fulfilled each of 8 hours					Yes ☐		No ☑		

Justification 2: Delay to Cross Traffic

Restricted Flow Urban Conditions

Justification	Guidance Approach Lanes				Percentage Warrant								Total Across	Section Percent
	1 lanes		2 or More lanes		Hour Ending									
Flow Condition	FREE FLOW ☐	RESTR. FLOW ☐	FREE FLOW ☐	RESTR. FLOW ☑	9:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00		
2A	480	720	600	900	1,620	1,087	1,204	1,368	1,655	1,915	1,851	1,475		
	COMPLIANCE %				100	100	100	100	100	100	100	100	800	100
2B	50	75	50	75	35	70	39	35	70	115	124	122		
	COMPLIANCE %				47	93	53	47	93	100	100	100	633	79
Restricted Flow Signal Justification 2:					Both 2A and 2B 100% fulfilled each of 8 hours					Yes ☐		No ☑		
					Lesser of 2A or 2B at least 80% fulfilled each of 8 hours					Yes ☐		No ☑		

Justification 3: Combination

Combination Justification 1 and 2

	Justification Satisfied 80% or More			Two Justifications Satisfied 80% or More	
Justification 1	Minimum Vehicle Volume	YES ☐	NO ☑	YES ☐	NO ☑
Justification 2	Delay Cross Traffic	YES ☐	NO ☑		NOT JUSTIFIED

Justification 4: Four Hour Volume

Justification	Time Period	Total Volume of Both Approaches (Main)	Heaviest Minor Approach	Required Value	Average % Compliance	Overall % Compliance
		X	Y (actual)	Y (warrant threshold)		
Justification 4	9:00	1,620	140	115	100 %	100 %
	16:00	1,655	139	115	100 %	
	17:00	1,915	170	115	100 %	
	18:00	1,851	169	115	100 %	

Justification 5: Collision Experience

Justification	Preceding Months	% Fulfillment	Overall % Compliance
Justification 5	1-12	0 %	0 %
	13-24	0 %	

	25-36	0 %	

Justification 6: Pedestrian Volume

Pedestrian Volume Analysis

8 Hour Vehicular Volume V_8		Net 8 Hour Pedestrian Volume				
		< 200	200 - 275	276 - 475	476 - 1000	>1000
Justification 6A	< 1440	Not Justified				
	1440 - 2600					
	2601 - 7000					
	> 7000					

Pedestrian Delay Analysis

Net Total 8 Hour Volume of Total Pedestrians		Net Total 8 Hour Volume of Delayed Pedestrians		
		< 75	75 - 130	> 130
Justification 6B	< 200	Not Justified		
	200 - 300			
	> 300			

Results Sheet

Input Sheet | Analysis Sheet | Proposed Collision

GO TO Justification:

Intersection: Clair Road East / Hawkins Drive Count Date: 2023-09-20

Summary Results

Justification			Compliance		Signal Justified? YES	Signal Justified? NO
1. Minimum Vehicular Volume	A	Total Volume	100	%	☐	☑
	B	Crossing Volume	57	%		
2. Delay to Cross Traffic	A	Main Road	100	%	☐	☑
	B	Crossing Road	79	%		
3. Combination	A	Justificaton 1	57	%	☐	☑
	B	Justification 2	79	%		
4. 4-Hr Volume			100	%	☑	☐
5. Collision Experience			0	%	☐	☑
6. Pedestrians	A	Volume	Justification not met		☐	☑
	B	Delay	Justification not met			

Appendix K:
Synchro Analysis Sheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	300	5	25	610	10	35
Future Volume (vph)	300	5	25	610	10	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Satd. Flow (prot)	3371	0	0	3431	1740	0
Flt Permitted				0.998	0.989	
Satd. Flow (perm)	3371	0	0	3431	1740	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Adj. Flow (vph)	349	6	29	709	12	41
Shared Lane Traffic (%)						
Lane Group Flow (vph)	355	0	0	738	53	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	300	5	25	610	10	35
Future Volume (Veh/h)	300	5	25	610	10	35
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	349	6	29	709	12	41
Pedestrians					5	
Lane Width (m)					4.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked						
vC, conflicting volume			360		770	182
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			360		770	182
tC, single (s)			4.1		7.0	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			98		96	95
cM capacity (veh/h)			1204		316	812

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	233	122	265	473	53
Volume Left	0	0	29	0	12
Volume Right	0	6	0	0	41
cSH	1700	1700	1204	1700	599
Volume to Capacity	0.14	0.07	0.02	0.28	0.09
Queue Length 95th (m)	0.0	0.0	0.6	0.0	2.3
Control Delay (s)	0.0	0.0	1.1	0.0	11.6
Lane LOS			A		B
Approach Delay (s)	0.0		0.4		11.6
Approach LOS					B

Intersection Summary				
Average Delay	0.8			
Intersection Capacity Utilization	40.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	25	0	0	65	10	10	5	0	5	0	10
Future Volume (vph)	20	25	0	0	65	10	10	5	0	5	0	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	1887	0	0	1804	0	0	2021	0	0	1643	0
Flt Permitted		0.979						0.967			0.984	
Satd. Flow (perm)	0	1887	0	0	1804	0	0	2021	0	0	1643	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	24		15	15		24	15		17	17		15
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	9%	8%	0%	0%	4%	0%	0%	0%	0%	0%	0%	20%
Adj. Flow (vph)	25	32	0	0	82	13	13	6	0	6	0	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	57	0	0	95	0	0	19	0	0	19	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	25	0	0	65	10	10	5	0	5	0	10
Future Volume (Veh/h)	20	25	0	0	65	10	10	5	0	5	0	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	25	32	0	0	82	13	13	6	0	6	0	13
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	119			47			214	216	64	214	210	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119			47			214	216	64	214	210	128
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	98			100			98	99	100	99	100	98
cM capacity (veh/h)	1391			1549			682	646	976	681	651	841

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	57	95	19	19
Volume Left	25	0	13	6
Volume Right	0	13	0	13
cSH	1391	1549	670	783
Volume to Capacity	0.02	0.00	0.03	0.02
Queue Length 95th (m)	0.4	0.0	0.7	0.6
Control Delay (s)	3.4	0.0	10.5	9.7
Lane LOS	A		B	A
Approach Delay (s)	3.4	0.0	10.5	9.7
Approach LOS			B	A

Intersection Summary				
Average Delay	3.1			
Intersection Capacity Utilization	25.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	30	100	10	10	10
Future Volume (vph)	10	30	100	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	1844	1958	0	1547	0
Flt Permitted		0.988			0.976	
Satd. Flow (perm)	0	1844	1958	0	1547	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	8			8		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	30%	6%	6%	0%	9%	12%
Adj. Flow (vph)	11	33	110	11	11	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	44	121	0	22	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.8%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	30	100	10	10	10
Future Volume (Veh/h)	10	30	100	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	33	110	11	11	11
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	129				178	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	129				178	124
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	99				99	99
cM capacity (veh/h)	1292				783	895

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	44	121	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1292	1700	836
Volume to Capacity	0.01	0.07	0.03
Queue Length 95th (m)	0.2	0.0	0.6
Control Delay (s)	2.0	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	2.0	0.0	9.4
Approach LOS			A

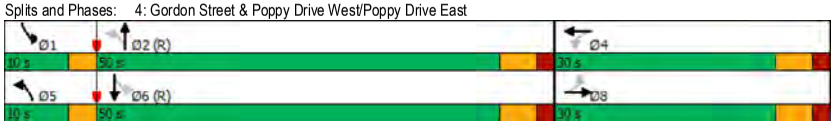
Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	30	5	85	10	600	20	25	525	5
Future Volume (vph)	10	10	10	30	5	85	10	600	20	25	525	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1432	0	0	1734	0	1894	3307	0	1678	3391	0
Flt Permitted		0.885			0.906		0.446			0.393		
Satd. Flow (perm)	0	1287	0	0	1589	0	887	3307	0	691	3391	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			89			5			1	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Adj. Flow (vph)	10	10	10	31	5	89	10	625	21	26	547	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	30	0	0	125	0	10	646	0	26	552	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		10.0	50.0		10.0	50.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		11.1%	55.6%		11.1%	55.6%	
Maximum Green (s)	24.0	24.0		24.0	24.0		7.0	44.0		7.0	44.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	1	1		1	1			3			3	
Act Effct Green (s)		11.0			11.0		68.8	63.0		69.4	65.0	
Actuated g/C Ratio		0.12			0.12		0.76	0.70		0.77	0.72	
v/c Ratio		0.18			0.46		0.01	0.28		0.04	0.23	
Control Delay		26.0			17.5		4.3	7.3		3.6	5.9	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		26.0			17.5		4.3	7.3		3.6	5.9	
LOS		C			B		A	A		A	A	
Approach Delay		26.0			17.5			7.2			5.8	
Approach LOS		C			B			A			A	

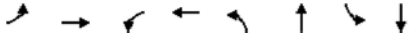
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	30.0	30.0	30.0	30.0	10.0	50.0	10.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	11.1%	55.6%	11.1%	55.6%
Maximum Green (s)	24.0	24.0	24.0	24.0	7.0	44.0	7.0	44.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	1	1	1	1		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	7.0	44.0	7.0	44.0
90th %ile Term Code	Ped	Ped	Ped	Ped	Min	Coord	Min	Coord
70th %ile Green (s)	9.6	9.6	9.6	9.6	0.0	58.4	7.0	68.4
70th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Min	Coord
50th %ile Green (s)	7.5	7.5	7.5	7.5	0.0	70.5	0.0	70.5
50th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Skip	Coord
30th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
30th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	30	125	10	646	26	552
v/c Ratio	0.18	0.46	0.01	0.28	0.04	0.23
Control Delay	26.0	17.5	4.3	7.3	3.6	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	17.5	4.3	7.3	3.6	5.9
Queue Length 50th (m)	3.5	6.3	0.4	12.5	0.4	8.2
Queue Length 95th (m)	9.6	18.6	2.4	50.6	m3.2	38.5
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	350	489	756	2315	609	2448
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.26	0.01	0.28	0.04	0.23

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	10	10	30	5	85	10	600	20	25	525	5
Future Volume (vph)	10	10	10	30	5	85	10	600	20	25	525	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.90		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1430			1732		1892	3308		1675	3390	
Flt Permitted		0.88			0.91		0.45	1.00		0.39	1.00	
Satd. Flow (perm)		1286			1588		887	3308		692	3390	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	10	10	31	5	89	10	625	21	26	547	5
RTOR Reduction (vph)	0	9	0	0	78	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	21	0	0	47	0	10	644	0	26	552	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		11.0			11.0		62.6	61.2		65.4	62.6	
Effective Green, g (s)		11.0			11.0		62.6	61.2		65.4	62.6	
Actuated g/C Ratio		0.12			0.12		0.70	0.68		0.73	0.70	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		157			194		632	2249		533	2357	
v/s Ratio Prot							0.00	c0.19		c0.00	0.16	
v/s Ratio Perm		0.02			c0.03		0.01			0.03		
v/c Ratio		0.14			0.24		0.02	0.29		0.05	0.23	
Uniform Delay, d1		35.3			35.7		4.2	5.7		3.4	5.0	
Progression Factor		1.00			1.00		1.00	1.00		0.91	0.96	
Incremental Delay, d2		0.4			0.6		0.0	0.3		0.0	0.2	
Delay (s)		35.6			36.4		4.2	6.0		3.2	5.0	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		35.6			36.4			6.0			4.9	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.27			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	44.5%	ICU Level of Service	A	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	270	90	145	550	65	145	445	90	65	325	185
Future Volume (vph)	140	270	90	145	550	65	145	445	90	65	325	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1631	3206	0	1572	3385	0	1586	3221	0	1678	3194	0
Flt Permitted	0.214			0.451			0.320			0.389		
Satd. Flow (perm)	364	3206	0	738	3385	0	532	3221	0	682	3194	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		53			15			28			132	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	156	300	100	161	611	72	161	494	100	72	361	206
Shared Lane Traffic (%)												
Lane Group Flow (vph)	156	400	0	161	683	0	161	594	0	72	567	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	35.0		10.0	35.0		10.0	35.0		10.0	35.0	
Total Split (%)	11.1%	38.9%		11.1%	38.9%		11.1%	38.9%		11.1%	38.9%	
Maximum Green (s)	7.0	29.0		7.0	29.0		7.0	29.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		10			10			9			9	
Act Effct Green (s)	35.6	23.1		35.8	23.3		44.5	33.8		40.6	30.1	
Actuated g/C Ratio	0.40	0.26		0.40	0.26		0.49	0.38		0.45	0.33	
v/c Ratio	0.56	0.46		0.42	0.77		0.44	0.48		0.19	0.49	
Control Delay	24.5	25.4		24.2	44.9		15.5	19.2		14.6	20.7	

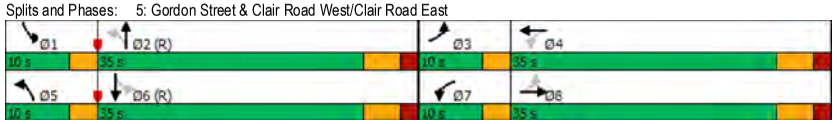
Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.5	25.4		24.2	44.9		15.5	19.2		14.6	20.7	
LOS	C	C		C	D		B	B		B	C	
Approach Delay		25.1			40.9			18.4			20.0	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 26.9		Intersection LOS: C	
Intersection Capacity Utilization 77.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	35.0	10.0	35.0	10.0	35.0	10.0	35.0
Total Split (%)	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%
Maximum Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		10		10		9		9
90th %ile Green (s)	7.0	28.9	7.0	28.9	7.1	29.0	7.1	29.0
90th %ile Term Code	Max	Hold	Max	Gap	Max	Coord	Max	Coord
70th %ile Green (s)	12.1	25.8	12.3	26.0	12.1	25.3	8.6	21.8
70th %ile Term Code	Gap	Hold	Gap	Gap	Max	Coord	Gap	Coord
50th %ile Green (s)	11.0	23.0	11.1	23.1	10.7	30.4	7.5	27.2
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Coord	Gap	Coord
30th %ile Green (s)	9.7	20.7	9.8	20.8	8.9	34.5	7.0	32.6
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Coord	Min	Coord
10th %ile Green (s)	7.5	17.3	7.7	17.5	7.0	50.0	0.0	40.0
10th %ile Term Code	Gap	Hold	Gap	Gap	Min	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	156	400	161	683	161	594	72	567
v/c Ratio	0.56	0.46	0.42	0.77	0.44	0.48	0.19	0.49
Control Delay	24.5	25.4	24.2	44.9	15.5	19.2	14.6	20.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	25.4	24.2	44.9	15.5	19.2	14.6	20.7
Queue Length 50th (m)	16.8	27.8	20.0	65.1	16.8	44.1	6.7	34.0
Queue Length 95th (m)	#28.8	37.9	43.4	86.4	13.0	55.8	14.7	49.1
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	277	1068	382	1100	370	1254	389	1217
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.37	0.42	0.62	0.44	0.47	0.19	0.47

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	270	90	145	550	65	145	445	90	65	325	185
Future Volume (vph)	140	270	90	145	550	65	145	445	90	65	325	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1628	3207		1564	3386		1584	3220		1673	3192	
Flt Permitted	0.21	1.00		0.45	1.00		0.32	1.00		0.39	1.00	
Satd. Flow (perm)	366	3207		743	3386		534	3220		684	3192	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	156	300	100	161	611	72	161	494	100	72	361	206
RTOR Reduction (vph)	0	39	0	0	11	0	0	18	0	0	88	0
Lane Group Flow (vph)	156	361	0	161	672	0	161	576	0	72	479	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	32.7	23.2		32.9	23.3		42.2	33.2		36.0	30.0	
Effective Green, g (s)	32.7	23.2		32.9	23.3		42.2	33.2		36.0	30.0	
Actuated g/C Ratio	0.36	0.26		0.37	0.26		0.47	0.37		0.40	0.33	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	266	826		359	876		357	1187		339	1064	
v/s Ratio Prot	c0.06	0.11		0.05	c0.20		c0.05	c0.18		0.01	0.15	
v/s Ratio Perm	0.15			0.12			0.16			0.07		
v/c Ratio	0.59	0.44		0.45	0.77		0.45	0.49		0.21	0.45	
Uniform Delay, d1	21.0	27.9		20.3	30.8		14.7	21.8		17.0	23.5	
Progression Factor	1.00	1.00		1.32	1.30		0.83	0.80		1.00	1.00	
Incremental Delay, d2	3.3	0.4		0.9	3.9		0.9	1.4		0.3	1.4	
Delay (s)	24.3	28.3		27.5	44.0		13.0	18.8		17.3	24.9	
Level of Service	C	C		C	D		B	B		B	C	
Approach Delay (s)		27.2			40.8			17.5			24.1	
Approach LOS		C			D			B			C	

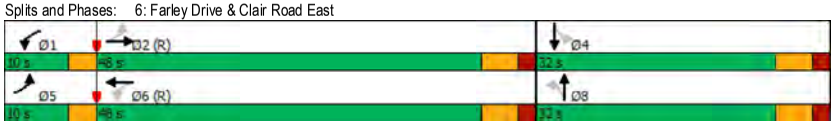
Intersection Summary					
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.60				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	77.9%	ICU Level of Service		D	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	275	40	10	585	40	25	15	5	35	20	130
Future Volume (vph)	85	275	40	10	585	40	25	15	5	35	20	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1716	3189	0	1785	3339	0	1639	1723	0	0	1829	0
Flt Permitted	0.348			0.540			0.403				0.928	
Satd. Flow (perm)	626	3189	0	1007	3339	0	689	1723	0	0	1710	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			10			6			135	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
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 (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Adj. Flow (vph)	96	309	45	11	657	45	28	17	6	39	22	146
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	354	0	11	702	0	28	23	0	0	207	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	10.0	48.0		10.0	48.0		32.0	32.0		32.0	32.0	
Total Split (%)	11.1%	53.3%		11.1%	53.3%		35.6%	35.6%		35.6%	35.6%	
Maximum Green (s)	7.0	42.0		7.0	42.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		3			3		5	5		5	5	
Act Effct Green (s)	68.6	63.7		65.8	57.2		12.3	12.3			12.3	
Actuated g/C Ratio	0.76	0.71		0.73	0.64		0.14	0.14			0.14	
v/c Ratio	0.17	0.16		0.01	0.33		0.30	0.10			0.59	
Control Delay	3.1	4.9		4.9	10.0		39.6	24.5			19.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	3.1	4.9		4.9	10.0		39.6	24.5			19.7	
LOS	A	A		A	A		D	C			B	
Approach Delay		4.5			9.9			32.8			19.7	
Approach LOS		A			A			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 10.4		Intersection LOS: B	
Intersection Capacity Utilization 63.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	48.0	10.0	48.0	32.0	32.0	32.0	32.0
Total Split (%)	11.1%	53.3%	11.1%	53.3%	35.6%	35.6%	35.6%	35.6%
Maximum Green (s)	7.0	42.0	7.0	42.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		3		3	5	5	5	5
90th %ile Green (s)	9.4	42.0	7.0	39.6	26.0	26.0	26.0	26.0
90th %ile Term Code	Gap	Coord	Min	Coord	Ped	Ped	Ped	Ped
70th %ile Green (s)	7.2	65.9	0.0	55.7	12.1	12.1	12.1	12.1
70th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.0	68.6	0.0	58.6	9.4	9.4	9.4	9.4
50th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.0	71.0	0.0	61.0	7.0	7.0	7.0	7.0
30th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Min	Min
10th %ile Green (s)	0.0	71.0	0.0	71.0	7.0	7.0	7.0	7.0
10th %ile Term Code	Skip	Coord	Skip	Coord	Hold	Hold	Min	Min

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	96	354	11	702	28	23	207
v/c Ratio	0.17	0.16	0.01	0.33	0.30	0.10	0.59
Control Delay	3.1	4.9	4.9	10.0	39.6	24.5	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	4.9	4.9	10.0	39.6	24.5	19.7
Queue Length 50th (m)	1.2	2.5	0.3	25.9	4.8	2.9	12.5
Queue Length 95th (m)	10.4	32.0	2.7	60.3	10.7	7.9	26.9
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	568	2264	796	2142	199	502	590
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	0.17	0.16	0.01	0.33	0.14	0.05	0.35

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	275	40	10	585	40	25	15	5	35	20	130
Future Volume (vph)	85	275	40	10	585	40	25	15	5	35	20	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96			0.90	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1714	3189		1778	3340		1624	1723			1825	
Flt Permitted	0.35	1.00		0.54	1.00		0.40	1.00			0.93	
Satd. Flow (perm)	628	3189		1010	3340		689	1723			1710	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	96	309	45	11	657	45	28	17	6	39	22	146
RTOR Reduction (vph)	0	8	0	0	4	0	0	5	0	0	117	0
Lane Group Flow (vph)	96	346	0	11	698	0	28	18	0	0	90	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	65.7	61.3		58.0	56.6		12.3	12.3			12.3	
Effective Green, g (s)	65.7	61.3		58.0	56.6		12.3	12.3			12.3	
Actuated g/C Ratio	0.73	0.68		0.64	0.63		0.14	0.14			0.14	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	532	2172		662	2100		94	235			233	
v/s Ratio Prot	c0.01	0.11		0.00	c0.21			0.01				
v/s Ratio Perm	0.12			0.01			0.04				c0.05	
v/c Ratio	0.18	0.16		0.02	0.33		0.30	0.08			0.39	
Uniform Delay, d1	3.7	5.1		5.7	7.8		35.0	33.9			35.4	
Progression Factor	0.61	0.79		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.1		0.0	0.4		1.8	0.1			1.1	
Delay (s)	2.4	4.2		5.7	8.3		36.7	34.0			36.5	
Level of Service	A	A		A	A		D	C			D	
Approach Delay (s)		3.8			8.2			35.5			36.5	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.33			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	63.1%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Flt Permitted		0.960									0.996	
Satd. Flow (perm)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	1		2	2		1	16		5	5		16
Confl. Bikes (#/hr)			1			1						
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	6%	0%	20%	4%	0%
Adj. Flow (vph)	34	7	0	0	14	7	0	21	0	7	27	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	21	0	0	21	0	0	89	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	0	14	7	0	21	0	7	27	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	21	21	89
Volume Left (vph)	34	0	0	7
Volume Right (vph)	0	7	0	55
Hadj (s)	0.21	-0.20	0.10	-0.31
Departure Headway (s)	4.4	4.0	4.2	3.8
Degree Utilization, x	0.05	0.02	0.02	0.09
Capacity (veh/h)	802	877	826	939
Control Delay (s)	7.6	7.1	7.3	7.1
Approach Delay (s)	7.6	7.1	7.3	7.1
Approach LOS	A	A	A	A

Intersection Summary				
Delay			7.3	
Level of Service			A	
Intersection Capacity Utilization			26.1%	ICU Level of Service
Analysis Period (min)			15	

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Flt Permitted		0.976						0.987			0.987	
Satd. Flow (perm)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	3		18	18		3	36		6	6		36
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	50%	0%	0%	0%	12%	40%	0%	6%	0%
Adj. Flow (vph)	7	0	7	0	0	7	7	13	7	7	20	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	7	0	0	27	0	0	27	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization 26.3%			ICU Level of Service A	
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	0	7	0	0	7	7	13	7	7	20	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	14	7	27	27
Volume Left (vph)	7	0	7	7
Volume Right (vph)	7	7	7	0
Hadj (s)	-0.20	-0.60	0.17	0.13
Departure Headway (s)	3.8	3.4	4.1	4.1
Degree Utilization, x	0.01	0.01	0.03	0.03
Capacity (veh/h)	922	1027	852	869
Control Delay (s)	6.9	6.5	7.3	7.2
Approach Delay (s)	6.9	6.5	7.3	7.2
Approach LOS	A	A	A	A

Intersection Summary					
Delay			7.1		
Level of Service			A		
Intersection Capacity Utilization			26.3%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
9: Hawkins Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	40	15	15
Future Volume (vph)	5	0	0	40	15	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1642	0	0	1990	1948	0
Flt Permitted	0.950					
Satd. Flow (perm)	1642	0	0	1990	1948	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Confl. Peds. (#/hr)			12			12
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	16%	100%	0%	5%	0%	0%
Adj. Flow (vph)	6	0	0	51	19	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	51	38	0
Sign Control	Stop			Free	Free	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization	16.6%		ICU Level of Service	A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	40	15	15
Future Volume (Veh/h)	5	0	0	40	15	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	6	0	0	51	19	19
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	92	40	50			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	92	40	50			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	866	800	1552			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	6	51	38
Volume Left	6	0	0
Volume Right	0	0	19
cSH	866	1552	1700
Volume to Capacity	0.01	0.00	0.02
Queue Length 95th (m)	0.2	0.0	0.0
Control Delay (s)	9.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.2	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay		0.6		
Intersection Capacity Utilization		16.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lanes, Volumes, Timings
10: 1888 Gordon Street Access & Poppy Drive East

12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	25	5	5	95	40	15
Future Volume (vph)	25	5	5	95	40	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	1829	0	0	1972	1721	0
Flt Permitted				0.997	0.965	
Satd. Flow (perm)	1829	0	0	1972	1721	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)						6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	0%	0%	6%	2%	0%
Adj. Flow (vph)	28	6	6	107	45	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	34	0	0	113	62	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.9%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	25	5	5	95	40	15
Future Volume (Veh/h)	25	5	5	95	40	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	28	6	6	107	45	17
Pedestrians				6		
Lane Width (m)				4.5		
Walking Speed (m/s)				1.2		
Percent Blockage				1		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			34		150	37
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			34		150	37
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		95	98
cM capacity (veh/h)			1591		839	1035

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	34	113	62
Volume Left	0	6	45
Volume Right	6	0	17
cSH	1700	1591	885
Volume to Capacity	0.02	0.00	0.07
Queue Length 95th (m)	0.0	0.1	1.8
Control Delay (s)	0.0	0.4	9.4
Lane LOS		A	A
Approach Delay (s)	0.0	0.4	9.4
Approach LOS			A

Intersection Summary			
Average Delay		3.0	
Intersection Capacity Utilization		20.9%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	605	15	55	425	10	85
Future Volume (vph)	605	15	55	425	10	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Satd. Flow (prot)	3474	0	0	3517	1828	0
Flt Permitted				0.994	0.995	
Satd. Flow (perm)	3474	0	0	3517	1828	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Adj. Flow (vph)	617	15	56	434	10	87
Shared Lane Traffic (%)						
Lane Group Flow (vph)	632	0	0	490	97	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.4%			ICU Level of Service A
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	605	15	55	425	10	85
Future Volume (Veh/h)	605	15	55	425	10	85
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	617	15	56	434	10	87
Pedestrians	1				13	
Lane Width (m)	3.5				4.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.93		0.93	0.93
vC, conflicting volume			645		968	329
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			478		823	140
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			94		96	89
cM capacity (veh/h)			1008		274	819

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	411	221	201	289	97
Volume Left	0	0	56	0	10
Volume Right	0	15	0	0	87
cSH	1700	1700	1008	1700	680
Volume to Capacity	0.24	0.13	0.06	0.17	0.14
Queue Length 95th (m)	0.0	0.0	1.4	0.0	4.0
Control Delay (s)	0.0	0.0	2.8	0.0	11.2
Lane LOS			A		B
Approach Delay (s)	0.0		1.2		11.2
Approach LOS					B

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	46.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	85	10	0	40	5	10	5	0	15	0	15
Future Volume (vph)	35	85	10	0	40	5	10	5	0	15	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2042	0	0	1839	0	0	2023	0	0	1846	0
Flt Permitted		0.987						0.968			0.976	
Satd. Flow (perm)	0	2042	0	0	1839	0	0	2023	0	0	1846	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	33		13	13		33	8		4	4		8
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	6%
Adj. Flow (vph)	42	101	12	0	48	6	12	6	0	18	0	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	54	0	0	18	0	0	36	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization 26.1%		ICU Level of Service A		
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	85	10	0	40	5	10	5	0	15	0	15
Future Volume (Veh/h)	35	85	10	0	40	5	10	5	0	15	0	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	42	101	12	0	48	6	12	6	0	18	0	18
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	87			126			281	291	124	282	294	92
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	87			126			281	291	124	282	294	92
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			100			98	99	100	97	100	98
cM capacity (veh/h)	1469			1453			611	576	916	607	574	914

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	155	54	18	36
Volume Left	42	0	12	18
Volume Right	12	6	0	18
cSH	1469	1453	599	730
Volume to Capacity	0.03	0.00	0.03	0.05
Queue Length 95th (m)	0.7	0.0	0.7	1.2
Control Delay (s)	2.2	0.0	11.2	10.2
Lane LOS	A		B	B
Approach Delay (s)	2.2	0.0	11.2	10.2
Approach LOS			B	B

Intersection Summary					
Average Delay	3.5				
Intersection Capacity Utilization	26.1%	ICU Level of Service	A		
Analysis Period (min)	15				

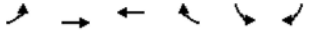
Lanes, Volumes, Timings
3: Poppy Drive East & Farley Drive

12-12-2023

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	130	60	15	20	30
Future Volume (vph)	20	130	60	15	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2075	1971	0	1692	0
Flt Permitted		0.993			0.980	
Satd. Flow (perm)	0	2075	1971	0	1692	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	15			15		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	23	148	68	17	23	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	171	85	0	57	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			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 12-12-2023

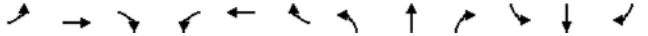


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	130	60	15	20	30
Future Volume (Veh/h)	20	130	60	15	20	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	23	148	68	17	23	34
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	100				286	92
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	100				286	92
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				97	96
cM capacity (veh/h)	1487				690	960

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	171	85	57
Volume Left	23	0	23
Volume Right	0	17	34
cSH	1487	1700	829
Volume to Capacity	0.02	0.05	0.07
Queue Length 95th (m)	0.4	0.0	1.8
Control Delay (s)	1.1	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	1.1	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization		24.6%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

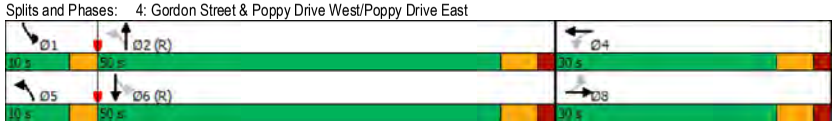


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	20	20	50	20	60	45	670	85	80	540	10
Future Volume (vph)	15	20	20	50	20	60	45	670	85	80	540	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1803	0	0	1847	0	2006	3426	0	1728	3489	0
Flt Permitted		0.898			0.849		0.442			0.327		
Satd. Flow (perm)	0	1633	0	0	1597	0	929	3426	0	590	3489	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			47			21			3	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
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 (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Adj. Flow (vph)	15	20	20	51	20	61	46	684	87	82	551	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	55	0	0	132	0	46	771	0	82	561	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		10.0	50.0		10.0	50.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		11.1%	55.6%		11.1%	55.6%	
Maximum Green (s)	24.0	24.0		24.0	24.0		7.0	44.0		7.0	44.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	6	6		6	6			6			6	
Act Effct Green (s)		12.3			12.3		66.0	57.3		67.2	59.6	
Actuated g/C Ratio		0.14			0.14		0.73	0.64		0.75	0.66	
v/c Ratio		0.23			0.51		0.06	0.35		0.15	0.24	
Control Delay		24.3			28.7		4.2	9.6		3.9	7.3	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		24.3			28.7		4.2	9.6		3.9	7.3	
LOS		C			C		A	A		A	A	
Approach Delay		24.3			28.7			9.3			6.9	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.51			
Intersection Signal Delay: 10.4		Intersection LOS: B	
Intersection Capacity Utilization 59.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	30.0	30.0	30.0	30.0	10.0	50.0	10.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	11.1%	55.6%	11.1%	55.6%
Maximum Green (s)	24.0	24.0	24.0	24.0	7.0	44.0	7.0	44.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	6	6	6	6		6		6
90th %ile Green (s)	24.0	24.0	24.0	24.0	7.2	42.3	8.7	43.8
90th %ile Term Code	Ped	Ped	Ped	Ped	Gap	Coord	Gap	Coord
70th %ile Green (s)	12.3	12.3	12.3	12.3	7.0	55.7	7.0	55.7
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	10.2	10.2	10.2	10.2	7.0	57.8	7.0	57.8
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
30th %ile Green (s)	8.1	8.1	8.1	8.1	0.0	59.9	7.0	69.9
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Min	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	55	132	46	771	82	561
v/c Ratio	0.23	0.51	0.06	0.35	0.15	0.24
Control Delay	24.3	28.7	4.2	9.6	3.9	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	28.7	4.2	9.6	3.9	7.3
Queue Length 50th (m)	5.9	14.7	1.4	29.4	1.3	13.6
Queue Length 95th (m)	14.1	27.2	6.7	62.9	m6.7	29.6
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	450	460	765	2203	533	2314
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.29	0.06	0.35	0.15	0.24

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	20	20	50	20	60	45	670	85	80	540	10
Future Volume (vph)	15	20	20	50	20	60	45	670	85	80	540	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1795			1844		2002	3427		1723	3490	
Flt Permitted		0.90			0.85		0.44	1.00		0.33	1.00	
Satd. Flow (perm)		1633			1597		931	3427		592	3490	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	15	20	20	51	20	61	46	684	87	82	551	10
RTOR Reduction (vph)	0	17	0	0	41	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	38	0	0	91	0	46	763	0	82	560	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		12.3			12.3		61.0	56.8		64.4	58.5	
Effective Green, g (s)		12.3			12.3		61.0	56.8		64.4	58.5	
Actuated g/C Ratio		0.14			0.14		0.68	0.63		0.72	0.65	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		223			218		680	2162		497	2268	
v/s Ratio Prot							0.00	c0.22		c0.01	0.16	
v/s Ratio Perm		0.02			c0.06		0.04			0.11		
v/c Ratio		0.17			0.42		0.07	0.35		0.16	0.25	
Uniform Delay, d1		34.3			35.6		4.8	7.9		4.0	6.6	
Progression Factor		1.00			1.00		1.00	1.00		0.84	0.90	
Incremental Delay, d2		0.4			1.3		0.0	0.5		0.1	0.2	
Delay (s)		34.7			36.9		4.8	8.3		3.5	6.1	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		34.7			36.9			8.1			5.8	
Approach LOS		C			D			A			A	

Intersection Summary

HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.35			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	59.1%	ICU Level of Service	B	
Analysis Period (min)	15			

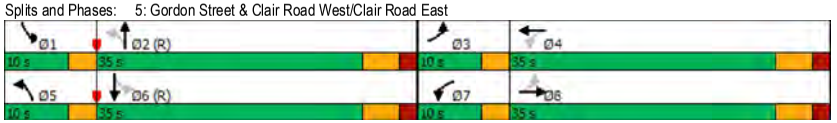
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	615	95	130	350	90	120	485	130	155	455	115
Future Volume (vph)	240	615	95	130	350	90	120	485	130	155	455	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3444	0	1711	3401	0	1646	3321	0	1728	3303	0
Flt Permitted	0.358			0.206			0.347			0.306		
Satd. Flow (perm)	647	3444	0	369	3401	0	597	3321	0	552	3303	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			38			40			37	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	247	634	98	134	361	93	124	500	134	160	469	119
Shared Lane Traffic (%)												
Lane Group Flow (vph)	247	732	0	134	454	0	124	634	0	160	588	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	35.0		10.0	35.0		10.0	35.0		10.0	35.0	
Total Split (%)	11.1%	38.9%		11.1%	38.9%		11.1%	38.9%		11.1%	38.9%	
Maximum Green (s)	7.0	29.0		7.0	29.0		7.0	29.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		11			11			9			9	
Act Effct Green (s)	37.9	24.1		33.9	22.0		41.6	30.5		42.3	30.8	
Actuated g/C Ratio	0.42	0.27		0.38	0.24		0.46	0.34		0.47	0.34	
v/c Ratio	0.61	0.78		0.49	0.53		0.33	0.55		0.43	0.51	
Control Delay	24.5	35.7		25.3	30.7		10.9	18.9		17.9	24.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	24.5	35.7		25.3	30.7		10.9	18.9		17.9	24.9	
LOS	C	D		C	C		B	B		B	C	
Approach Delay		32.9			29.4			17.6			23.4	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 26.1		Intersection LOS: C	
Intersection Capacity Utilization 82.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	35.0	10.0	35.0	10.0	35.0	10.0	35.0
Total Split (%)	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%
Maximum Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		11		11		9		9
90th %ile Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
70th %ile Green (s)	12.0	26.8	11.6	26.4	9.6	24.0	9.6	24.0
70th %ile Term Code	Max	Gap	Gap	Hold	Max	Coord	Max	Coord
50th %ile Green (s)	14.0	24.7	10.1	20.8	9.3	27.0	10.2	27.9
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
30th %ile Green (s)	12.4	21.7	8.9	18.2	7.8	32.8	8.6	33.6
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
10th %ile Green (s)	9.8	18.3	7.0	15.5	7.0	39.7	7.0	39.7
10th %ile Term Code	Gap	Gap	Min	Hold	Min	Coord	Min	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	247	732	134	454	124	634	160	588
v/c Ratio	0.61	0.78	0.49	0.53	0.33	0.55	0.43	0.51
Control Delay	24.5	35.7	25.3	30.7	10.9	18.9	17.9	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.5	35.7	25.3	30.7	10.9	18.9	17.9	24.9
Queue Length 50th (m)	27.6	62.5	15.4	43.0	11.1	49.8	16.0	43.6
Queue Length 95th (m)	#44.8	77.8	26.3	37.7	7.6	15.2	29.0	59.6
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	406	1123	272	1121	371	1203	370	1200
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.65	0.49	0.40	0.33	0.53	0.43	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	615	95	130	350	90	120	485	130	155	455	115
Future Volume (vph)	240	615	95	130	350	90	120	485	130	155	455	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3444		1709	3402		1643	3323		1724	3301	
Flt Permitted	0.36	1.00		0.21	1.00		0.35	1.00		0.31	1.00	
Satd. Flow (perm)	654	3444		371	3402		601	3323		554	3301	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	247	634	98	134	361	93	124	500	134	160	469	119
RTOR Reduction (vph)	0	15	0	0	29	0	0	26	0	0	24	0
Lane Group Flow (vph)	247	717	0	134	425	0	124	608	0	160	564	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.1	24.1		30.9	22.0		38.6	30.5		39.4	30.9	
Effective Green, g (s)	35.1	24.1		30.9	22.0		38.6	30.5		39.4	30.9	
Actuated g/C Ratio	0.39	0.27		0.34	0.24		0.43	0.34		0.44	0.34	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	387	922		259	831		351	1126		353	1133	
v/s Ratio Prot	c0.08	c0.21		0.05	0.13		0.03	c0.18		c0.04	0.17	
v/s Ratio Perm	0.17			0.13			0.12			0.16		
v/c Ratio	0.64	0.78		0.52	0.51		0.35	0.54		0.45	0.50	
Uniform Delay, d1	19.8	30.5		21.7	29.4		16.1	24.1		16.1	23.4	
Progression Factor	1.00	1.00		1.27	1.09		0.62	0.71		1.00	1.00	
Incremental Delay, d2	3.4	4.2		1.7	0.5		0.6	1.8		0.9	1.6	
Delay (s)	23.3	34.7		29.3	32.5		10.6	19.0		17.1	25.0	
Level of Service	C	C		C	C		B	B		B	C	
Approach Delay (s)		31.8			31.8			17.6			23.3	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	82.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	520	140	45	335	65	85	55	30	70	65	130
Future Volume (vph)	190	520	140	45	335	65	85	55	30	70	65	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1785	3346	0	1785	3393	0	1705	1753	0	0	1923	0
Flt Permitted	0.478			0.390			0.422				0.881	
Satd. Flow (perm)	883	3346	0	728	3393	0	741	1753	0	0	1704	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			34			31			54	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Adj. Flow (vph)	198	542	146	47	349	68	89	57	31	73	68	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	198	688	0	47	417	0	89	88	0	0	276	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	10.0	48.0		10.0	48.0		32.0	32.0		32.0	32.0	
Total Split (%)	11.1%	53.3%		11.1%	53.3%		35.6%	35.6%		35.6%	35.6%	
Maximum Green (s)	7.0	42.0		7.0	42.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		7			7		12	12		12	12	
Act Effct Green (s)	63.2	54.3		58.3	48.2		17.6	17.6			17.6	
Actuated g/C Ratio	0.70	0.60		0.65	0.54		0.20	0.20			0.20	
v/c Ratio	0.28	0.34		0.08	0.23		0.62	0.24			0.73	
Control Delay	3.1	6.2		6.1	12.0		49.9	20.5			38.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	

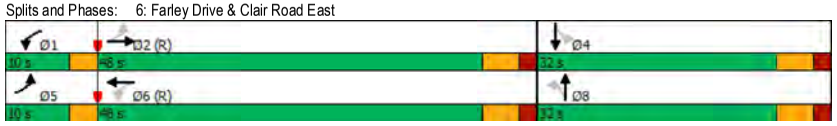
Lanes, Volumes, Timings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	3.1	6.2		6.1	12.0		49.9	20.5			38.1	
LOS	A	A		A	B		D	C			D	
Approach Delay		5.5			11.4			35.3			38.1	
Approach LOS		A			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 15.0		Intersection LOS: B	
Intersection Capacity Utilization 71.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	48.0	10.0	48.0	32.0	32.0	32.0	32.0
Total Split (%)	11.1%	53.3%	11.1%	53.3%	35.6%	35.6%	35.6%	35.6%
Maximum Green (s)	7.0	42.0	7.0	42.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		7		7	12	12	12	12
90th %ile Green (s)	12.9	41.4	7.6	36.1	26.0	26.0	26.0	26.0
90th %ile Term Code	Gap	Coord	Gap	Coord	Ped	Ped	Ped	Ped
70th %ile Green (s)	10.1	47.8	7.0	44.7	20.2	20.2	20.2	20.2
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	8.7	50.7	7.0	49.0	17.3	17.3	17.3	17.3
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.6	63.7	0.0	53.1	14.3	14.3	14.3	14.3
30th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	67.9	0.0	57.9	10.1	10.1	10.1	10.1
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	198	688	47	417	89	88	276
v/c Ratio	0.28	0.34	0.08	0.23	0.62	0.24	0.73
Control Delay	3.1	6.2	6.1	12.0	49.9	20.5	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.1	6.2	6.1	12.0	49.9	20.5	38.1
Queue Length 50th (m)	2.7	5.2	2.2	17.6	15.0	8.7	38.5
Queue Length 95th (m)	m14.0	65.5	7.3	35.4	28.0	19.0	58.3
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	712	2043	555	1875	214	528	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	0.28	0.34	0.08	0.22	0.42	0.17	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	520	140	45	335	65	85	55	30	70	65	130
Future Volume (vph)	190	520	140	45	335	65	85	55	30	70	65	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.97		1.00	0.98		1.00	0.95			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1772	3347		1780	3392		1671	1754			1909	
Flt Permitted	0.48	1.00		0.39	1.00		0.42	1.00			0.88	
Satd. Flow (perm)	892	3347		731	3392		742	1754			1704	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	198	542	146	47	349	68	89	57	31	73	68	135
RTOR Reduction (vph)	0	21	0	0	16	0	0	25	0	0	43	0
Lane Group Flow (vph)	198	667	0	47	401	0	89	63	0	0	233	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	60.4	53.1		52.4	48.1		17.6	17.6			17.6	
Effective Green, g (s)	60.4	53.1		52.4	48.1		17.6	17.6			17.6	
Actuated g/C Ratio	0.67	0.59		0.58	0.53		0.20	0.20			0.20	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	689	1974		475	1812		145	343			333	
v/s Ratio Prot	c0.03	c0.20		0.00	0.12			0.04				
v/s Ratio Perm	0.16			0.05			0.12				c0.14	
v/c Ratio	0.29	0.34		0.10	0.22		0.61	0.18			0.70	
Uniform Delay, d1	5.5	9.4		8.1	11.1		33.1	30.2			33.7	
Progression Factor	0.42	0.58		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.4		0.1	0.3		7.5	0.3			6.3	
Delay (s)	2.5	5.8		8.2	11.3		40.6	30.5			40.0	
Level of Service	A	A		A	B		D	C			D	
Approach Delay (s)		5.1			11.0			35.6			40.0	
Approach LOS		A			B			D			D	

Intersection Summary

HCM 2000 Control Delay	15.0	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.43				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	71.5%	ICU Level of Service		C	
Analysis Period (min)	15				

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Flt Permitted		0.963			0.993			0.996			0.990	
Satd. Flow (perm)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	5		5	5		5	26		22	22		26
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	94	22	6	11	22	44	6	56	11	56	61	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	77	0	0	73	0	0	273	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	11	22	44	6	56	11	56	61	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	77	73	273
Volume Left (vph)	94	11	6	56
Volume Right (vph)	6	44	11	156
Hadj (s)	0.12	-0.31	-0.07	-0.29
Departure Headway (s)	4.9	4.5	4.6	4.2
Degree Utilization, x	0.17	0.10	0.09	0.32
Capacity (veh/h)	680	725	728	816
Control Delay (s)	8.9	8.0	8.1	9.1
Approach Delay (s)	8.9	8.0	8.1	9.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.8		
Level of Service	A		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Flt Permitted		0.968			0.984			0.988			0.979	
Satd. Flow (perm)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	13		45	45		13	45		15	15		45
Confl. Bikes (#/hr)			2			5						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	34	6	11	11	6	17	11	23	11	34	34	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	34	0	0	45	0	0	79	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	6	11	11	6	17	11	23	11	34	34	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	51	34	45	79
Volume Left (vph)	34	11	11	34
Volume Right (vph)	11	17	11	11
Hadj (s)	0.00	-0.24	-0.10	0.00
Departure Headway (s)	4.2	4.0	4.1	4.1
Degree Utilization, x	0.06	0.04	0.05	0.09
Capacity (veh/h)	827	870	854	849
Control Delay (s)	7.5	7.1	7.3	7.5
Approach Delay (s)	7.5	7.1	7.3	7.5
Approach LOS	A	A	A	A

Intersection Summary					
Delay		7.4			
Level of Service		A			
Intersection Capacity Utilization		30.2%	ICU Level of Service		A
Analysis Period (min)		15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	5	0	40	25	45
Future Volume (vph)	55	5	0	40	25	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1851	0	0	2090	1908	0
Flt Permitted	0.956					
Satd. Flow (perm)	1851	0	0	2090	1908	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Confl. Peds. (#/hr)			8			8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	16%	0%	0%	0%	0%
Adj. Flow (vph)	62	6	0	45	28	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	0	45	79	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.7%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	5	0	40	25	45
Future Volume (Veh/h)	55	5	0	40	25	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	62	6	0	45	28	51
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	106	62	87			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	106	62	87			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	93	99	100			
cM capacity (veh/h)	887	958	1510			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	68	45	79
Volume Left	62	0	0
Volume Right	6	0	51
cSH	893	1510	1700
Volume to Capacity	0.08	0.00	0.05
Queue Length 95th (m)	2.0	0.0	0.0
Control Delay (s)	9.4	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.4	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	16.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	105	30	10	70	30	10
Future Volume (vph)	105	30	10	70	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2027	0	0	2042	1750	0
Flt Permitted				0.994	0.964	
Satd. Flow (perm)	2027	0	0	2042	1750	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)		1	1		2	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	114	33	11	76	33	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	147	0	0	87	44	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	105	30	10	70	30	10
Future Volume (Veh/h)	105	30	10	70	30	10
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)	114	33	11	76	33	11
Pedestrians	2			17	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			148		232	148
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			148		232	148
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	99
cM capacity (veh/h)			1445		753	887

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	147	87	44
Volume Left	0	11	33
Volume Right	33	0	11
cSH	1700	1445	783
Volume to Capacity	0.09	0.01	0.06
Queue Length 95th (m)	0.0	0.2	1.4
Control Delay (s)	0.0	1.0	9.9
Lane LOS		A	A
Approach Delay (s)	0.0	1.0	9.9
Approach LOS			A

Intersection Summary				
Average Delay		1.9		
Intersection Capacity Utilization		26.4%	ICU Level of Service	A
Analysis Period (min)		15		

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	390	15	75	355	15	70
Future Volume (vph)	390	15	75	355	15	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Satd. Flow (prot)	3501	0	0	3446	1841	0
Flt Permitted				0.991	0.991	
Satd. Flow (perm)	3501	0	0	3446	1841	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		6	6			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Adj. Flow (vph)	406	16	78	370	16	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	422	0	0	448	89	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	390	15	75	355	15	70
Future Volume (Veh/h)	390	15	75	355	15	70
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	406	16	78	370	16	73
Pedestrians					6	
Lane Width (m)					4.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked						
vC, conflicting volume			428		761	217
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			428		761	217
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		95	91
cM capacity (veh/h)			1128		320	789

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	271	151	201	247	89
Volume Left	0	0	78	0	16
Volume Right	0	16	0	0	73
cSH	1700	1700	1128	1700	624
Volume to Capacity	0.16	0.09	0.07	0.15	0.14
Queue Length 95th (m)	0.0	0.0	1.8	0.0	4.0
Control Delay (s)	0.0	0.0	3.7	0.0	11.7
Lane LOS			A		B
Approach Delay (s)	0.0		1.6		11.7
Approach LOS					B

Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	38.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	40	5	0	50	10	5	0	0	5	5	10
Future Volume (vph)	15	40	5	0	50	10	5	0	0	5	5	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2042	0	0	1797	0	0	1986	0	0	1832	0
Flt Permitted		0.988						0.950			0.988	
Satd. Flow (perm)	0	2042	0	0	1797	0	0	1986	0	0	1832	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	12		11	11		12	6		3	3		6
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 (%)	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	9%
Adj. Flow (vph)	16	43	5	0	54	11	5	0	0	5	5	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	0	65	0	0	5	0	0	21	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.8%	ICU Level of Service A	
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	40	5	0	50	10	5	0	0	5	5	10
Future Volume (Veh/h)	15	40	5	0	50	10	5	0	0	5	5	10
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	16	43	5	0	54	11	5	0	0	5	5	11
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	77			59			168	166	60	152	162	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	77			59			168	166	60	152	162	78
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	99			100			99	100	100	99	99	99
cM capacity (veh/h)	1515			1540			753	706	998	787	709	946

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	64	65	5	21
Volume Left	16	0	5	5
Volume Right	5	11	0	11
cSH	1515	1540	753	839
Volume to Capacity	0.01	0.00	0.01	0.03
Queue Length 95th (m)	0.3	0.0	0.2	0.6
Control Delay (s)	1.9	0.0	9.8	9.4
Lane LOS	A		A	A
Approach Delay (s)	1.9	0.0	9.8	9.4
Approach LOS			A	A

Intersection Summary				
Average Delay	2.4			
Intersection Capacity Utilization	22.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	65	60	15	15	35
Future Volume (vph)	25	65	60	15	15	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2061	1957	0	1675	0
Flt Permitted		0.986			0.985	
Satd. Flow (perm)	0	2061	1957	0	1675	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	15			15		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	27	71	66	16	16	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	98	82	0	54	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.5%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	65	60	15	15	35
Future Volume (Veh/h)	25	65	60	15	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	27	71	66	16	16	38
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	97				214	89
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	97				214	89
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	96
cM capacity (veh/h)	1491				755	963

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	98	82	54
Volume Left	27	0	16
Volume Right	0	16	38
cSH	1491	1700	890
Volume to Capacity	0.02	0.05	0.06
Queue Length 95th (m)	0.4	0.0	1.5
Control Delay (s)	2.2	0.0	9.3
Lane LOS	A		A
Approach Delay (s)	2.2	0.0	9.3
Approach LOS			A

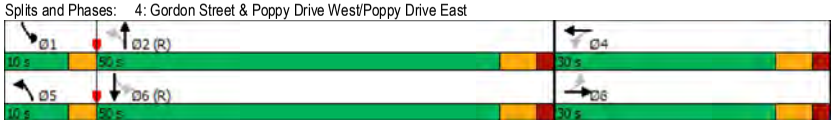
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	15	15	50	15	65	35	505	45	60	535	5
Future Volume (vph)	15	15	15	50	15	65	35	505	45	60	535	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1758	0	0	1833	0	2046	3517	0	1745	3565	0
Flt Permitted		0.864			0.852		0.428			0.404		
Satd. Flow (perm)	0	1537	0	0	1588	0	916	3517	0	737	3565	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			55			14			1	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Adj. Flow (vph)	16	16	16	55	16	71	38	555	49	66	588	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	142	0	38	604	0	66	593	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		10.0	50.0		10.0	50.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		11.1%	55.6%		11.1%	55.6%	
Maximum Green (s)	24.0	24.0		24.0	24.0		7.0	44.0		7.0	44.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	5	5		5	5			3			3	
Act Effct Green (s)		12.4			12.4		66.0	57.4		67.0	59.6	
Actuated g/C Ratio		0.14			0.14		0.73	0.64		0.74	0.66	
v/c Ratio		0.21			0.53		0.05	0.27		0.10	0.25	
Control Delay		24.9			28.2		4.3	8.9		2.9	5.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		24.9			28.2		4.3	8.9		2.9	5.4	
LOS		C			C		A	A		A	A	
Approach Delay		24.9			28.2			8.7			5.1	
Approach LOS		C			C			A			A	

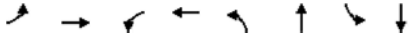
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	30.0	30.0	30.0	30.0	10.0	50.0	10.0	50.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	11.1%	55.6%	11.1%	55.6%
Maximum Green (s)	24.0	24.0	24.0	24.0	7.0	44.0	7.0	44.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	5	5	5	5		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	7.0	42.8	8.2	44.0
90th %ile Term Code	Ped	Ped	Ped	Ped	Min	Coord	Gap	Coord
70th %ile Green (s)	12.6	12.6	12.6	12.6	7.0	55.4	7.0	55.4
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	10.3	10.3	10.3	10.3	7.0	57.7	7.0	57.7
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
30th %ile Green (s)	8.1	8.1	8.1	8.1	0.0	59.9	7.0	69.9
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Min	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	48	142	38	604	66	593
v/c Ratio	0.21	0.53	0.05	0.27	0.10	0.25
Control Delay	24.9	28.2	4.3	8.9	2.9	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	28.2	4.3	8.9	2.9	5.4
Queue Length 50th (m)	5.4	15.1	1.2	21.8	0.9	14.7
Queue Length 95th (m)	13.1	28.0	5.8	46.7	6.1	30.3
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	421	463	759	2255	629	2361
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.31	0.05	0.27	0.10	0.25

Intersection Summary

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	15	15	50	15	65	35	505	45	60	535	5
Future Volume (vph)	15	15	15	50	15	65	35	505	45	60	535	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.93		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1750			1829		2040	3516		1741	3564	
Flt Permitted		0.86			0.85		0.43	1.00		0.40	1.00	
Satd. Flow (perm)		1538			1589		919	3516		740	3564	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	16	16	16	55	16	71	38	555	49	66	588	5
RTOR Reduction (vph)	0	14	0	0	47	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	34	0	0	95	0	38	599	0	66	593	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		12.4			12.4		61.0	56.8		64.2	58.4	
Effective Green, g (s)		12.4			12.4		61.0	56.8		64.2	58.4	
Actuated g/C Ratio		0.14			0.14		0.68	0.63		0.71	0.65	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		211			218		675	2218		592	2312	
v/s Ratio Prot							0.00	c0.17		c0.01	0.17	
v/s Ratio Perm		0.02			c0.06		0.04			0.07		
v/c Ratio		0.16			0.43		0.06	0.27		0.11	0.26	
Uniform Delay, d1		34.2			35.6		4.8	7.4		3.9	6.7	
Progression Factor		1.00			1.00		1.00	1.00		0.64	0.64	
Incremental Delay, d2		0.4			1.4		0.0	0.3		0.1	0.3	
Delay (s)		34.6			37.0		4.8	7.7		2.6	4.5	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		34.6			37.0			7.5			4.3	
Approach LOS		C			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.28			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	57.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	370	60	155	295	95	90	380	75	155	430	65
Future Volume (vph)	165	370	60	155	295	95	90	380	75	155	430	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3477	0	1711	3374	0	1646	3451	0	1728	3466	0
Flt Permitted	0.404			0.367			0.454			0.420		
Satd. Flow (perm)	728	3477	0	652	3374	0	780	3451	0	757	3466	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			51			27			20	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Adj. Flow (vph)	170	381	62	160	304	98	93	392	77	160	443	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	170	443	0	160	402	0	93	469	0	160	510	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	35.0		10.0	35.0		10.0	35.0		10.0	35.0	
Total Split (%)	11.1%	38.9%		11.1%	38.9%		11.1%	38.9%		11.1%	38.9%	
Maximum Green (s)	7.0	29.0		7.0	29.0		7.0	29.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		12			12			7			7	
Act Effct Green (s)	30.8	17.8		30.2	17.5		46.5	35.7		49.1	38.7	
Actuated g/C Ratio	0.34	0.20		0.34	0.19		0.52	0.40		0.55	0.43	
v/c Ratio	0.47	0.63		0.48	0.58		0.19	0.34		0.32	0.34	
Control Delay	23.2	34.9		19.7	23.6		7.2	14.2		12.9	19.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

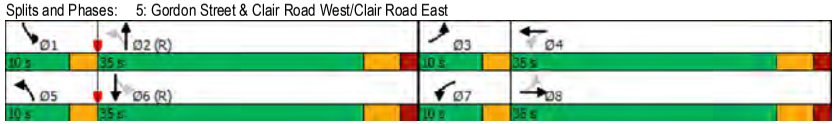
Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	23.2	34.9		19.7	23.6		7.2	14.2		12.9	19.3	
LOS	C	C		B	C		A	B		B	B	
Approach Delay		31.6			22.5			13.0			17.7	
Approach LOS		C			C			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 78.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	35.0	10.0	35.0	10.0	35.0	10.0	35.0
Total Split (%)	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%
Maximum Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		12		12		7		7
90th %ile Green (s)	7.0	28.0	7.0	28.0	8.0	29.0	8.0	29.0
90th %ile Term Code	Max	Ped	Max	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	13.2	18.1	12.7	17.6	9.0	30.1	11.1	32.2
70th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
50th %ile Green (s)	11.8	16.3	11.4	15.9	7.8	34.8	9.5	36.5
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
30th %ile Green (s)	10.3	14.5	10.0	14.2	7.0	39.4	8.1	40.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Min	Coord	Gap	Coord
10th %ile Green (s)	7.9	11.9	7.7	11.7	0.0	45.4	7.0	55.4
10th %ile Term Code	Gap	Gap	Gap	Hold	Skip	Coord	Min	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	170	443	160	402	93	469	160	510
v/c Ratio	0.47	0.63	0.48	0.58	0.19	0.34	0.32	0.34
Control Delay	23.2	34.9	19.7	23.6	7.2	14.2	12.9	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	34.9	19.7	23.6	7.2	14.2	12.9	19.3
Queue Length 50th (m)	21.1	38.1	15.5	25.0	3.2	30.9	13.2	31.7
Queue Length 95th (m)	31.2	45.2	m25.1	28.2	7.0	17.7	28.3	51.8
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	362	1134	333	1121	477	1386	506	1502
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.39	0.48	0.36	0.19	0.34	0.32	0.34

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	370	60	155	295	95	90	380	75	155	430	65
Future Volume (vph)	165	370	60	155	295	95	90	380	75	155	430	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1733	3477		1704	3375		1639	3453		1722	3467	
Flt Permitted	0.40	1.00		0.37	1.00		0.45	1.00		0.42	1.00	
Satd. Flow (perm)	737	3477		659	3375		783	3453		762	3467	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	170	381	62	160	304	98	93	392	77	160	443	67
RTOR Reduction (vph)	0	17	0	0	41	0	0	16	0	0	12	0
Lane Group Flow (vph)	170	426	0	160	361	0	93	453	0	160	498	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	27.8	17.8		27.4	17.6		42.1	35.7		46.7	38.0	
Effective Green, g (s)	27.8	17.8		27.4	17.6		42.1	35.7		46.7	38.0	
Actuated g/C Ratio	0.31	0.20		0.30	0.20		0.47	0.40		0.52	0.42	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	338	687		314	660		427	1369		488	1463	
v/s Ratio Prot	c0.06	c0.12		0.06	0.11		0.02	0.13		c0.03	c0.14	
v/s Ratio Perm	0.10			0.10			0.09			0.14		
v/c Ratio	0.50	0.62		0.51	0.55		0.22	0.33		0.33	0.34	
Uniform Delay, d1	23.9	33.0		24.2	32.6		13.5	18.9		11.6	17.5	
Progression Factor	1.00	1.00		0.81	0.74		0.57	0.70		1.00	1.00	
Incremental Delay, d2	1.2	1.7		1.2	0.9		0.3	0.6		0.4	0.6	
Delay (s)	25.1	34.8		20.7	24.9		7.9	13.8		12.0	18.2	
Level of Service	C	C		C	C		A	B		B	B	
Approach Delay (s)		32.1			23.7			12.8			16.7	
Approach LOS		C			C			B			B	

Intersection Summary

HCM 2000 Control Delay	21.4	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.44				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	78.5%	ICU Level of Service		D	
Analysis Period (min)	15				

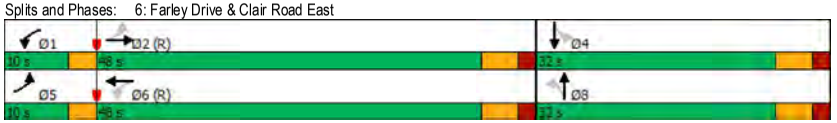
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	295	150	35	275	65	125	70	35	80	65	140
Future Volume (vph)	115	295	150	35	275	65	125	70	35	80	65	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1767	3327	0	1785	3328	0	1705	1765	0	0	1949	0
Flt Permitted	0.500			0.476			0.423				0.866	
Satd. Flow (perm)	915	3327	0	888	3328	0	750	1765	0	0	1703	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		133			43			28			54	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
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%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	125	321	163	38	299	71	136	76	38	87	71	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	125	484	0	38	370	0	136	114	0	0	310	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	10.0	48.0		10.0	48.0		32.0	32.0		32.0	32.0	
Total Split (%)	11.1%	53.3%		11.1%	53.3%		35.6%	35.6%		35.6%	35.6%	
Maximum Green (s)	7.0	42.0		7.0	42.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		6			6		8	8		8	8	
Act Effct Green (s)	60.4	52.0		57.0	46.9		19.9	19.9			19.9	
Actuated g/C Ratio	0.67	0.58		0.63	0.52		0.22	0.22			0.22	
v/c Ratio	0.18	0.24		0.06	0.21		0.82	0.28			0.74	
Control Delay	3.8	4.5		6.9	12.1		67.5	21.5			37.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	3.8	4.5		6.9	12.1		67.5	21.5			37.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	B		E	C			D	
Approach Delay		4.3			11.6			46.5			37.0	
Approach LOS		A			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	48.0	10.0	48.0	32.0	32.0	32.0	32.0
Total Split (%)	11.1%	53.3%	11.1%	53.3%	35.6%	35.6%	35.6%	35.6%
Maximum Green (s)	7.0	42.0	7.0	42.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		6		6	8	8	8	8
90th %ile Green (s)	10.7	38.9	7.4	35.6	28.7	28.7	28.7	28.7
90th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	8.7	44.5	7.0	42.8	23.5	23.5	23.5	23.5
70th %ile Term Code	Gap	Coord	Min	Coord	Gap	Gap	Hold	Hold
50th %ile Green (s)	7.6	48.4	7.0	47.8	19.6	19.6	19.6	19.6
50th %ile Term Code	Gap	Coord	Min	Coord	Gap	Gap	Hold	Hold
30th %ile Green (s)	7.0	61.9	0.0	51.9	16.1	16.1	16.1	16.1
30th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	66.5	0.0	56.5	11.5	11.5	11.5	11.5
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	125	484	38	370	136	114	310
v/c Ratio	0.18	0.24	0.06	0.21	0.82	0.28	0.74
Control Delay	3.8	4.5	6.9	12.1	67.5	21.5	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.8	4.5	6.9	12.1	67.5	21.5	37.0
Queue Length 50th (m)	1.9	1.0	2.0	15.3	23.8	12.9	44.0
Queue Length 95th (m)	21.0	36.4	6.8	31.1	41.1	23.9	63.8
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	691	2001	632	1802	221	539	540
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	0.18	0.24	0.06	0.21	0.62	0.21	0.57

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	295	150	35	275	65	125	70	35	80	65	140
Future Volume (vph)	115	295	150	35	275	65	125	70	35	80	65	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.95		1.00	0.97		1.00	0.95			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1755	3329		1779	3329		1684	1765			1938	
Flt Permitted	0.50	1.00		0.48	1.00		0.42	1.00			0.87	
Satd. Flow (perm)	923	3329		891	3329		749	1765			1702	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	321	163	38	299	71	136	76	38	87	71	152
RTOR Reduction (vph)	0	58	0	0	21	0	0	22	0	0	42	0
Lane Group Flow (vph)	125	426	0	38	349	0	136	92	0	0	268	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	58.1	50.8		51.2	46.9		19.9	19.9			19.9	
Effective Green, g (s)	58.1	50.8		51.2	46.9		19.9	19.9			19.9	
Actuated g/C Ratio	0.65	0.56		0.57	0.52		0.22	0.22			0.22	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	671	1879		549	1734		165	390			376	
v/s Ratio Prot	c0.02	c0.13		0.00	0.10			0.05				
v/s Ratio Perm	0.10			0.04			c0.18				0.16	
v/c Ratio	0.19	0.23		0.07	0.20		0.82	0.24			0.71	
Uniform Delay, d1	6.1	9.8		8.5	11.5		33.4	28.8			32.4	
Progression Factor	0.50	0.50		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.3		0.1	0.3		27.1	0.3			6.3	
Delay (s)	3.2	5.1		8.6	11.8		60.5	29.1			38.7	
Level of Service	A	A		A	B		E	C			D	
Approach Delay (s)		4.7			11.5			46.2			38.7	
Approach LOS		A			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.39			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	68.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

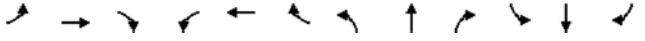
12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Flt Permitted		0.962			0.990						0.986	
Satd. Flow (perm)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	6		6	6		6	26		22	22		26
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	121	23	11	23	29	63	0	92	11	80	63	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	115	0	0	103	0	0	287	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023



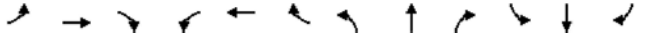
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	23	29	63	0	92	11	80	63	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	115	103	287
Volume Left (vph)	121	23	0	80
Volume Right (vph)	11	63	11	144
Hadj (s)	0.11	-0.29	-0.06	-0.25
Departure Headway (s)	5.1	4.8	4.9	4.5
Degree Utilization, x	0.22	0.15	0.14	0.36
Capacity (veh/h)	649	683	678	757
Control Delay (s)	9.5	8.6	8.7	10.0
Approach Delay (s)	9.5	8.6	8.7	10.0
Approach LOS	A	A	A	A

Intersection Summary					
Delay			9.4		
Level of Service			A		
Intersection Capacity Utilization			43.2%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access

12-12-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Flt Permitted		0.970			0.990			0.994			0.980	
Satd. Flow (perm)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	5		49	49		5	43		8	8		43
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	49	12	18	12	6	43	6	24	24	43	30	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	61	0	0	54	0	0	103	0
Sign Control		Stop			Stop			Stop			Stop	

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

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	12	18	12	6	43	6	24	24	43	30	30

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	79	61	54	103
Volume Left (vph)	49	12	6	43
Volume Right (vph)	18	43	24	30
Hadj (s)	-0.01	-0.38	-0.24	-0.09
Departure Headway (s)	4.3	3.9	4.1	4.2
Degree Utilization, x	0.09	0.07	0.06	0.12
Capacity (veh/h)	804	871	842	833
Control Delay (s)	7.7	7.2	7.3	7.7
Approach Delay (s)	7.7	7.2	7.3	7.7
Approach LOS	A	A	A	A

Intersection Summary					
Delay			7.5		
Level of Service			A		
Intersection Capacity Utilization			32.5%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
9: Hawkins Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	0	5	25	20	70
Future Volume (vph)	65	0	5	25	20	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1905	0	0	2073	1871	0
Flt Permitted	0.950			0.992		
Satd. Flow (perm)	1905	0	0	2073	1871	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	80	0	6	31	25	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	37	111	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	15.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	0	5	25	20	70
Future Volume (Veh/h)	65	0	5	25	20	70
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	80	0	6	31	25	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	111	68	111			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	111	68	111			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	100	100			
cM capacity (veh/h)	887	1001	1492			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	80	37	111
Volume Left	80	6	0
Volume Right	0	0	86
cSH	887	1492	1700
Volume to Capacity	0.09	0.00	0.07
Queue Length 95th (m)	2.4	0.1	0.0
Control Delay (s)	9.5	1.2	0.0
Lane LOS	A	A	
Approach Delay (s)	9.5	1.2	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		3.5	
Intersection Capacity Utilization		15.9%	ICU Level of Service A
Analysis Period (min)		15	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	60	20	5	65	20	15
Future Volume (vph)	60	20	5	65	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2004	0	0	2025	1683	0
Flt Permitted				0.996	0.972	
Satd. Flow (perm)	2004	0	0	2025	1683	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)		1	1		3	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	1%	0%	0%	3%	4%	0%
Adj. Flow (vph)	69	23	6	75	23	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	92	0	0	81	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 19.4%			ICU Level of Service A
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	60	20	5	65	20	15
Future Volume (Veh/h)	60	20	5	65	20	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	69	23	6	75	23	17
Pedestrians	3			6	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			93		172	88
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			93		172	88
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	98
cM capacity (veh/h)			1513		808	970

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	92	81	40
Volume Left	0	6	23
Volume Right	23	0	17
cSH	1700	1513	869
Volume to Capacity	0.05	0.00	0.05
Queue Length 95th (m)	0.0	0.1	1.2
Control Delay (s)	0.0	0.6	9.3
Lane LOS		A	A
Approach Delay (s)	0.0	0.6	9.3
Approach LOS			A

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization		19.4%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	395	5	30	820	10	60
Future Volume (vph)	395	5	30	820	10	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3376	0	1785	3433	1728	0
Flt Permitted			0.950		0.993	
Satd. Flow (perm)	3376	0	1785	3433	1728	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Adj. Flow (vph)	459	6	35	953	12	70
Lane Group Flow (vph)	465	0	35	953	82	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	33.6%	ICU Level of Service A	
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	395	5	30	820	10	60
Future Volume (Veh/h)	395	5	30	820	10	60
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	459	6	35	953	12	70
Pedestrians					5	
Lane Width (m)					4.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.98		0.98	0.98
vC, conflicting volume			470		1014	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			415		971	178
tC, single (s)			4.1		7.0	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			97		95	91
cM capacity (veh/h)			1124		227	801

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	306	159	35	476	476	82
Volume Left	0	0	35	0	0	12
Volume Right	0	6	0	0	0	70
cSH	1700	1700	1124	1700	1700	584
Volume to Capacity	0.18	0.09	0.03	0.28	0.28	0.14
Queue Length 95th (m)	0.0	0.0	0.8	0.0	0.0	3.9
Control Delay (s)	0.0	0.0	8.3	0.0	0.0	12.2
Lane LOS			A			B
Approach Delay (s)	0.0		0.3			12.2
Approach LOS						B

Intersection Summary					
Average Delay	0.8				
Intersection Capacity Utilization	33.6%	ICU Level of Service	A		
Analysis Period (min)	15				

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	25	0	0	65	10	10	5	0	5	0	15
Future Volume (vph)	45	25	0	0	65	10	10	5	0	5	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	1864	0	0	1804	0	0	2021	0	0	1608	0
Flt Permitted		0.969						0.967			0.988	
Satd. Flow (perm)	0	1864	0	0	1804	0	0	2021	0	0	1608	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Adj. Flow (vph)	57	32	0	0	82	13	13	6	0	6	0	19
Lane Group Flow (vph)	0	89	0	0	95	0	0	19	0	0	25	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.9%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	25	0	0	65	10	10	5	0	5	0	15
Future Volume (Veh/h)	45	25	0	0	65	10	10	5	0	5	0	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	57	32	0	0	82	13	13	6	0	6	0	19
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	119			47			284	280	64	278	274	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119			47			284	280	64	278	274	128
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	96			100			98	99	100	99	100	98
cM capacity (veh/h)	1391			1549			598	581	976	607	586	841

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	89	95	19	25
Volume Left	57	0	13	6
Volume Right	0	13	0	19
cSH	1391	1549	593	770
Volume to Capacity	0.04	0.00	0.03	0.03
Queue Length 95th (m)	1.0	0.0	0.8	0.8
Control Delay (s)	5.0	0.0	11.3	9.8
Lane LOS	A		B	A
Approach Delay (s)	5.0	0.0	11.3	9.8
Approach LOS			B	A

Intersection Summary					
Average Delay	4.0				
Intersection Capacity Utilization	25.9%	ICU Level of Service		A	
Analysis Period (min)	15				

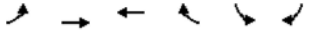
Lanes, Volumes, Timings
3: Poppy Drive East & Farley Drive

12-12-2023

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	55	105	10	10	10
Future Volume (vph)	10	55	105	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	1890	1958	0	1547	0
Flt Permitted		0.992			0.976	
Satd. Flow (perm)	0	1890	1958	0	1547	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Adj. Flow (vph)	11	60	115	11	11	11
Lane Group Flow (vph)	0	71	126	0	22	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.1%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 12-12-2023

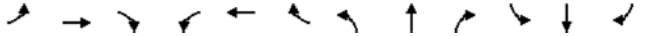


Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	55	105	10	10	10
Future Volume (Veh/h)	10	55	105	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	60	115	11	11	11
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	134				210	128
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134				210	128
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	99				99	99
cM capacity (veh/h)	1287				751	890

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	71	126	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1287	1700	814
Volume to Capacity	0.01	0.07	0.03
Queue Length 95th (m)	0.2	0.0	0.7
Control Delay (s)	1.3	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	1.3	0.0	9.5
Approach LOS			A

Intersection Summary				
Average Delay			1.4	
Intersection Capacity Utilization			20.1%	ICU Level of Service A
Analysis Period (min)			15	

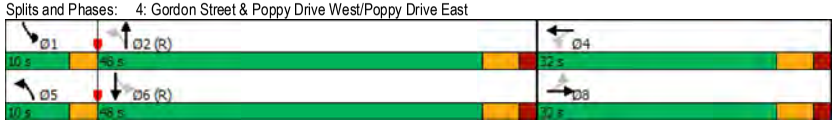
Lanes, Volumes, Timings
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	15	35	5	85	20	810	45	25	630	25
Future Volume (vph)	20	10	15	35	5	85	20	810	45	25	630	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1362	0	0	1742	0	1894	3289	0	1678	3358	0
Flt Permitted		0.779			0.890		0.384			0.297		
Satd. Flow (perm)	0	1083	0	0	1572	0	764	3289	0	523	3358	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			89			8			6	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Adj. Flow (vph)	21	10	16	36	5	89	21	844	47	26	656	26
Lane Group Flow (vph)	0	47	0	0	130	0	21	891	0	26	682	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	32.0	32.0		32.0	32.0		10.0	48.0		10.0	48.0	
Total Split (%)	35.6%	35.6%		35.6%	35.6%		11.1%	53.3%		11.1%	53.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		7.0	42.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	1	1		1	1			3			3	
Act Effct Green (s)		11.2			11.2		68.6	62.8		68.6	62.8	
Actuated g/C Ratio		0.12			0.12		0.76	0.70		0.76	0.70	
v/c Ratio		0.32			0.48		0.03	0.39		0.05	0.29	
Control Delay		29.4			18.5		4.0	8.2		3.6	7.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		29.4			18.5		4.0	8.2		3.6	7.6	
LOS		C			B		A	A		A	A	
Approach Delay		29.4			18.5			8.1			7.5	
Approach LOS		C			B			A			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.48		
Intersection Signal Delay: 9.2	Intersection LOS: A	
Intersection Capacity Utilization 44.2%	ICU Level of Service A	
Analysis Period (min) 15		

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	32.0	32.0	32.0	32.0	10.0	48.0	10.0	48.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	11.1%	53.3%	11.1%	53.3%
Maximum Green (s)	26.0	26.0	26.0	26.0	7.0	42.0	7.0	42.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	1	1	1	1		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	7.0	44.0	7.0	44.0
90th %ile Term Code	Ped	Ped	Ped	Ped	Min	Coord	Min	Coord
70th %ile Green (s)	10.0	10.0	10.0	10.0	7.0	58.0	7.0	58.0
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	7.8	7.8	7.8	7.8	0.0	70.2	0.0	70.2
50th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Skip	Coord
30th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
30th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	47	130	21	891	26	682
v/c Ratio	0.32	0.48	0.03	0.39	0.05	0.29
Control Delay	29.4	18.5	4.0	8.2	3.6	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	18.5	4.0	8.2	3.6	7.6
Queue Length 50th (m)	5.4	7.1	0.5	19.4	1.3	27.1
Queue Length 95th (m)	13.1	19.7	3.9	74.7	m2.3	44.5
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	324	517	670	2299	488	2346
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.25	0.03	0.39	0.05	0.29

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	15	35	5	85	20	810	45	25	630	25
Future Volume (vph)	20	10	15	35	5	85	20	810	45	25	630	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.91		1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1360			1741		1893	3290		1676	3359	
Flt Permitted		0.78			0.89		0.38	1.00		0.30	1.00	
Satd. Flow (perm)		1083			1571		766	3290		524	3359	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	10	16	36	5	89	21	844	47	26	656	26
RTOR Reduction (vph)	0	14	0	0	78	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	33	0	0	52	0	21	888	0	26	680	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		11.2			11.2		63.8	61.0		63.8	61.0	
Effective Green, g (s)		11.2			11.2		63.8	61.0		63.8	61.0	
Actuated g/C Ratio		0.12			0.12		0.71	0.68		0.71	0.68	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		134			195		578	2229		407	2276	
v/s Ratio Prot							0.00	c0.27		c0.00	0.20	
v/s Ratio Perm		0.03			c0.03		0.02			0.04		
v/c Ratio		0.25			0.27		0.04	0.40		0.06	0.30	
Uniform Delay, d1		35.6			35.7		3.9	6.4		4.0	5.9	
Progression Factor		1.00			1.00		1.00	1.00		0.88	1.04	
Incremental Delay, d2		1.0			0.7		0.0	0.5		0.1	0.3	
Delay (s)		36.5			36.4		3.9	6.9		3.6	6.3	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		36.5			36.4			6.9			6.2	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.37			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	44.2%	ICU Level of Service	A	
Analysis Period (min)	15			

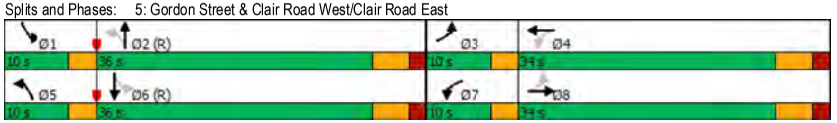
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	340	105	185	700	90	180	595	125	70	395	200
Future Volume (vph)	145	340	105	185	700	90	180	595	125	70	395	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1631	3218	0	1572	3379	0	1586	3214	0	1678	3215	0
Flt Permitted	0.152			0.382			0.261			0.236		
Satd. Flow (perm)	259	3218	0	626	3379	0	434	3214	0	415	3215	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			16			30			106	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Adj. Flow (vph)	161	378	117	206	778	100	200	661	139	78	439	222
Lane Group Flow (vph)	161	495	0	206	878	0	200	800	0	78	661	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		10.0	34.0		10.0	36.0		10.0	36.0	
Total Split (%)	11.1%	37.8%		11.1%	37.8%		11.1%	40.0%		11.1%	40.0%	
Maximum Green (s)	7.0	28.0		7.0	28.0		7.0	30.0		7.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		10			10			9			9	
Act Effct Green (s)	37.8	26.3		38.2	26.5		41.2	32.0		39.0	29.0	
Actuated g/C Ratio	0.42	0.29		0.42	0.29		0.46	0.36		0.43	0.32	
v/c Ratio	0.68	0.51		0.58	0.87		0.66	0.69		0.28	0.60	
Control Delay	32.5	25.5		27.1	44.4		28.7	23.3		16.1	23.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.5	25.5		27.1	44.4		28.7	23.3		16.1	23.9	
LOS	C	C		C	D		C	C		B	C	
Approach Delay		27.2			41.1			24.4			23.1	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 29.9	Intersection LOS: C
Intersection Capacity Utilization 81.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Maximum Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		10		10		9		9
90th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
90th %ile Term Code	Max	Ped	Max	Max	Max	Coord	Max	Coord
70th %ile Green (s)	7.2	28.0	7.2	28.0	7.0	29.8	7.0	29.8
70th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
50th %ile Green (s)	9.5	28.0	9.5	28.0	7.0	27.5	7.0	27.5
50th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
30th %ile Green (s)	10.2	26.0	10.7	26.5	10.9	28.3	7.0	24.4
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Coord	Min	Coord
10th %ile Green (s)	8.2	21.7	8.7	22.2	8.1	44.6	0.0	33.5
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	161	495	206	878	200	800	78	661
v/c Ratio	0.68	0.51	0.58	0.87	0.66	0.69	0.28	0.60
Control Delay	32.5	25.5	27.1	44.4	28.7	23.3	16.1	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.5	25.5	27.1	44.4	28.7	23.3	16.1	23.9
Queue Length 50th (m)	16.1	34.3	19.8	62.7	25.1	70.5	7.9	45.2
Queue Length 95th (m)	#42.2	49.4	52.1	#111.0	#36.3	37.9	15.4	61.1
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	237	1033	356	1062	301	1194	278	1166
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.48	0.58	0.83	0.66	0.67	0.28	0.57

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	340	105	185	700	90	180	595	125	70	395	200
Future Volume (vph)	145	340	105	185	700	90	180	595	125	70	395	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	3216		1567	3379		1585	3214		1676	3213	
Flt Permitted	0.15	1.00		0.38	1.00		0.26	1.00		0.24	1.00	
Satd. Flow (perm)	261	3216		631	3379		435	3214		416	3213	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	378	117	206	778	100	200	661	139	78	439	222
RTOR Reduction (vph)	0	33	0	0	11	0	0	20	0	0	72	0
Lane Group Flow (vph)	161	462	0	206	867	0	200	781	0	78	589	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	34.7	26.3		35.1	26.5		39.5	31.5		34.7	29.1	
Effective Green, g (s)	34.7	26.3		35.1	26.5		39.5	31.5		34.7	29.1	
Actuated g/C Ratio	0.39	0.29		0.39	0.29		0.44	0.35		0.39	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	228	939		335	994		293	1124		238	1038	
v/s Ratio Prot	c0.07	0.14		0.06	c0.26		c0.06	c0.24		0.02	0.18	
v/s Ratio Perm	0.21			0.18			0.24			0.11		
v/c Ratio	0.71	0.49		0.61	0.87		0.68	0.69		0.33	0.57	
Uniform Delay, d1	20.7	26.3		19.5	30.1		17.2	25.1		18.4	25.2	
Progression Factor	1.00	1.00		1.24	1.17		1.05	0.80		1.00	1.00	
Incremental Delay, d2	9.6	0.4		3.1	7.9		6.1	3.4		0.8	2.3	
Delay (s)	30.2	26.7		27.1	43.3		24.1	23.5		19.2	27.5	
Level of Service	C	C		C	D		C	C		B	C	
Approach Delay (s)		27.6			40.2			23.6			26.6	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	81.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	365	40	10	790	45	25	15	5	40	20	140
Future Volume (vph)	105	365	40	10	790	45	25	15	5	40	20	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1716	3201	0	1785	3345	0	1639	1723	0	0	1826	0
Flt Permitted	0.249			0.490			0.385				0.924	
Satd. Flow (perm)	449	3201	0	915	3345	0	658	1723	0	0	1701	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			8			6			134	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Adj. Flow (vph)	118	410	45	11	888	51	28	17	6	45	22	157
Lane Group Flow (vph)	118	455	0	11	939	0	28	23	0	0	224	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	10.0	47.0		10.0	47.0		33.0	33.0		33.0	33.0	
Total Split (%)	11.1%	52.2%		11.1%	52.2%		36.7%	36.7%		36.7%	36.7%	
Maximum Green (s)	7.0	41.0		7.0	41.0		27.0	27.0		27.0	27.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		3			3		5	5		5	5	
Act Effct Green (s)	68.1	63.1		64.4	54.4		12.9	12.9			12.9	
Actuated g/C Ratio	0.76	0.70		0.72	0.60		0.14	0.14			0.14	
v/c Ratio	0.26	0.20		0.02	0.46		0.30	0.09			0.63	
Control Delay	5.2	6.4		5.1	12.3		39.2	24.1			21.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	5.2	6.4		5.1	12.3		39.2	24.1			21.9	
LOS	A	A		A	B		D	C			C	
Approach Delay		6.1			12.2			32.4			21.9	
Approach LOS		A			B			C			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.63		
Intersection Signal Delay: 12.1	Intersection LOS: B	
Intersection Capacity Utilization 63.7%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 6: Farley Drive & Clair Road East

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	47.0	10.0	47.0	33.0	33.0	33.0	33.0
Total Split (%)	11.1%	52.2%	11.1%	52.2%	36.7%	36.7%	36.7%	36.7%
Maximum Green (s)	7.0	41.0	7.0	41.0	27.0	27.0	27.0	27.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		3		3	5	5	5	5
90th %ile Green (s)	10.2	42.0	7.0	38.8	26.0	26.0	26.0	26.0
90th %ile Term Code	Gap	Coord	Min	Coord	Ped	Ped	Ped	Ped
70th %ile Green (s)	7.6	64.8	0.0	54.2	13.2	13.2	13.2	13.2
70th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.0	67.6	0.0	57.6	10.4	10.4	10.4	10.4
50th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.0	70.3	0.0	60.3	7.7	7.7	7.7	7.7
30th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	71.0	0.0	61.0	7.0	7.0	7.0	7.0
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Min	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	118	455	11	939	28	23	224
v/c Ratio	0.26	0.20	0.02	0.46	0.30	0.09	0.63
Control Delay	5.2	6.4	5.1	12.3	39.2	24.1	21.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	6.4	5.1	12.3	39.2	24.1	21.9
Queue Length 50th (m)	3.7	9.2	0.3	39.9	4.8	2.8	15.6
Queue Length 95th (m)	m21.8	41.2	2.7	88.2	10.8	7.9	30.6
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	449	2250	722	2040	197	521	604
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	0.26	0.20	0.02	0.46	0.14	0.04	0.37

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	365	40	10	790	45	25	15	5	40	20	140
Future Volume (vph)	105	365	40	10	790	45	25	15	5	40	20	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.96			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1715	3201		1779	3344		1625	1723			1823	
Flt Permitted	0.25	1.00		0.49	1.00		0.39	1.00			0.92	
Satd. Flow (perm)	449	3201		917	3344		659	1723			1702	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	118	410	45	11	888	51	28	17	6	45	22	157
RTOR Reduction (vph)	0	6	0	0	3	0	0	5	0	0	115	0
Lane Group Flow (vph)	118	449	0	11	936	0	28	18	0	0	109	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	65.1	60.7		55.7	54.3		12.9	12.9			12.9	
Effective Green, g (s)	65.1	60.7		55.7	54.3		12.9	12.9			12.9	
Actuated g/C Ratio	0.72	0.67		0.62	0.60		0.14	0.14			0.14	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	434	2158		580	2017		94	246			243	
v/s Ratio Prot	c0.02	0.14		0.00	c0.28			0.01				
v/s Ratio Perm	0.17			0.01			0.04				c0.06	
v/c Ratio	0.27	0.21		0.02	0.46		0.30	0.07			0.45	
Uniform Delay, d1	4.5	5.5		6.6	9.8		34.5	33.4			35.3	
Progression Factor	0.93	0.96		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.3	0.2		0.0	0.8		1.8	0.1			1.3	
Delay (s)	4.5	5.5		6.6	10.6		36.3	33.5			36.6	
Level of Service	A	A		A	B		D	C			D	
Approach Delay (s)		5.3			10.6			35.0			36.6	
Approach LOS		A			B			D			D	

Intersection Summary

HCM 2000 Control Delay	12.8	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.44				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	63.7%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Flt Permitted		0.960									0.996	
Satd. Flow (perm)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Adj. Flow (vph)	34	7	0	0	14	7	0	21	0	7	27	55
Lane Group Flow (vph)	0	41	0	0	21	0	0	21	0	0	89	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization	26.1%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

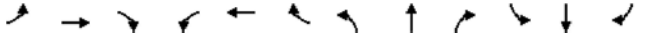
12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	0	14	7	0	21	0	7	27	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	21	21	89
Volume Left (vph)	34	0	0	7
Volume Right (vph)	0	7	0	55
Hadj (s)	0.21	-0.20	0.10	-0.31
Departure Headway (s)	4.4	4.0	4.2	3.8
Degree Utilization, x	0.05	0.02	0.02	0.09
Capacity (veh/h)	802	877	826	939
Control Delay (s)	7.6	7.1	7.3	7.1
Approach Delay (s)	7.6	7.1	7.3	7.1
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.3			
Level of Service	A			
Intersection Capacity Utilization	26.1%	ICU Level of Service	A	
Analysis Period (min)	15			

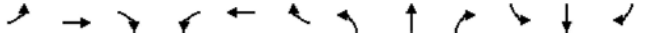
Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Flt Permitted		0.976						0.987			0.987	
Satd. Flow (perm)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Adj. Flow (vph)	7	0	7	0	0	7	7	13	7	7	20	0
Lane Group Flow (vph)	0	14	0	0	7	0	0	27	0	0	27	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization	26.3%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	0	7	0	0	7	7	13	7	7	20	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	14	7	27	27
Volume Left (vph)	7	0	7	7
Volume Right (vph)	7	7	7	0
Hadj (s)	-0.20	-0.60	0.17	0.13
Departure Headway (s)	3.8	3.4	4.1	4.1
Degree Utilization, x	0.01	0.01	0.03	0.03
Capacity (veh/h)	922	1027	852	869
Control Delay (s)	6.9	6.5	7.3	7.2
Approach Delay (s)	6.9	6.5	7.3	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.1			
Level of Service	A			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	65	20	15
Future Volume (vph)	5	0	0	65	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1642	0	0	1990	1971	0
Flt Permitted	0.950					
Satd. Flow (perm)	1642	0	0	1990	1971	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Adj. Flow (vph)	6	0	0	83	26	19
Lane Group Flow (vph)	6	0	0	83	45	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	65	20	15
Future Volume (Veh/h)	5	0	0	65	20	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	6	0	0	83	26	19
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	130	48	57			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	48	57			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	822	792	1543			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	6	83	45
Volume Left	6	0	0
Volume Right	0	0	19
cSH	822	1543	1700
Volume to Capacity	0.01	0.00	0.03
Queue Length 95th (m)	0.2	0.0	0.0
Control Delay (s)	9.4	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.4	0.0	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	16.6%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	50	5	5	100	40	15
Future Volume (vph)	50	5	5	100	40	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	1831	0	0	1971	1721	0
Flt Permitted				0.997	0.965	
Satd. Flow (perm)	1831	0	0	1971	1721	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Adj. Flow (vph)	56	6	6	112	45	17
Lane Group Flow (vph)	62	0	0	118	62	0
Sign Control	Free			Free	Stop	

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

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	50	5	5	100	40	15
Future Volume (Veh/h)	50	5	5	100	40	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	56	6	6	112	45	17
Pedestrians				6		
Lane Width (m)				4.5		
Walking Speed (m/s)				1.2		
Percent Blockage				1		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			62		183	65
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			62		183	65
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	98
cM capacity (veh/h)			1554		803	998

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	62	118	62
Volume Left	0	6	45
Volume Right	6	0	17
cSH	1700	1554	849
Volume to Capacity	0.04	0.00	0.07
Queue Length 95th (m)	0.0	0.1	1.9
Control Delay (s)	0.0	0.4	9.6
Lane LOS		A	A
Approach Delay (s)	0.0	0.4	9.6
Approach LOS			A

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	21.1%	ICU Level of Service		A
Analysis Period (min)	15			

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	820	15	65	570	10	115
Future Volume (vph)	820	15	65	570	10	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3477	0	1785	3535	1824	0
Flt Permitted			0.950		0.996	
Satd. Flow (perm)	3477	0	1785	3535	1824	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Adj. Flow (vph)	837	15	66	582	10	117
Lane Group Flow (vph)	852	0	66	582	127	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	820	15	65	570	10	115
Future Volume (Veh/h)	820	15	65	570	10	115
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	837	15	66	582	10	117
Pedestrians	1				13	
Lane Width (m)	3.5				4.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			865		1282	439
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			554		1031	66
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		95	86
cM capacity (veh/h)			884		185	853

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	558	294	66	291	291	127
Volume Left	0	0	66	0	0	10
Volume Right	0	15	0	0	0	117
cSH	1700	1700	884	1700	1700	664
Volume to Capacity	0.33	0.17	0.07	0.17	0.17	0.19
Queue Length 95th (m)	0.0	0.0	1.9	0.0	0.0	5.6
Control Delay (s)	0.0	0.0	9.4	0.0	0.0	11.7
Lane LOS			A			B
Approach Delay (s)	0.0		1.0			11.7
Approach LOS						B

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	44.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	85	10	0	40	5	10	5	0	15	0	25
Future Volume (vph)	65	85	10	0	40	5	10	5	0	15	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2030	0	0	1839	0	0	2023	0	0	1812	0
Flt Permitted		0.980						0.968			0.982	
Satd. Flow (perm)	0	2030	0	0	1839	0	0	2023	0	0	1812	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Adj. Flow (vph)	77	101	12	0	48	6	12	6	0	18	0	30
Lane Group Flow (vph)	0	190	0	0	54	0	0	18	0	0	48	0
Sign Control		Free			Free			Stop			Stop	

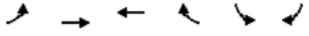
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.8%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	85	10	0	40	5	10	5	0	15	0	25
Future Volume (Veh/h)	65	85	10	0	40	5	10	5	0	15	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	77	101	12	0	48	6	12	6	0	18	0	30
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	87			126			363	361	124	352	364	92
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	87			126			363	361	124	352	364	92
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	95			100			98	99	100	97	100	97
cM capacity (veh/h)	1469			1453			522	514	916	536	512	914

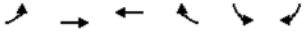
Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	190	54	18	48
Volume Left	77	0	12	18
Volume Right	12	6	0	30
cSH	1469	1453	520	723
Volume to Capacity	0.05	0.00	0.03	0.07
Queue Length 95th (m)	1.3	0.0	0.9	1.7
Control Delay (s)	3.3	0.0	12.2	10.3
Lane LOS	A		B	B
Approach Delay (s)	3.3	0.0	12.2	10.3
Approach LOS			B	B

Intersection Summary					
Average Delay		4.3			
Intersection Capacity Utilization		27.8%	ICU Level of Service		A
Analysis Period (min)		15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	160	70	15	20	30
Future Volume (vph)	20	160	70	15	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2077	1975	0	1692	0
Flt Permitted		0.994			0.980	
Satd. Flow (perm)	0	2077	1975	0	1692	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Adj. Flow (vph)	23	182	80	17	23	34
Lane Group Flow (vph)	0	205	97	0	57	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	160	70	15	20	30
Future Volume (Veh/h)	20	160	70	15	20	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	23	182	80	17	23	34
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	112				332	104
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	112				332	104
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	96
cM capacity (veh/h)	1472				649	945

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	205	97	57
Volume Left	23	0	23
Volume Right	0	17	34
cSH	1472	1700	798
Volume to Capacity	0.02	0.06	0.07
Queue Length 95th (m)	0.4	0.0	1.8
Control Delay (s)	1.0	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	1.0	0.0	9.9
Approach LOS			A

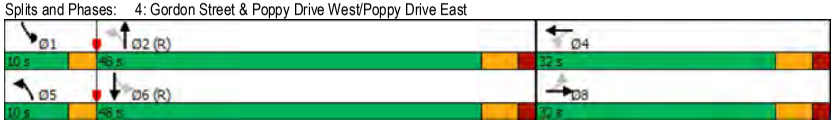
Intersection Summary				
Average Delay		2.1		
Intersection Capacity Utilization		26.2%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	25	30	60	20	60	50	835	110	80	765	20
Future Volume (vph)	30	25	30	60	20	60	50	835	110	80	765	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1774	0	0	1854	0	2006	3426	0	1728	3485	0
Flt Permitted		0.818			0.852		0.335			0.251		
Satd. Flow (perm)	0	1468	0	0	1611	0	705	3426	0	454	3485	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			42			21			4	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Adj. Flow (vph)	31	26	31	61	20	61	51	852	112	82	781	20
Lane Group Flow (vph)	0	88	0	0	142	0	51	964	0	82	801	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	32.0	32.0		32.0	32.0		10.0	48.0		10.0	48.0	
Total Split (%)	35.6%	35.6%		35.6%	35.6%		11.1%	53.3%		11.1%	53.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		7.0	42.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	6	6		6	6			6			6	
Act Effct Green (s)		12.9			12.9		65.4	56.7		66.6	59.0	
Actuated g/C Ratio		0.14			0.14		0.73	0.63		0.74	0.66	
v/c Ratio		0.37			0.53		0.08	0.44		0.19	0.35	
Control Delay		26.2			30.7		4.5	10.9		4.5	9.7	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		26.2			30.7		4.5	10.9		4.5	9.7	
LOS		C			C		A	B		A	A	
Approach Delay		26.2			30.7			10.6			9.2	
Approach LOS		C			C			B			A	

Intersection Summary

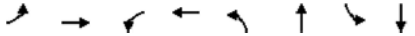
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 12.0	Intersection LOS: B
Intersection Capacity Utilization 61.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	32.0	32.0	32.0	32.0	10.0	48.0	10.0	48.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	11.1%	53.3%	11.1%	53.3%
Maximum Green (s)	26.0	26.0	26.0	26.0	7.0	42.0	7.0	42.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	6	6	6	6		6		6
90th %ile Green (s)	24.0	24.0	24.0	24.0	7.3	42.3	8.7	43.7
90th %ile Term Code	Ped	Ped	Ped	Ped	Gap	Coord	Gap	Coord
70th %ile Green (s)	13.5	13.5	13.5	13.5	7.0	54.5	7.0	54.5
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	11.2	11.2	11.2	11.2	7.0	56.8	7.0	56.8
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
30th %ile Green (s)	8.9	8.9	8.9	8.9	0.0	59.1	7.0	69.1
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Min	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	88	142	51	964	82	801
v/c Ratio	0.37	0.53	0.08	0.44	0.19	0.35
Control Delay	26.2	30.7	4.5	10.9	4.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	30.7	4.5	10.9	4.5	9.7
Queue Length 50th (m)	9.6	17.3	1.7	41.6	3.8	42.3
Queue Length 95th (m)	20.0	30.2	7.2	83.6	m4.8	m38.6
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	446	495	614	2167	439	2286
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.29	0.08	0.44	0.19	0.35

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	25	30	60	20	60	50	835	110	80	765	20
Future Volume (vph)	30	25	30	60	20	60	50	835	110	80	765	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		0.99			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765			1852		2004	3424		1725	3486	
Flt Permitted		0.82			0.85		0.34	1.00		0.25	1.00	
Satd. Flow (perm)		1468			1611		707	3424		457	3486	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	26	31	61	20	61	51	852	112	82	781	20
RTOR Reduction (vph)	0	27	0	0	36	0	0	8	0	0	1	0
Lane Group Flow (vph)	0	61	0	0	106	0	51	956	0	82	800	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		12.9			12.9		60.5	56.2		63.7	57.8	
Effective Green, g (s)		12.9			12.9		60.5	56.2		63.7	57.8	
Actuated g/C Ratio		0.14			0.14		0.67	0.62		0.71	0.64	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		210			230		537	2138		406	2238	
v/s Ratio Prot							0.00	c0.28		c0.01	0.23	
v/s Ratio Perm		0.04			c0.07		0.06			0.13		
v/c Ratio		0.29			0.46		0.09	0.45		0.20	0.36	
Uniform Delay, d1		34.5			35.4		5.0	8.8		4.5	7.5	
Progression Factor		1.00			1.00		1.00	1.00		0.95	1.06	
Incremental Delay, d2		0.8			1.5		0.1	0.7		0.2	0.3	
Delay (s)		35.2			36.8		5.1	9.5		4.5	8.3	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		35.2			36.8			9.3			7.9	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.43			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	61.6%	ICU Level of Service	B	
Analysis Period (min)	15			

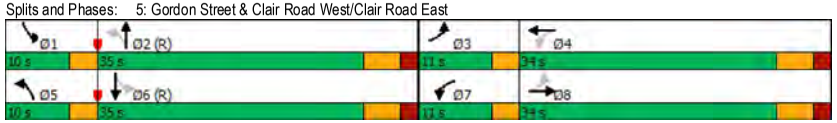
c Critical Lane Group

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	775	125	180	440	105	145	605	165	180	610	130
Future Volume (vph)	250	775	125	180	440	105	145	605	165	180	610	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3440	0	1711	3409	0	1646	3321	0	1728	3326	0
Flt Permitted	0.330			0.150			0.214			0.188		
Satd. Flow (perm)	598	3440	0	269	3409	0	369	3321	0	340	3326	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21			33			40			30	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Adj. Flow (vph)	258	799	129	186	454	108	149	624	170	186	629	134
Lane Group Flow (vph)	258	928	0	186	562	0	149	794	0	186	763	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	11.0	34.0		11.0	34.0		10.0	35.0		10.0	35.0	
Total Split (%)	12.2%	37.8%		12.2%	37.8%		11.1%	38.9%		11.1%	38.9%	
Maximum Green (s)	8.0	28.0		8.0	28.0		7.0	29.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		11			11			9			9	
Act Effct Green (s)	39.7	26.9		39.1	26.6		38.3	27.9		39.0	28.2	
Actuated g/C Ratio	0.44	0.30		0.43	0.30		0.43	0.31		0.43	0.31	
v/c Ratio	0.66	0.89		0.69	0.55		0.57	0.75		0.70	0.72	
Control Delay	25.9	41.2		35.9	29.7		23.8	24.0		32.0	30.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.9	41.2		35.9	29.7		23.8	24.0		32.0	30.9	
LOS	C	D		D	C		C	C		C	C	
Approach Delay		37.8			31.3			23.9			31.1	
Approach LOS		D			C			C			C	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection		
Natural Cycle: 90		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.89		
Intersection Signal Delay: 31.5	Intersection LOS: C	
Intersection Capacity Utilization 86.5%	ICU Level of Service E	
Analysis Period (min) 15		

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	11.0	34.0	11.0	34.0	10.0	35.0	10.0	35.0
Total Split (%)	12.2%	37.8%	12.2%	37.8%	11.1%	38.9%	11.1%	38.9%
Maximum Green (s)	8.0	28.0	8.0	28.0	7.0	29.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		11		11		9		9
90th %ile Green (s)	8.0	28.0	8.0	28.0	7.0	29.0	7.0	29.0
90th %ile Term Code	Max	Max	Max	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	8.3	28.0	8.3	28.0	7.0	28.7	7.0	28.7
70th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
50th %ile Green (s)	10.5	28.0	10.5	28.0	7.0	26.5	7.0	26.5
50th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
30th %ile Green (s)	12.1	27.4	11.4	26.7	9.0	23.4	9.8	24.2
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Max	Coord
10th %ile Green (s)	9.9	23.2	9.1	22.4	7.0	31.8	7.9	32.7
10th %ile Term Code	Gap	Gap	Gap	Hold	Min	Coord	Gap	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	258	928	186	562	149	794	186	763
v/c Ratio	0.66	0.89	0.69	0.55	0.57	0.75	0.70	0.72
Control Delay	25.9	41.2	35.9	29.7	23.8	24.0	32.0	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	41.2	35.9	29.7	23.8	24.0	32.0	30.9
Queue Length 50th (m)	26.6	81.1	22.2	49.8	17.3	67.5	20.6	63.6
Queue Length 95th (m)	#50.8	#115.1	#49.1	57.7	26.3	26.1	#39.7	82.0
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	388	1084	268	1083	261	1117	266	1119
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.86	0.69	0.52	0.57	0.71	0.70	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	775	125	180	440	105	145	605	165	180	610	130
Future Volume (vph)	250	775	125	180	440	105	145	605	165	180	610	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	3440		1710	3410		1645	3321		1726	3325	
Flt Permitted	0.33	1.00		0.15	1.00		0.21	1.00		0.19	1.00	
Satd. Flow (perm)	604	3440		271	3410		370	3321		342	3325	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	258	799	129	186	454	108	149	624	170	186	629	134
RTOR Reduction (vph)	0	15	0	0	23	0	0	28	0	0	21	0
Lane Group Flow (vph)	258	913	0	186	539	0	149	766	0	186	742	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	36.7	26.9		36.1	26.6		35.3	27.9		35.9	28.2	
Effective Green, g (s)	36.7	26.9		36.1	26.6		35.3	27.9		35.9	28.2	
Actuated g/C Ratio	0.41	0.30		0.40	0.30		0.39	0.31		0.40	0.31	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	369	1028		260	1007		249	1029		254	1041	
v/s Ratio Prot	c0.08	c0.27		0.08	0.16		0.05	c0.23		c0.06	0.22	
v/s Ratio Perm	0.21			0.21			0.18			0.23		
v/c Ratio	0.70	0.89		0.72	0.54		0.60	0.74		0.73	0.71	
Uniform Delay, d1	18.9	30.1		20.3	26.5		19.2	27.9		19.6	27.3	
Progression Factor	1.00	1.00		1.42	1.12		1.01	0.72		1.00	1.00	
Incremental Delay, d2	5.7	9.5		8.6	0.5		3.5	4.5		10.4	4.2	
Delay (s)	24.6	39.6		37.4	30.2		23.0	24.6		30.0	31.5	
Level of Service	C	D		D	C		C	C		C	C	
Approach Delay (s)		36.3			32.0			24.4			31.2	
Approach LOS		D			C			C			C	

Intersection Summary

HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	725	145	45	475	70	85	55	30	80	65	145
Future Volume (vph)	200	725	145	45	475	70	85	55	30	80	65	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1785	3372	0	1785	3415	0	1705	1753	0	0	1916	0
Flt Permitted	0.389			0.299			0.411				0.877	
Satd. Flow (perm)	722	3372	0	559	3415	0	723	1753	0	0	1692	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		32			20			31			59	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Adj. Flow (vph)	208	755	151	47	495	73	89	57	31	83	68	151
Lane Group Flow (vph)	208	906	0	47	568	0	89	88	0	0	302	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	16.0	44.0		11.0	39.0		35.0	35.0		35.0	35.0	
Total Split (%)	17.8%	48.9%		12.2%	43.3%		38.9%	38.9%		38.9%	38.9%	
Maximum Green (s)	13.0	38.0		8.0	33.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		7			7		12	12		12	12	
Act Effct Green (s)	62.3	53.3		57.0	46.9		18.6	18.6			18.6	
Actuated g/C Ratio	0.69	0.59		0.63	0.52		0.21	0.21			0.21	
v/c Ratio	0.34	0.45		0.10	0.32		0.60	0.23			0.76	
Control Delay	3.9	8.3		6.6	14.0		47.7	19.9			39.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	3.9	8.3		6.6	14.0		47.7	19.9			39.1	
LOS	A	A		A	B		D	B			D	
Approach Delay		7.5			13.5			33.9			39.1	
Approach LOS		A			B			C			D	

Intersection Summary

Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 73.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 6: Farley Drive & Clair Road East

Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	16.0	44.0	11.0	39.0	35.0	35.0	35.0	35.0
Total Split (%)	17.8%	48.9%	12.2%	43.3%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	13.0	38.0	8.0	33.0	29.0	29.0	29.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		7		7	12	12	12	12
90th %ile Green (s)	13.2	41.4	7.6	35.8	26.0	26.0	26.0	26.0
90th %ile Term Code	Gap	Coord	Gap	Coord	Ped	Ped	Ped	Ped
70th %ile Green (s)	10.6	46.2	7.0	42.6	21.8	21.8	21.8	21.8
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	9.1	49.4	7.0	47.3	18.6	18.6	18.6	18.6
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.9	62.5	0.0	51.6	15.5	15.5	15.5	15.5
30th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	67.1	0.0	57.1	10.9	10.9	10.9	10.9
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	208	906	47	568	89	88	302
v/c Ratio	0.34	0.45	0.10	0.32	0.60	0.23	0.76
Control Delay	3.9	8.3	6.6	14.0	47.7	19.9	39.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.9	8.3	6.6	14.0	47.7	19.9	39.1
Queue Length 50th (m)	6.2	15.4	2.3	28.0	14.8	8.6	42.0
Queue Length 95th (m)	m9.6	m88.2	7.3	51.1	28.2	19.0	64.2
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	655	2010	468	1788	232	585	585
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	0.32	0.45	0.10	0.32	0.38	0.15	0.52

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	725	145	45	475	70	85	55	30	80	65	145
Future Volume (vph)	200	725	145	45	475	70	85	55	30	80	65	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.97		1.00	0.98		1.00	0.95			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1777	3373		1782	3414		1673	1754			1904	
Flt Permitted	0.39	1.00		0.30	1.00		0.41	1.00			0.88	
Satd. Flow (perm)	728	3373		561	3414		724	1754			1692	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	208	755	151	47	495	73	89	57	31	83	68	151
RTOR Reduction (vph)	0	13	0	0	10	0	0	25	0	0	47	0
Lane Group Flow (vph)	208	893	0	47	558	0	89	63	0	0	255	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	59.4	52.1		51.1	46.8		18.6	18.6			18.6	
Effective Green, g (s)	59.4	52.1		51.1	46.8		18.6	18.6			18.6	
Actuated g/C Ratio	0.66	0.58		0.57	0.52		0.21	0.21			0.21	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	592	1952		376	1775		149	362			349	
v/s Ratio Prot	c0.04	c0.26		0.01	0.16			0.04				
v/s Ratio Perm	0.19			0.06			0.12				c0.15	
v/c Ratio	0.35	0.46		0.12	0.31		0.60	0.18			0.73	
Uniform Delay, d1	6.1	10.9		8.7	12.4		32.3	29.4			33.4	
Progression Factor	0.52	0.66		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.4		0.2	0.5		6.3	0.2			7.7	
Delay (s)	3.4	7.6		8.8	12.9		38.6	29.6			41.0	
Level of Service	A	A		A	B		D	C			D	
Approach Delay (s)		6.8			12.6			34.1			41.0	
Approach LOS		A			B			C			D	

Intersection Summary				
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.53			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	73.5%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Flt Permitted		0.963			0.993			0.996			0.990	
Satd. Flow (perm)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Adj. Flow (vph)	94	22	6	11	22	44	6	56	11	56	61	156
Lane Group Flow (vph)	0	122	0	0	77	0	0	73	0	0	273	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	11	22	44	6	56	11	56	61	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	77	73	273
Volume Left (vph)	94	11	6	56
Volume Right (vph)	6	44	11	156
Hadj (s)	0.12	-0.31	-0.07	-0.29
Departure Headway (s)	4.9	4.5	4.6	4.2
Degree Utilization, x	0.17	0.10	0.09	0.32
Capacity (veh/h)	680	725	728	816
Control Delay (s)	8.9	8.0	8.1	9.1
Approach Delay (s)	8.9	8.0	8.1	9.1
Approach LOS	A	A	A	A

Intersection Summary					
Delay			8.8		
Level of Service			A		
Intersection Capacity Utilization			41.8%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Flt Permitted		0.968			0.984			0.988			0.979	
Satd. Flow (perm)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Adj. Flow (vph)	34	6	11	11	6	17	11	23	11	34	34	11
Lane Group Flow (vph)	0	51	0	0	34	0	0	45	0	0	79	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary					
Area Type:	Other				
Control Type: Unsignalized					
Intersection Capacity Utilization	30.2%			ICU Level of Service	A
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	6	11	11	6	17	11	23	11	34	34	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	51	34	45	79
Volume Left (vph)	34	11	11	34
Volume Right (vph)	11	17	11	11
Hadj (s)	0.00	-0.24	-0.10	0.00
Departure Headway (s)	4.2	4.0	4.1	4.1
Degree Utilization, x	0.06	0.04	0.05	0.09
Capacity (veh/h)	827	870	854	849
Control Delay (s)	7.5	7.1	7.3	7.5
Approach Delay (s)	7.5	7.1	7.3	7.5
Approach LOS	A	A	A	A

Intersection Summary					
Delay			7.4		
Level of Service			A		
Intersection Capacity Utilization			30.2%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
9: Hawkins Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	5	0	70	35	45
Future Volume (vph)	55	5	0	70	35	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1851	0	0	2090	1929	0
Flt Permitted	0.956					
Satd. Flow (perm)	1851	0	0	2090	1929	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Adj. Flow (vph)	62	6	0	79	39	51
Lane Group Flow (vph)	68	0	0	79	90	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	5	0	70	35	45
Future Volume (Veh/h)	55	5	0	70	35	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	62	6	0	79	39	51
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	152	72	98			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	72	98			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	93	99	100			
cM capacity (veh/h)	836	945	1496			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	68	79	90
Volume Left	62	0	0
Volume Right	6	0	51
cSH	845	1496	1700
Volume to Capacity	0.08	0.00	0.05
Queue Length 95th (m)	2.1	0.0	0.0
Control Delay (s)	9.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.6	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		2.8	
Intersection Capacity Utilization		17.0%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
10: 1888 Gordon Street Access & Poppy Drive East

12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	135	30	10	80	30	10
Future Volume (vph)	135	30	10	80	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2038	0	0	2041	1750	0
Flt Permitted				0.994	0.964	
Satd. Flow (perm)	2038	0	0	2041	1750	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Adj. Flow (vph)	147	33	11	87	33	11
Lane Group Flow (vph)	180	0	0	98	44	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.9%			ICU Level of Service A
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	135	30	10	80	30	10
Future Volume (Veh/h)	135	30	10	80	30	10
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)	147	33	11	87	33	11
Pedestrians	2			17	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			181		276	182
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			181		276	182
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	99
cM capacity (veh/h)			1405		711	850

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	180	98	44
Volume Left	0	11	33
Volume Right	33	0	11
cSH	1700	1405	741
Volume to Capacity	0.11	0.01	0.06
Queue Length 95th (m)	0.0	0.2	1.5
Control Delay (s)	0.0	0.9	10.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.9	10.2
Approach LOS			B

Intersection Summary				
Average Delay			1.7	
Intersection Capacity Utilization			26.9%	ICU Level of Service A
Analysis Period (min)			15	

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	545	15	90	495	15	95
Future Volume (vph)	545	15	90	495	15	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3507	0	1767	3466	1835	0
Flt Permitted			0.950		0.993	
Satd. Flow (perm)	3507	0	1767	3466	1835	0
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Adj. Flow (vph)	568	16	94	516	16	99
Lane Group Flow (vph)	584	0	94	516	115	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	37.2%	ICU Level of Service A	
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	545	15	90	495	15	95
Future Volume (Veh/h)	545	15	90	495	15	95
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	568	16	94	516	16	99
Pedestrians					6	
Lane Width (m)					4.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			590		1028	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			464		925	156
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			91		93	88
cM capacity (veh/h)			1040		234	819

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	379	205	94	258	258	115
Volume Left	0	0	94	0	0	16
Volume Right	0	16	0	0	0	99
cSH	1700	1700	1040	1700	1700	607
Volume to Capacity	0.22	0.12	0.09	0.15	0.15	0.19
Queue Length 95th (m)	0.0	0.0	2.4	0.0	0.0	5.5
Control Delay (s)	0.0	0.0	8.8	0.0	0.0	12.3
Lane LOS			A			B
Approach Delay (s)	0.0		1.4			12.3
Approach LOS						B

Intersection Summary					
Average Delay	1.7				
Intersection Capacity Utilization	37.2%	ICU Level of Service	A		
Analysis Period (min)	15				

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

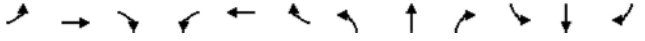
12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	40	5	0	50	10	5	0	0	5	5	20
Future Volume (vph)	45	40	5	0	50	10	5	0	0	5	5	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2026	0	0	1797	0	0	1986	0	0	1771	0
Flt Permitted		0.976						0.950			0.992	
Satd. Flow (perm)	0	2026	0	0	1797	0	0	1986	0	0	1771	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Adj. Flow (vph)	48	43	5	0	54	11	5	0	0	5	5	22
Lane Group Flow (vph)	0	96	0	0	65	0	0	5	0	0	32	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023



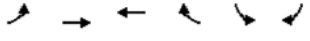
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	40	5	0	50	10	5	0	0	5	5	20
Future Volume (Veh/h)	45	40	5	0	50	10	5	0	0	5	5	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	48	43	5	0	54	11	5	0	0	5	5	22
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	77			59			242	230	60	216	226	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	77			59			242	230	60	216	226	78
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			100			99	100	100	99	99	98
cM capacity (veh/h)	1515			1540			654	637	998	703	639	946

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	96	65	5	32
Volume Left	48	0	5	5
Volume Right	5	11	0	22
cSH	1515	1540	654	838
Volume to Capacity	0.03	0.00	0.01	0.04
Queue Length 95th (m)	0.8	0.0	0.2	1.0
Control Delay (s)	3.8	0.0	10.5	9.5
Lane LOS	A		B	A
Approach Delay (s)	3.8	0.0	10.5	9.5
Approach LOS			B	A

Intersection Summary					
Average Delay	3.7				
Intersection Capacity Utilization	24.0%	ICU Level of Service		A	
Analysis Period (min)	15				

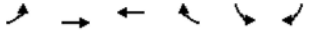
Lanes, Volumes, Timings
3: Poppy Drive East & Farley Drive

12-12-2023



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	95	70	15	15	35
Future Volume (vph)	25	95	70	15	15	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2069	1961	0	1675	0
Flt Permitted		0.990			0.985	
Satd. Flow (perm)	0	2069	1961	0	1675	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Adj. Flow (vph)	27	104	77	16	16	38
Lane Group Flow (vph)	0	131	93	0	54	0
Sign Control		Free	Free		Stop	

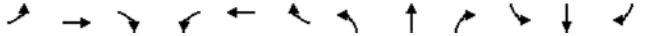
Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization	23.0%		ICU Level of Service	A
Analysis Period (min)	15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	95	70	15	15	35
Future Volume (Veh/h)	25	95	70	15	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	27	104	77	16	16	38
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	108				258	100
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	108				258	100
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	96
cM capacity (veh/h)	1477				713	949

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	131	93	54
Volume Left	27	0	16
Volume Right	0	16	38
cSH	1477	1700	864
Volume to Capacity	0.02	0.05	0.06
Queue Length 95th (m)	0.4	0.0	1.6
Control Delay (s)	1.7	0.0	9.4
Lane LOS	A		A
Approach Delay (s)	1.7	0.0	9.4
Approach LOS			A

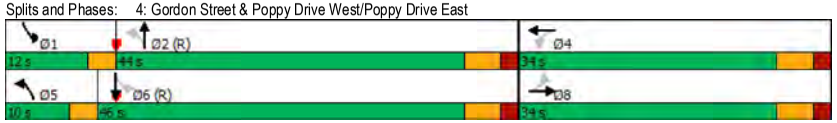
Intersection Summary			
Average Delay		2.6	
Intersection Capacity Utilization		23.0%	ICU Level of Service A
Analysis Period (min)		15	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	15	20	60	20	65	40	660	75	60	735	15
Future Volume (vph)	25	15	20	60	20	65	40	660	75	60	735	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1719	0	0	1853	0	2046	3503	0	1745	3557	0
Flt Permitted		0.789			0.838		0.325			0.310		
Satd. Flow (perm)	0	1377	0	0	1581	0	697	3503	0	567	3557	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22			47			17			3	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Adj. Flow (vph)	27	16	22	66	22	71	44	725	82	66	808	16
Lane Group Flow (vph)	0	65	0	0	159	0	44	807	0	66	824	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	34.0	34.0		34.0	34.0		10.0	44.0		12.0	46.0	
Total Split (%)	37.8%	37.8%		37.8%	37.8%		11.1%	48.9%		13.3%	51.1%	
Maximum Green (s)	28.0	28.0		28.0	28.0		7.0	38.0		9.0	40.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	5	5		5	5			3			3	
Act Effct Green (s)		13.3			13.3		65.1	56.5		66.1	58.7	
Actuated g/C Ratio		0.15			0.15		0.72	0.63		0.73	0.65	
v/c Ratio		0.29			0.58		0.07	0.37		0.13	0.36	
Control Delay		25.8			32.2		4.5	10.1		3.6	8.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		25.8			32.2		4.5	10.1		3.6	8.2	
LOS		C			C		A	B		A	A	
Approach Delay		25.8			32.2			9.9			7.8	
Approach LOS		C			C			A			A	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green		
Natural Cycle: 75		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.58		
Intersection Signal Delay: 11.3	Intersection LOS: B	
Intersection Capacity Utilization 57.9%	ICU Level of Service B	
Analysis Period (min) 15		

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	34.0	34.0	34.0	34.0	10.0	44.0	12.0	46.0
Total Split (%)	37.8%	37.8%	37.8%	37.8%	11.1%	48.9%	13.3%	51.1%
Maximum Green (s)	28.0	28.0	28.0	28.0	7.0	38.0	9.0	40.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	5	5	5	5		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	7.1	42.8	8.2	43.9
90th %ile Term Code	Ped	Ped	Ped	Ped	Gap	Coord	Gap	Coord
70th %ile Green (s)	14.2	14.2	14.2	14.2	7.0	53.8	7.0	53.8
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	11.8	11.8	11.8	11.8	7.0	56.2	7.0	56.2
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
30th %ile Green (s)	9.4	9.4	9.4	9.4	0.0	58.6	7.0	68.6
30th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Min	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	65	159	44	807	66	824
v/c Ratio	0.29	0.58	0.07	0.37	0.13	0.36
Control Delay	25.8	32.2	4.5	10.1	3.6	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	32.2	4.5	10.1	3.6	8.2
Queue Length 50th (m)	7.1	19.4	1.5	33.2	1.0	22.9
Queue Length 95th (m)	16.3	33.5	6.5	65.5	m5.1	45.5
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	443	524	609	2204	540	2320
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.30	0.07	0.37	0.12	0.36

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	15	20	60	20	65	40	660	75	60	735	15
Future Volume (vph)	25	15	20	60	20	65	40	660	75	60	735	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1847		2043	3503		1743	3557	
Flt Permitted		0.79			0.84		0.32	1.00		0.31	1.00	
Satd. Flow (perm)		1377			1580		698	3503		569	3557	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	16	22	66	22	71	44	725	82	66	808	16
RTOR Reduction (vph)	0	19	0	0	40	0	0	6	0	0	1	0
Lane Group Flow (vph)	0	46	0	0	119	0	44	801	0	66	823	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		13.3			13.3		60.1	55.9		63.3	57.5	
Effective Green, g (s)		13.3			13.3		60.1	55.9		63.3	57.5	
Actuated g/C Ratio		0.15			0.15		0.67	0.62		0.70	0.64	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		203			233		528	2175		475	2272	
v/s Ratio Prot							0.00	0.23		c0.01	c0.23	
v/s Ratio Perm		0.03			c0.08		0.05			0.09		
v/c Ratio		0.23			0.51		0.08	0.37		0.14	0.36	
Uniform Delay, d1		33.8			35.3		5.1	8.4		4.3	7.6	
Progression Factor		1.00			1.00		1.00	1.00		0.75	0.87	
Incremental Delay, d2		0.6			1.9		0.1	0.5		0.1	0.4	
Delay (s)		34.4			37.2		5.2	8.9		3.4	7.0	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		34.4			37.2			8.7			6.7	
Approach LOS		C			D			A			A	

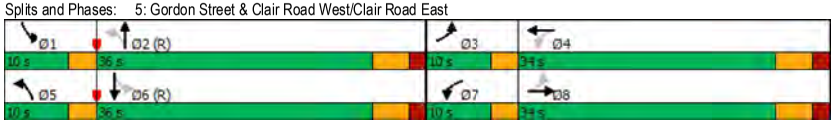
Intersection Summary					
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.38				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	57.9%	ICU Level of Service		B	
Analysis Period (min)	15				
c Critical Lane Group					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	480	85	200	385	110	115	485	110	180	570	80
Future Volume (vph)	170	480	85	200	385	110	115	485	110	180	570	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3469	0	1711	3390	0	1646	3437	0	1728	3475	0
Flt Permitted	0.348			0.247			0.309			0.315		
Satd. Flow (perm)	629	3469	0	440	3390	0	532	3437	0	569	3475	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			42			32			18	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Adj. Flow (vph)	175	495	88	206	397	113	119	500	113	186	588	82
Lane Group Flow (vph)	175	583	0	206	510	0	119	613	0	186	670	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		10.0	34.0		10.0	36.0		10.0	36.0	
Total Split (%)	11.1%	37.8%		11.1%	37.8%		11.1%	40.0%		11.1%	40.0%	
Maximum Green (s)	7.0	28.0		7.0	28.0		7.0	30.0		7.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		12			12			7			7	
Act Effct Green (s)	33.5	20.5		35.4	21.4		42.3	31.2		44.7	32.4	
Actuated g/C Ratio	0.37	0.23		0.39	0.24		0.47	0.35		0.50	0.36	
v/c Ratio	0.49	0.72		0.63	0.61		0.34	0.51		0.46	0.53	
Control Delay	21.2	35.8		27.8	30.0		10.4	18.1		17.6	25.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	21.2	35.8		27.8	30.0		10.4	18.1		17.6	25.2	
LOS	C	D		C	C		B	B		B	C	
Approach Delay		32.4			29.4			16.9			23.5	
Approach LOS		C			C			B			C	

Intersection Summary

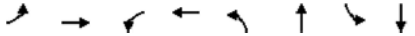
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 82.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023



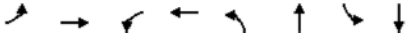
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Maximum Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		12		12		7		7
90th %ile Green (s)	8.0	28.0	8.0	28.0	7.0	29.0	7.0	29.0
90th %ile Term Code	Max	Ped	Max	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	12.8	21.9	13.5	22.6	10.4	23.8	12.8	26.2
70th %ile Term Code	Gap	Gap	Max	Hold	Gap	Coord	Gap	Coord
50th %ile Green (s)	11.5	19.9	13.0	21.4	8.9	28.2	10.9	30.2
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
30th %ile Green (s)	10.1	17.8	11.4	19.1	7.6	33.7	9.1	35.2
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
10th %ile Green (s)	7.9	14.8	9.0	15.9	7.0	41.1	7.1	41.2
10th %ile Term Code	Gap	Gap	Gap	Hold	Min	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	175	583	206	510	119	613	186	670
v/c Ratio	0.49	0.72	0.63	0.61	0.34	0.51	0.46	0.53
Control Delay	21.2	35.8	27.8	30.0	10.4	18.1	17.6	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	35.8	27.8	30.0	10.4	18.1	17.6	25.2
Queue Length 50th (m)	19.5	50.3	24.2	42.4	4.4	47.5	18.1	50.6
Queue Length 95th (m)	31.4	60.7	#38.2	41.6	7.9	25.7	33.2	70.1
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	359	1095	327	1083	351	1279	403	1298
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.53	0.63	0.47	0.34	0.48	0.46	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	480	85	200	385	110	115	485	110	180	570	80
Future Volume (vph)	170	480	85	200	385	110	115	485	110	180	570	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1736	3470		1707	3390		1643	3439		1724	3474	
Flt Permitted	0.35	1.00		0.25	1.00		0.31	1.00		0.31	1.00	
Satd. Flow (perm)	636	3470		443	3390		535	3439		572	3474	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	495	88	206	397	113	119	500	113	186	588	82
RTOR Reduction (vph)	0	18	0	0	32	0	0	21	0	0	12	0
Lane Group Flow (vph)	175	565	0	206	478	0	119	592	0	186	658	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	30.6	20.5		32.4	21.4		39.3	31.1		41.7	32.3	
Effective Green, g (s)	30.6	20.5		32.4	21.4		39.3	31.1		41.7	32.3	
Actuated g/C Ratio	0.34	0.23		0.36	0.24		0.44	0.35		0.46	0.36	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	339	790		313	806		334	1188		385	1246	
v/s Ratio Prot	0.06	c0.16		c0.08	0.14		0.03	0.17		c0.05	c0.19	
v/s Ratio Perm	0.12			0.16			0.12			0.17		
v/c Ratio	0.52	0.72		0.66	0.59		0.36	0.50		0.48	0.53	
Uniform Delay, d1	22.0	32.1		21.6	30.4		15.7	23.3		15.0	22.8	
Progression Factor	1.00	1.00		1.08	0.99		0.61	0.71		1.00	1.00	
Incremental Delay, d2	1.3	3.1		4.6	1.1		0.6	1.4		1.0	1.6	
Delay (s)	23.3	35.2		27.8	31.1		10.2	18.0		16.0	24.4	
Level of Service	C	D		C	C		B	B		B	C	
Approach Delay (s)		32.4			30.2			16.7			22.6	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	82.3%	ICU Level of Service	E	
Analysis Period (min)	15			

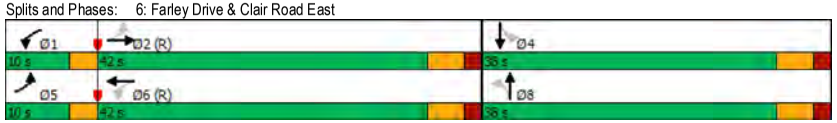
c Critical Lane Group

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	445	155	35	410	70	125	70	35	90	65	160
Future Volume (vph)	125	445	155	35	410	70	125	70	35	90	65	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1767	3376	0	1785	3353	0	1705	1765	0	0	1943	0
Flt Permitted	0.412			0.404			0.404				0.864	
Satd. Flow (perm)	757	3376	0	755	3353	0	716	1765	0	0	1694	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		64			25			31			64	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Adj. Flow (vph)	136	484	168	38	446	76	136	76	38	98	71	174
Lane Group Flow (vph)	136	652	0	38	522	0	136	114	0	0	343	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	10.0	42.0		10.0	42.0		38.0	38.0		38.0	38.0	
Total Split (%)	11.1%	46.7%		11.1%	46.7%		42.2%	42.2%		42.2%	42.2%	
Maximum Green (s)	7.0	36.0		7.0	36.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		6			6		8	8		8	8	
Act Effct Green (s)	59.7	51.2		55.9	45.8		20.7	20.7			20.7	
Actuated g/C Ratio	0.66	0.57		0.62	0.51		0.23	0.23			0.23	
v/c Ratio	0.23	0.33		0.07	0.30		0.83	0.27			0.78	
Control Delay	4.0	7.2		7.2	14.2		68.1	20.3			38.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	4.0	7.2		7.2	14.2		68.1	20.3			38.2	
LOS	A	A		A	B		E	C			D	
Approach Delay		6.6			13.8			46.3			38.2	
Approach LOS		A			B			D			D	

Intersection Summary		
Area Type:	Other	
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green		
Natural Cycle: 80		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.83		
Intersection Signal Delay: 19.4	Intersection LOS: B	
Intersection Capacity Utilization 70.4%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 6: Farley Drive & Clair Road East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	42.0	10.0	42.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	46.7%	11.1%	46.7%	42.2%	42.2%	42.2%	42.2%
Maximum Green (s)	7.0	36.0	7.0	36.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		6		6	8	8	8	8
90th %ile Green (s)	11.1	38.7	7.4	35.0	28.9	28.9	28.9	28.9
90th %ile Term Code	Gap	Coord	Gap	Coord	Gap	Gap	Hold	Hold
70th %ile Green (s)	9.1	43.9	7.0	41.8	24.1	24.1	24.1	24.1
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.9	47.2	7.0	46.3	20.8	20.8	20.8	20.8
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.0	60.6	0.0	50.6	17.4	17.4	17.4	17.4
30th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	65.5	0.0	55.5	12.5	12.5	12.5	12.5
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	136	652	38	522	136	114	343
v/c Ratio	0.23	0.33	0.07	0.30	0.83	0.27	0.78
Control Delay	4.0	7.2	7.2	14.2	68.1	20.3	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.0	7.2	7.2	14.2	68.1	20.3	38.2
Queue Length 50th (m)	2.0	4.4	2.1	25.7	23.6	12.2	48.1
Queue Length 95th (m)	14.9	57.2	6.9	47.2	#42.1	23.4	70.3
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	596	1947	550	1727	254	647	643
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	0.23	0.33	0.07	0.30	0.54	0.18	0.53

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	445	155	35	410	70	125	70	35	90	65	160
Future Volume (vph)	125	445	155	35	410	70	125	70	35	90	65	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.96		1.00	0.98		1.00	0.95			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1759	3377		1781	3354		1686	1765			1932	
Flt Permitted	0.41	1.00		0.40	1.00		0.40	1.00			0.86	
Satd. Flow (perm)	764	3377		758	3354		718	1765			1692	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	484	168	38	446	76	136	76	38	98	71	174
RTOR Reduction (vph)	0	28	0	0	12	0	0	24	0	0	49	0
Lane Group Flow (vph)	136	624	0	38	510	0	136	90	0	0	294	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	57.3	50.0		50.2	45.9		20.7	20.7			20.7	
Effective Green, g (s)	57.3	50.0		50.2	45.9		20.7	20.7			20.7	
Actuated g/C Ratio	0.64	0.56		0.56	0.51		0.23	0.23			0.23	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	579	1876		471	1710		165	405			389	
v/s Ratio Prot	c0.02	c0.18		0.00	0.15			0.05				
v/s Ratio Perm	0.13			0.04			c0.19				0.17	
v/c Ratio	0.23	0.33		0.08	0.30		0.82	0.22			0.76	
Uniform Delay, d1	6.6	10.9		9.0	12.7		32.9	28.1			32.3	
Progression Factor	0.48	0.60		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.4		0.1	0.4		27.1	0.3			8.1	
Delay (s)	3.3	7.0		9.1	13.2		60.0	28.4			40.4	
Level of Service	A	A		A	B		E	C			D	
Approach Delay (s)		6.4			12.9			45.6			40.4	
Approach LOS		A			B			D			D	

Intersection Summary

HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Flt Permitted		0.962			0.990						0.986	
Satd. Flow (perm)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Adj. Flow (vph)	121	23	11	23	29	63	0	92	11	80	63	144
Lane Group Flow (vph)	0	155	0	0	115	0	0	103	0	0	287	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

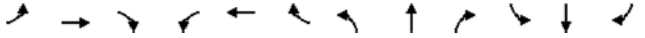
12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	23	29	63	0	92	11	80	63	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	115	103	287
Volume Left (vph)	121	23	0	80
Volume Right (vph)	11	63	11	144
Hadj (s)	0.11	-0.29	-0.06	-0.25
Departure Headway (s)	5.1	4.8	4.9	4.5
Degree Utilization, x	0.22	0.15	0.14	0.36
Capacity (veh/h)	649	683	678	757
Control Delay (s)	9.5	8.6	8.7	10.0
Approach Delay (s)	9.5	8.6	8.7	10.0
Approach LOS	A	A	A	A

Intersection Summary					
Delay	9.4				
Level of Service	A				
Intersection Capacity Utilization	43.2%	ICU Level of Service		A	
Analysis Period (min)	15				

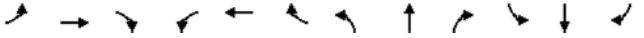
Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Flt Permitted		0.970			0.990			0.994			0.980	
Satd. Flow (perm)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Adj. Flow (vph)	49	12	18	12	6	43	6	24	24	43	30	30
Lane Group Flow (vph)	0	79	0	0	61	0	0	54	0	0	103	0
Sign Control		Stop			Stop			Stop			Stop	

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

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	12	18	12	6	43	6	24	24	43	30	30

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	79	61	54	103
Volume Left (vph)	49	12	6	43
Volume Right (vph)	18	43	24	30
Hadj (s)	-0.01	-0.38	-0.24	-0.09
Departure Headway (s)	4.3	3.9	4.1	4.2
Degree Utilization, x	0.09	0.07	0.06	0.12
Capacity (veh/h)	804	871	842	833
Control Delay (s)	7.7	7.2	7.3	7.7
Approach Delay (s)	7.7	7.2	7.3	7.7
Approach LOS	A	A	A	A

Intersection Summary					
Delay	7.5				
Level of Service	A				
Intersection Capacity Utilization	32.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	0	5	50	30	70
Future Volume (vph)	65	0	5	50	30	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1905	0	0	2082	1894	0
Flt Permitted	0.950			0.996		
Satd. Flow (perm)	1905	0	0	2082	1894	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Adj. Flow (vph)	80	0	6	62	37	86
Lane Group Flow (vph)	80	0	0	68	123	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	17.1%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	0	5	50	30	70
Future Volume (Veh/h)	65	0	5	50	30	70
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	80	0	6	62	37	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	154	80	123			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	154	80	123			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	100	100			
cM capacity (veh/h)	839	986	1477			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	80	68	123
Volume Left	80	6	0
Volume Right	0	0	86
cSH	839	1477	1700
Volume to Capacity	0.10	0.00	0.07
Queue Length 95th (m)	2.5	0.1	0.0
Control Delay (s)	9.7	0.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.7	0.7	0.0
Approach LOS	A		

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	17.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	90	20	5	75	20	15
Future Volume (vph)	90	20	5	75	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2021	0	0	2027	1683	0
Flt Permitted				0.997	0.972	
Satd. Flow (perm)	2021	0	0	2027	1683	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Adj. Flow (vph)	103	23	6	86	23	17
Lane Group Flow (vph)	126	0	0	92	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	90	20	5	75	20	15
Future Volume (Veh/h)	90	20	5	75	20	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	103	23	6	86	23	17
Pedestrians	3			6	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			127		216	122
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			127		216	122
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	98
cM capacity (veh/h)			1470		761	929

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	126	92	40
Volume Left	0	6	23
Volume Right	23	0	17
cSH	1700	1470	824
Volume to Capacity	0.07	0.00	0.05
Queue Length 95th (m)	0.0	0.1	1.2
Control Delay (s)	0.0	0.5	9.6
Lane LOS		A	A
Approach Delay (s)	0.0	0.5	9.6
Approach LOS			A

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	19.9%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	395	5	35	820	10	70
Future Volume (Veh/h)	395	5	35	820	10	70
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Hourly flow rate (vph)	459	6	41	953	12	81
Pedestrians					5	
Lane Width (m)					4.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.98		0.98	0.98
vC, conflicting volume			470		1026	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			410		978	172
tC, single (s)			4.1		7.0	7.0
tC, 2 stage (s)						
tF (s)			2.2		3.6	3.4
p0 queue free %			96		95	90
cM capacity (veh/h)			1127		222	806

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	306	159	41	476	476	93
Volume Left	0	0	41	0	0	12
Volume Right	0	6	0	0	0	81
cSH	1700	1700	1127	1700	1700	602
Volume to Capacity	0.18	0.09	0.04	0.28	0.28	0.15
Queue Length 95th (m)	0.0	0.0	0.9	0.0	0.0	4.3
Control Delay (s)	0.0	0.0	8.3	0.0	0.0	12.1
Lane LOS			A			B
Approach Delay (s)	0.0		0.3			12.1
Approach LOS						B

Intersection Summary					
Average Delay	0.9				
Intersection Capacity Utilization	34.2%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	25	0	0	65	10	10	5	0	5	0	15
Future Volume (Veh/h)	45	25	0	0	65	10	10	5	0	5	0	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	57	32	0	0	82	13	13	6	0	6	0	19
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	119			47			284	280	64	278	274	128
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	119			47			284	280	64	278	274	128
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	96			100			98	99	100	99	100	98
cM capacity (veh/h)	1391			1549			598	581	976	607	586	841

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	89	95	19	25
Volume Left	57	0	13	6
Volume Right	0	13	0	19
cSH	1391	1549	593	770
Volume to Capacity	0.04	0.00	0.03	0.03
Queue Length 95th (m)	1.0	0.0	0.8	0.8
Control Delay (s)	5.0	0.0	11.3	9.8
Lane LOS	A		B	A
Approach Delay (s)	5.0	0.0	11.3	9.8
Approach LOS			B	A

Intersection Summary				
Average Delay	4.0			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	80	175	10	10	10
Future Volume (Veh/h)	5	80	175	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	5	88	192	11	11	11
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	211				304	206
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	211				304	206
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	100				98	99
cM capacity (veh/h)	1202				667	805

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	93	203	22
Volume Left	5	0	11
Volume Right	0	11	11
cSH	1202	1700	729
Volume to Capacity	0.00	0.12	0.03
Queue Length 95th (m)	0.1	0.0	0.7
Control Delay (s)	0.5	0.0	10.1
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	10.1
Approach LOS			B

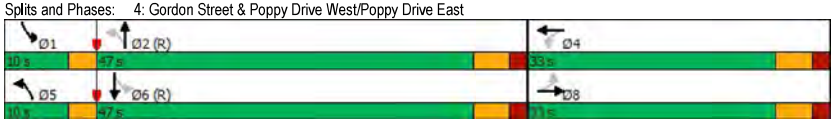
Intersection Summary			
Average Delay		0.8	
Intersection Capacity Utilization		20.7%	ICU Level of Service A
Analysis Period (min)		15	

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	20	10	70	5	20	810	35	630
Future Volume (vph)	20	10	70	5	20	810	35	630
Lane Group Flow (vph)	0	47	0	203	21	901	36	682
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	33.0	33.0	33.0	33.0	10.0	47.0	10.0	47.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	11.1%	52.2%	11.1%	52.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.28		0.65	0.03	0.42	0.08	0.30
Control Delay		26.6		28.5	4.6	10.3	3.6	7.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		26.6		28.5	4.6	10.3	3.6	7.9
Queue Length 50th (m)		5.1		19.1	0.7	40.3	1.1	17.9
Queue Length 95th (m)		13.2		36.0	3.9	76.1	m3.2	43.8
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		319		530	653	2136	454	2260
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.15		0.38	0.03	0.42	0.08	0.30

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	10	15	70	5	120	20	810	55	35	630	25
Future Volume (vph)	20	10	15	70	5	120	20	810	55	35	630	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.92		1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1360			1771		1893	3281		1676	3359	
Flt Permitted		0.74			0.86		0.39	1.00		0.28	1.00	
Satd. Flow (perm)		1027			1553		776	3281		491	3359	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	10	16	73	5	125	21	844	57	36	656	26
RTOR Reduction (vph)	0	14	0	0	78	0	0	4	0	0	2	0
Lane Group Flow (vph)	0	33	0	0	125	0	21	897	0	36	680	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		13.5			13.5		60.1	57.3		62.9	58.7	
Effective Green, g (s)		13.5			13.5		60.1	57.3		62.9	58.7	
Actuated g/C Ratio		0.15			0.15		0.67	0.64		0.70	0.65	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		154			232		552	2088		398	2190	
v/s Ratio Prot							0.00	c0.27		c0.00	0.20	
v/s Ratio Perm		0.03			c0.08		0.02			0.06		
v/c Ratio		0.22			0.54		0.04	0.43		0.09	0.31	
Uniform Delay, d1		33.6			35.4		5.0	8.2		4.5	6.8	
Progression Factor		1.00			1.00		1.00	1.00		0.76	0.96	
Incremental Delay, d2		0.7			2.4		0.0	0.6		0.1	0.3	
Delay (s)		34.3			37.8		5.1	8.8		3.5	6.8	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		34.3			37.8			8.7			6.7	
Approach LOS		C			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.43			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	53.8%	ICU Level of Service	A	
Analysis Period (min)	15			

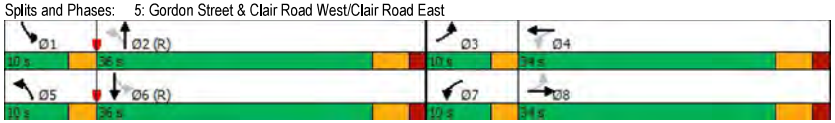
c Critical Lane Group

Queues
5: Gordon Street & Clair Road West/Clair Road East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	145	345	185	720	195	615	75	405
Future Volume (vph)	145	345	185	720	195	615	75	405
Lane Group Flow (vph)	161	500	206	928	217	822	83	672
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.69	0.50	0.58	0.90	0.75	0.72	0.31	0.61
Control Delay	33.3	25.1	27.5	47.7	32.8	23.4	16.7	24.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.3	25.1	27.5	47.7	32.8	23.4	16.7	24.5
Queue Length 50th (m)	16.3	34.7	23.0	77.1	26.1	71.1	8.3	46.2
Queue Length 95th (m)	#43.1	50.1	49.6	#120.5	#28.0	46.3	16.1	63.2
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	233	1033	357	1059	291	1185	265	1147
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.48	0.58	0.88	0.75	0.69	0.31	0.59

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	145	345	105	185	720	115	195	615	125	75	405	200
Future Volume (vph)	145	345	105	185	720	115	195	615	125	75	405	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.98		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	3218		1567	3361		1585	3219		1676	3217	
Flt Permitted	0.15	1.00		0.38	1.00		0.25	1.00		0.22	1.00	
Satd. Flow (perm)	254	3218		631	3361		423	3219		384	3217	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	161	383	117	206	800	128	217	683	139	83	450	222
RTOR Reduction (vph)	0	33	0	0	15	0	0	18	0	0	69	0
Lane Group Flow (vph)	161	467	0	206	913	0	217	804	0	83	603	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.2	27.0		35.6	27.2		38.8	31.0		34.4	28.8	
Effective Green, g (s)	35.2	27.0		35.6	27.2		38.8	31.0		34.4	28.8	
Actuated g/C Ratio	0.39	0.30		0.40	0.30		0.43	0.34		0.38	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	965		336	1015		283	1108		227	1029	
v/s Ratio Prot	c0.07	0.15		0.06	c0.27		c0.07	0.25		0.02	0.19	
v/s Ratio Perm	0.21			0.18			c0.26			0.12		
v/c Ratio	0.72	0.48		0.61	0.90		0.77	0.73		0.37	0.59	
Uniform Delay, d1	20.6	25.8		19.1	30.1		18.3	25.8		18.8	25.6	
Progression Factor	1.00	1.00		1.27	1.21		0.93	0.77		1.00	1.00	
Incremental Delay, d2	10.5	0.4		3.0	9.8		11.1	3.9		1.0	2.4	
Delay (s)	31.1	26.2		27.2	46.2		28.1	23.8		19.8	28.1	
Level of Service	C	C		C	D		C	C		B	C	
Approach Delay (s)		27.4			42.7			24.7			27.2	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	31.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	83.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Queues
6: Farley Drive & Clair Road East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	105	365	10	790	70	15	40	20
Future Volume (vph)	105	365	10	790	70	15	40	20
Lane Group Flow (vph)	118	466	11	939	79	23	0	224
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	47.0	10.0	47.0	33.0	33.0	33.0	33.0
Total Split (%)	11.1%	52.2%	11.1%	52.2%	36.7%	36.7%	36.7%	36.7%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.27	0.21	0.02	0.48	0.71	0.08		0.59
Control Delay	5.5	6.7	5.4	13.1	65.1	23.1		19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	5.5	6.7	5.4	13.1	65.1	23.1		19.8
Queue Length 50th (m)	3.7	9.2	0.4	43.5	14.1	2.7		15.1
Queue Length 95th (m)	m21.7	41.8	2.7	88.2	25.0	7.9		30.6
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	438	2198	700	1987	213	521		604
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	0.27	0.21	0.02	0.47	0.37	0.04		0.37

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	365	50	10	790	45	70	15	5	40	20	140
Future Volume (vph)	105	365	50	10	790	45	70	15	5	40	20	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1715	3192		1780	3344		1625	1723			1823	
Flt Permitted	0.24	1.00		0.48	1.00		0.42	1.00			0.92	
Satd. Flow (perm)	442	3192		907	3344		712	1723			1702	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	118	410	56	11	888	51	79	17	6	45	22	157
RTOR Reduction (vph)	0	7	0	0	3	0	0	5	0	0	113	0
Lane Group Flow (vph)	118	459	0	11	936	0	79	18	0	0	111	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	63.8	59.4		54.4	53.0		14.2	14.2			14.2	
Effective Green, g (s)	63.8	59.4		54.4	53.0		14.2	14.2			14.2	
Actuated g/C Ratio	0.71	0.66		0.60	0.59		0.16	0.16			0.16	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	423	2106		561	1969		112	271			268	
v/s Ratio Prot	c0.02	0.14		0.00	c0.28			0.01				
v/s Ratio Perm	0.17			0.01			c0.11				0.07	
v/c Ratio	0.28	0.22		0.02	0.48		0.71	0.07			0.41	
Uniform Delay, d1	5.0	6.1		7.1	10.6		35.9	32.3			34.2	
Progression Factor	0.92	0.95		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.3	0.2		0.0	0.8		18.3	0.1			1.0	
Delay (s)	4.9	6.0		7.1	11.4		54.2	32.4			35.2	
Level of Service	A	A		A	B		D	C			D	
Approach Delay (s)		5.7			11.3			49.3			35.2	
Approach LOS		A			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	63.7%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	0	10	55	0	10	0	20	15	40
Future Volume (vph)	25	5	0	0	10	55	0	10	0	20	15	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	0	14	75	0	14	0	27	21	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	89	14	103
Volume Left (vph)	34	0	0	27
Volume Right (vph)	0	75	0	55
Hadj (s)	0.21	-0.51	0.10	-0.16
Departure Headway (s)	4.4	3.7	4.4	4.0
Degree Utilization, x	0.05	0.09	0.02	0.11
Capacity (veh/h)	783	942	785	866
Control Delay (s)	7.7	7.1	7.4	7.5
Approach Delay (s)	7.7	7.1	7.4	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	5	5	5	10	15	0
Future Volume (vph)	5	5	5	10	15	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	7	7	13	20	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	14	20	20
Volume Left (vph)	7	7	0
Volume Right (vph)	7	0	0
Hadj (s)	-0.20	0.20	0.10
Departure Headway (s)	3.8	4.2	4.0
Degree Utilization, x	0.01	0.02	0.02
Capacity (veh/h)	934	851	880
Control Delay (s)	6.8	7.2	7.1
Approach Delay (s)	6.8	7.2	7.1
Approach LOS	A	A	A

Intersection Summary			
Delay		7.1	
Level of Service		A	
Intersection Capacity Utilization		24.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	0	0	65	20	20
Future Volume (Veh/h)	15	0	0	65	20	20
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	19	0	0	83	26	26
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	134	51	64			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134	51	64			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	98	100	100			
cM capacity (veh/h)	818	788	1534			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	19	83	52
Volume Left	19	0	0
Volume Right	0	0	26
cSH	818	1534	1700
Volume to Capacity	0.02	0.00	0.03
Queue Length 95th (m)	0.6	0.0	0.0
Control Delay (s)	9.5	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.5	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		1.2	
Intersection Capacity Utilization		16.6%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	50	5	5	100	0	40	0	15	0	0	70
Future Volume (Veh/h)	25	50	5	5	100	0	40	0	15	0	0	70
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.89	0.92	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	27	56	6	6	112	0	45	0	17	0	0	76
Pedestrians					6							
Lane Width (m)					4.5							
Walking Speed (m/s)					1.2							
Percent Blockage					1							
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	112			62			313	237	65	260	240	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			62			313	237	65	260	240	112
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			92	100	98	100	100	92
cM capacity (veh/h)	1478			1554			578	649	998	665	647	941

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	89	118	62	76
Volume Left	27	6	45	0
Volume Right	6	0	17	76
cSH	1478	1554	653	941
Volume to Capacity	0.02	0.00	0.09	0.08
Queue Length 95th (m)	0.4	0.1	2.5	2.1
Control Delay (s)	2.4	0.4	11.1	9.2
Lane LOS	A	A	B	A
Approach Delay (s)	2.4	0.4	11.1	9.2
Approach LOS			B	A

Intersection Summary				
Average Delay	4.8			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

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

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	820	15	65	575	10	105
Future Volume (Veh/h)	820	15	65	575	10	105
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	837	15	66	587	10	107
Pedestrians	1				13	
Lane Width (m)	3.5				4.5	
Walking Speed (m/s)	1.2				1.2	
Percent Blockage	0				1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.87		0.87	0.87
vC, conflicting volume			865		1284	439
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			557		1037	70
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			93		95	87
cM capacity (veh/h)			883		184	849

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	558	294	66	294	294	117
Volume Left	0	0	66	0	0	10
Volume Right	0	15	0	0	0	107
cSH	1700	1700	883	1700	1700	649
Volume to Capacity	0.33	0.17	0.07	0.17	0.17	0.18
Queue Length 95th (m)	0.0	0.0	1.9	0.0	0.0	5.2
Control Delay (s)	0.0	0.0	9.4	0.0	0.0	11.8
Lane LOS			A			B
Approach Delay (s)	0.0		1.0			11.8
Approach LOS						B

Intersection Summary					
Average Delay	1.2				
Intersection Capacity Utilization	43.8%	ICU Level of Service	A		
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	85	10	0	40	5	10	5	0	15	0	25
Future Volume (Veh/h)	65	85	10	0	40	5	10	5	0	15	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	77	101	12	0	48	6	12	6	0	18	0	30
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	87			126			363	361	124	352	364	92
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	87			126			363	361	124	352	364	92
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	95			100			98	99	100	97	100	97
cM capacity (veh/h)	1469			1453			522	514	916	536	512	914

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	190	54	18	48
Volume Left	77	0	12	18
Volume Right	12	6	0	30
cSH	1469	1453	520	723
Volume to Capacity	0.05	0.00	0.03	0.07
Queue Length 95th (m)	1.3	0.0	0.9	1.7
Control Delay (s)	3.3	0.0	12.2	10.3
Lane LOS	A		B	B
Approach Delay (s)	3.3	0.0	12.2	10.3
Approach LOS			B	B

Intersection Summary					
Average Delay	4.3				
Intersection Capacity Utilization	27.8%	ICU Level of Service	A		
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	215	105	15	20	15
Future Volume (Veh/h)	5	215	105	15	20	15
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	6	244	119	17	23	17
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	151				398	142
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	151				398	142
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	98
cM capacity (veh/h)	1425				601	899

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	250	136	40
Volume Left	6	0	23
Volume Right	0	17	17
cSH	1425	1700	700
Volume to Capacity	0.00	0.08	0.06
Queue Length 95th (m)	0.1	0.0	1.5
Control Delay (s)	0.2	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	10.5
Approach LOS			B

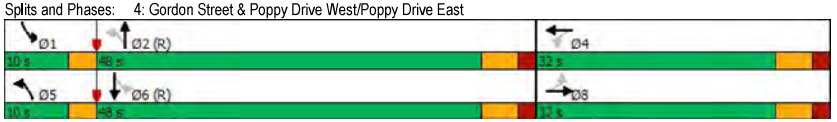
Intersection Summary			
Average Delay		1.1	
Intersection Capacity Utilization		25.3%	ICU Level of Service A
Analysis Period (min)		15	

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	30	25	60	20	50	835	100	765
Future Volume (vph)	30	25	60	20	50	835	100	765
Lane Group Flow (vph)	0	88	0	163	51	985	102	801
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	32.0	32.0	32.0	32.0	10.0	48.0	10.0	48.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	11.1%	53.3%	11.1%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.38		0.57	0.08	0.46	0.24	0.35
Control Delay		26.4		29.7	4.6	11.3	4.7	9.5
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		26.4		29.7	4.6	11.3	4.7	9.5
Queue Length 50th (m)		9.6		18.3	1.7	43.1	4.5	41.1
Queue Length 95th (m)		20.1		32.5	7.2	87.2	m6.0	m37.4
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		429		507	612	2148	432	2279
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.21		0.32	0.08	0.46	0.24	0.35

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	25	30	60	20	80	50	835	130	100	765	20
Future Volume (vph)	30	25	30	60	20	80	50	835	130	100	765	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.98		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.93		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1765			1830		2004	3412		1726	3486	
Flt Permitted		0.79			0.87		0.34	1.00		0.24	1.00	
Satd. Flow (perm)		1412			1617		710	3412		439	3486	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	26	31	61	20	82	51	852	133	102	781	20
RTOR Reduction (vph)	0	26	0	0	49	0	0	10	0	0	1	0
Lane Group Flow (vph)	0	62	0	0	114	0	51	975	0	102	800	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		13.1			13.1		60.0	55.7		63.8	57.6	
Effective Green, g (s)		13.1			13.1		60.0	55.7		63.8	57.6	
Actuated g/C Ratio		0.15			0.15		0.67	0.62		0.71	0.64	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		205			235		535	2111		399	2231	
v/s Ratio Prot							0.00	c0.29		c0.02	0.23	
v/s Ratio Perm		0.04			c0.07		0.06			0.16		
v/c Ratio		0.30			0.49		0.10	0.46		0.26	0.36	
Uniform Delay, d1		34.4			35.4		5.2	9.2		4.7	7.6	
Progression Factor		1.00			1.00		1.00	1.00		0.94	1.03	
Incremental Delay, d2		0.8			1.6		0.1	0.7		0.2	0.3	
Delay (s)		35.2			36.9		5.2	9.9		4.7	8.1	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		35.2			36.9			9.7			7.7	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	62.9%	ICU Level of Service	B	
Analysis Period (min)	15			

c Critical Lane Group

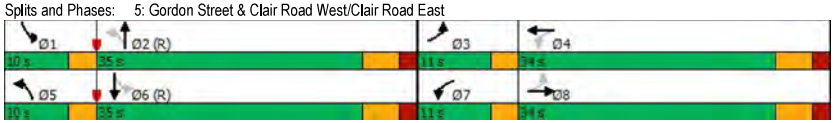
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	250	775	180	445	155	615	185	620
Future Volume (vph)	250	775	180	445	155	615	185	620
Lane Group Flow (vph)	258	938	186	578	160	804	191	773
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	11.0	34.0	11.0	34.0	10.0	35.0	10.0	35.0
Total Split (%)	12.2%	37.8%	12.2%	37.8%	11.1%	38.9%	11.1%	38.9%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.68	0.89	0.70	0.56	0.62	0.76	0.73	0.73
Control Delay	26.6	41.1	35.5	28.0	26.9	25.6	35.1	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	41.1	35.5	28.0	26.9	25.6	35.1	31.5
Queue Length 50th (m)	26.8	82.3	21.7	49.8	18.7	68.7	21.2	64.7
Queue Length 95th (m)	#52.1	#117.0	#48.9	57.8	#33.3	34.9	#43.8	83.4
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	382	1084	266	1083	256	1108	260	1110
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.87	0.70	0.53	0.63	0.73	0.73	0.70

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	775	135	180	445	115	155	615	165	185	620	130
Future Volume (vph)	250	775	135	180	445	115	155	615	165	185	620	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1738	3434		1710	3401		1645	3322		1726	3327	
Flt Permitted	0.32	1.00		0.15	1.00		0.21	1.00		0.18	1.00	
Satd. Flow (perm)	586	3434		268	3401		355	3322		332	3327	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	258	799	139	186	459	119	160	634	170	191	639	134
RTOR Reduction (vph)	0	16	0	0	26	0	0	28	0	0	20	0
Lane Group Flow (vph)	258	922	0	186	552	0	160	776	0	191	753	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	36.9	27.2		36.3	26.9		35.2	27.8		35.6	28.0	
Effective Green, g (s)	36.9	27.2		36.3	26.9		35.2	27.8		35.6	28.0	
Actuated g/C Ratio	0.41	0.30		0.40	0.30		0.39	0.31		0.40	0.31	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	364	1037		258	1016		244	1026		249	1035	
v/s Ratio Prot	c0.08	c0.27		0.08	0.16		0.05	0.23		c0.06	0.23	
v/s Ratio Perm	0.21			0.22			0.20			c0.24		
v/c Ratio	0.71	0.89		0.72	0.54		0.66	0.76		0.77	0.73	
Uniform Delay, d1	18.8	30.0		20.2	26.4		19.5	28.0		19.9	27.6	
Progression Factor	1.00	1.00		1.37	1.05		1.04	0.77		1.00	1.00	
Incremental Delay, d2	6.2	9.5		9.1	0.6		5.7	4.8		13.2	4.5	
Delay (s)	25.0	39.4		36.8	28.3		25.9	26.4		33.1	32.1	
Level of Service	C	D		D	C		C	C		C	C	
Approach Delay (s)		36.3			30.4			26.3			32.3	
Approach LOS		D			C			C			C	

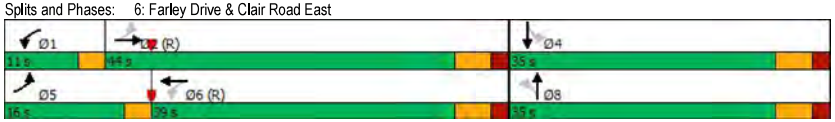
Intersection Summary				
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	87.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Queues
6: Farley Drive & Clair Road East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	200	725	50	475	100	40	80	60
Future Volume (vph)	200	725	50	475	100	40	80	60
Lane Group Flow (vph)	208	911	52	568	104	73	0	297
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	16.0	44.0	11.0	39.0	35.0	35.0	35.0	35.0
Total Split (%)	17.8%	48.9%	12.2%	43.3%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.34	0.45	0.12	0.32	0.71	0.20		0.76
Control Delay	3.9	8.3	6.5	13.8	57.6	18.4		38.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	3.9	8.3	6.5	13.8	57.6	18.4		38.7
Queue Length 50th (m)	6.2	15.7	2.5	27.6	17.8	6.3		40.9
Queue Length 95th (m)	m9.4	m88.0	7.8	51.1	33.0	15.9		62.2
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	659	2020	468	1802	233	577		587
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	0.32	0.45	0.11	0.32	0.45	0.13		0.51

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	725	150	50	475	70	100	40	30	80	60	145
Future Volume (vph)	200	725	150	50	475	70	100	40	30	80	60	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.97		1.00	0.98		1.00	0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1777	3370		1782	3414		1672	1728			1900	
Flt Permitted	0.39	1.00		0.30	1.00		0.41	1.00			0.88	
Satd. Flow (perm)	731	3370		557	3414		727	1728			1696	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	208	755	156	52	495	73	104	42	31	83	62	151
RTOR Reduction (vph)	0	14	0	0	9	0	0	25	0	0	49	0
Lane Group Flow (vph)	208	897	0	52	559	0	104	48	0	0	248	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	59.8	52.5		51.6	47.3		18.2	18.2			18.2	
Effective Green, g (s)	59.8	52.5		51.6	47.3		18.2	18.2			18.2	
Actuated g/C Ratio	0.66	0.58		0.57	0.53		0.20	0.20			0.20	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	596	1965		377	1794		147	349			342	
v/s Ratio Prot	c0.04	c0.27		0.01	0.16			0.03				
v/s Ratio Perm	0.20			0.07			0.14				c0.15	
v/c Ratio	0.35	0.46		0.14	0.31		0.71	0.14			0.73	
Uniform Delay, d1	6.0	10.6		8.5	12.1		33.4	29.5			33.6	
Progression Factor	0.54	0.67		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.4		0.2	0.5		14.4	0.2			7.5	
Delay (s)	3.4	7.5		8.6	12.6		47.8	29.6			41.0	
Level of Service	A	A		A	B		D	C			D	
Approach Delay (s)		6.8			12.2			40.3			41.0	
Approach LOS		A			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	5	20	55	5	35	5	85	25	140
Future Volume (vph)	85	20	5	5	20	55	5	35	5	85	25	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	6	22	61	6	39	6	94	28	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	89	51	278
Volume Left (vph)	94	6	6	94
Volume Right (vph)	6	61	6	156
Hadj (s)	0.12	-0.40	-0.05	-0.25
Departure Headway (s)	4.9	4.4	4.7	4.2
Degree Utilization, x	0.17	0.11	0.07	0.33
Capacity (veh/h)	684	747	716	810
Control Delay (s)	8.8	7.9	8.0	9.3
Approach Delay (s)	8.8	7.9	8.0	9.3
Approach LOS	A	A	A	A

Intersection Summary				
Delay	8.8			
Level of Service	A			
Intersection Capacity Utilization	42.1%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	30	10	10	15	25	10
Future Volume (vph)	30	10	10	15	25	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	11	11	17	28	11

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	45	28	39
Volume Left (vph)	34	11	0
Volume Right (vph)	11	0	11
Hadj (s)	0.00	0.08	-0.17
Departure Headway (s)	4.0	4.1	3.9
Degree Utilization, x	0.05	0.03	0.04
Capacity (veh/h)	870	853	917
Control Delay (s)	7.3	7.2	7.0
Approach Delay (s)	7.3	7.2	7.0
Approach LOS	A	A	A

Intersection Summary			
Delay		7.2	
Level of Service		A	
Intersection Capacity Utilization		28.9%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	45	5	0	70	35	45
Future Volume (Veh/h)	45	5	0	70	35	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	51	6	0	79	39	51
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	152	72	98			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152	72	98			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	94	99	100			
cM capacity (veh/h)	836	945	1496			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	57	79	90
Volume Left	51	0	0
Volume Right	6	0	51
cSH	846	1496	1700
Volume to Capacity	0.07	0.00	0.05
Queue Length 95th (m)	1.7	0.0	0.0
Control Delay (s)	9.6	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.6	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization		17.0%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	135	30	10	80	0	30	0	10	0	0	35
Future Volume (Veh/h)	55	135	30	10	80	0	30	0	10	0	0	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	60	147	33	11	87	0	33	0	11	0	0	38
Pedestrians		2			17			1				
Lane Width (m)		4.5			4.5			3.6				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		0			2			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	87			181			434	394	182	420	410	89
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	87			181			434	394	182	420	410	89
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			99			93	100	99	100	100	96
cM capacity (veh/h)	1509			1405			495	517	850	507	506	967

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	240	98	44	38
Volume Left	60	11	33	0
Volume Right	33	0	11	38
cSH	1509	1405	552	967
Volume to Capacity	0.04	0.01	0.08	0.04
Queue Length 95th (m)	1.0	0.2	2.1	1.0
Control Delay (s)	2.1	0.9	12.1	8.9
Lane LOS	A	A	B	A
Approach Delay (s)	2.1	0.9	12.1	8.9
Approach LOS			B	A

Intersection Summary				
Average Delay	3.5			
Intersection Capacity Utilization	36.4%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

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

HCM Unsignalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	545	15	80	500	15	85
Future Volume (Veh/h)	545	15	80	500	15	85
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	568	16	83	521	16	89
Pedestrians					6	
Lane Width (m)					4.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	161					
pX, platoon unblocked			0.95		0.95	0.95
vC, conflicting volume			590		1008	298
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			465		905	158
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		93	89
cM capacity (veh/h)			1039		243	818

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1
Volume Total	379	205	83	260	260	105
Volume Left	0	0	83	0	0	16
Volume Right	0	16	0	0	0	89
cSH	1700	1700	1039	1700	1700	601
Volume to Capacity	0.22	0.12	0.08	0.15	0.15	0.17
Queue Length 95th (m)	0.0	0.0	2.1	0.0	0.0	5.0
Control Delay (s)	0.0	0.0	8.8	0.0	0.0	12.2
Lane LOS			A			B
Approach Delay (s)	0.0		1.2			12.2
Approach LOS						B

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	36.1%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	40	5	0	50	10	5	0	0	5	5	20
Future Volume (Veh/h)	45	40	5	0	50	10	5	0	0	5	5	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	48	43	5	0	54	11	5	0	0	5	5	22
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	77			59			242	230	60	216	226	78
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	77			59			242	230	60	216	226	78
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			100			99	100	100	99	99	98
cM capacity (veh/h)	1515			1540			654	637	998	703	639	946

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	96	65	5	32
Volume Left	48	0	5	5
Volume Right	5	11	0	22
cSH	1515	1540	654	838
Volume to Capacity	0.03	0.00	0.01	0.04
Queue Length 95th (m)	0.8	0.0	0.2	1.0
Control Delay (s)	3.8	0.0	10.5	9.5
Lane LOS	A		B	A
Approach Delay (s)	3.8	0.0	10.5	9.5
Approach LOS			B	A

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	24.0%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	140	110	15	15	20
Future Volume (Veh/h)	0	140	110	15	15	20
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	0	154	121	16	16	22
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	152				298	144
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				298	144
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				98	98
cM capacity (veh/h)	1424				689	898

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	154	137	38
Volume Left	0	0	16
Volume Right	0	16	22
cSH	1424	1700	796
Volume to Capacity	0.00	0.08	0.05
Queue Length 95th (m)	0.0	0.0	1.2
Control Delay (s)	0.0	0.0	9.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.7
Approach LOS			A

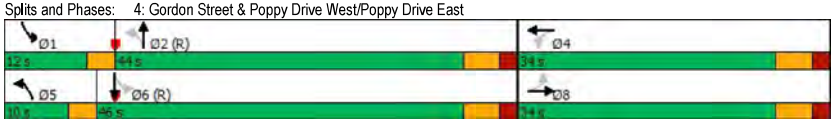
Intersection Summary				
Average Delay			1.1	
Intersection Capacity Utilization			19.4%	ICU Level of Service A
Analysis Period (min)			15	

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	15	65	20	40	660	75	735
Future Volume (vph)	25	15	65	20	40	660	75	735
Lane Group Flow (vph)	0	65	0	186	44	813	82	824
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	34.0	34.0	34.0	34.0	10.0	44.0	12.0	46.0
Total Split (%)	37.8%	37.8%	37.8%	37.8%	11.1%	48.9%	13.3%	51.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.29		0.64	0.07	0.37	0.16	0.36
Control Delay		25.4		33.0	4.7	10.6	3.9	8.5
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		25.4		33.0	4.7	10.6	3.9	8.5
Queue Length 50th (m)		7.0		22.1	1.6	34.7	1.4	23.5
Queue Length 95th (m)		16.3		37.9	6.5	66.8	m6.3	46.4
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		428		531	602	2174	529	2297
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.15		0.35	0.07	0.37	0.16	0.36

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	15	20	65	20	85	40	660	80	75	735	15
Future Volume (vph)	25	15	20	65	20	85	40	660	80	75	735	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.95			0.93		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1830		2043	3498		1743	3557	
Flt Permitted		0.76			0.85		0.32	1.00		0.30	1.00	
Satd. Flow (perm)		1331			1579		698	3498		558	3557	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	27	16	22	71	22	93	44	725	88	82	808	16
RTOR Reduction (vph)	0	19	0	0	49	0	0	7	0	0	1	0
Lane Group Flow (vph)	0	46	0	0	137	0	44	806	0	82	823	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		13.9			13.9		59.3	55.1		62.9	56.9	
Effective Green, g (s)		13.9			13.9		59.3	55.1		62.9	56.9	
Actuated g/C Ratio		0.15			0.15		0.66	0.61		0.70	0.63	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		205			243		522	2141		468	2248	
v/s Ratio Prot							0.00	0.23		c0.01	c0.23	
v/s Ratio Perm		0.03			c0.09		0.05			0.11		
v/c Ratio		0.23			0.56		0.08	0.38		0.18	0.37	
Uniform Delay, d1		33.3			35.2		5.4	8.8		4.6	7.9	
Progression Factor		1.00			1.00		1.00	1.00		0.75	0.87	
Incremental Delay, d2		0.6			3.0		0.1	0.5		0.2	0.4	
Delay (s)		33.9			38.2		5.5	9.3		3.6	7.3	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		33.9			38.2			9.1			7.0	
Approach LOS		C			D			A			A	

Intersection Summary					
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.40				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0		
Intersection Capacity Utilization	58.9%	ICU Level of Service	B		
Analysis Period (min)	15				
c Critical Lane Group					

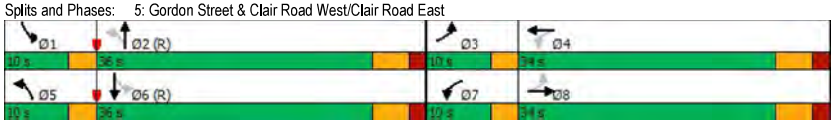
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	170	475	200	390	125	495	185	580
Future Volume (vph)	170	475	200	390	125	495	185	580
Lane Group Flow (vph)	175	583	206	521	129	623	191	680
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.50	0.72	0.63	0.62	0.37	0.51	0.48	0.54
Control Delay	21.5	35.7	28.1	30.4	11.0	18.4	17.9	25.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.5	35.7	28.1	30.4	11.0	18.4	17.9	25.4
Queue Length 50th (m)	19.5	50.1	24.1	44.6	4.6	48.9	18.6	52.0
Queue Length 95th (m)	31.4	60.5	#40.9	42.3	9.2	26.9	34.2	71.3
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	353	1094	326	1084	350	1278	401	1294
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.53	0.63	0.48	0.37	0.49	0.48	0.53

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	170	475	90	200	390	115	125	495	110	185	580	80
Future Volume (vph)	170	475	90	200	390	115	125	495	110	185	580	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1737	3464		1707	3385		1643	3441		1725	3475	
Flt Permitted	0.33	1.00		0.25	1.00		0.30	1.00		0.31	1.00	
Satd. Flow (perm)	612	3464		446	3385		522	3441		562	3475	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	175	490	93	206	402	119	129	510	113	191	598	82
RTOR Reduction (vph)	0	19	0	0	34	0	0	21	0	0	12	0
Lane Group Flow (vph)	175	564	0	206	487	0	129	602	0	191	668	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	30.6	20.5		32.2	21.3		39.5	31.1		41.7	32.2	
Effective Green, g (s)	30.6	20.5		32.2	21.3		39.5	31.1		41.7	32.2	
Actuated g/C Ratio	0.34	0.23		0.36	0.24		0.44	0.35		0.46	0.36	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	334	789		312	801		333	1189		383	1243	
v/s Ratio Prot	0.06	c0.16		c0.08	0.14		0.04	0.17		c0.05	c0.19	
v/s Ratio Perm	0.12			0.16			0.13			0.18		
v/c Ratio	0.52	0.71		0.66	0.61		0.39	0.51		0.50	0.54	
Uniform Delay, d1	22.0	32.1		21.7	30.6		15.7	23.4		15.1	23.0	
Progression Factor	1.00	1.00		1.07	0.99		0.62	0.72		1.00	1.00	
Incremental Delay, d2	1.5	3.1		4.8	1.2		0.7	1.5		1.0	1.7	
Delay (s)	23.5	35.1		28.2	31.5		10.5	18.3		16.1	24.7	
Level of Service	C	D		C	C		B	B		B	C	
Approach Delay (s)		32.5			30.6			17.0			22.8	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	82.6%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

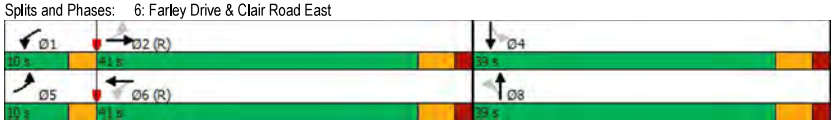
Queues
6: Farley Drive & Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	125	445	40	410	135	60	90	55
Future Volume (vph)	125	445	40	410	135	60	90	55
Lane Group Flow (vph)	136	652	43	522	147	103	0	332
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	41.0	10.0	41.0	39.0	39.0	39.0	39.0
Total Split (%)	11.1%	45.6%	11.1%	45.6%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.23	0.33	0.08	0.30	0.88	0.24		0.76
Control Delay	4.2	7.6	7.3	14.3	75.8	18.1		35.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	4.2	7.6	7.3	14.3	75.8	18.1		35.9
Queue Length 50th (m)	2.1	5.1	2.3	25.3	26.0	9.7		45.1
Queue Length 95th (m)	17.3	57.3	7.7	48.3	#45.1	19.9		65.5
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	599	1953	553	1735	270	666		662
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	0.23	0.33	0.08	0.30	0.54	0.15		0.50

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Farley Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	445	155	40	410	70	135	60	35	90	55	160
Future Volume (vph)	125	445	155	40	410	70	135	60	35	90	55	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.96		1.00	0.98		1.00	0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1759	3377		1781	3354		1685	1753			1924	
Flt Permitted	0.41	1.00		0.40	1.00		0.42	1.00			0.86	
Satd. Flow (perm)	764	3377		758	3354		738	1753			1687	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	484	168	43	446	76	147	65	38	98	60	174
RTOR Reduction (vph)	0	28	0	0	12	0	0	29	0	0	54	0
Lane Group Flow (vph)	136	624	0	43	510	0	147	74	0	0	278	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	57.5	50.2		50.3	46.0		20.5	20.5			20.5	
Effective Green, g (s)	57.5	50.2		50.3	46.0		20.5	20.5			20.5	
Actuated g/C Ratio	0.64	0.56		0.56	0.51		0.23	0.23			0.23	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	582	1883		472	1714		168	399			384	
v/s Ratio Prot	c0.02	c0.18		0.00	0.15			0.04				
v/s Ratio Perm	0.13			0.05			c0.20				0.16	
v/c Ratio	0.23	0.33		0.09	0.30		0.88	0.19			0.72	
Uniform Delay, d1	6.5	10.8		9.0	12.7		33.5	28.0			32.1	
Progression Factor	0.52	0.63		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.4		0.1	0.4		36.2	0.2			6.6	
Delay (s)	3.5	7.2		9.1	13.1		69.7	28.3			38.8	
Level of Service	A	A		A	B		E	C			D	
Approach Delay (s)		6.5			12.8			52.6			38.8	
Approach LOS		A			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	69.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	15	20	90	0	45	5	95	20	125
Future Volume (vph)	105	20	10	15	20	90	0	45	5	95	20	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	17	23	103	0	52	6	109	23	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	143	58	276
Volume Left (vph)	121	17	0	109
Volume Right (vph)	11	103	6	144
Hadj (s)	0.11	-0.41	-0.06	-0.23
Departure Headway (s)	5.0	4.5	4.9	4.5
Degree Utilization, x	0.21	0.18	0.08	0.34
Capacity (veh/h)	669	734	667	757
Control Delay (s)	9.4	8.5	8.3	9.8
Approach Delay (s)	9.4	8.5	8.3	9.8
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.3			
Level of Service	A			
Intersection Capacity Utilization	42.8%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	40	15	5	15	20	25
Future Volume (vph)	40	15	5	15	20	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	18	6	18	24	30

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	67	24	54
Volume Left (vph)	49	6	0
Volume Right (vph)	18	0	30
Hadj (s)	-0.01	0.05	-0.33
Departure Headway (s)	4.0	4.1	3.7
Degree Utilization, x	0.08	0.03	0.06
Capacity (veh/h)	869	841	941
Control Delay (s)	7.4	7.3	7.0
Approach Delay (s)	7.4	7.3	7.0
Approach LOS	A	A	A

Intersection Summary			
Delay		7.2	
Level of Service		A	
Intersection Capacity Utilization		29.5%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	0	5	50	30	60
Future Volume (Veh/h)	55	0	5	50	30	60
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	68	0	6	62	37	74
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	148	74	111			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	148	74	111			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	92	100	100			
cM capacity (veh/h)	845	993	1492			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	68	68	111
Volume Left	68	6	0
Volume Right	0	0	74
cSH	845	1492	1700
Volume to Capacity	0.08	0.00	0.07
Queue Length 95th (m)	2.1	0.1	0.0
Control Delay (s)	9.6	0.7	0.0
Lane LOS	A	A	
Approach Delay (s)	9.6	0.7	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		2.8	
Intersection Capacity Utilization		16.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	90	20	5	75	0	20	0	15	0	0	40
Future Volume (Veh/h)	45	90	20	5	75	0	20	0	15	0	0	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	49	103	23	6	86	0	23	0	17	0	0	43
Pedestrians		3			6			1				
Lane Width (m)		4.5			4.5			3.6				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	86			127			358	312	122	334	323	89
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	86			127			358	312	122	334	323	89
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			96	100	98	100	100	96
cM capacity (veh/h)	1510			1470			549	581	929	588	572	966

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	175	92	40	43
Volume Left	49	6	23	0
Volume Right	23	0	17	43
cSH	1510	1470	665	966
Volume to Capacity	0.03	0.00	0.06	0.04
Queue Length 95th (m)	0.8	0.1	1.5	1.1
Control Delay (s)	2.3	0.5	10.8	8.9
Lane LOS	A	A	B	A
Approach Delay (s)	2.3	0.5	10.8	8.9
Approach LOS			B	A

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	31.5%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

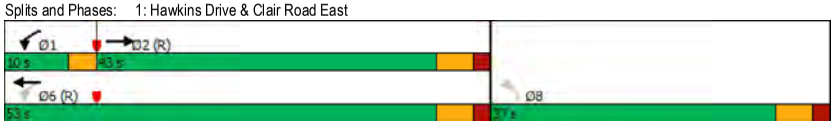
Intersection Summary				
Delay	0.0			
Level of Service	A			
Intersection Capacity Utilization	0.0%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	430	10	55	890	25	70
Future Volume (vph)	430	10	55	890	25	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3364	0	1785	3433	1745	0
Flt Permitted			0.441		0.987	
Satd. Flow (perm)	3364	0	826	3433	1745	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	3				81	
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Adj. Flow (vph)	500	12	64	1035	29	81
Shared Lane Traffic (%)						
Lane Group Flow (vph)	512	0	64	1035	110	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	10.0		7.0	10.0	7.0	
Minimum Split (s)	35.0		10.0	35.0	35.0	
Total Split (s)	43.0		10.0	53.0	37.0	
Total Split (%)	47.8%		11.1%	58.9%	41.1%	
Maximum Green (s)	37.0		7.0	47.0	31.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		None	C-Min	None	
Walk Time (s)	11.0			11.0	8.0	
Flash Dont Walk (s)	18.0			18.0	18.0	
Pedestrian Calls (#/hr)	7			7	12	
Act Effct Green (s)	62.4		72.4	70.6	11.2	
Actuated g/C Ratio	0.69		0.80	0.78	0.12	
v/c Ratio	0.22		0.09	0.38	0.38	
Control Delay	4.5		4.2	5.5	15.8	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	4.5		4.2	5.5	15.8	
LOS	A		A	A	B	
Approach Delay	4.5			5.4	15.8	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.38			
Intersection Signal Delay: 5.8		Intersection LOS: A	
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Hawkins Drive & Clair Road East



Phasings
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Protected Phases	2	1	6	
Permitted Phases		6		8
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	43.0	10.0	53.0	37.0
Total Split (%)	47.8%	11.1%	58.9%	41.1%
Maximum Green (s)	37.0	7.0	47.0	31.0
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	C-Min	None	C-Min	None
Walk Time (s)	11.0		11.0	8.0
Flash Dont Walk (s)	18.0		18.0	18.0
Pedestrian Calls (#/hr)	7		7	12
90th %ile Green (s)	40.8	8.2	52.0	26.0
90th %ile Term Code	Coord	Gap	Coord	Ped
70th %ile Green (s)	59.2	7.0	69.2	8.8
70th %ile Term Code	Coord	Min	Coord	Gap
50th %ile Green (s)	61.0	7.0	71.0	7.0
50th %ile Term Code	Coord	Min	Coord	Min
30th %ile Green (s)	61.0	7.0	71.0	7.0
30th %ile Term Code	Coord	Min	Coord	Min
10th %ile Green (s)	84.0	0.0	84.0	0.0
10th %ile Term Code	Coord	Skip	Coord	Skip

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	512	64	1035	110
v/c Ratio	0.22	0.09	0.38	0.38
Control Delay	4.5	4.2	5.5	15.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.5	4.2	5.5	15.8
Queue Length 50th (m)	9.0	1.5	22.5	5.1
Queue Length 95th (m)	16.0	8.8	67.1	13.8
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2333	742	2694	654
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.09	0.38	0.17

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	430	10	55	890	25	70
Future Volume (vph)	430	10	55	890	25	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3365		1782	3433	1744	
Flt Permitted	1.00		0.44	1.00	0.99	
Satd. Flow (perm)	3365		827	3433	1744	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	500	12	64	1035	29	81
RTOR Reduction (vph)	1	0	0	0	72	0
Lane Group Flow (vph)	511	0	64	1035	38	0
Confl. Peds. (#/hr)		5	5			
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	59.4		68.2	68.2	9.8	
Effective Green, g (s)	59.4		68.2	68.2	9.8	
Actuated g/C Ratio	0.66		0.76	0.76	0.11	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2220		688	2601	189	
v/s Ratio Prot	0.15		0.01	c0.30		
v/s Ratio Perm			0.06		c0.02	
v/c Ratio	0.23		0.09	0.40	0.20	
Uniform Delay, d1	6.1		2.8	3.8	36.5	
Progression Factor	0.54		1.00	1.00	1.03	
Incremental Delay, d2	0.2		0.1	0.5	0.5	
Delay (s)	3.5		2.9	4.2	38.2	
Level of Service	A		A	A	D	
Approach Delay (s)	3.5			4.2	38.2	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	45	0	15	75	10	10	30	20	5	20	25
Future Volume (vph)	45	45	0	15	75	10	10	30	20	5	20	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	1880	0	0	1806	0	0	1982	0	0	1758	0
Flt Permitted		0.976			0.993			0.992			0.995	
Satd. Flow (perm)	0	1880	0	0	1806	0	0	1982	0	0	1758	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	24		15	15		24	15		17	17		15
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	9%	8%	0%	0%	4%	0%	0%	0%	0%	0%	0%	20%
Adj. Flow (vph)	57	57	0	19	95	13	13	38	25	6	25	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	114	0	0	127	0	0	76	0	0	63	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.0%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	45	0	15	75	10	10	30	20	5	20	25
Future Volume (Veh/h)	45	45	0	15	75	10	10	30	20	5	20	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	57	57	0	19	95	13	13	38	25	6	25	32
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	132			72			385	356	89	396	350	140
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132			72			385	356	89	396	350	140
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	96			99			97	93	97	99	95	96
cM capacity (veh/h)	1376			1517			482	521	946	467	525	827

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	114	127	76	63
Volume Left	57	19	13	6
Volume Right	0	13	25	32
cSH	1376	1517	601	635
Volume to Capacity	0.04	0.01	0.13	0.10
Queue Length 95th (m)	1.0	0.3	3.5	2.6
Control Delay (s)	4.0	1.2	11.9	11.3
Lane LOS	A	A	B	B
Approach Delay (s)	4.0	1.2	11.9	11.3
Approach LOS			B	B

Intersection Summary					
Average Delay	5.8				
Intersection Capacity Utilization	28.0%	ICU Level of Service	A		
Analysis Period (min)	15				

Lanes, Volumes, Timings
3: Poppy Drive East & Farley Drive

12-12-2023

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	75	125	10	10	10
Future Volume (vph)	10	75	125	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	1909	1960	0	1547	0
Flt Permitted		0.994			0.976	
Satd. Flow (perm)	0	1909	1960	0	1547	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	8			8		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	30%	6%	6%	0%	9%	12%
Adj. Flow (vph)	11	82	137	11	11	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	93	148	0	22	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	75	125	10	10	10
Future Volume (Veh/h)	10	75	125	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	82	137	11	11	11
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	156				254	150
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	156				254	150
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	99				98	99
cM capacity (veh/h)	1262				708	865

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	93	148	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1262	1700	779
Volume to Capacity	0.01	0.09	0.03
Queue Length 95th (m)	0.2	0.0	0.7
Control Delay (s)	1.0	0.0	9.8
Lane LOS	A		A
Approach Delay (s)	1.0	0.0	9.8
Approach LOS			A

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	22.4%	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)	30	15	40	50	10	85	75	910	60	25	630	45
Future Volume (vph)	30	15	40	50	10	85	75	910	60	25	630	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1424	0	0	1747	0	1894	3282	0	1678	3329	0
Flt Permitted		0.782			0.877		0.349			0.267		
Satd. Flow (perm)	0	1131	0	0	1558	0	695	3282	0	470	3329	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		42			81			10			11	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Adj. Flow (vph)	31	16	42	52	10	89	78	948	63	26	656	47
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	151	0	78	1011	0	26	703	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	32.0	32.0		32.0	32.0		10.0	48.0		10.0	48.0	
Total Split (%)	35.6%	35.6%		35.6%	35.6%		11.1%	53.3%		11.1%	53.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		7.0	42.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	1	1		1	1			3			3	
Act Effct Green (s)		12.0			12.0		68.1	62.0		66.3	57.7	
Actuated g/C Ratio		0.13			0.13		0.76	0.69		0.74	0.64	
v/c Ratio		0.48			0.55		0.13	0.45		0.06	0.33	
Control Delay		27.7			24.0		4.3	9.2		4.2	10.2	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	

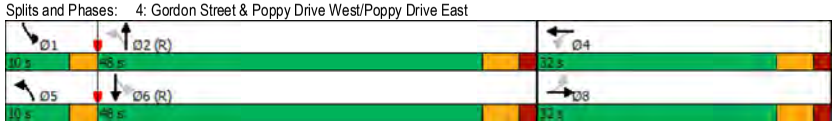
Lanes, Volumes, Timings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		27.7			24.0		4.3	9.2		4.2	10.2	
LOS		C			C		A	A		A	B	
Approach Delay		27.7			24.0			8.8			9.9	
Approach LOS		C			C			A			A	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	32.0	32.0	32.0	32.0	10.0	48.0	10.0	48.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	11.1%	53.3%	11.1%	53.3%
Maximum Green (s)	26.0	26.0	26.0	26.0	7.0	42.0	7.0	42.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	1	1	1	1		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	8.3	44.0	7.0	42.7
90th %ile Term Code	Ped	Ped	Ped	Ped	Gap	Coord	Min	Coord
70th %ile Green (s)	12.1	12.1	12.1	12.1	7.0	55.9	7.0	55.9
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	9.7	9.7	9.7	9.7	7.0	68.3	0.0	58.3
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Skip	Coord
30th %ile Green (s)	7.2	7.2	7.2	7.2	7.0	70.8	0.0	60.8
30th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Skip	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Hold	Hold	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	151	78	1011	26	703
v/c Ratio	0.48	0.55	0.13	0.45	0.06	0.33
Control Delay	27.7	24.0	4.3	9.2	4.2	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	24.0	4.3	9.2	4.2	10.2
Queue Length 50th (m)	8.1	12.1	2.3	26.5	1.3	39.5
Queue Length 95th (m)	19.1	25.8	10.0	88.5	m2.5	35.1
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	356	507	622	2264	440	2139
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.30	0.13	0.45	0.06	0.33

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	15	40	50	10	85	75	910	60	25	630	45
Future Volume (vph)	30	15	40	50	10	85	75	910	60	25	630	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.92		1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1423			1747		1893	3281		1677	3328	
Flt Permitted		0.78			0.88		0.35	1.00		0.27	1.00	
Satd. Flow (perm)		1132			1558		696	3281		470	3328	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	16	42	52	10	89	78	948	62	26	656	47
RTOR Reduction (vph)	0	36	0	0	70	0	0	3	0	0	4	0
Lane Group Flow (vph)	0	53	0	0	81	0	78	1008	0	26	699	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		12.0			12.0		66.0	60.2		59.9	57.1	
Effective Green, g (s)		12.0			12.0		66.0	60.2		59.9	57.1	
Actuated g/C Ratio		0.13			0.13		0.73	0.67		0.67	0.63	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		150			207		588	2194		350	2111	
v/s Ratio Prot							c0.01	c0.31		0.00	0.21	
v/s Ratio Perm		0.05			c0.05		0.09			0.05		
v/c Ratio		0.35			0.39		0.13	0.46		0.07	0.33	
Uniform Delay, d1		35.5			35.7		3.5	7.1		5.2	7.6	
Progression Factor		1.00			1.00		1.00	1.00		0.96	1.10	
Incremental Delay, d2		1.4			1.2		0.1	0.7		0.1	0.3	
Delay (s)		36.9			36.9		3.6	7.8		5.0	8.7	
Level of Service		D			D		A	A		A	A	
Approach Delay (s)		36.9			36.9			7.5			8.5	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.44			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	58.7%	ICU Level of Service	B	
Analysis Period (min)	15			

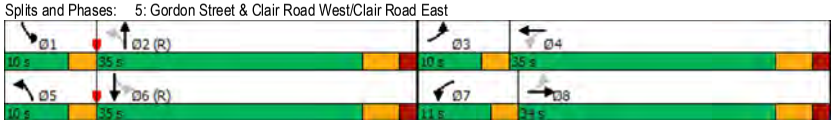
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	390	95	150	780	100	170	735	105	75	460	210
Future Volume (vph)	150	390	95	150	780	100	170	735	105	75	460	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1631	3243	0	1572	3380	0	1586	3267	0	1678	3231	0
Flt Permitted	0.144			0.352			0.217			0.152		
Satd. Flow (perm)	246	3243	0	577	3380	0	361	3267	0	267	3231	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		35			16			18			86	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	167	433	106	167	867	111	189	817	117	83	511	233
Shared Lane Traffic (%)												
Lane Group Flow (vph)	167	539	0	167	978	0	189	934	0	83	744	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		11.0	35.0		10.0	35.0		10.0	35.0	
Total Split (%)	11.1%	37.8%		12.2%	38.9%		11.1%	38.9%		11.1%	38.9%	
Maximum Green (s)	7.0	28.0		8.0	29.0		7.0	29.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		10			10			9			9	
Act Effct Green (s)	38.1	27.8		39.3	28.4		39.9	31.3		39.0	29.0	
Actuated g/C Ratio	0.42	0.31		0.44	0.32		0.44	0.35		0.43	0.32	
v/c Ratio	0.77	0.53		0.49	0.91		0.73	0.81		0.37	0.68	
Control Delay	41.3	26.1		23.6	45.4		35.0	30.3		18.4	26.9	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	41.3	26.1		23.6	45.4		35.0	30.3		18.4	26.9	
LOS	D	C		C	D		D	C		B	C	
Approach Delay		29.7			42.2			31.1			26.0	
Approach LOS		C			D			C			C	

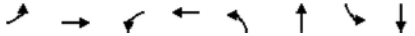
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 33.1		Intersection LOS: C	
Intersection Capacity Utilization 83.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023



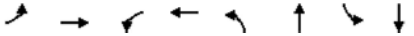
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	11.0	35.0	10.0	35.0	10.0	35.0
Total Split (%)	11.1%	37.8%	12.2%	38.9%	11.1%	38.9%	11.1%	38.9%
Maximum Green (s)	7.0	28.0	8.0	29.0	7.0	29.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		10		10		9		9
90th %ile Green (s)	7.0	28.0	8.0	29.0	7.0	29.0	7.0	29.0
90th %ile Term Code	Max	Ped	Max	Max	Max	Coord	Max	Coord
70th %ile Green (s)	7.0	28.0	8.0	29.0	7.0	29.0	7.0	29.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
50th %ile Green (s)	7.0	28.0	8.0	29.0	7.0	29.0	7.0	29.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
30th %ile Green (s)	7.1	28.0	8.1	29.0	7.0	28.9	7.0	28.9
30th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
10th %ile Green (s)	8.5	26.8	7.5	25.8	8.5	40.7	0.0	29.2
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	167	539	167	978	189	934	83	744
v/c Ratio	0.77	0.53	0.49	0.91	0.73	0.81	0.37	0.68
Control Delay	41.3	26.1	23.6	45.4	35.0	30.3	18.4	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	26.1	23.6	45.4	35.0	30.3	18.4	26.9
Queue Length 50th (m)	17.3	39.3	21.4	86.4	22.4	84.1	8.2	54.2
Queue Length 95th (m)	#46.8	55.6	36.4	#129.2	#28.9	#112.0	16.5	74.7
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	216	1033	340	1099	259	1149	225	1100
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.52	0.49	0.89	0.73	0.81	0.37	0.68

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	390	95	150	780	100	170	735	105	75	460	210
Future Volume (vph)	150	390	95	150	780	100	170	735	105	75	460	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	3241		1567	3380		1585	3268		1677	3231	
Flt Permitted	0.14	1.00		0.35	1.00		0.22	1.00		0.15	1.00	
Satd. Flow (perm)	247	3241		581	3380		362	3268		269	3231	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	167	433	106	167	867	111	189	817	117	83	511	233
RTOR Reduction (vph)	0	24	0	0	11	0	0	12	0	0	58	0
Lane Group Flow (vph)	167	515	0	167	967	0	189	922	0	83	686	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.1	27.8		36.3	28.4		38.0	30.7		34.6	29.0	
Effective Green, g (s)	35.1	27.8		36.3	28.4		38.0	30.7		34.6	29.0	
Actuated g/C Ratio	0.39	0.31		0.40	0.32		0.42	0.34		0.38	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	208	1001		320	1066		252	1114		191	1041	
v/s Ratio Prot	c0.06	0.16		c0.05	c0.29		c0.06	c0.28		0.03	0.21	
v/s Ratio Perm	0.25			0.16			0.26			0.14		
v/c Ratio	0.80	0.51		0.52	0.91		0.75	0.83		0.43	0.66	
Uniform Delay, d1	21.0	25.6		18.2	29.5		18.3	27.2		19.3	26.2	
Progression Factor	1.00	1.00		1.27	1.14		1.09	0.87		1.00	1.00	
Incremental Delay, d2	19.6	0.4		1.4	10.0		11.1	6.7		1.6	3.3	
Delay (s)	40.7	26.0		24.5	43.7		31.1	30.3		20.9	29.5	
Level of Service	D	C		C	D		C	C		C	C	
Approach Delay (s)		29.5			40.9			30.5			28.6	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	83.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	400	45	10	850	70	25	15	5	45	20	135
Future Volume (vph)	100	400	45	10	850	70	25	15	5	45	20	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1716	3201	0	1785	3336	0	1639	1723	0	0	1831	0
Flt Permitted	0.220			0.469			0.407				0.915	
Satd. Flow (perm)	397	3201	0	876	3336	0	696	1723	0	0	1690	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			12			6			117	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
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 (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Adj. Flow (vph)	112	449	51	11	955	79	28	17	6	51	22	152
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	500	0	11	1034	0	28	23	0	0	225	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	12.0	48.0		10.0	46.0		32.0	32.0		32.0	32.0	
Total Split (%)	13.3%	53.3%		11.1%	51.1%		35.6%	35.6%		35.6%	35.6%	
Maximum Green (s)	9.0	42.0		7.0	40.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		3			3		5	5		5	5	
Act Effct Green (s)	67.4	62.6		64.6	56.0		13.4	13.4			13.4	
Actuated g/C Ratio	0.75	0.70		0.72	0.62		0.15	0.15			0.15	
v/c Ratio	0.28	0.22		0.02	0.50		0.27	0.09			0.64	
Control Delay	5.8	6.6		1.1	8.0		36.9	23.7			24.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	

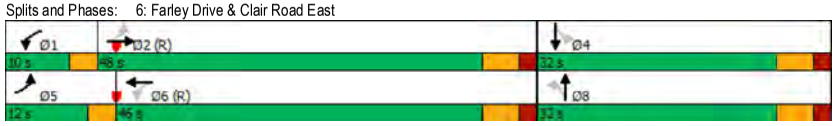
Lanes, Volumes, Timings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	5.8	6.6		1.1	8.1		36.9	23.7			24.6	
LOS	A	A		A	A		D	C			C	
Approach Delay		6.5			8.0			31.0			24.6	
Approach LOS		A			A			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 10.0		Intersection LOS: B	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	12.0	48.0	10.0	46.0	32.0	32.0	32.0	32.0
Total Split (%)	13.3%	53.3%	11.1%	51.1%	35.6%	35.6%	35.6%	35.6%
Maximum Green (s)	9.0	42.0	7.0	40.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		3		3	5	5	5	5
90th %ile Green (s)	9.0	42.0	7.0	40.0	26.0	26.0	26.0	26.0
90th %ile Term Code	Max	Coord	Max	Coord	Ped	Ped	Ped	Ped
70th %ile Green (s)	7.6	63.8	0.0	53.2	14.2	14.2	14.2	14.2
70th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.0	66.6	0.0	56.6	11.4	11.4	11.4	11.4
50th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.0	69.4	0.0	59.4	8.6	8.6	8.6	8.6
30th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	71.0	0.0	71.0	7.0	7.0	7.0	7.0
10th %ile Term Code	Skip	Coord	Skip	Coord	Hold	Hold	Min	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	112	500	11	1034	28	23	225
v/c Ratio	0.28	0.22	0.02	0.50	0.27	0.09	0.64
Control Delay	5.8	6.6	1.1	8.0	36.9	23.7	24.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	6.6	1.1	8.1	36.9	23.7	24.6
Queue Length 50th (m)	2.7	7.5	0.4	48.4	4.7	2.8	18.6
Queue Length 95th (m)	m22.4	m47.9	m0.1	98.4	10.7	7.9	33.9
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	429	2230	699	2081	201	502	571
Starvation Cap Reductn	0	0	0	116	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	0.26	0.22	0.02	0.53	0.14	0.05	0.39

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	400	45	10	850	70	25	15	5	45	20	135
Future Volume (vph)	100	400	45	10	850	70	25	15	5	45	20	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1715	3200		1780	3335		1625	1723			1826	
Flt Permitted	0.22	1.00		0.47	1.00		0.41	1.00			0.92	
Satd. Flow (perm)	398	3200		878	3335		695	1723			1690	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	112	449	51	11	955	79	28	17	6	51	22	152
RTOR Reduction (vph)	0	6	0	0	5	0	0	5	0	0	100	0
Lane Group Flow (vph)	112	494	0	11	1029	0	28	18	0	0	125	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	64.6	60.2		56.9	55.5		13.4	13.4			13.4	
Effective Green, g (s)	64.6	60.2		56.9	55.5		13.4	13.4			13.4	
Actuated g/C Ratio	0.72	0.67		0.63	0.62		0.15	0.15			0.15	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	374	2140		569	2056		103	256			251	
v/s Ratio Prot	c0.02	0.15		0.00	c0.31			0.01				
v/s Ratio Perm	0.19			0.01			0.04				c0.07	
v/c Ratio	0.30	0.23		0.02	0.50		0.27	0.07			0.50	
Uniform Delay, d1	4.9	5.8		6.1	9.6		34.0	32.9			35.2	
Progression Factor	1.01	0.96		0.20	0.63		1.00	1.00			1.00	
Incremental Delay, d2	0.4	0.2		0.0	0.8		1.4	0.1			1.6	
Delay (s)	5.3	5.8		1.2	6.8		35.4	33.1			36.8	
Level of Service	A	A		A	A		D	C			D	
Approach Delay (s)		5.7			6.8			34.3			36.8	
Approach LOS		A			A			C			D	

Intersection Summary				
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Flt Permitted		0.960									0.996	
Satd. Flow (perm)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	1		2	2		1	16		5	5		16
Confl. Bikes (#/hr)			1			1						
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	6%	0%	20%	4%	0%
Adj. Flow (vph)	34	7	0	0	14	7	0	21	0	7	27	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	21	0	0	21	0	0	89	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	0	14	7	0	21	0	7	27	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	21	21	89
Volume Left (vph)	34	0	0	7
Volume Right (vph)	0	7	0	55
Hadj (s)	0.21	-0.20	0.10	-0.31
Departure Headway (s)	4.4	4.0	4.2	3.8
Degree Utilization, x	0.05	0.02	0.02	0.09
Capacity (veh/h)	802	877	826	939
Control Delay (s)	7.6	7.1	7.3	7.1
Approach Delay (s)	7.6	7.1	7.3	7.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.3		
Level of Service	A		
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Flt Permitted		0.976						0.987			0.987	
Satd. Flow (perm)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	3		18	18		3	36		6	6		36
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	50%	0%	0%	0%	12%	40%	0%	6%	0%
Adj. Flow (vph)	7	0	7	0	0	7	7	13	7	7	20	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	7	0	0	27	0	0	27	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	26.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	0	7	0	0	7	7	13	7	7	20	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	14	7	27	27
Volume Left (vph)	7	0	7	7
Volume Right (vph)	7	7	7	0
Hadj (s)	-0.20	-0.60	0.17	0.13
Departure Headway (s)	3.8	3.4	4.1	4.1
Degree Utilization, x	0.01	0.01	0.03	0.03
Capacity (veh/h)	922	1027	852	869
Control Delay (s)	6.9	6.5	7.3	7.2
Approach Delay (s)	6.9	6.5	7.3	7.2
Approach LOS	A	A	A	A

Intersection Summary					
Delay	7.1				
Level of Service	A				
Intersection Capacity Utilization	26.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	90	50	15
Future Volume (vph)	5	0	0	90	50	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1642	0	0	1990	2025	0
Flt Permitted	0.950					
Satd. Flow (perm)	1642	0	0	1990	2025	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Confl. Peds. (#/hr)			12			12
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	16%	100%	0%	5%	0%	0%
Adj. Flow (vph)	6	0	0	115	64	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	115	83	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	17.0%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	90	50	15
Future Volume (Veh/h)	5	0	0	90	50	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	6	0	0	115	64	19
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	200	86	95			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	200	86	95			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	749	750	1494			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	6	115	83
Volume Left	6	0	0
Volume Right	0	0	19
cSH	749	1494	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (m)	0.2	0.0	0.0
Control Delay (s)	9.8	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.8	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	17.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	70	5	5	120	40	15
Future Volume (vph)	70	5	5	120	40	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	1831	0	0	1973	1721	0
Flt Permitted				0.998	0.965	
Satd. Flow (perm)	1831	0	0	1973	1721	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)						6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	0%	0%	6%	2%	0%
Adj. Flow (vph)	79	6	6	135	45	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	85	0	0	141	62	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	70	5	5	120	40	15
Future Volume (Veh/h)	70	5	5	120	40	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	79	6	6	135	45	17
Pedestrians				6		
Lane Width (m)				4.5		
Walking Speed (m/s)				1.2		
Percent Blockage				1		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			85		229	88
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			85		229	88
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	98
cM capacity (veh/h)			1524		756	970

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	85	141	62
Volume Left	0	6	45
Volume Right	6	0	17
cSH	1700	1524	805
Volume to Capacity	0.05	0.00	0.08
Queue Length 95th (m)	0.0	0.1	2.0
Control Delay (s)	0.0	0.3	9.8
Lane LOS		A	A
Approach Delay (s)	0.0	0.3	9.8
Approach LOS			A

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	22.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	900	35	90	605	20	125
Future Volume (vph)	900	35	90	605	20	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3462	0	1785	3535	1833	0
Flt Permitted			0.254		0.993	
Satd. Flow (perm)	3462	0	475	3535	1832	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5				128	
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	0	0	0	0	0
Adj. Flow (vph)	918	36	92	617	20	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	954	0	92	617	148	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	10.0		7.0	10.0	7.0	
Minimum Split (s)	35.0		10.0	35.0	35.0	
Total Split (s)	45.0		10.0	55.0	35.0	
Total Split (%)	50.0%		11.1%	61.1%	38.9%	
Maximum Green (s)	39.0		7.0	49.0	29.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		None	C-Min	None	
Walk Time (s)	11.0			11.0	8.0	
Flash Dont Walk (s)	18.0			18.0	18.0	
Pedestrian Calls (#/hr)	7			7	12	
Act Effct Green (s)	58.5		69.9	66.9	11.1	
Actuated g/C Ratio	0.65		0.78	0.74	0.12	
v/c Ratio	0.42		0.19	0.23	0.44	
Control Delay	3.6		4.7	4.8	11.6	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	3.6		4.7	4.8	11.6	
LOS	A		A	A	B	
Approach Delay	3.6			4.8	11.6	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 4.7		Intersection LOS: A	
Intersection Capacity Utilization 54.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Hawkins Drive & Clair Road East

Phasings
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Protected Phases	2	1	6	
Permitted Phases		6		8
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	45.0	10.0	55.0	35.0
Total Split (%)	50.0%	11.1%	61.1%	38.9%
Maximum Green (s)	39.0	7.0	49.0	29.0
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	C-Min	None	C-Min	None
Walk Time (s)	11.0		11.0	8.0
Flash Dont Walk (s)	18.0		18.0	18.0
Pedestrian Calls (#/hr)	7		7	12
90th %ile Green (s)	39.9	9.1	52.0	26.0
90th %ile Term Code	Coord	Gap	Coord	Ped
70th %ile Green (s)	59.5	7.0	69.5	8.5
70th %ile Term Code	Coord	Min	Coord	Gap
50th %ile Green (s)	61.0	7.0	71.0	7.0
50th %ile Term Code	Coord	Min	Coord	Min
30th %ile Green (s)	61.0	7.0	71.0	7.0
30th %ile Term Code	Coord	Min	Coord	Min
10th %ile Green (s)	71.0	0.0	71.0	7.0
10th %ile Term Code	Coord	Skip	Coord	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	954	92	617	148
v/c Ratio	0.42	0.19	0.23	0.44
Control Delay	3.6	4.7	4.8	11.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.6	4.7	4.8	11.6
Queue Length 50th (m)	14.4	2.2	11.3	2.7
Queue Length 95th (m)	22.0	12.4	38.0	14.0
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2251	476	2627	677
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.19	0.23	0.22

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	900	35	90	605	20	125
Future Volume (vph)	900	35	90	605	20	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.88	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3463		1783	3535	1833	
Flt Permitted	1.00		0.25	1.00	0.99	
Satd. Flow (perm)	3463		476	3535	1833	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	918	36	92	617	20	128
RTOR Reduction (vph)	2	0	0	0	112	0
Lane Group Flow (vph)	952	0	92	617	36	0
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	0	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	57.9		66.9	66.9	11.1	
Effective Green, g (s)	57.9		66.9	66.9	11.1	
Actuated g/C Ratio	0.64		0.74	0.74	0.12	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2227		440	2627	226	
v/s Ratio Prot	c0.27		0.01	c0.17		
v/s Ratio Perm			0.14		c0.02	
v/c Ratio	0.43		0.21	0.23	0.16	
Uniform Delay, d1	7.9		3.7	3.6	35.3	
Progression Factor	0.32		1.00	1.00	0.92	
Incremental Delay, d2	0.5		0.2	0.2	0.3	
Delay (s)	3.1		4.0	3.8	32.9	
Level of Service	A		A	A	C	
Approach Delay (s)	3.1			3.8	32.9	
Approach LOS	A			A	C	

Intersection Summary				
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.37			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	54.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	105	10	40	50	5	10	30	15	15	35	35
Future Volume (vph)	60	105	10	40	50	5	10	30	15	15	35	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2038	0	0	1828	0	0	1995	0	0	1908	0
Flt Permitted		0.983			0.979			0.991			0.991	
Satd. Flow (perm)	0	2038	0	0	1828	0	0	1995	0	0	1908	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	33		13	13		33	8		4	4		8
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	6%
Adj. Flow (vph)	71	125	12	48	60	6	12	36	18	18	42	42
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	208	0	0	114	0	0	66	0	0	102	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.0%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	105	10	40	50	5	10	30	15	15	35	35
Future Volume (Veh/h)	60	105	10	40	50	5	10	30	15	15	35	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	71	125	12	48	60	6	12	36	18	18	42	42
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	99			150			516	481	148	505	484	104
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	99			150			516	481	148	505	484	104
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	95			97			97	92	98	95	90	95
cM capacity (veh/h)	1455			1424			369	427	889	384	425	900

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	208	114	66	102
Volume Left	71	48	12	18
Volume Right	12	6	18	42
cSH	1455	1424	481	530
Volume to Capacity	0.05	0.03	0.14	0.19
Queue Length 95th (m)	1.2	0.8	3.8	5.6
Control Delay (s)	2.9	3.4	13.7	13.4
Lane LOS	A	A	B	B
Approach Delay (s)	2.9	3.4	13.7	13.4
Approach LOS			B	B

Intersection Summary					
Average Delay	6.6				
Intersection Capacity Utilization	27.0%	ICU Level of Service	A		
Analysis Period (min)	15				

Lanes, Volumes, Timings
3: Poppy Drive East & Farley Drive

12-12-2023

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	175	90	15	20	30
Future Volume (vph)	20	175	90	15	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2080	1982	0	1692	0
Flt Permitted		0.995			0.980	
Satd. Flow (perm)	0	2080	1982	0	1692	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	15			15		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	23	199	102	17	23	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	222	119	0	57	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	175	90	15	20	30
Future Volume (Veh/h)	20	175	90	15	20	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	23	199	102	17	23	34
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	134				370	126
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	134				370	126
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	96
cM capacity (veh/h)	1445				616	919

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	222	119	57
Volume Left	23	0	23
Volume Right	0	17	34
cSH	1445	1700	767
Volume to Capacity	0.02	0.07	0.07
Queue Length 95th (m)	0.4	0.0	1.9
Control Delay (s)	0.9	0.0	10.1
Lane LOS	A		B
Approach Delay (s)	0.9	0.0	10.1
Approach LOS			B

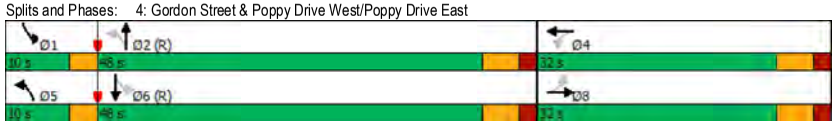
Intersection Summary				
Average Delay	1.9			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	65	70	30	60	95	895	125	80	860	35
Future Volume (vph)	40	25	65	70	30	60	95	895	125	80	860	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1751	0	0	1874	0	2006	3422	0	1728	3478	0
Flt Permitted		0.814			0.781		0.275			0.228		
Satd. Flow (perm)	0	1441	0	0	1493	0	579	3422	0	413	3478	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			34			23			6	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
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 (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Adj. Flow (vph)	41	26	66	71	31	61	97	913	128	82	878	36
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	133	0	0	163	0	97	1041	0	82	914	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	32.0	32.0		32.0	32.0		10.0	48.0		10.0	48.0	
Total Split (%)	35.6%	35.6%		35.6%	35.6%		11.1%	53.3%		11.1%	53.3%	
Maximum Green (s)	26.0	26.0		26.0	26.0		7.0	42.0		7.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	6	6		6	6			6			6	
Act Effct Green (s)		13.9			13.9		64.7	55.8		64.7	55.8	
Actuated g/C Ratio		0.15			0.15		0.72	0.62		0.72	0.62	
v/c Ratio		0.50			0.63		0.18	0.49		0.20	0.42	
Control Delay		25.8			37.7		5.1	11.9		5.1	12.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		25.8			37.7		5.1	11.9		5.1	12.1	
LOS		C			D		A	B		A	B	
Approach Delay		25.8			37.7			11.3			11.6	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 14.0		Intersection LOS: B	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	32.0	32.0	32.0	32.0	10.0	48.0	10.0	48.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	11.1%	53.3%	11.1%	53.3%
Maximum Green (s)	26.0	26.0	26.0	26.0	7.0	42.0	7.0	42.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	6	6	6	6		6		6
90th %ile Green (s)	24.0	24.0	24.0	24.0	8.6	42.3	8.7	42.4
90th %ile Term Code	Ped	Ped	Ped	Ped	Gap	Coord	Gap	Coord
70th %ile Green (s)	15.2	15.2	15.2	15.2	7.1	52.7	7.1	52.7
70th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Gap	Coord
50th %ile Green (s)	12.8	12.8	12.8	12.8	7.0	55.2	7.0	55.2
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
30th %ile Green (s)	10.4	10.4	10.4	10.4	7.0	57.6	7.0	57.6
30th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	0.0	71.0	0.0	71.0
10th %ile Term Code	Min	Min	Min	Min	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	133	163	97	1041	82	914
v/c Ratio	0.50	0.63	0.18	0.49	0.20	0.42
Control Delay	25.8	37.7	5.1	11.9	5.1	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.8	37.7	5.1	11.9	5.1	12.1
Queue Length 50th (m)	13.1	22.4	3.6	49.0	4.6	51.8
Queue Length 95th (m)	26.6	37.1	11.8	92.6	m3.6	m34.6
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	455	455	532	2128	404	2158
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.36	0.18	0.49	0.20	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	65	70	30	60	95	895	125	80	860	35
Future Volume (vph)	40	25	65	70	30	60	95	895	125	80	860	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.95		1.00	0.98		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1743			1872		2004	3420		1726	3478	
Flt Permitted		0.81			0.78		0.27	1.00		0.23	1.00	
Satd. Flow (perm)		1441			1494		580	3420		415	3478	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	26	66	71	31	61	97	913	128	82	878	36
RTOR Reduction (vph)	0	47	0	0	29	0	0	9	0	0	2	0
Lane Group Flow (vph)	0	86	0	0	134	0	97	1032	0	82	912	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		13.9			13.9		61.0	55.1		61.2	55.2	
Effective Green, g (s)		13.9			13.9		61.0	55.1		61.2	55.2	
Actuated g/C Ratio		0.15			0.15		0.68	0.61		0.68	0.61	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		222			230		486	2093		369	2133	
v/s Ratio Prot							0.01	c0.30		c0.01	0.26	
v/s Ratio Perm		0.06			c0.09		0.12			0.14		
v/c Ratio		0.39			0.58		0.20	0.49		0.22	0.43	
Uniform Delay, d1		34.2			35.4		5.2	9.7		5.4	9.1	
Progression Factor		1.00			1.00		1.00	1.00		1.03	1.11	
Incremental Delay, d2		1.1			3.7		0.2	0.8		0.2	0.3	
Delay (s)		35.4			39.1		5.4	10.5		5.8	10.4	
Level of Service		D			D		A	B		A	B	
Approach Delay (s)		35.4			39.1			10.1			10.1	
Approach LOS		D			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
Analysis Period (min)	15			

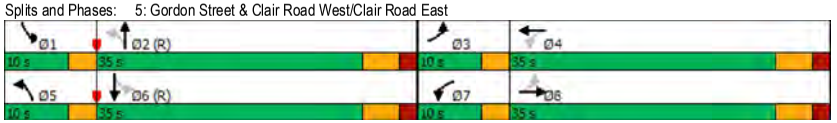
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	870	120	155	495	110	135	710	140	190	750	150
Future Volume (vph)	255	870	120	155	495	110	135	710	140	190	750	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3453	0	1711	3418	0	1646	3356	0	1728	3332	0
Flt Permitted	0.295			0.142			0.140			0.149		
Satd. Flow (perm)	535	3453	0	255	3418	0	242	3356	0	270	3332	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			31			27			27	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	263	897	124	160	510	113	139	732	144	196	773	155
Shared Lane Traffic (%)												
Lane Group Flow (vph)	263	1021	0	160	623	0	139	876	0	196	928	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	35.0		10.0	35.0		10.0	35.0		10.0	35.0	
Total Split (%)	11.1%	38.9%		11.1%	38.9%		11.1%	38.9%		11.1%	38.9%	
Maximum Green (s)	7.0	29.0		7.0	29.0		7.0	29.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		11			11			9			9	
Act Effct Green (s)	39.4	28.5		38.5	28.1		38.6	28.6		39.5	29.0	
Actuated g/C Ratio	0.44	0.32		0.43	0.31		0.43	0.32		0.44	0.32	
v/c Ratio	0.77	0.92		0.70	0.57		0.65	0.81		0.82	0.85	
Control Delay	35.2	43.7		35.0	26.8		31.9	27.7		45.3	36.6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	35.2	43.7		35.0	26.8		31.9	27.7		45.3	36.6	
LOS	D	D		C	C		C	C		D	D	
Approach Delay		42.0			28.4			28.3			38.1	
Approach LOS		D			C			C			D	

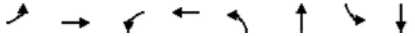
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 35.1		Intersection LOS: D	
Intersection Capacity Utilization 88.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023



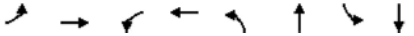
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	35.0	10.0	35.0	10.0	35.0	10.0	35.0
Total Split (%)	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%	11.1%	38.9%
Maximum Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		11		11		9		9
90th %ile Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
90th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
70th %ile Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
70th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
50th %ile Green (s)	7.0	29.0	7.0	29.0	7.0	29.0	7.0	29.0
50th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
30th %ile Green (s)	8.0	29.0	8.0	29.0	7.0	28.0	7.0	28.0
30th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
10th %ile Green (s)	10.4	26.7	8.1	24.4	7.0	27.9	9.3	30.2
10th %ile Term Code	Gap	Gap	Gap	Hold	Min	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	263	1021	160	623	139	876	196	928
v/c Ratio	0.77	0.92	0.70	0.57	0.65	0.81	0.82	0.85
Control Delay	35.2	43.7	35.0	26.8	31.9	27.7	45.3	36.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	43.7	35.0	26.8	31.9	27.7	45.3	36.6
Queue Length 50th (m)	29.0	91.4	21.7	59.8	11.0	75.3	20.6	80.1
Queue Length 95th (m)	#61.0	#131.1	#40.9	60.1	#34.4	45.2	#55.2	#113.9
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	340	1124	228	1122	213	1099	239	1100
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.91	0.70	0.56	0.65	0.80	0.82	0.84

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	870	120	155	495	110	135	710	140	190	750	150
Future Volume (vph)	255	870	120	155	495	110	135	710	140	190	750	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1740	3452		1710	3417		1646	3357		1727	3332	
Flt Permitted	0.30	1.00		0.14	1.00		0.14	1.00		0.15	1.00	
Satd. Flow (perm)	541	3452		256	3417		243	3357		271	3332	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	263	897	124	160	510	113	139	732	144	196	773	155
RTOR Reduction (vph)	0	12	0	0	21	0	0	18	0	0	18	0
Lane Group Flow (vph)	263	1009	0	160	602	0	139	858	0	196	910	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	36.5	28.6		35.5	28.1		35.5	28.5		36.5	29.0	
Effective Green, g (s)	36.5	28.6		35.5	28.1		35.5	28.5		36.5	29.0	
Actuated g/C Ratio	0.41	0.32		0.39	0.31		0.39	0.32		0.41	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	324	1096		220	1066		204	1063		231	1073	
v/s Ratio Prot	c0.07	c0.29		0.06	0.18		0.05	0.26		c0.07	0.27	
v/s Ratio Perm	0.26			0.23			0.21			c0.27		
v/c Ratio	0.81	0.92		0.73	0.56		0.68	0.81		0.85	0.85	
Uniform Delay, d1	20.8	29.6		20.8	25.8		20.0	28.2		20.0	28.4	
Progression Factor	1.00	1.00		1.19	1.01		1.19	0.79		1.00	1.00	
Incremental Delay, d2	14.3	12.3		10.6	0.6		8.1	5.9		24.0	8.3	
Delay (s)	35.0	41.9		35.5	26.6		32.0	28.1		44.0	36.8	
Level of Service	D	D		D	C		C	C		D	D	
Approach Delay (s)		40.5			28.4			28.7			38.0	
Approach LOS		D			C			C			D	

Intersection Summary				
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.88			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	88.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	800	150	45	505	85	85	55	30	105	65	150
Future Volume (vph)	200	800	150	45	505	85	85	55	30	105	65	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1785	3376	0	1785	3403	0	1705	1753	0	0	1924	0
Flt Permitted	0.359			0.255			0.435				0.857	
Satd. Flow (perm)	667	3376	0	477	3403	0	766	1753	0	0	1661	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		30			25			31			52	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Adj. Flow (vph)	208	833	156	47	526	89	89	57	31	109	68	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	208	989	0	47	615	0	89	88	0	0	333	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	13.0	45.0		10.0	42.0		35.0	35.0		35.0	35.0	
Total Split (%)	14.4%	50.0%		11.1%	46.7%		38.9%	38.9%		38.9%	38.9%	
Maximum Green (s)	10.0	39.0		7.0	36.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		7			7		12	12		12	12	
Act Effct Green (s)	60.0	51.1		55.0	45.0		20.9	20.9			20.9	
Actuated g/C Ratio	0.67	0.57		0.61	0.50		0.23	0.23			0.23	
v/c Ratio	0.37	0.51		0.12	0.36		0.50	0.20			0.78	
Control Delay	5.2	11.7		5.1	11.1		38.4	18.2			39.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	5.2	11.7		5.1	11.1		38.4	18.2			39.8	
LOS	A	B		A	B		D	B			D	
Approach Delay		10.6			10.7			28.4			39.8	
Approach LOS		B			B			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 16.1		Intersection LOS: B	
Intersection Capacity Utilization 75.1%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East

Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	13.0	45.0	10.0	42.0	35.0	35.0	35.0	35.0
Total Split (%)	14.4%	50.0%	11.1%	46.7%	38.9%	38.9%	38.9%	38.9%
Maximum Green (s)	10.0	39.0	7.0	36.0	29.0	29.0	29.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		7		7	12	12	12	12
90th %ile Green (s)	10.3	39.0	7.3	36.0	28.7	28.7	28.7	28.7
90th %ile Term Code	Max	Coord	Max	Coord	Hold	Hold	Gap	Gap
70th %ile Green (s)	11.0	43.7	7.0	39.7	24.3	24.3	24.3	24.3
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	9.4	47.0	7.0	44.6	21.0	21.0	21.0	21.0
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	8.1	60.4	0.0	49.3	17.6	17.6	17.6	17.6
30th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	65.2	0.0	55.2	12.8	12.8	12.8	12.8
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	208	989	47	615	89	88	333
v/c Ratio	0.37	0.51	0.12	0.36	0.50	0.20	0.78
Control Delay	5.2	11.7	5.1	11.1	38.4	18.2	39.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	11.7	5.1	11.1	38.4	18.2	39.8
Queue Length 50th (m)	4.0	46.7	0.8	33.1	14.1	8.3	48.4
Queue Length 95th (m)	m22.8	m101.8	2.7	55.9	26.5	18.1	71.0
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	572	1928	394	1712	246	585	570
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	0.36	0.51	0.12	0.36	0.36	0.15	0.58

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	800	150	45	505	85	85	55	30	105	65	150
Future Volume (vph)	200	800	150	45	505	85	85	55	30	105	65	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.98		1.00	0.98		1.00	0.95			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1778	3377		1783	3404		1674	1754			1906	
Flt Permitted	0.36	1.00		0.25	1.00		0.44	1.00			0.86	
Satd. Flow (perm)	671	3377		478	3404		767	1754			1660	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	208	833	156	47	526	89	89	57	31	109	68	156
RTOR Reduction (vph)	0	13	0	0	13	0	0	24	0	0	40	0
Lane Group Flow (vph)	208	976	0	47	602	0	89	64	0	0	293	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	57.1	49.8		49.2	44.9		20.9	20.9			20.9	
Effective Green, g (s)	57.1	49.8		49.2	44.9		20.9	20.9			20.9	
Actuated g/C Ratio	0.63	0.55		0.55	0.50		0.23	0.23			0.23	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	538	1868		323	1698		178	407			385	
v/s Ratio Prot	c0.04	c0.29		0.01	0.18			0.04				
v/s Ratio Perm	0.21			0.07			0.12				c0.18	
v/c Ratio	0.39	0.52		0.15	0.35		0.50	0.16			0.76	
Uniform Delay, d1	7.2	12.6		9.7	13.7		30.0	27.5			32.2	
Progression Factor	0.63	0.82		0.64	0.72		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.5		0.2	0.6		2.2	0.2			8.6	
Delay (s)	4.8	10.8		6.4	10.4		32.2	27.7			40.8	
Level of Service	A	B		A	B		C	C			D	
Approach Delay (s)		9.7			10.1			30.0			40.8	
Approach LOS		A			B			C			D	

Intersection Summary					
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio	0.59				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0		
Intersection Capacity Utilization	75.1%	ICU Level of Service	D		
Analysis Period (min)	15				

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Flt Permitted		0.963			0.993			0.996			0.990	
Satd. Flow (perm)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	5		5	5		5	26		22	22		26
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	94	22	6	11	22	44	6	56	11	56	61	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	77	0	0	73	0	0	273	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	11	22	44	6	56	11	56	61	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	77	73	273
Volume Left (vph)	94	11	6	56
Volume Right (vph)	6	44	11	156
Hadj (s)	0.12	-0.31	-0.07	-0.29
Departure Headway (s)	4.9	4.5	4.6	4.2
Degree Utilization, x	0.17	0.10	0.09	0.32
Capacity (veh/h)	680	725	728	816
Control Delay (s)	8.9	8.0	8.1	9.1
Approach Delay (s)	8.9	8.0	8.1	9.1
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.8		
Level of Service	A		
Intersection Capacity Utilization	41.8%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Flt Permitted		0.968			0.984			0.988			0.979	
Satd. Flow (perm)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	13		45	45		13	45		15	15		45
Confl. Bikes (#/hr)			2			5						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	34	6	11	11	6	17	11	23	11	34	34	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	34	0	0	45	0	0	79	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	6	11	11	6	17	11	23	11	34	34	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	51	34	45	79
Volume Left (vph)	34	11	11	34
Volume Right (vph)	11	17	11	11
Hadj (s)	0.00	-0.24	-0.10	0.00
Departure Headway (s)	4.2	4.0	4.1	4.1
Degree Utilization, x	0.06	0.04	0.05	0.09
Capacity (veh/h)	827	870	854	849
Control Delay (s)	7.5	7.1	7.3	7.5
Approach Delay (s)	7.5	7.1	7.3	7.5
Approach LOS	A	A	A	A

Intersection Summary			
Delay	7.4		
Level of Service	A		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	5	0	90	80	45
Future Volume (vph)	55	5	0	90	80	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1851	0	0	2090	1988	0
Flt Permitted	0.956					
Satd. Flow (perm)	1851	0	0	2090	1988	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Confl. Peds. (#/hr)			8			8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	16%	0%	0%	0%	0%
Adj. Flow (vph)	62	6	0	101	90	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	0	101	141	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.7%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	5	0	90	80	45
Future Volume (Veh/h)	55	5	0	90	80	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	62	6	0	101	90	51
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	224	124	149			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	224	124	149			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	92	99	100			
cM capacity (veh/h)	760	884	1434			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	68	101	141
Volume Left	62	0	0
Volume Right	6	0	51
cSH	770	1434	1700
Volume to Capacity	0.09	0.00	0.08
Queue Length 95th (m)	2.3	0.0	0.0
Control Delay (s)	10.1	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.1	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	18.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	150	30	10	100	30	10
Future Volume (vph)	150	30	10	100	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2042	0	0	2042	1750	0
Flt Permitted				0.995	0.964	
Satd. Flow (perm)	2042	0	0	2042	1750	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)		1	1		2	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	163	33	11	109	33	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	196	0	0	120	44	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	150	30	10	100	30	10
Future Volume (Veh/h)	150	30	10	100	30	10
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)	163	33	11	109	33	11
Pedestrians	2			17	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			197		314	198
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			197		314	198
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	99
cM capacity (veh/h)			1387		676	833

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	196	120	44
Volume Left	0	11	33
Volume Right	33	0	11
cSH	1700	1387	709
Volume to Capacity	0.12	0.01	0.06
Queue Length 95th (m)	0.0	0.2	1.6
Control Delay (s)	0.0	0.8	10.4
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	10.4
Approach LOS			B

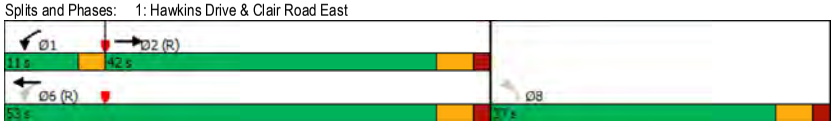
Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	610	30	120	515	25	105
Future Volume (vph)	610	30	120	515	25	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3493	0	1767	3466	1844	0
Flt Permitted			0.364		0.990	
Satd. Flow (perm)	3493	0	675	3466	1844	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	6				109	
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		6	6			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Adj. Flow (vph)	635	31	125	536	26	109
Shared Lane Traffic (%)						
Lane Group Flow (vph)	666	0	125	536	135	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	10.0		7.0	10.0	7.0	
Minimum Split (s)	35.0		10.0	35.0	35.0	
Total Split (s)	42.0		11.0	53.0	37.0	
Total Split (%)	46.7%		12.2%	58.9%	41.1%	
Maximum Green (s)	36.0		8.0	47.0	31.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		None	C-Min	None	
Walk Time (s)	11.0			11.0	8.0	
Flash Dont Walk (s)	18.0			18.0	18.0	
Pedestrian Calls (#/hr)	7			7	12	
Act Effct Green (s)	56.2		69.9	66.9	11.1	
Actuated g/C Ratio	0.62		0.78	0.74	0.12	
v/c Ratio	0.31		0.20	0.21	0.42	
Control Delay	5.2		4.5	4.7	13.1	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	5.2		4.5	4.7	13.1	
LOS	A		A	A	B	
Approach Delay	5.2			4.7	13.1	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.42			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 52.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Hawkins Drive & Clair Road East



Phasings
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Protected Phases	2	1	6	
Permitted Phases		6		8
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	42.0	11.0	53.0	37.0
Total Split (%)	46.7%	12.2%	58.9%	41.1%
Maximum Green (s)	36.0	8.0	47.0	31.0
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	C-Min	None	C-Min	None
Walk Time (s)	11.0		11.0	8.0
Flash Dont Walk (s)	18.0		18.0	18.0
Pedestrian Calls (#/hr)	7		7	12
90th %ile Green (s)	38.7	10.3	52.0	26.0
90th %ile Term Code	Coord	Gap	Coord	Ped
70th %ile Green (s)	59.1	7.2	69.3	8.7
70th %ile Term Code	Coord	Gap	Coord	Gap
50th %ile Green (s)	61.0	7.0	71.0	7.0
50th %ile Term Code	Coord	Min	Coord	Min
30th %ile Green (s)	61.0	7.0	71.0	7.0
30th %ile Term Code	Coord	Min	Coord	Min
10th %ile Green (s)	61.0	7.0	71.0	7.0
10th %ile Term Code	Coord	Min	Coord	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	666	125	536	135
v/c Ratio	0.31	0.20	0.21	0.42
Control Delay	5.2	4.5	4.7	13.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.2	4.5	4.7	13.1
Queue Length 50th (m)	13.2	3.0	9.6	4.0
Queue Length 95th (m)	25.3	16.0	32.7	15.4
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2181	626	2574	706
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.20	0.21	0.19

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	610	30	120	515	25	105
Future Volume (vph)	610	30	120	515	25	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3493		1765	3466	1844	
Flt Permitted	1.00		0.36	1.00	0.99	
Satd. Flow (perm)	3493		676	3466	1844	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	635	31	125	536	26	109
RTOR Reduction (vph)	2	0	0	0	96	0
Lane Group Flow (vph)	664	0	125	536	39	0
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	56.2		66.9	66.9	11.1	
Effective Green, g (s)	56.2		66.9	66.9	11.1	
Actuated g/C Ratio	0.62		0.74	0.74	0.12	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2181		595	2576	227	
v/s Ratio Prot	c0.19		0.02	c0.15		
v/s Ratio Perm			0.14		c0.02	
v/c Ratio	0.30		0.21	0.21	0.17	
Uniform Delay, d1	7.8		3.4	3.5	35.3	
Progression Factor	0.51		1.00	1.00	0.97	
Incremental Delay, d2	0.3		0.2	0.2	0.4	
Delay (s)	4.4		3.5	3.7	34.5	
Level of Service	A		A	A	C	
Approach Delay (s)	4.4			3.7	34.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	60	5	40	60	10	5	25	15	5	45	30
Future Volume (vph)	35	60	5	40	60	10	5	25	15	5	45	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2042	0	0	1804	0	0	1986	0	0	1913	0
Flt Permitted		0.983			0.982			0.995			0.997	
Satd. Flow (perm)	0	2042	0	0	1804	0	0	1986	0	0	1913	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	12		11	11		12	6		3	3		6
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 (%)	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	9%
Adj. Flow (vph)	38	65	5	43	65	11	5	27	16	5	48	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	108	0	0	119	0	0	48	0	0	85	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.4%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	60	5	40	60	10	5	25	15	5	45	30
Future Volume (Veh/h)	35	60	5	40	60	10	5	25	15	5	45	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	38	65	5	43	65	11	5	27	16	5	48	32
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	88			81			373	328	82	344	326	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			81			373	328	82	344	326	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			97			99	95	98	99	91	97
cM capacity (veh/h)	1501			1512			491	549	970	539	551	933

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	108	119	48	85
Volume Left	38	43	5	5
Volume Right	5	11	16	32
cSH	1501	1512	633	650
Volume to Capacity	0.03	0.03	0.08	0.13
Queue Length 95th (m)	0.6	0.7	2.0	3.6
Control Delay (s)	2.8	2.8	11.2	11.4
Lane LOS	A	A	B	B
Approach Delay (s)	2.8	2.8	11.2	11.4
Approach LOS			B	B

Intersection Summary				
Average Delay	5.9			
Intersection Capacity Utilization	23.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lanes, Volumes, Timings
3: Poppy Drive East & Farley Drive

12-12-2023

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	105	90	15	15	35
Future Volume (vph)	25	105	90	15	15	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2071	1966	0	1675	0
Flt Permitted		0.991			0.985	
Satd. Flow (perm)	0	2071	1966	0	1675	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	15			15		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	27	115	99	16	16	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	142	115	0	54	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 12-12-2023

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	105	90	15	15	35
Future Volume (Veh/h)	25	105	90	15	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	27	115	99	16	16	38
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	130				291	122
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130				291	122
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	96
cM capacity (veh/h)	1450				682	923

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	142	115	54
Volume Left	27	0	16
Volume Right	0	16	38
cSH	1450	1700	836
Volume to Capacity	0.02	0.07	0.06
Queue Length 95th (m)	0.5	0.0	1.7
Control Delay (s)	1.6	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	1.6	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay		2.4	
Intersection Capacity Utilization		23.6%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	20	45	70	25	65	75	720	80	60	815	25
Future Volume (vph)	35	20	45	70	25	65	75	720	80	60	815	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1717	0	0	1865	0	2046	3504	0	1745	3552	0
Flt Permitted		0.791			0.822		0.270			0.287		
Satd. Flow (perm)	0	1377	0	0	1563	0	579	3504	0	525	3552	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			39			17			4	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Adj. Flow (vph)	38	22	49	77	27	71	82	791	88	66	896	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	109	0	0	175	0	82	879	0	66	923	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	33.0	33.0		33.0	33.0		10.0	47.0		10.0	47.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%		11.1%	52.2%		11.1%	52.2%	
Maximum Green (s)	27.0	27.0		27.0	27.0		7.0	41.0		7.0	41.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	5	5		5	5			3			3	
Act Effct Green (s)		14.3			14.3		64.3	55.5		64.3	55.5	
Actuated g/C Ratio		0.16			0.16		0.71	0.62		0.71	0.62	
v/c Ratio		0.42			0.62		0.15	0.41		0.14	0.42	
Control Delay		23.9			36.0		5.1	11.0		4.4	10.4	

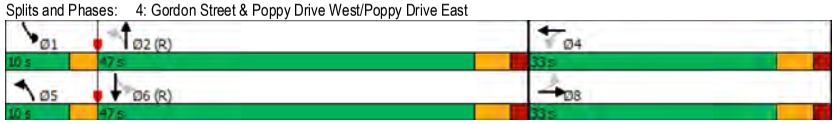
Lanes, Volumes, Timings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		23.9			36.0		5.1	11.0		4.4	10.4	
LOS		C			D		A	B		A	B	
Approach Delay		23.9			36.0			10.5			10.0	
Approach LOS		C			D			B			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 12.9		Intersection LOS: B	
Intersection Capacity Utilization 59.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	33.0	33.0	33.0	33.0	10.0	47.0	10.0	47.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	11.1%	52.2%	11.1%	52.2%
Maximum Green (s)	27.0	27.0	27.0	27.0	7.0	41.0	7.0	41.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	5	5	5	5		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	8.2	42.8	8.2	42.8
90th %ile Term Code	Ped	Ped	Ped	Ped	Gap	Coord	Gap	Coord
70th %ile Green (s)	16.0	16.0	16.0	16.0	7.0	52.0	7.0	52.0
70th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
50th %ile Green (s)	13.4	13.4	13.4	13.4	7.0	54.6	7.0	54.6
50th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
30th %ile Green (s)	10.8	10.8	10.8	10.8	7.0	57.2	7.0	57.2
30th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
10th %ile Green (s)	7.1	7.1	7.1	7.1	0.0	70.9	0.0	70.9
10th %ile Term Code	Hold	Hold	Gap	Gap	Skip	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	109	175	82	879	66	923
v/c Ratio	0.42	0.62	0.15	0.41	0.14	0.42
Control Delay	23.9	36.0	5.1	11.0	4.4	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.9	36.0	5.1	11.0	4.4	10.4
Queue Length 50th (m)	10.2	23.5	3.1	39.4	1.4	33.4
Queue Length 95th (m)	22.4	38.9	10.3	72.6	m4.9	50.3
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	446	496	531	2167	473	2191
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.35	0.15	0.41	0.14	0.42

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	20	45	70	25	65	75	720	80	60	815	25
Future Volume (vph)	35	20	45	70	25	65	75	720	80	60	815	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.95		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1711			1861		2044	3504		1743	3551	
Flt Permitted		0.79			0.82		0.27	1.00		0.29	1.00	
Satd. Flow (perm)		1377			1563		581	3504		527	3551	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	22	49	77	27	71	82	791	88	66	896	27
RTOR Reduction (vph)	0	40	0	0	33	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	69	0	0	142	0	82	872	0	66	921	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		14.3			14.3		60.7	54.9		60.7	54.9	
Effective Green, g (s)		14.3			14.3		60.7	54.9		60.7	54.9	
Actuated g/C Ratio		0.16			0.16		0.67	0.61		0.67	0.61	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		218			248		486	2137		433	2166	
v/s Ratio Prot							c0.01	0.25		0.01	c0.26	
v/s Ratio Perm		0.05			c0.09		0.10			0.09		
v/c Ratio		0.32			0.57		0.17	0.41		0.15	0.43	
Uniform Delay, d1		33.5			35.0		5.3	9.1		5.2	9.2	
Progression Factor		1.00			1.00		1.00	1.00		0.86	0.92	
Incremental Delay, d2		0.8			3.2		0.2	0.6		0.1	0.5	
Delay (s)		34.4			38.2		5.4	9.7		4.6	9.0	
Level of Service		C			D		A	A		A	A	
Approach Delay (s)		34.4			38.2			9.3			8.7	
Approach LOS		C			D			A			A	

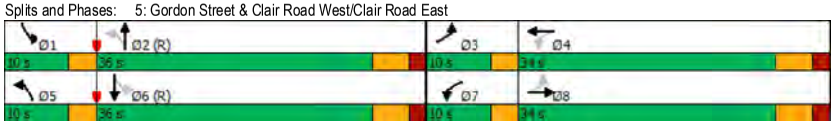
Intersection Summary				
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.43			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	59.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	540	85	165	430	115	105	580	95	190	695	95
Future Volume (vph)	180	540	85	165	430	115	105	580	95	190	695	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3481	0	1711	3395	0	1646	3470	0	1728	3476	0
Flt Permitted	0.287			0.226			0.249			0.260		
Satd. Flow (perm)	520	3481	0	403	3395	0	429	3470	0	470	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			39			22			18	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Adj. Flow (vph)	186	557	88	170	443	119	108	598	98	196	716	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	645	0	170	562	0	108	696	0	196	814	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		10.0	34.0		10.0	36.0		10.0	36.0	
Total Split (%)	11.1%	37.8%		11.1%	37.8%		11.1%	40.0%		11.1%	40.0%	
Maximum Green (s)	7.0	28.0		7.0	28.0		7.0	30.0		7.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		12			12			7			7	
Act Effct Green (s)	34.1	21.9		33.7	21.7		42.9	32.0		45.8	35.1	
Actuated g/C Ratio	0.38	0.24		0.37	0.24		0.48	0.36		0.51	0.39	
v/c Ratio	0.58	0.75		0.60	0.66		0.35	0.56		0.54	0.60	
Control Delay	25.1	35.9		28.0	31.9		9.9	18.1		19.5	25.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	25.1	35.9		28.0	31.9		9.9	18.1		19.5	25.2	
LOS	C	D		C	C		A	B		B	C	
Approach Delay		33.5			31.0			17.0			24.1	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 82.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Maximum Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		12		12		7		7
90th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
90th %ile Term Code	Max	Ped	Max	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	9.0	24.3	9.0	24.3	9.8	28.0	10.7	28.9
70th %ile Term Code	Max	Gap	Max	Hold	Gap	Coord	Max	Coord
50th %ile Green (s)	11.8	21.5	11.3	21.0	8.6	28.0	11.2	30.6
50th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
30th %ile Green (s)	10.3	19.4	10.0	19.1	7.4	33.2	9.4	35.2
30th %ile Term Code	Gap	Gap	Gap	Hold	Gap	Coord	Gap	Coord
10th %ile Green (s)	8.1	16.2	7.9	16.0	0.0	40.7	7.2	50.9
10th %ile Term Code	Gap	Gap	Gap	Hold	Skip	Coord	Gap	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	186	645	170	562	108	696	196	814
v/c Ratio	0.58	0.75	0.60	0.66	0.35	0.56	0.54	0.60
Control Delay	25.1	35.9	28.0	31.9	9.9	18.1	19.5	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	35.9	28.0	31.9	9.9	18.1	19.5	25.2
Queue Length 50th (m)	20.9	55.9	20.5	54.0	4.4	56.8	19.1	64.7
Queue Length 95th (m)	33.9	68.1	#33.2	45.7	8.0	20.6	#34.5	86.8
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	322	1096	282	1083	312	1277	366	1375
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.59	0.60	0.52	0.35	0.55	0.54	0.59

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	540	85	165	430	115	105	580	95	190	695	95
Future Volume (vph)	180	540	85	165	430	115	105	580	95	190	695	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1739	3479		1708	3396		1644	3469		1725	3476	
Flt Permitted	0.29	1.00		0.23	1.00		0.25	1.00		0.26	1.00	
Satd. Flow (perm)	526	3479		407	3396		432	3469		472	3476	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	186	557	88	170	443	119	108	598	98	196	716	98
RTOR Reduction (vph)	0	15	0	0	30	0	0	14	0	0	11	0
Lane Group Flow (vph)	186	630	0	170	532	0	108	682	0	196	803	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	31.1	21.9		30.7	21.7		38.6	32.0		43.6	34.5	
Effective Green, g (s)	31.1	21.9		30.7	21.7		38.6	32.0		43.6	34.5	
Actuated g/C Ratio	0.35	0.24		0.34	0.24		0.43	0.36		0.48	0.38	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	305	846		268	818		274	1233		355	1332	
v/s Ratio Prot	0.06	c0.18		c0.06	0.16		0.03	0.20		c0.06	c0.23	
v/s Ratio Perm	0.15			0.15			0.14			0.21		
v/c Ratio	0.61	0.74		0.63	0.65		0.39	0.55		0.55	0.60	
Uniform Delay, d1	22.0	31.5		22.4	30.7		16.2	23.3		14.5	22.3	
Progression Factor	1.00	1.00		1.09	1.00		0.56	0.69		1.00	1.00	
Incremental Delay, d2	3.4	3.6		4.5	1.7		0.9	1.7		1.9	2.0	
Delay (s)	25.4	35.0		28.9	32.6		10.0	17.8		16.3	24.3	
Level of Service	C	D		C	C		B	B		B	C	
Approach Delay (s)		32.9			31.7			16.8			22.7	
Approach LOS		C			C			B			C	

Intersection Summary				
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	82.5%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	500	160	35	425	85	125	70	35	110	65	155
Future Volume (vph)	125	500	160	35	425	85	125	70	35	110	65	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1767	3388	0	1785	3343	0	1705	1765	0	0	1952	0
Flt Permitted	0.389			0.373			0.432				0.844	
Satd. Flow (perm)	715	3388	0	698	3343	0	766	1765	0	0	1664	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			31			31			55	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
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%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	136	543	174	38	462	92	136	76	38	120	71	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	136	717	0	38	554	0	136	114	0	0	359	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	10.0	42.0		10.0	42.0		38.0	38.0		38.0	38.0	
Total Split (%)	11.1%	46.7%		11.1%	46.7%		42.2%	42.2%		42.2%	42.2%	
Maximum Green (s)	7.0	36.0		7.0	36.0		32.0	32.0		32.0	32.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		6			6		8	8		8	8	
Act Effct Green (s)	58.2	49.6		54.2	44.1		22.3	22.3			22.3	
Actuated g/C Ratio	0.65	0.55		0.60	0.49		0.25	0.25			0.25	
v/c Ratio	0.24	0.38		0.08	0.34		0.72	0.25			0.79	
Control Delay	4.8	9.2		5.4	11.6		50.8	19.1			38.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	4.8	9.2		5.4	11.6		50.8	19.1			38.9	

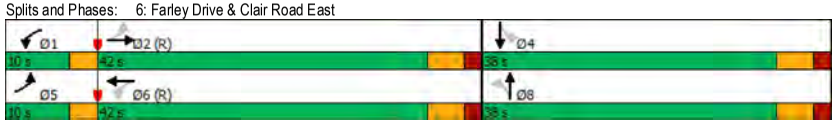
Lanes, Volumes, Timings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	A		A	B		D	B			D	
Approach Delay		8.5			11.2			36.3			38.9	
Approach LOS		A			B			D			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 71.1%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	42.0	10.0	42.0	38.0	38.0	38.0	38.0
Total Split (%)	11.1%	46.7%	11.1%	46.7%	42.2%	42.2%	42.2%	42.2%
Maximum Green (s)	7.0	36.0	7.0	36.0	32.0	32.0	32.0	32.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		6		6	8	8	8	8
90th %ile Green (s)	11.4	37.0	7.5	33.1	30.5	30.5	30.5	30.5
90th %ile Term Code	Gap	Coord	Gap	Coord	Hold	Hold	Gap	Gap
70th %ile Green (s)	9.3	42.1	7.0	39.8	25.9	25.9	25.9	25.9
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	8.1	45.5	7.0	44.4	22.5	22.5	22.5	22.5
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.1	59.1	0.0	49.0	18.9	18.9	18.9	18.9
30th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	64.2	0.0	54.2	13.8	13.8	13.8	13.8
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	136	717	38	554	136	114	359
v/c Ratio	0.24	0.38	0.08	0.34	0.72	0.25	0.79
Control Delay	4.8	9.2	5.4	11.6	50.8	19.1	38.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	9.2	5.4	11.6	50.8	19.1	38.9
Queue Length 50th (m)	2.7	7.2	2.0	28.8	22.6	11.9	52.1
Queue Length 95th (m)	19.8	67.6	2.5	52.5	39.3	22.7	74.6
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	562	1892	506	1675	272	647	627
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	0.24	0.38	0.08	0.33	0.50	0.18	0.57

Intersection Summary

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	500	160	35	425	85	125	70	35	110	65	155
Future Volume (vph)	125	500	160	35	425	85	125	70	35	110	65	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.96		1.00	0.98		1.00	0.95			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1760	3386		1782	3343		1686	1765			1939	
Flt Permitted	0.39	1.00		0.37	1.00		0.43	1.00			0.84	
Satd. Flow (perm)	721	3386		699	3343		768	1765			1664	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	543	174	38	462	92	136	76	38	120	71	168
RTOR Reduction (vph)	0	26	0	0	16	0	0	23	0	0	41	0
Lane Group Flow (vph)	136	691	0	38	538	0	136	91	0	0	318	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.7	48.4		48.4	44.1		22.3	22.3			22.3	
Effective Green, g (s)	55.7	48.4		48.4	44.1		22.3	22.3			22.3	
Actuated g/C Ratio	0.62	0.54		0.54	0.49		0.25	0.25			0.25	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	545	1820		427	1638		190	437			412	
v/s Ratio Prot	c0.02	c0.20		0.00	0.16			0.05				
v/s Ratio Perm	0.13			0.04			0.18				c0.19	
v/c Ratio	0.25	0.38		0.09	0.33		0.72	0.21			0.77	
Uniform Delay, d1	7.3	12.1		9.8	14.0		31.0	26.8			31.5	
Progression Factor	0.54	0.69		0.68	0.74		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.5		0.1	0.5		12.1	0.2			8.7	
Delay (s)	4.1	8.8		6.7	10.9		43.0	27.1			40.1	
Level of Service	A	A		A	B		D	C			D	
Approach Delay (s)		8.1			10.6			35.8			40.1	
Approach LOS		A			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	71.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Flt Permitted		0.962			0.990						0.986	
Satd. Flow (perm)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	6		6	6		6	26		22	22		26
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	121	23	11	23	29	63	0	92	11	80	63	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	115	0	0	103	0	0	287	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	23	29	63	0	92	11	80	63	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	115	103	287
Volume Left (vph)	121	23	0	80
Volume Right (vph)	11	63	11	144
Hadj (s)	0.11	-0.29	-0.06	-0.25
Departure Headway (s)	5.1	4.8	4.9	4.5
Degree Utilization, x	0.22	0.15	0.14	0.36
Capacity (veh/h)	649	683	678	757
Control Delay (s)	9.5	8.6	8.7	10.0
Approach Delay (s)	9.5	8.6	8.7	10.0
Approach LOS	A	A	A	A

Intersection Summary					
Delay	9.4				
Level of Service	A				
Intersection Capacity Utilization	43.2%	ICU Level of Service		A	
Analysis Period (min)	15				

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Flt Permitted		0.970			0.990			0.994			0.980	
Satd. Flow (perm)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	5		49	49		5	43		8	8		43
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	49	12	18	12	6	43	6	24	24	43	30	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	61	0	0	54	0	0	103	0
Sign Control		Stop			Stop			Stop			Stop	

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

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	12	18	12	6	43	6	24	24	43	30	30

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	79	61	54	103
Volume Left (vph)	49	12	6	43
Volume Right (vph)	18	43	24	30
Hadj (s)	-0.01	-0.38	-0.24	-0.09
Departure Headway (s)	4.3	3.9	4.1	4.2
Degree Utilization, x	0.09	0.07	0.06	0.12
Capacity (veh/h)	804	871	842	833
Control Delay (s)	7.7	7.2	7.3	7.7
Approach Delay (s)	7.7	7.2	7.3	7.7
Approach LOS	A	A	A	A

Intersection Summary					
Delay	7.5				
Level of Service	A				
Intersection Capacity Utilization	32.5%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	0	5	70	80	70
Future Volume (vph)	65	0	5	70	80	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1905	0	0	2084	1958	0
Flt Permitted	0.950			0.997		
Satd. Flow (perm)	1905	0	0	2084	1958	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	80	0	6	86	99	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	92	185	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	0	5	70	80	70
Future Volume (Veh/h)	65	0	5	70	80	70
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	80	0	6	86	99	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	240	142	185			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	240	142	185			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	89	100	100			
cM capacity (veh/h)	749	911	1402			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	80	92	185
Volume Left	80	6	0
Volume Right	0	0	86
cSH	749	1402	1700
Volume to Capacity	0.11	0.00	0.11
Queue Length 95th (m)	2.9	0.1	0.0
Control Delay (s)	10.4	0.5	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	0.5	0.0
Approach LOS	B		

Intersection Summary				
Average Delay	2.5			
Intersection Capacity Utilization	18.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	100	20	5	95	20	15
Future Volume (vph)	100	20	5	95	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2025	0	0	2026	1683	0
Flt Permitted				0.997	0.972	
Satd. Flow (perm)	2025	0	0	2026	1683	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)		1	1		3	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	1%	0%	0%	3%	4%	0%
Adj. Flow (vph)	115	23	6	109	23	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	138	0	0	115	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	100	20	5	95	20	15
Future Volume (Veh/h)	100	20	5	95	20	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	115	23	6	109	23	17
Pedestrians	3			6	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			139		252	134
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			139		252	134
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	98
cM capacity (veh/h)			1456		727	914

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	138	115	40
Volume Left	0	6	23
Volume Right	23	0	17
cSH	1700	1456	796
Volume to Capacity	0.08	0.00	0.05
Queue Length 95th (m)	0.0	0.1	1.3
Control Delay (s)	0.0	0.4	9.8
Lane LOS		A	A
Approach Delay (s)	0.0	0.4	9.8
Approach LOS			A

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
1: Hawkins Drive & Clair Road East

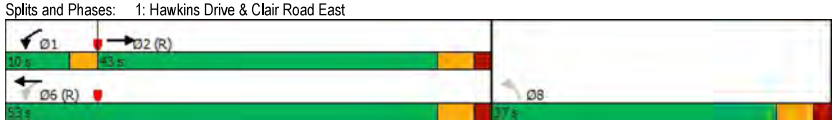
06-27-2024

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	430	65	895	25
Future Volume (vph)	430	65	895	25
Lane Group Flow (vph)	512	76	1041	134
Turn Type	NA	pm+pt	NA	Perm
Protected Phases	2	1	6	
Permitted Phases		6		8
Detector Phase	2	1	6	8
Switch Phase				
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	43.0	10.0	53.0	37.0
Total Split (%)	47.8%	11.1%	58.9%	41.1%
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	C-Min	None	C-Min	None
v/c Ratio	0.23	0.11	0.41	0.44
Control Delay	5.0	4.2	6.0	16.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.0	4.2	6.0	16.2
Queue Length 50th (m)	9.5	1.8	22.8	4.2
Queue Length 95th (m)	15.8	10.1	67.7	14.7
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2186	717	2547	666
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.23	0.11	0.41	0.20

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 1: Hawkins Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	430	10	65	895	25	90
Future Volume (vph)	430	10	65	895	25	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3365		1782	3433	1737	
Flt Permitted	1.00		0.44	1.00	0.99	
Satd. Flow (perm)	3365		826	3433	1737	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	500	12	76	1041	29	105
RTOR Reduction (vph)	1	0	0	0	92	0
Lane Group Flow (vph)	511	0	76	1041	42	0
Confl. Peds. (#/hr)		5	5			
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	57.9		66.8	66.8	11.2	
Effective Green, g (s)	57.9		66.8	66.8	11.2	
Actuated g/C Ratio	0.64		0.74	0.74	0.12	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2164		675	2548	216	
v/s Ratio Prot	0.15		0.01	c0.30		
v/s Ratio Perm			0.08		c0.02	
v/c Ratio	0.24		0.11	0.41	0.19	
Uniform Delay, d1	6.7		3.2	4.3	35.4	
Progression Factor	0.56		1.00	1.00	1.18	
Incremental Delay, d2	0.3		0.1	0.5	0.4	
Delay (s)	4.1		3.3	4.8	42.2	
Level of Service	A		A	A	D	
Approach Delay (s)	4.1			4.7	42.2	
Approach LOS	A			A	D	

Intersection Summary

HCM 2000 Control Delay	7.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	45	0	15	75	10	10	30	20	5	20	25
Future Volume (Veh/h)	50	45	0	15	75	10	10	30	20	5	20	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	63	57	0	19	95	13	13	38	25	6	25	32
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	132			72			397	368	89	408	362	140
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132			72			397	368	89	408	362	140
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	95			99			97	93	97	99	95	96
cM capacity (veh/h)	1376			1517			471	510	946	457	515	827

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	120	127	76	63
Volume Left	63	19	13	6
Volume Right	0	13	25	32
cSH	1376	1517	591	627
Volume to Capacity	0.05	0.01	0.13	0.10
Queue Length 95th (m)	1.2	0.3	3.5	2.7
Control Delay (s)	4.2	1.2	12.0	11.4
Lane LOS	A	A	B	B
Approach Delay (s)	4.2	1.2	12.0	11.4
Approach LOS			B	B

Intersection Summary				
Average Delay	5.9			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	105	220	10	10	30
Future Volume (Veh/h)	15	105	220	10	10	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	16	115	242	11	11	33
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	261				402	256
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	261				402	256
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	99				98	96
cM capacity (veh/h)	1150				578	754

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	131	253	44
Volume Left	16	0	11
Volume Right	0	11	33
cSH	1150	1700	701
Volume to Capacity	0.01	0.15	0.06
Queue Length 95th (m)	0.3	0.0	1.6
Control Delay (s)	1.1	0.0	10.5
Lane LOS	A		B
Approach Delay (s)	1.1	0.0	10.5
Approach LOS			B

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	28.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

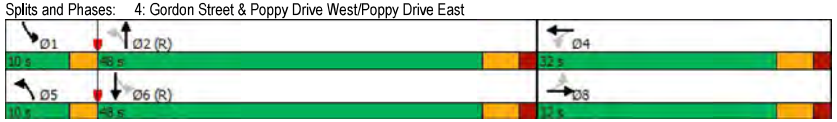
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	30	15	105	10	75	910	40	630
Future Volume (vph)	30	15	105	10	75	910	40	630
Lane Group Flow (vph)	0	89	0	270	78	1031	42	703
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	32.0	32.0	32.0	32.0	10.0	48.0	10.0	48.0
Total Split (%)	35.6%	35.6%	35.6%	35.6%	11.1%	53.3%	11.1%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.35		0.75	0.14	0.52	0.11	0.36
Control Delay		20.4		37.6	6.0	13.6	5.1	11.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		20.4		37.6	6.0	13.6	5.1	11.2
Queue Length 50th (m)		7.2		34.5	3.8	58.2	1.4	33.3
Queue Length 95th (m)		18.7		55.9	10.6	95.5	m4.3	33.7
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		354		496	569	1976	377	1938
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.25		0.54	0.14	0.52	0.11	0.36

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	15	40	105	10	145	75	910	80	40	630	45
Future Volume (vph)	30	15	40	105	10	145	75	910	80	40	630	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.92		1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1423			1778		1893	3265		1677	3328	
Flt Permitted		0.77			0.85		0.34	1.00		0.23	1.00	
Satd. Flow (perm)		1122			1544		686	3265		411	3328	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	31	16	42	109	10	151	78	948	83	42	656	47
RTOR Reduction (vph)	0	34	0	0	57	0	0	6	0	0	5	0
Lane Group Flow (vph)	0	55	0	0	213	0	78	1025	0	42	698	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		17.6			17.6		59.0	53.1		55.8	51.5	
Effective Green, g (s)		17.6			17.6		59.0	53.1		55.8	51.5	
Actuated g/C Ratio		0.20			0.20		0.66	0.59		0.62	0.57	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		219			301		528	1926		315	1904	
v/s Ratio Prot							c0.01	c0.31		0.01	0.21	
v/s Ratio Perm		0.05			c0.14		0.09			0.08		
v/c Ratio		0.25			0.71		0.15	0.53		0.13	0.37	
Uniform Delay, d1		30.6			33.8		5.8	11.0		7.1	10.4	
Progression Factor		1.00			1.00		1.00	1.00		0.82	0.91	
Incremental Delay, d2		0.6			7.4		0.1	1.1		0.2	0.4	
Delay (s)		31.2			41.2		5.9	12.1		6.0	9.9	
Level of Service		C			D		A	B		A	A	
Approach Delay (s)		31.2			41.2			11.7			9.7	
Approach LOS		C			D			B			A	

Intersection Summary

HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Queues
5: Gordon Street & Clair Road West/Clair Road East

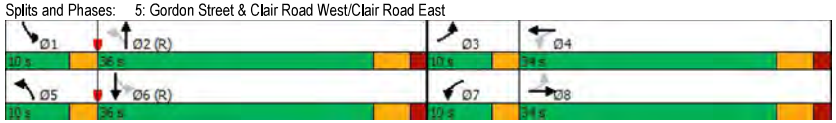
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	150	400	150	810	195	770	80	475
Future Volume (vph)	150	400	150	810	195	770	80	475
Lane Group Flow (vph)	167	550	167	1056	217	973	89	761
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.77	0.51	0.50	0.96	0.88	0.86	0.41	0.70
Control Delay	42.0	25.4	24.5	53.5	54.1	32.0	19.1	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.0	25.4	24.5	53.5	54.1	32.0	19.1	27.5
Queue Length 50th (m)	17.8	40.4	25.6	109.0	8.5	88.1	8.6	55.2
Queue Length 95th (m)	#48.4	56.8	36.3	#148.3	#46.6	#117.2	17.0	75.9
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	216	1078	335	1098	246	1128	216	1134
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.51	0.50	0.96	0.88	0.86	0.41	0.67

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	400	95	150	810	140	195	770	105	80	475	210
Future Volume (vph)	150	400	95	150	810	140	195	770	105	80	475	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	3244		1567	3354		1585	3274		1677	3236	
Flt Permitted	0.14	1.00		0.36	1.00		0.21	1.00		0.14	1.00	
Satd. Flow (perm)	234	3244		599	3354		344	3274		247	3236	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	167	444	106	167	900	156	217	856	117	89	528	233
RTOR Reduction (vph)	0	23	0	0	16	0	0	12	0	0	57	0
Lane Group Flow (vph)	167	527	0	167	1040	0	217	961	0	89	704	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	36.6	29.3		36.2	29.1		37.0	30.0		34.2	28.6	
Effective Green, g (s)	36.6	29.3		36.2	29.1		37.0	30.0		34.2	28.6	
Actuated g/C Ratio	0.41	0.33		0.40	0.32		0.41	0.33		0.38	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	208	1056		317	1084		237	1091		182	1028	
v/s Ratio Prot	c0.06	0.16		0.04	c0.31		c0.07	0.29		0.03	0.22	
v/s Ratio Perm	0.26			0.17			c0.30			0.15		
v/c Ratio	0.80	0.50		0.53	0.96		0.92	0.88		0.49	0.69	
Uniform Delay, d1	20.8	24.4		18.2	29.9		21.7	28.3		20.0	26.8	
Progression Factor	1.00	1.00		1.26	1.18		1.22	0.84		1.00	1.00	
Incremental Delay, d2	19.6	0.4		1.4	16.7		33.3	9.2		2.1	3.7	
Delay (s)	40.4	24.8		24.4	52.0		59.8	33.1		22.1	30.5	
Level of Service	D	C		C	D		E	C		C	C	
Approach Delay (s)		28.5			48.2			38.0			29.6	
Approach LOS		C			D			D			C	

Intersection Summary

HCM 2000 Control Delay	37.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	87.2%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Queues
6: Farley Drive & Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	100	400	15	850	95	15	45	20
Future Volume (vph)	100	400	15	850	95	15	45	20
Lane Group Flow (vph)	112	516	17	1034	107	23	0	225
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	12.0	48.0	10.0	46.0	32.0	32.0	32.0	32.0
Total Split (%)	13.3%	53.3%	11.1%	51.1%	35.6%	35.6%	35.6%	35.6%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.29	0.25	0.03	0.52	0.78	0.07		0.57
Control Delay	6.1	8.5	2.0	10.1	67.7	22.1		20.7
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0		0.0
Total Delay	6.1	8.5	2.0	10.1	67.7	22.1		20.7
Queue Length 50th (m)	2.7	6.7	0.6	58.1	18.9	2.6		17.6
Queue Length 95th (m)	m22.4	m48.0	m0.2	98.3	32.6	7.9		33.9
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	407	2065	665	1984	225	502		571
Starvation Cap Reductn	0	0	0	122	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	0.28	0.25	0.03	0.56	0.48	0.05		0.39

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	400	60	15	850	70	95	15	5	45	20	135
Future Volume (vph)	100	400	60	15	850	70	95	15	5	45	20	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1716	3188		1780	3335		1625	1723			1826	
Flt Permitted	0.21	1.00		0.46	1.00		0.46	1.00			0.92	
Satd. Flow (perm)	383	3188		865	3335		782	1723			1690	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	112	449	67	17	955	79	107	17	6	51	22	152
RTOR Reduction (vph)	0	9	0	0	5	0	0	5	0	0	96	0
Lane Group Flow (vph)	112	507	0	17	1029	0	107	18	0	0	129	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	62.0	56.2		55.6	52.8		16.0	16.0			16.0	
Effective Green, g (s)	62.0	56.2		55.6	52.8		16.0	16.0			16.0	
Actuated g/C Ratio	0.69	0.62		0.62	0.59		0.18	0.18			0.18	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	355	1990		562	1956		139	306			300	
v/s Ratio Prot	c0.02	0.16		0.00	c0.31			0.01				
v/s Ratio Perm	0.20			0.02			c0.14				0.08	
v/c Ratio	0.32	0.25		0.03	0.53		0.77	0.06			0.43	
Uniform Delay, d1	5.9	7.5		6.6	11.1		35.2	30.7			32.9	
Progression Factor	0.90	0.97		0.35	0.70		1.00	1.00			1.00	
Incremental Delay, d2	0.4	0.3		0.0	0.9		22.2	0.1			1.0	
Delay (s)	5.7	7.6		2.3	8.8		57.5	30.8			33.9	
Level of Service	A	A		A	A		E	C			C	
Approach Delay (s)		7.3			8.7			52.8			33.9	
Approach LOS		A			A			D			C	

Intersection Summary

HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

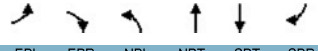
HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	20	10	80	0	10	10	30	15	40
Future Volume (vph)	25	5	0	20	10	80	0	10	10	30	15	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	27	14	110	0	14	14	41	21	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	151	28	117
Volume Left (vph)	34	27	0	41
Volume Right (vph)	0	110	14	55
Hadj (s)	0.21	-0.40	-0.25	-0.08
Departure Headway (s)	4.6	3.9	4.2	4.3
Degree Utilization, x	0.05	0.16	0.03	0.14
Capacity (veh/h)	752	895	808	799
Control Delay (s)	7.8	7.6	7.3	7.9
Approach Delay (s)	7.8	7.6	7.3	7.9
Approach LOS	A	A	A	A

Intersection Summary				
Delay	7.7			
Level of Service	A			
Intersection Capacity Utilization	25.9%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access 06-27-2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	5	5	5	20	35	0
Future Volume (vph)	5	5	5	20	35	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	7	7	27	47	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	14	34	47
Volume Left (vph)	7	7	0
Volume Right (vph)	7	0	0
Hadj (s)	-0.20	0.20	0.10
Departure Headway (s)	3.9	4.2	4.1
Degree Utilization, x	0.02	0.04	0.05
Capacity (veh/h)	904	845	877
Control Delay (s)	6.9	7.3	7.3
Approach Delay (s)	6.9	7.3	7.3
Approach LOS	A	A	A

Intersection Summary				
Delay	7.3			
Level of Service	A			
Intersection Capacity Utilization	24.8%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street 06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	0	0	95	50	25
Future Volume (Veh/h)	20	0	0	95	50	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	26	0	0	122	64	32
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	214	92	108			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	214	92	108			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	96	100	100			
cM capacity (veh/h)	736	743	1478			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	26	122	96
Volume Left	26	0	0
Volume Right	0	0	32
cSH	736	1478	1700
Volume to Capacity	0.04	0.00	0.06
Queue Length 95th (m)	0.9	0.0	0.0
Control Delay (s)	10.1	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.1	0.0	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		1.1		
Intersection Capacity Utilization	17.5%	ICU Level of Service		A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	70	5	5	120	0	40	0	15	5	0	95
Future Volume (Veh/h)	30	70	5	5	120	0	40	0	15	5	0	95
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.89	0.92	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	33	79	6	6	135	0	45	0	17	5	0	103
Pedestrians					6							
Lane Width (m)					4.5							
Walking Speed (m/s)					1.2							
Percent Blockage					1							
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	135			85			398	295	88	318	298	135
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	135			85			398	295	88	318	298	135
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			91	100	98	99	100	89
cM capacity (veh/h)	1449			1524			489	600	970	607	598	914

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	118	141	62	108
Volume Left	33	6	45	5
Volume Right	6	0	17	103
cSH	1449	1524	566	893
Volume to Capacity	0.02	0.00	0.11	0.12
Queue Length 95th (m)	0.6	0.1	2.9	3.3
Control Delay (s)	2.2	0.3	12.1	9.6
Lane LOS	A	A	B	A
Approach Delay (s)	2.2	0.3	12.1	9.6
Approach LOS			B	A

Intersection Summary				
Average Delay		4.9		
Intersection Capacity Utilization	29.6%	ICU Level of Service		A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

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

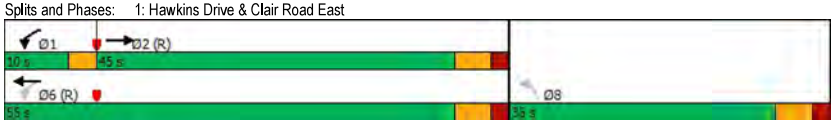
Queues
1: Hawkins Drive & Clair Road East

06-27-2024

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	900	95	615	20
Future Volume (vph)	900	95	615	20
Lane Group Flow (vph)	954	97	628	142
Turn Type	NA	pm+pt	NA	Perm
Protected Phases	2	1	6	
Permitted Phases		6		8
Detector Phase	2	1	6	8
Switch Phase				
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	45.0	10.0	55.0	35.0
Total Split (%)	50.0%	11.1%	61.1%	38.9%
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	C-Min	None	C-Min	None
v/c Ratio	0.42	0.20	0.24	0.43
Control Delay	3.6	4.7	4.9	12.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.6	4.7	4.9	12.6
Queue Length 50th (m)	14.3	2.3	11.6	2.5
Queue Length 95th (m)	21.9	12.8	38.6	14.4
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2249	476	2627	673
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.42	0.20	0.24	0.21

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 1: Hawkins Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	900	35	95	615	20	120
Future Volume (vph)	900	35	95	615	20	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.88	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3463		1783	3535	1834	
Flt Permitted	1.00		0.25	1.00	0.99	
Satd. Flow (perm)	3463		476	3535	1834	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	918	36	97	628	20	122
RTOR Reduction (vph)	2	0	0	0	107	0
Lane Group Flow (vph)	952	0	97	628	35	0
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	57.8		66.9	66.9	11.1	
Effective Green, g (s)	57.8		66.9	66.9	11.1	
Actuated g/C Ratio	0.64		0.74	0.74	0.12	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2224		442	2627	226	
v/s Ratio Prot	c0.27		0.01	c0.18		
v/s Ratio Perm			0.15		c0.02	
v/c Ratio	0.43		0.22	0.24	0.16	
Uniform Delay, d1	7.9		3.7	3.6	35.3	
Progression Factor	0.32		1.00	1.00	1.04	
Incremental Delay, d2	0.5		0.3	0.2	0.3	
Delay (s)	3.1		4.0	3.8	36.8	
Level of Service	A		A	A	D	
Approach Delay (s)	3.1			3.8	36.8	
Approach LOS	A			A	D	

Intersection Summary				
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.37			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	53.7%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	105	10	40	50	5	10	30	15	15	35	35
Future Volume (Veh/h)	60	105	10	40	50	5	10	30	15	15	35	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	71	125	12	48	60	6	12	36	18	18	42	42
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	99			150			516	481	148	505	484	104
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	99			150			516	481	148	505	484	104
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	95			97			97	92	98	95	90	95
cM capacity (veh/h)	1455			1424			369	427	889	384	425	900

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	208	114	66	102
Volume Left	71	48	12	18
Volume Right	12	6	18	42
cSH	1455	1424	481	530
Volume to Capacity	0.05	0.03	0.14	0.19
Queue Length 95th (m)	1.2	0.8	3.8	5.6
Control Delay (s)	2.9	3.4	13.7	13.4
Lane LOS	A	A	B	B
Approach Delay (s)	2.9	3.4	13.7	13.4
Approach LOS			B	B

Intersection Summary				
Average Delay	6.6			
Intersection Capacity Utilization	27.0%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive

06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	240	135	15	20	25
Future Volume (Veh/h)	20	240	135	15	20	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	23	273	153	17	23	28
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	185				496	176
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	185				496	176
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	97
cM capacity (veh/h)	1385				522	861

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	296	170	51
Volume Left	23	0	23
Volume Right	0	17	28
cSH	1385	1700	666
Volume to Capacity	0.02	0.10	0.08
Queue Length 95th (m)	0.4	0.0	2.0
Control Delay (s)	0.7	0.0	10.9
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	10.9
Approach LOS			B

Intersection Summary			
Average Delay		1.5	
Intersection Capacity Utilization		37.3%	ICU Level of Service A
Analysis Period (min)		15	

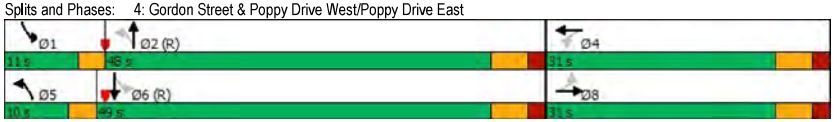
Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	25	80	30	95	895	110	860
Future Volume (vph)	40	25	80	30	95	895	110	860
Lane Group Flow (vph)	0	133	0	205	97	1076	112	914
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	10.0	48.0	11.0	49.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	11.1%	53.3%	12.2%	54.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.47		0.70	0.19	0.52	0.29	0.43
Control Delay		24.4		39.1	5.5	13.3	6.0	11.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		24.4		39.1	5.5	13.3	6.0	11.8
Queue Length 50th (m)		12.7		27.8	4.1	55.0	5.3	48.8
Queue Length 95th (m)		26.7		45.6	11.8	99.3	m5.2	m31.8
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		425		451	518	2057	396	2106
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.31		0.45	0.19	0.52	0.28	0.43

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	25	65	80	30	90	95	895	160	110	860	35
Future Volume (vph)	40	25	65	80	30	90	95	895	160	110	860	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.94		1.00	0.98		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1744			1848		2004	3402		1726	3478	
Flt Permitted		0.78			0.80		0.27	1.00		0.21	1.00	
Satd. Flow (perm)		1388			1509		573	3402		383	3478	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	41	26	66	82	31	92	97	913	163	112	878	36
RTOR Reduction (vph)	0	46	0	0	37	0	0	12	0	0	2	0
Lane Group Flow (vph)	0	87	0	0	168	0	97	1064	0	112	912	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		15.3			15.3		59.4	53.4		60.0	53.7	
Effective Green, g (s)		15.3			15.3		59.4	53.4		60.0	53.7	
Actuated g/C Ratio		0.17			0.17		0.66	0.59		0.67	0.60	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		235			256		473	2018		349	2075	
v/s Ratio Prot							0.01	c0.31		c0.02	0.26	
v/s Ratio Perm		0.06			c0.11		0.12			0.19		
v/c Ratio		0.37			0.65		0.21	0.53		0.32	0.44	
Uniform Delay, d1		33.1			34.9		5.8	10.8		6.2	9.9	
Progression Factor		1.00			1.00		1.00	1.00		1.07	1.00	
Incremental Delay, d2		1.0			5.9		0.2	1.0		0.3	0.4	
Delay (s)		34.1			40.8		6.0	11.8		7.0	10.3	
Level of Service		C			D		A	B		A	B	
Approach Delay (s)		34.1			40.8			11.3			9.9	
Approach LOS		C			D			B			A	

Intersection Summary				
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	68.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

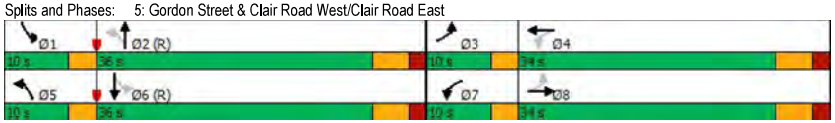
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	255	875	155	505	150	725	200	765
Future Volume (vph)	255	875	155	505	150	725	200	765
Lane Group Flow (vph)	263	1041	160	650	155	891	206	944
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.80	0.96	0.69	0.61	0.72	0.82	0.86	0.86
Control Delay	39.2	49.3	34.7	29.0	38.9	28.4	51.2	36.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.2	49.3	34.7	29.0	38.9	28.4	51.2	36.8
Queue Length 50th (m)	29.6	95.6	21.3	63.7	8.4	76.3	21.3	80.6
Queue Length 95th (m)	#66.8	#139.4	#41.3	61.9	#41.8	56.4	#60.0	#107.8
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	328	1090	231	1083	215	1138	239	1129
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.96	0.69	0.60	0.72	0.78	0.86	0.84

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	255	875	135	155	505	125	150	725	140	200	765	150
Future Volume (vph)	255	875	135	155	505	125	150	725	140	200	765	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1740	3444		1710	3406		1646	3359		1727	3334	
Flt Permitted	0.27	1.00		0.15	1.00		0.14	1.00		0.14	1.00	
Satd. Flow (perm)	497	3444		262	3406		241	3359		262	3334	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	263	902	139	160	521	129	155	747	144	206	789	155
RTOR Reduction (vph)	0	14	0	0	24	0	0	18	0	0	18	0
Lane Group Flow (vph)	263	1027	0	160	626	0	155	873	0	206	926	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	36.2	28.1		35.0	27.5		35.9	28.8		36.9	29.3	
Effective Green, g (s)	36.2	28.1		35.0	27.5		35.9	28.8		36.9	29.3	
Actuated g/C Ratio	0.40	0.31		0.39	0.31		0.40	0.32		0.41	0.33	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	311	1075		222	1040		206	1074		231	1085	
v/s Ratio Prot	c0.08	c0.30		0.06	0.18		0.06	0.26		c0.08	0.28	
v/s Ratio Perm	0.26			0.22			0.24			c0.29		
v/c Ratio	0.85	0.96		0.72	0.60		0.75	0.81		0.89	0.85	
Uniform Delay, d1	21.1	30.3		21.3	26.6		20.1	28.1		20.0	28.3	
Progression Factor	1.00	1.00		1.18	1.05		1.42	0.82		1.00	1.00	
Incremental Delay, d2	18.6	17.6		10.2	0.9		12.7	5.9		31.9	8.5	
Delay (s)	39.8	48.0		35.4	28.8		41.2	28.9		52.0	36.9	
Level of Service	D	D		D	C		D	C		D	D	
Approach Delay (s)		46.3			30.1			30.8			39.6	
Approach LOS		D			C			C			D	

Intersection Summary				
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	90.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

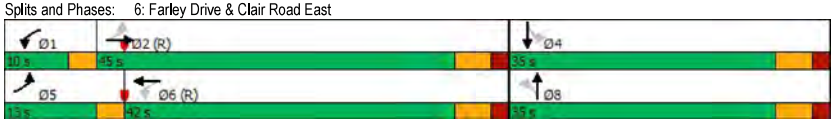
Queues
6: Farley Drive & Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	200	800	55	505	110	40	105	60
Future Volume (vph)	200	800	55	505	110	40	105	60
Lane Group Flow (vph)	208	1005	57	615	115	73	0	328
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	13.0	45.0	10.0	42.0	35.0	35.0	35.0	35.0
Total Split (%)	14.4%	50.0%	11.1%	46.7%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.37	0.54	0.15	0.36	0.66	0.18		0.78
Control Delay	4.8	11.6	5.4	10.9	48.3	16.9		39.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	4.8	11.6	5.4	10.9	48.3	16.9		39.5
Queue Length 50th (m)	4.1	35.7	0.8	32.8	19.1	6.1		47.2
Queue Length 95th (m)	m20.7	m98.8	4.7	55.7	34.4	15.3		69.4
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	577	1863	379	1724	247	577		573
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	0.36	0.54	0.15	0.36	0.47	0.13		0.57

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	800	165	55	505	85	110	40	30	105	60	150
Future Volume (vph)	200	800	165	55	505	85	110	40	30	105	60	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.97		1.00	0.98		1.00	0.94			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1778	3370		1783	3404		1674	1728			1902	
Flt Permitted	0.36	1.00		0.24	1.00		0.44	1.00			0.86	
Satd. Flow (perm)	674	3370		445	3404		771	1728			1665	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	208	833	172	57	526	89	115	42	31	109	62	156
RTOR Reduction (vph)	0	16	0	0	12	0	0	24	0	0	42	0
Lane Group Flow (vph)	208	989	0	57	603	0	115	49	0	0	286	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	57.5	48.8		51.0	45.3		20.5	20.5			20.5	
Effective Green, g (s)	57.5	48.8		51.0	45.3		20.5	20.5			20.5	
Actuated g/C Ratio	0.64	0.54		0.57	0.50		0.23	0.23			0.23	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	543	1827		336	1713		175	393			379	
v/s Ratio Prot	c0.04	c0.29		0.01	0.18			0.03				
v/s Ratio Perm	0.21			0.09			0.15				c0.17	
v/c Ratio	0.38	0.54		0.17	0.35		0.66	0.12			0.76	
Uniform Delay, d1	7.0	13.4		9.1	13.5		31.6	27.6			32.4	
Progression Factor	0.61	0.77		0.67	0.71		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.4		0.2	0.6		8.6	0.1			8.3	
Delay (s)	4.4	10.7		6.3	10.2		40.1	27.8			40.7	
Level of Service	A	B		A	B		D	C			D	
Approach Delay (s)		9.6			9.8			35.3			40.7	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	74.9%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	15	20	65	5	35	20	100	25	140
Future Volume (vph)	85	20	5	15	20	65	5	35	20	100	25	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	17	22	72	6	39	22	111	28	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	111	67	295
Volume Left (vph)	94	17	6	111
Volume Right (vph)	6	72	22	156
Hadj (s)	0.12	-0.36	-0.18	-0.22
Departure Headway (s)	5.0	4.5	4.6	4.3
Degree Utilization, x	0.17	0.14	0.09	0.36
Capacity (veh/h)	664	723	717	787
Control Delay (s)	9.0	8.3	8.1	9.7
Approach Delay (s)	9.0	8.3	8.1	9.7
Approach LOS	A	A	A	A

Intersection Summary				
Delay	9.1			
Level of Service	A			
Intersection Capacity Utilization	42.9%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	30	10	10	30	35	10
Future Volume (vph)	30	10	10	30	35	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	11	11	34	40	11

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	45	45	51
Volume Left (vph)	34	11	0
Volume Right (vph)	11	0	11
Hadj (s)	0.00	0.05	-0.13
Departure Headway (s)	4.1	4.1	3.9
Degree Utilization, x	0.05	0.05	0.06
Capacity (veh/h)	852	856	903
Control Delay (s)	7.3	7.3	7.1
Approach Delay (s)	7.3	7.3	7.1
Approach LOS	A	A	A

Intersection Summary			
Delay		7.3	
Level of Service		A	
Intersection Capacity Utilization		28.9%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	5	0	90	80	50
Future Volume (Veh/h)	50	5	0	90	80	50
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	56	6	0	101	90	56
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	227	126	154			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	227	126	154			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	93	99	100			
cM capacity (veh/h)	758	881	1428			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	62	101	146
Volume Left	56	0	0
Volume Right	6	0	56
cSH	768	1428	1700
Volume to Capacity	0.08	0.00	0.09
Queue Length 95th (m)	2.1	0.0	0.0
Control Delay (s)	10.1	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.1	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		2.0	
Intersection Capacity Utilization		18.9%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	150	30	10	100	0	30	0	10	0	0	45
Future Volume (Veh/h)	65	150	30	10	100	0	30	0	10	0	0	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	71	163	33	11	109	0	33	0	11	0	0	49
Pedestrians		2			17			1				
Lane Width (m)		4.5			4.5			3.6				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		0			2			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	109			197			504	454	198	480	470	111
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	109			197			504	454	198	480	470	111
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			92	100	99	100	100	95
cM capacity (veh/h)	1481			1387			435	474	833	460	464	940

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	267	120	44	49
Volume Left	71	11	33	0
Volume Right	33	0	11	49
cSH	1481	1387	494	940
Volume to Capacity	0.05	0.01	0.09	0.05
Queue Length 95th (m)	1.2	0.2	2.3	1.3
Control Delay (s)	2.3	0.8	13.0	9.0
Lane LOS	A	A	B	A
Approach Delay (s)	2.3	0.8	13.0	9.0
Approach LOS			B	A

Intersection Summary				
Average Delay	3.6			
Intersection Capacity Utilization	37.7%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

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

Queues
1: Hawkins Drive & Clair Road East

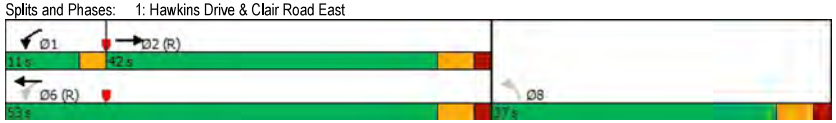
06-27-2024

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	610	115	525	25
Future Volume (vph)	610	115	525	25
Lane Group Flow (vph)	666	120	547	135
Turn Type	NA	pm+pt	NA	Perm
Protected Phases	2	1	6	
Permitted Phases		6		8
Detector Phase	2	1	6	8
Switch Phase				
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	42.0	11.0	53.0	37.0
Total Split (%)	46.7%	12.2%	58.9%	41.1%
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	C-Min	None	C-Min	None
v/c Ratio	0.31	0.19	0.21	0.42
Control Delay	5.1	4.5	4.8	13.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.1	4.5	4.8	13.6
Queue Length 50th (m)	13.1	2.9	9.8	4.0
Queue Length 95th (m)	25.0	15.5	33.5	15.4
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2183	626	2574	706
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.19	0.21	0.19

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 1: Hawkins Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	610	30	115	525	25	105
Future Volume (vph)	610	30	115	525	25	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3493		1765	3466	1844	
Flt Permitted	1.00		0.36	1.00	0.99	
Satd. Flow (perm)	3493		676	3466	1844	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	635	31	120	547	26	109
RTOR Reduction (vph)	2	0	0	0	96	0
Lane Group Flow (vph)	664	0	120	547	39	0
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	56.2		66.9	66.9	11.1	
Effective Green, g (s)	56.2		66.9	66.9	11.1	
Actuated g/C Ratio	0.62		0.74	0.74	0.12	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2181		595	2576	227	
v/s Ratio Prot	c0.19		0.02	c0.16		
v/s Ratio Perm			0.13		c0.02	
v/c Ratio	0.30		0.20	0.21	0.17	
Uniform Delay, d1	7.8		3.4	3.5	35.3	
Progression Factor	0.51		1.00	1.00	1.01	
Incremental Delay, d2	0.3		0.2	0.2	0.4	
Delay (s)	4.3		3.5	3.7	36.1	
Level of Service	A		A	A	D	
Approach Delay (s)	4.3			3.7	36.1	
Approach LOS	A			A	D	

Intersection Summary

HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	60	5	40	60	10	5	25	15	5	45	30
Future Volume (Veh/h)	40	60	5	40	60	10	5	25	15	5	45	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	43	65	5	43	65	11	5	27	16	5	48	32
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	88			81			383	338	82	354	336	88
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	88			81			383	338	82	354	336	88
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			97			99	95	98	99	91	97
cM capacity (veh/h)	1501			1512			482	540	970	529	542	933

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	113	119	48	85
Volume Left	43	43	5	5
Volume Right	5	11	16	32
cSH	1501	1512	624	642
Volume to Capacity	0.03	0.03	0.08	0.13
Queue Length 95th (m)	0.7	0.7	2.0	3.6
Control Delay (s)	3.0	2.8	11.2	11.5
Lane LOS	A	A	B	B
Approach Delay (s)	3.0	2.8	11.2	11.5
Approach LOS			B	B

Intersection Summary				
Average Delay	6.0			
Intersection Capacity Utilization	23.2%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	155	145	15	15	35
Future Volume (Veh/h)	10	155	145	15	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	170	159	16	16	38
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	190				374	182
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	190				374	182
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	96
cM capacity (veh/h)	1379				618	855

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	181	175	54
Volume Left	11	0	16
Volume Right	0	16	38
cSH	1379	1700	768
Volume to Capacity	0.01	0.10	0.07
Queue Length 95th (m)	0.2	0.0	1.8
Control Delay (s)	0.5	0.0	10.0
Lane LOS	A		B
Approach Delay (s)	0.5	0.0	10.0
Approach LOS			B

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

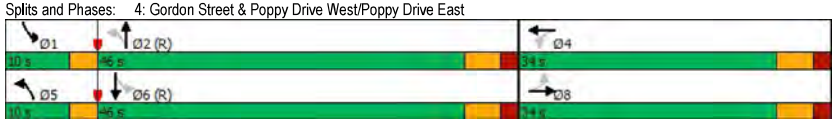
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	35	20	90	25	75	720	80	815
Future Volume (vph)	35	20	90	25	75	720	80	815
Lane Group Flow (vph)	0	109	0	236	82	895	88	923
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	34.0	34.0	34.0	34.0	10.0	46.0	10.0	46.0
Total Split (%)	37.8%	37.8%	37.8%	37.8%	11.1%	51.1%	11.1%	51.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.39		0.73	0.16	0.43	0.20	0.44
Control Delay		21.9		39.1	5.7	12.4	4.8	10.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		21.9		39.1	5.7	12.4	4.8	10.9
Queue Length 50th (m)		9.8		31.9	3.7	44.3	2.6	37.7
Queue Length 95th (m)		22.6		51.8	10.3	75.4	m5.8	48.4
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		447		520	510	2071	450	2106
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.24		0.45	0.16	0.43	0.20	0.44

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	20	45	90	25	100	75	720	95	80	815	25
Future Volume (vph)	35	20	45	90	25	100	75	720	95	80	815	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.94			0.94		1.00	0.98		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1712			1840		2044	3493		1743	3551	
Flt Permitted		0.77			0.83		0.26	1.00		0.27	1.00	
Satd. Flow (perm)		1337			1560		569	3493		501	3551	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	38	22	49	99	27	110	82	791	104	88	896	27
RTOR Reduction (vph)	0	38	0	0	42	0	0	8	0	0	2	0
Lane Group Flow (vph)	0	71	0	0	194	0	82	887	0	88	921	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		16.4			16.4		58.4	52.5		58.8	52.7	
Effective Green, g (s)		16.4			16.4		58.4	52.5		58.8	52.7	
Actuated g/C Ratio		0.18			0.18		0.65	0.58		0.65	0.59	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		243			284		465	2037		411	2079	
v/s Ratio Prot							0.01	0.25		c0.01	c0.26	
v/s Ratio Perm		0.05			c0.12		0.10			0.13		
v/c Ratio		0.29			0.68		0.18	0.44		0.21	0.44	
Uniform Delay, d1		31.8			34.4		6.1	10.5		6.1	10.4	
Progression Factor		1.00			1.00		1.00	1.00		0.81	0.88	
Incremental Delay, d2		0.7			6.7		0.2	0.7		0.2	0.5	
Delay (s)		32.4			41.0		6.3	11.2		5.1	9.7	
Level of Service		C			D		A	B		A	A	
Approach Delay (s)		32.4			41.0			10.7			9.3	
Approach LOS		C			D			B			A	

Intersection Summary

HCM 2000 Control Delay	14.2	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.48				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	62.2%	ICU Level of Service		B	
Analysis Period (min)	15				

c Critical Lane Group

Queues
5: Gordon Street & Clair Road West/Clair Road East

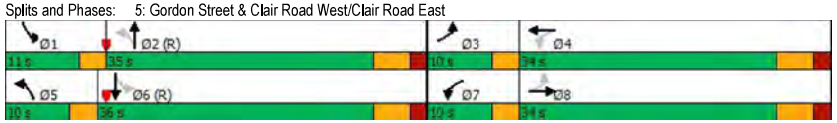
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	180	540	165	445	125	600	200	710
Future Volume (vph)	180	540	165	445	125	600	200	710
Lane Group Flow (vph)	186	655	170	593	129	717	206	830
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	11.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	38.9%	12.2%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.61	0.75	0.61	0.69	0.43	0.59	0.56	0.65
Control Delay	26.6	35.9	28.0	31.9	15.2	18.9	19.7	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	35.9	28.0	31.9	15.2	18.9	19.7	27.1
Queue Length 50th (m)	20.9	56.5	19.7	56.1	4.6	60.2	20.2	67.5
Queue Length 95th (m)	33.9	69.1	#33.4	49.3	17.3	25.5	35.8	89.2
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	307	1096	277	1083	297	1246	369	1288
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.60	0.61	0.55	0.43	0.58	0.56	0.64

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	540	95	165	445	130	125	600	95	200	710	95
Future Volume (vph)	180	540	95	165	445	130	125	600	95	200	710	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1740	3471		1708	3387		1645	3472		1726	3477	
Flt Permitted	0.26	1.00		0.22	1.00		0.22	1.00		0.25	1.00	
Satd. Flow (perm)	479	3471		399	3387		383	3472		459	3477	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	186	557	98	170	459	134	129	619	98	206	732	98
RTOR Reduction (vph)	0	17	0	0	33	0	0	14	0	0	11	0
Lane Group Flow (vph)	186	638	0	170	560	0	129	703	0	206	819	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	31.2	22.1		30.6	21.8		39.7	31.4		42.5	32.8	
Effective Green, g (s)	31.2	22.1		30.6	21.8		39.7	31.4		42.5	32.8	
Actuated g/C Ratio	0.35	0.25		0.34	0.24		0.44	0.35		0.47	0.36	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	293	852		263	820		285	1211		353	1267	
v/s Ratio Prot	c0.06	c0.18		0.06	0.17		0.04	0.20		c0.06	c0.24	
v/s Ratio Perm	0.16			0.16			0.16			0.21		
v/c Ratio	0.63	0.75		0.65	0.68		0.45	0.58		0.58	0.65	
Uniform Delay, d1	22.0	31.4		22.5	31.0		16.1	23.9		15.2	23.8	
Progression Factor	1.00	1.00		1.05	0.98		0.87	0.69		1.00	1.00	
Incremental Delay, d2	4.5	3.6		5.0	2.2		1.1	1.9		2.5	2.6	
Delay (s)	26.5	35.0		28.5	32.6		15.1	18.5		17.6	26.3	
Level of Service	C	D		C	C		B	B		B	C	
Approach Delay (s)		33.1			31.7			18.0			24.6	
Approach LOS		C			C			B			C	

Intersection Summary

HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	83.4%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Queues
6: Farley Drive & Clair Road East

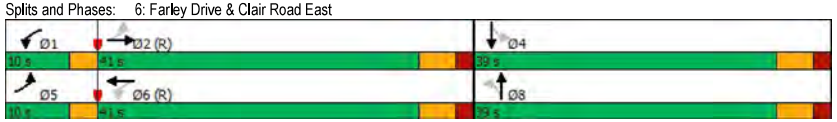
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	125	500	45	425	150	60	110	55
Future Volume (vph)	125	500	45	425	150	60	110	55
Lane Group Flow (vph)	136	722	49	554	163	103	0	348
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	41.0	10.0	41.0	39.0	39.0	39.0	39.0
Total Split (%)	11.1%	45.6%	11.1%	45.6%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.24	0.38	0.10	0.33	0.84	0.22		0.77
Control Delay	5.2	9.8	5.5	11.7	64.6	17.0		36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	5.2	9.8	5.5	11.7	64.6	17.0		36.7
Queue Length 50th (m)	2.9	7.6	2.1	28.5	28.4	9.5		49.5
Queue Length 95th (m)	m22.6	72.1	3.0	54.0	46.7	19.2		69.5
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	563	1890	504	1682	288	666		645
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	0.24	0.38	0.10	0.33	0.57	0.15		0.54

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	500	165	45	425	85	150	60	35	110	55	155
Future Volume (vph)	125	500	165	45	425	85	150	60	35	110	55	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.96		1.00	0.98		1.00	0.94			0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1760	3383		1782	3343		1686	1753			1932	
Flt Permitted	0.39	1.00		0.37	1.00		0.44	1.00			0.84	
Satd. Flow (perm)	722	3383		693	3343		788	1753			1660	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	543	179	49	462	92	163	65	38	120	60	168
RTOR Reduction (vph)	0	27	0	0	15	0	0	28	0	0	44	0
Lane Group Flow (vph)	136	695	0	49	539	0	163	75	0	0	304	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.8	48.4		48.6	44.2		22.2	22.2			22.2	
Effective Green, g (s)	55.8	48.4		48.6	44.2		22.2	22.2			22.2	
Actuated g/C Ratio	0.62	0.54		0.54	0.49		0.25	0.25			0.25	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	546	1819		427	1641		194	432			409	
v/s Ratio Prot	c0.02	c0.21		0.01	0.16			0.04				
v/s Ratio Perm	0.13			0.06			c0.21				0.18	
v/c Ratio	0.25	0.38		0.11	0.33		0.84	0.17			0.74	
Uniform Delay, d1	7.3	12.1		9.8	13.9		32.2	26.7			31.3	
Progression Factor	0.58	0.72		0.65	0.74		1.00	1.00			1.00	
Incremental Delay, d2	0.2	0.5		0.1	0.5		26.5	0.2			7.1	
Delay (s)	4.4	9.2		6.5	10.8		58.7	26.9			38.4	
Level of Service	A	A		A	B		E	C			D	
Approach Delay (s)		8.5			10.5			46.4			38.4	
Approach LOS		A			B			D			D	

Intersection Summary

HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	70.6%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

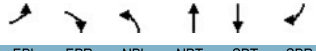
HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	30	20	105	0	45	15	105	20	125
Future Volume (vph)	105	20	10	30	20	105	0	45	15	105	20	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	34	23	121	0	52	17	121	23	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	178	69	288
Volume Left (vph)	121	34	0	121
Volume Right (vph)	11	121	17	144
Hadj (s)	0.11	-0.37	-0.15	-0.22
Departure Headway (s)	5.1	4.6	5.0	4.6
Degree Utilization, x	0.22	0.23	0.10	0.37
Capacity (veh/h)	646	713	653	733
Control Delay (s)	9.6	9.0	8.5	10.3
Approach Delay (s)	9.6	9.0	8.5	10.3
Approach LOS	A	A	A	B

Intersection Summary				
Delay	9.6			
Level of Service	A			
Intersection Capacity Utilization	51.3%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access 06-27-2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	40	15	5	25	35	25
Future Volume (vph)	40	15	5	25	35	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	18	6	30	43	30

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	67	36	73
Volume Left (vph)	49	6	0
Volume Right (vph)	18	0	30
Hadj (s)	-0.01	0.03	-0.25
Departure Headway (s)	4.1	4.1	3.8
Degree Utilization, x	0.08	0.04	0.08
Capacity (veh/h)	850	840	917
Control Delay (s)	7.4	7.3	7.2
Approach Delay (s)	7.4	7.3	7.2
Approach LOS	A	A	A

Intersection Summary			
Delay	7.3		
Level of Service	A		
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street 06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	60	0	5	75	80	65
Future Volume (Veh/h)	60	0	5	75	80	65
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	74	0	6	93	99	80
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	244	139	179			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	244	139	179			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	90	100	100			
cM capacity (veh/h)	746	915	1409			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	74	99	179
Volume Left	74	6	0
Volume Right	0	0	80
cSH	746	1409	1700
Volume to Capacity	0.10	0.00	0.11
Queue Length 95th (m)	2.6	0.1	0.0
Control Delay (s)	10.4	0.5	0.0
Lane LOS	B	A	
Approach Delay (s)	10.4	0.5	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		2.3		
Intersection Capacity Utilization	18.2%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	100	20	5	95	0	20	0	15	5	0	55
Future Volume (Veh/h)	50	100	20	5	95	0	20	0	15	5	0	55
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	54	115	23	6	109	0	23	0	17	5	0	60
Pedestrians		3			6			1				
Lane Width (m)		4.5			4.5			3.6				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	109			139			420	356	134	378	368	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	109			139			420	356	134	378	368	112
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			95	100	98	99	100	94
cM capacity (veh/h)	1481			1456			488	546	914	547	538	938

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	192	115	40	65
Volume Left	54	6	23	5
Volume Right	23	0	17	60
cSH	1481	1456	609	889
Volume to Capacity	0.04	0.00	0.07	0.07
Queue Length 95th (m)	0.9	0.1	1.7	1.9
Control Delay (s)	2.3	0.4	11.3	9.4
Lane LOS	A	A	B	A
Approach Delay (s)	2.3	0.4	11.3	9.4
Approach LOS			B	A

Intersection Summary				
Average Delay		3.8		
Intersection Capacity Utilization	31.9%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

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

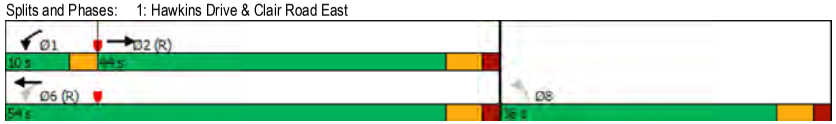
Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	15	80	995	35	95
Future Volume (vph)	510	15	80	995	35	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3362	0	1785	3433	1746	0
Flt Permitted			0.393		0.987	
Satd. Flow (perm)	3362	0	736	3433	1746	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	4				110	
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		5	5			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Adj. Flow (vph)	593	17	93	1157	41	110
Shared Lane Traffic (%)						
Lane Group Flow (vph)	610	0	93	1157	151	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	10.0		7.0	10.0	7.0	
Minimum Split (s)	35.0		10.0	35.0	35.0	
Total Split (s)	44.0		10.0	54.0	36.0	
Total Split (%)	48.9%		11.1%	60.0%	40.0%	
Maximum Green (s)	38.0		7.0	48.0	30.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		None	C-Min	None	
Walk Time (s)	11.0			11.0	8.0	
Flash Dont Walk (s)	18.0			18.0	18.0	
Pedestrian Calls (#/hr)	7			7	12	
Act Effct Green (s)	58.1		69.5	66.5	11.5	
Actuated g/C Ratio	0.65		0.77	0.74	0.13	
v/c Ratio	0.28		0.14	0.46	0.47	
Control Delay	4.4		4.3	6.5	17.6	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	4.4		4.3	6.5	17.6	
LOS	A		A	A	B	
Approach Delay	4.4			6.3	17.6	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 51.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: Hawkins Drive & Clair Road East



Lane Group	EBT	WBL	WBT	NBL
Protected Phases	2	1	6	
Permitted Phases		6		8
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	44.0	10.0	54.0	36.0
Total Split (%)	48.9%	11.1%	60.0%	40.0%
Maximum Green (s)	38.0	7.0	48.0	30.0
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	C-Min	None	C-Min	None
Walk Time (s)	11.0		11.0	8.0
Flash Dont Walk (s)	18.0		18.0	18.0
Pedestrian Calls (#/hr)	7		7	12
90th %ile Green (s)	39.8	9.2	52.0	26.0
90th %ile Term Code	Coord	Gap	Coord	Ped
70th %ile Green (s)	58.1	7.0	68.1	9.9
70th %ile Term Code	Coord	Min	Coord	Gap
50th %ile Green (s)	60.4	7.0	70.4	7.6
50th %ile Term Code	Coord	Min	Coord	Gap
30th %ile Green (s)	61.0	7.0	71.0	7.0
30th %ile Term Code	Coord	Min	Coord	Min
10th %ile Green (s)	71.0	0.0	71.0	7.0
10th %ile Term Code	Coord	Skip	Coord	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	610	93	1157	151
v/c Ratio	0.28	0.14	0.46	0.47
Control Delay	4.4	4.3	6.5	17.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.4	4.3	6.5	17.6
Queue Length 50th (m)	8.5	2.3	27.7	6.5
Queue Length 95th (m)	18.8	11.8	78.3	18.1
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2170	655	2536	655
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	8	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.28	0.14	0.46	0.23

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	510	15	80	995	35	95
Future Volume (vph)	510	15	80	995	35	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3362		1783	3433	1745	
Flt Permitted	1.00		0.39	1.00	0.99	
Satd. Flow (perm)	3362		737	3433	1745	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	593	17	93	1157	41	110
RTOR Reduction (vph)	1	0	0	0	96	0
Lane Group Flow (vph)	609	0	93	1157	55	0
Confl. Peds. (#/hr)		5	5			
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	57.5		66.5	66.5	11.5	
Effective Green, g (s)	57.5		66.5	66.5	11.5	
Actuated g/C Ratio	0.64		0.74	0.74	0.13	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2147		614	2536	222	
v/s Ratio Prot	0.18		0.01	c0.34		
v/s Ratio Perm			0.10		c0.03	
v/c Ratio	0.28		0.15	0.46	0.25	
Uniform Delay, d1	7.2		3.3	4.6	35.4	
Progression Factor	0.46		1.00	1.00	1.17	
Incremental Delay, d2	0.3		0.1	0.6	0.6	
Delay (s)	3.7		3.5	5.2	41.8	
Level of Service	A		A	A	D	
Approach Delay (s)	3.7			5.1	41.8	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	65	0	40	80	10	10	50	40	5	40	35
Future Volume (vph)	60	65	0	40	80	10	10	50	40	5	40	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	1882	0	0	1807	0	0	1967	0	0	1804	0
Flt Permitted		0.977			0.985			0.995			0.997	
Satd. Flow (perm)	0	1882	0	0	1807	0	0	1967	0	0	1804	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	24		15	15		24	15		17	17		15
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	9%	8%	0%	0%	4%	0%	0%	0%	0%	0%	0%	20%
Adj. Flow (vph)	76	82	0	51	101	13	13	63	51	6	51	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	158	0	0	165	0	0	127	0	0	101	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	29.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	65	0	40	80	10	10	50	40	5	40	35
Future Volume (Veh/h)	60	65	0	40	80	10	10	50	40	5	40	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	76	82	0	51	101	13	13	63	51	6	51	44
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	138			97			543	489	114	567	482	146
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	138			97			543	489	114	567	482	146
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	94			97			96	85	94	98	88	95
cM capacity (veh/h)	1369			1485			342	422	916	319	426	821

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	158	165	127	101
Volume Left	76	51	13	6
Volume Right	0	13	51	44
cSH	1369	1485	523	526
Volume to Capacity	0.06	0.03	0.24	0.19
Queue Length 95th (m)	1.4	0.9	7.6	5.6
Control Delay (s)	4.0	2.5	14.1	13.5
Lane LOS	A	A	B	B
Approach Delay (s)	4.0	2.5	14.1	13.5
Approach LOS			B	B

Intersection Summary				
Average Delay	7.6			
Intersection Capacity Utilization	29.4%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	10	110	140	10	10	10
Future Volume (vph)	10	110	140	10	10	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	1927	1961	0	1547	0
Flt Permitted		0.996			0.976	
Satd. Flow (perm)	0	1927	1961	0	1547	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	8			8		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	30%	6%	6%	0%	9%	12%
Adj. Flow (vph)	11	121	154	11	11	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	132	165	0	22	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	24.1%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	110	140	10	10	10
Future Volume (Veh/h)	10	110	140	10	10	10
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	11	121	154	11	11	11
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	173				310	168
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	173				310	168
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	99				98	99
cM capacity (veh/h)	1243				657	846

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	132	165	22
Volume Left	11	0	11
Volume Right	0	11	11
cSH	1243	1700	740
Volume to Capacity	0.01	0.10	0.03
Queue Length 95th (m)	0.2	0.0	0.7
Control Delay (s)	0.7	0.0	10.0
Lane LOS	A		B
Approach Delay (s)	0.7	0.0	10.0
Approach LOS			B

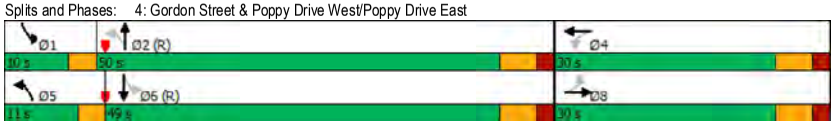
Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	24.1%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	15	80	55	20	85	165	1175	95	25	700	80
Future Volume (vph)	45	15	80	55	20	85	165	1175	95	25	700	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1443	0	0	1721	0	1894	3271	0	1678	3292	0
Flt Permitted		0.781			0.798		0.296			0.174		
Satd. Flow (perm)	0	1144	0	0	1396	0	589	3271	0	307	3292	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		72			62			13			18	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Adj. Flow (vph)	47	16	83	57	21	89	172	1224	99	26	729	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	146	0	0	167	0	172	1323	0	26	812	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		11.0	50.0		10.0	49.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		12.2%	55.6%		11.1%	54.4%	
Maximum Green (s)	24.0	24.0		24.0	24.0		8.0	44.0		7.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	1	1		1	1			3			3	
Act Effct Green (s)		13.3			13.3		67.0	60.7		64.1	54.1	
Actuated g/C Ratio		0.15			0.15		0.74	0.67		0.71	0.60	
v/c Ratio		0.63			0.64		0.31	0.60		0.08	0.41	
Control Delay		30.4			32.8		5.6	11.9		4.3	10.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		30.4			32.8		5.6	11.9		4.3	10.6	
LOS		C			C		A	B		A	B	
Approach Delay		30.4			32.8			11.2			10.4	
Approach LOS		C			C			B			B	

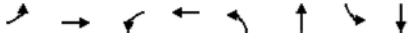
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 68.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	30.0	30.0	30.0	30.0	11.0	50.0	10.0	49.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	12.2%	55.6%	11.1%	54.4%
Maximum Green (s)	24.0	24.0	24.0	24.0	8.0	44.0	7.0	43.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	1	1	1	1		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	8.0	44.0	7.0	43.0
90th %ile Term Code	Ped	Ped	Ped	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	14.5	14.5	14.5	14.5	8.5	53.5	7.0	52.0
70th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Min	Coord
50th %ile Green (s)	11.9	11.9	11.9	11.9	7.5	66.1	0.0	55.6
50th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Skip	Coord
30th %ile Green (s)	9.2	9.2	9.2	9.2	7.0	68.8	0.0	58.8
30th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Skip	Coord
10th %ile Green (s)	7.0	7.0	7.0	7.0	7.0	71.0	0.0	61.0
10th %ile Term Code	Min	Min	Min	Min	Min	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	146	167	172	1323	26	812
v/c Ratio	0.63	0.64	0.31	0.60	0.08	0.41
Control Delay	30.4	32.8	5.6	11.9	4.3	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	32.8	5.6	11.9	4.3	10.6
Queue Length 50th (m)	12.7	18.2	6.3	46.0	1.0	44.1
Queue Length 95th (m)	28.2	33.6	19.5	133.3	m1.8	m31.7
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	357	417	555	2209	325	1985
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.40	0.31	0.60	0.08	0.41

Intersection Summary
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	15	80	55	20	85	165	1175	95	25	700	80
Future Volume (vph)	45	15	80	55	20	85	165	1175	95	25	700	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.93		1.00	0.99		1.00	0.98	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1442			1720		1894	3270		1677	3291	
Flt Permitted		0.78			0.80		0.30	1.00		0.17	1.00	
Satd. Flow (perm)		1144			1397		590	3270		306	3291	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	47	16	83	57	21	89	172	1224	99	26	729	83
RTOR Reduction (vph)	0	61	0	0	53	0	0	4	0	0	7	0
Lane Group Flow (vph)	0	85	0	0	114	0	172	1319	0	26	805	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		13.3			13.3		64.7	58.9		56.9	54.1	
Effective Green, g (s)		13.3			13.3		64.7	58.9		56.9	54.1	
Actuated g/C Ratio		0.15			0.15		0.72	0.65		0.63	0.60	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		169			206		534	2140		236	1978	
v/s Ratio Prot							c0.03	c0.40		0.00	0.24	
v/s Ratio Perm		0.07			c0.08		0.20			0.07		
v/c Ratio		0.50			0.55		0.32	0.62		0.11	0.41	
Uniform Delay, d1		35.3			35.6		4.4	9.0		6.6	9.5	
Progression Factor		1.00			1.00		1.00	1.00		0.89	0.96	
Incremental Delay, d2		2.3			3.2		0.4	1.3		0.1	0.4	
Delay (s)		37.6			38.8		4.8	10.3		6.1	9.5	
Level of Service		D			D		A	B		A	A	
Approach Delay (s)		37.6			38.8			9.7			9.4	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	68.4%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Future Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1631	3260	0	1572	3375	0	1586	3283	0	1678	3247	0
Flt Permitted	0.143			0.320			0.133			0.138		
Satd. Flow (perm)	245	3260	0	525	3375	0	222	3283	0	243	3247	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			17			16			72	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	172	494	100	161	967	128	183	1111	139	94	639	261
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	594	0	161	1095	0	183	1250	0	94	900	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		10.0	34.0		11.0	36.0		10.0	35.0	
Total Split (%)	11.1%	37.8%		11.1%	37.8%		12.2%	40.0%		11.1%	38.9%	
Maximum Green (s)	7.0	28.0		7.0	28.0		8.0	30.0		7.0	29.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		10			10			9			9	
Act Effct Green (s)	38.0	28.0		38.0	28.0		41.4	32.0		39.0	29.0	
Actuated g/C Ratio	0.42	0.31		0.42	0.31		0.46	0.36		0.43	0.32	
v/c Ratio	0.82	0.58		0.53	1.03		0.82	1.06		0.44	0.82	
Control Delay	47.4	27.4		26.0	70.3		50.1	70.4		19.7	33.3	

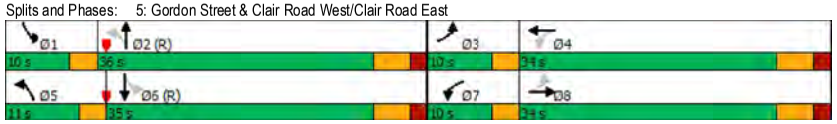
Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	47.4	27.4		26.0	70.3		50.1	70.4		19.7	33.3	
LOS	D	C		C	E		D	E		B	C	
Approach Delay		31.9			64.6			67.8			32.0	
Approach LOS		C			E			E			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.06			
Intersection Signal Delay: 52.7		Intersection LOS: D	
Intersection Capacity Utilization 91.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	11.0	36.0	10.0	35.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	12.2%	40.0%	11.1%	38.9%
Maximum Green (s)	7.0	28.0	7.0	28.0	8.0	30.0	7.0	29.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		10		10		9		9
90th %ile Green (s)	7.0	28.0	7.0	28.0	8.0	30.0	7.0	29.0
90th %ile Term Code	Max	Ped	Max	Max	Max	Coord	Max	Coord
70th %ile Green (s)	7.0	28.0	7.0	28.0	8.0	30.0	7.0	29.0
70th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
50th %ile Green (s)	7.0	28.0	7.0	28.0	8.0	30.0	7.0	29.0
50th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
30th %ile Green (s)	7.0	28.0	7.0	28.0	8.0	30.0	7.0	29.0
30th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Max	Coord
10th %ile Green (s)	7.0	28.0	7.0	28.0	8.0	40.0	0.0	29.0
10th %ile Term Code	Max	Hold	Max	Max	Max	Coord	Skip	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	172	594	161	1095	183	1250	94	900
v/c Ratio	0.82	0.58	0.53	1.03	0.82	1.06	0.44	0.82
Control Delay	47.4	27.4	26.0	70.3	50.1	70.4	19.7	33.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	27.4	26.0	70.3	50.1	70.4	19.7	33.3
Queue Length 50th (m)	18.4	45.2	27.1	~117.5	19.9	~140.5	9.1	73.0
Queue Length 95th (m)	#49.3	62.6	30.3	#156.0	#55.9	#177.1	17.9	98.0
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	211	1032	303	1061	223	1178	216	1095
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.58	0.53	1.03	0.82	1.06	0.44	0.82

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Future Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	3259		1568	3377		1586	3284		1677	3249	
Flt Permitted	0.14	1.00		0.32	1.00		0.13	1.00		0.14	1.00	
Satd. Flow (perm)	245	3259		529	3377		222	3284		244	3249	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	494	100	161	967	128	183	1111	139	94	639	261
RTOR Reduction (vph)	0	19	0	0	12	0	0	10	0	0	49	0
Lane Group Flow (vph)	172	575	0	161	1083	0	183	1240	0	94	851	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.0	28.0		35.0	28.0		39.4	31.4		34.6	29.0	
Effective Green, g (s)	35.0	28.0		35.0	28.0		39.4	31.4		34.6	29.0	
Actuated g/C Ratio	0.39	0.31		0.39	0.31		0.44	0.35		0.38	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	203	1013		286	1050		218	1145		182	1046	
v/s Ratio Prot	c0.07	0.18		0.04	c0.32		c0.07	c0.38		0.03	0.26	
v/s Ratio Perm	0.26			0.17			0.29			0.17		
v/c Ratio	0.85	0.57		0.56	1.03		0.84	1.08		0.52	0.81	
Uniform Delay, d1	22.2	25.9		19.1	31.0		18.9	29.3		21.7	28.0	
Progression Factor	1.00	1.00		1.29	1.19		1.53	0.90		1.00	1.00	
Incremental Delay, d2	26.4	0.7		2.1	33.9		20.6	50.1		2.5	6.9	
Delay (s)	48.6	26.7		26.7	70.7		49.6	76.5		24.2	35.0	
Level of Service	D	C		C	E		D	E		C	C	
Approach Delay (s)		31.6			65.1			73.1			33.9	
Approach LOS		C			E			E			C	

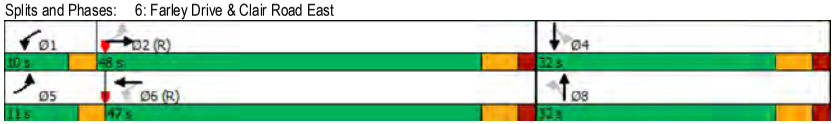
Intersection Summary				
HCM 2000 Control Delay	54.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	91.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	475	45	10	945	90	25	15	5	55	20	140
Future Volume (vph)	110	475	45	10	945	90	25	15	5	55	20	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1716	3207	0	1785	3330	0	1639	1723	0	0	1832	0
Flt Permitted	0.174			0.431			0.413				0.905	
Satd. Flow (perm)	314	3207	0	806	3330	0	706	1723	0	0	1675	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			15			6			105	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
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 (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Adj. Flow (vph)	124	534	51	11	1062	101	28	17	6	62	22	157
Shared Lane Traffic (%)												
Lane Group Flow (vph)	124	585	0	11	1163	0	28	23	0	0	241	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	11.0	48.0		10.0	47.0		32.0	32.0		32.0	32.0	
Total Split (%)	12.2%	53.3%		11.1%	52.2%		35.6%	35.6%		35.6%	35.6%	
Maximum Green (s)	8.0	42.0		7.0	41.0		26.0	26.0		26.0	26.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		3			3		5	5		5	5	
Act Effct Green (s)	66.2	61.6		63.1	53.1		14.4	14.4			14.4	
Actuated g/C Ratio	0.74	0.68		0.70	0.59		0.16	0.16			0.16	
v/c Ratio	0.36	0.27		0.02	0.59		0.25	0.08			0.68	
Control Delay	6.9	7.1		1.5	10.4		35.0	23.0			28.2	
Queue Delay	0.0	0.0		0.0	0.1		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	6.9	7.1		1.5	10.5		35.0	23.0			28.2	
LOS	A	A		A	B		C	C			C	
Approach Delay		7.0			10.4			29.6			28.2	
Approach LOS		A			B			C			C	

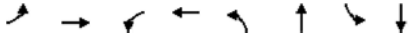
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 69.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023



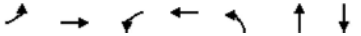
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	11.0	48.0	10.0	47.0	32.0	32.0	32.0	32.0
Total Split (%)	12.2%	53.3%	11.1%	52.2%	35.6%	35.6%	35.6%	35.6%
Maximum Green (s)	8.0	42.0	7.0	41.0	26.0	26.0	26.0	26.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		3		3	5	5	5	5
90th %ile Green (s)	8.0	42.0	7.0	41.0	26.0	26.0	26.0	26.0
90th %ile Term Code	Max	Coord	Max	Coord	Ped	Ped	Ped	Ped
70th %ile Green (s)	8.0	62.0	0.0	51.0	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.2	65.0	0.0	54.8	13.0	13.0	13.0	13.0
50th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.0	67.9	0.0	57.9	10.1	10.1	10.1	10.1
30th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	71.0	0.0	61.0	7.0	7.0	7.0	7.0
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Min	Min

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	124	585	11	1163	28	23	241
v/c Ratio	0.36	0.27	0.02	0.59	0.25	0.08	0.68
Control Delay	6.9	7.1	1.5	10.4	35.0	23.0	28.2
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	6.9	7.1	1.5	10.5	35.0	23.0	28.2
Queue Length 50th (m)	2.7	7.7	0.2	66.2	4.6	2.7	23.5
Queue Length 95th (m)	m24.2	m55.8	m0.2	114.9	10.7	7.9	39.9
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	355	2199	641	1972	203	502	558
Starvation Cap Reductn	0	0	0	117	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	0.35	0.27	0.02	0.63	0.14	0.05	0.43

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	475	45	10	945	90	25	15	5	55	20	140
Future Volume (vph)	110	475	45	10	945	90	25	15	5	55	20	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.99		1.00	0.99		1.00	0.96			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1716	3207		1781	3330		1625	1723			1828	
Flt Permitted	0.17	1.00		0.43	1.00		0.41	1.00			0.90	
Satd. Flow (perm)	315	3207		809	3330		706	1723			1675	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	124	534	51	11	1062	101	28	17	6	62	22	157
RTOR Reduction (vph)	0	5	0	0	6	0	0	5	0	0	88	0
Lane Group Flow (vph)	124	580	0	11	1157	0	28	18	0	0	153	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	63.6	59.2		54.6	53.2		14.4	14.4			14.4	
Effective Green, g (s)	63.6	59.2		54.6	53.2		14.4	14.4			14.4	
Actuated g/C Ratio	0.71	0.66		0.61	0.59		0.16	0.16			0.16	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	337	2109		505	1968		112	275			268	
v/s Ratio Prot	c0.03	0.18		0.00	c0.35			0.01				
v/s Ratio Perm	0.23			0.01			0.04				c0.09	
v/c Ratio	0.37	0.27		0.02	0.59		0.25	0.07			0.57	
Uniform Delay, d1	6.1	6.4		7.0	11.5		33.1	32.1			34.9	
Progression Factor	1.02	0.94		0.28	0.70		1.00	1.00			1.00	
Incremental Delay, d2	0.5	0.2		0.0	1.2		1.2	0.1			2.9	
Delay (s)	6.8	6.3		2.0	9.2		34.2	32.2			37.9	
Level of Service	A	A		A	A		C	C			D	
Approach Delay (s)		6.4			9.2			33.3			37.9	
Approach LOS		A			A			C			D	

Intersection Summary				
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	69.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Flt Permitted		0.960									0.996	
Satd. Flow (perm)	0	1760	0	0	1794	0	0	1773	0	0	1913	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	1		2	2		1	16		5	5		16
Confl. Bikes (#/hr)			1			1						
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	3%	0%	0%	0%	0%	0%	0%	6%	0%	20%	4%	0%
Adj. Flow (vph)	34	7	0	0	14	7	0	21	0	7	27	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	41	0	0	21	0	0	21	0	0	89	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.1%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Future Volume (vph)	25	5	0	0	10	5	0	15	0	5	20	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	0	14	7	0	21	0	7	27	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	21	21	89
Volume Left (vph)	34	0	0	7
Volume Right (vph)	0	7	0	55
Hadj (s)	0.21	-0.20	0.10	-0.31
Departure Headway (s)	4.4	4.0	4.2	3.8
Degree Utilization, x	0.05	0.02	0.02	0.09
Capacity (veh/h)	802	877	826	939
Control Delay (s)	7.6	7.1	7.3	7.1
Approach Delay (s)	7.6	7.1	7.3	7.1
Approach LOS	A	A	A	A

Intersection Summary				
Delay			7.3	
Level of Service			A	
Intersection Capacity Utilization			26.1%	ICU Level of Service A
Analysis Period (min)			15	

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Flt Permitted		0.976						0.987			0.987	
Satd. Flow (perm)	0	1709	0	0	1625	0	0	1541	0	0	1776	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	3		18	18		3	36		6	6		36
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	0%	0%	0%	50%	0%	0%	0%	12%	40%	0%	6%	0%
Adj. Flow (vph)	7	0	7	0	0	7	7	13	7	7	20	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	0	7	0	0	27	0	0	27	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization 26.3%			ICU Level of Service A	
Analysis Period (min) 15				

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Future Volume (vph)	5	0	5	0	0	5	5	10	5	5	15	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	0	7	0	0	7	7	13	7	7	20	0

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	14	7	27	27
Volume Left (vph)	7	0	7	7
Volume Right (vph)	7	7	7	0
Hadj (s)	-0.20	-0.60	0.17	0.13
Departure Headway (s)	3.8	3.4	4.1	4.1
Degree Utilization, x	0.01	0.01	0.03	0.03
Capacity (veh/h)	922	1027	852	869
Control Delay (s)	6.9	6.5	7.3	7.2
Approach Delay (s)	6.9	6.5	7.3	7.2
Approach LOS	A	A	A	A

Intersection Summary				
Delay			7.1	
Level of Service			A	
Intersection Capacity Utilization			26.3%	ICU Level of Service
Analysis Period (min)			15	

Lanes, Volumes, Timings
9: Hawkins Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	5	0	0	125	80	15
Future Volume (vph)	5	0	0	125	80	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1642	0	0	1990	2046	0
Flt Permitted	0.950					
Satd. Flow (perm)	1642	0	0	1990	2046	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Confl. Peds. (#/hr)			12			12
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	16%	100%	0%	5%	0%	0%
Adj. Flow (vph)	6	0	0	160	103	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	6	0	0	160	122	0
Sign Control	Stop			Free	Free	

Intersection Summary				
Area Type:	Other			
Control Type: Unsignalized				
Intersection Capacity Utilization	18.0%			ICU Level of Service A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	5	0	0	125	80	15
Future Volume (Veh/h)	5	0	0	125	80	15
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	6	0	0	160	103	19
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	284	124	134			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	284	124	134			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	99	100	100			
cM capacity (veh/h)	669	710	1446			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	6	160	122
Volume Left	6	0	0
Volume Right	0	0	19
cSH	669	1446	1700
Volume to Capacity	0.01	0.00	0.07
Queue Length 95th (m)	0.2	0.0	0.0
Control Delay (s)	10.4	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.4	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization		18.0%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
10: 1888 Gordon Street Access & Poppy Drive East

12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	105	5	5	135	40	15
Future Volume (vph)	105	5	5	135	40	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	1831	0	0	1972	1721	0
Flt Permitted				0.998	0.965	
Satd. Flow (perm)	1831	0	0	1972	1721	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)						6
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	14%	0%	0%	6%	2%	0%
Adj. Flow (vph)	118	6	6	152	45	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	124	0	0	158	62	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.0%			ICU Level of Service A
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	105	5	5	135	40	15
Future Volume (Veh/h)	105	5	5	135	40	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	118	6	6	152	45	17
Pedestrians				6		
Lane Width (m)				4.5		
Walking Speed (m/s)				1.2		
Percent Blockage				1		
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			124		285	127
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			124		285	127
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		94	98
cM capacity (veh/h)			1475		702	923

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	124	158	62
Volume Left	0	6	45
Volume Right	6	0	17
cSH	1700	1475	752
Volume to Capacity	0.07	0.00	0.08
Queue Length 95th (m)	0.0	0.1	2.2
Control Delay (s)	0.0	0.3	10.2
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	10.2
Approach LOS			B

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1030	50	145	665	35	140
Future Volume (vph)	1030	50	145	665	35	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3458	0	1785	3535	1846	0
Flt Permitted			0.197		0.990	
Satd. Flow (perm)	3458	0	369	3535	1845	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	7				143	
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	0	0	0	0	0
Adj. Flow (vph)	1051	51	148	679	36	143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1102	0	148	679	179	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	10.0		7.0	10.0	7.0	
Minimum Split (s)	35.0		10.0	35.0	35.0	
Total Split (s)	43.0		12.0	55.0	35.0	
Total Split (%)	47.8%		13.3%	61.1%	38.9%	
Maximum Green (s)	37.0		9.0	49.0	29.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		None	C-Min	None	
Walk Time (s)	11.0			11.0	8.0	
Flash Dont Walk (s)	18.0			18.0	18.0	
Pedestrian Calls (#/hr)	7			7	12	
Act Effct Green (s)	54.8		69.6	66.6	11.4	
Actuated g/C Ratio	0.61		0.77	0.74	0.13	
v/c Ratio	0.52		0.35	0.26	0.50	
Control Delay	5.4		6.1	5.0	14.6	

Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.1		0.0	0.0	0.0	
Total Delay	5.5		6.1	5.0	14.6	
LOS	A		A	A	B	
Approach Delay	5.5			5.2	14.6	
Approach LOS	A			A	B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 6.2		Intersection LOS: A	
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Hawkins Drive & Clair Road East

Phasings
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Protected Phases	2	1	6	
Permitted Phases		6		8
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	43.0	12.0	55.0	35.0
Total Split (%)	47.8%	13.3%	61.1%	38.9%
Maximum Green (s)	37.0	9.0	49.0	29.0
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	C-Min	None	C-Min	None
Walk Time (s)	11.0		11.0	8.0
Flash Dont Walk (s)	18.0		18.0	18.0
Pedestrian Calls (#/hr)	7		7	12
90th %ile Green (s)	37.0	12.0	52.0	26.0
90th %ile Term Code	Coord	Max	Coord	Ped
70th %ile Green (s)	55.7	9.7	68.4	9.6
70th %ile Term Code	Coord	Gap	Coord	Gap
50th %ile Green (s)	59.4	8.3	70.7	7.3
50th %ile Term Code	Coord	Gap	Coord	Gap
30th %ile Green (s)	61.0	7.0	71.0	7.0
30th %ile Term Code	Coord	Min	Coord	Min
10th %ile Green (s)	61.0	7.0	71.0	7.0
10th %ile Term Code	Coord	Min	Coord	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	1102	148	679	179
v/c Ratio	0.52	0.35	0.26	0.50
Control Delay	5.4	6.1	5.0	14.6
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	5.5	6.1	5.0	14.6
Queue Length 50th (m)	17.3	3.7	13.0	4.0
Queue Length 95th (m)	27.2	18.6	42.2	17.8
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2109	438	2616	691
Starvation Cap Reductn	110	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.55	0.34	0.26	0.26

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1030	50	145	665	35	140
Future Volume (vph)	1030	50	145	665	35	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3458		1784	3535	1846	
Flt Permitted	1.00		0.20	1.00	0.99	
Satd. Flow (perm)	3458		371	3535	1846	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1051	51	148	679	36	143
RTOR Reduction (vph)	3	0	0	0	125	0
Lane Group Flow (vph)	1099	0	148	679	54	0
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	0	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	54.8		66.6	66.6	11.4	
Effective Green, g (s)	54.8		66.6	66.6	11.4	
Actuated g/C Ratio	0.61		0.74	0.74	0.13	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2105		412	2615	233	
v/s Ratio Prot	c0.32		c0.04	0.19		
v/s Ratio Perm			0.23		c0.03	
v/c Ratio	0.52		0.36	0.26	0.23	
Uniform Delay, d1	10.1		4.8	3.8	35.4	
Progression Factor	0.39		1.00	1.00	1.09	
Incremental Delay, d2	0.7		0.5	0.2	0.5	
Delay (s)	4.6		5.4	4.0	39.1	
Level of Service	A		A	A	D	
Approach Delay (s)	4.6			4.2	39.1	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	125	10	60	60	5	10	50	40	15	95	45
Future Volume (vph)	70	125	10	60	60	5	10	50	40	15	95	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2040	0	0	1829	0	0	1967	0	0	1964	0
Flt Permitted		0.983			0.977			0.995			0.995	
Satd. Flow (perm)	0	2040	0	0	1829	0	0	1967	0	0	1964	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	33		13	13		33	8		4	4		8
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	6%
Adj. Flow (vph)	83	149	12	71	71	6	12	60	48	18	113	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	148	0	0	120	0	0	185	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	31.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	125	10	60	60	5	10	50	40	15	95	45
Future Volume (Veh/h)	70	125	10	60	60	5	10	50	40	15	95	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	83	149	12	71	71	6	12	60	48	18	113	54
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	110			174			668	586	172	652	589	115
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	110			174			668	586	172	652	589	115
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	94			95			95	83	94	93	69	94
cM capacity (veh/h)	1441			1396			232	362	862	271	361	887

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	244	148	120	185
Volume Left	83	71	12	18
Volume Right	12	6	48	54
cSH	1441	1396	440	420
Volume to Capacity	0.06	0.05	0.27	0.44
Queue Length 95th (m)	1.5	1.3	8.8	17.6
Control Delay (s)	2.9	3.9	16.2	20.2
Lane LOS	A	A	C	C
Approach Delay (s)	2.9	3.9	16.2	20.2
Approach LOS			C	C

Intersection Summary				
Average Delay		10.0		
Intersection Capacity Utilization		31.5%	ICU Level of Service	A
Analysis Period (min)		15		

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	20	205	110	15	20	30
Future Volume (vph)	20	205	110	15	20	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2082	1987	0	1692	0
Flt Permitted		0.996			0.980	
Satd. Flow (perm)	0	2082	1987	0	1692	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	15			15		
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	23	233	125	17	23	34
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	256	142	0	57	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	34.6%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	205	110	15	20	30
Future Volume (Veh/h)	20	205	110	15	20	30
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	23	233	125	17	23	34
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	157				428	148
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	157				428	148
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	96
cM capacity (veh/h)	1418				571	893

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	256	142	57
Volume Left	23	0	23
Volume Right	0	17	34
cSH	1418	1700	728
Volume to Capacity	0.02	0.08	0.08
Queue Length 95th (m)	0.4	0.0	2.0
Control Delay (s)	0.8	0.0	10.4
Lane LOS	A		B
Approach Delay (s)	0.8	0.0	10.4
Approach LOS			B

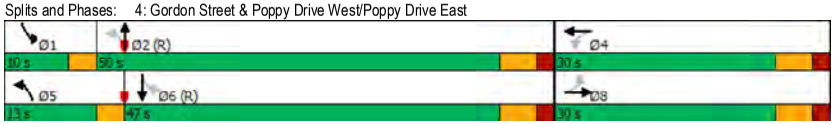
Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	34.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	30	135	85	35	60	160	1075	150	80	1115	55
Future Volume (vph)	65	30	135	85	35	60	160	1075	150	80	1115	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1736	0	0	1886	0	2006	3422	0	1728	3474	0
Flt Permitted		0.825			0.621		0.158			0.167		
Satd. Flow (perm)	0	1447	0	0	1198	0	333	3422	0	303	3474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		78			27			24			7	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
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 (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Adj. Flow (vph)	66	31	138	87	36	61	163	1097	153	82	1138	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	0	184	0	163	1250	0	82	1194	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		13.0	50.0		10.0	47.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		14.4%	55.6%		11.1%	52.2%	
Maximum Green (s)	24.0	24.0		24.0	24.0		10.0	44.0		7.0	41.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	6	6		6	6			6			6	
Act Effct Green (s)		16.2			16.2		63.4	53.7		60.8	50.7	
Actuated g/C Ratio		0.18			0.18		0.70	0.60		0.68	0.56	
v/c Ratio		0.73			0.78		0.42	0.61		0.26	0.61	
Control Delay		35.1			50.4		8.3	14.7		5.9	13.1	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.1	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		35.1			50.4		8.3	14.7		5.9	13.2	
LOS		D			D		A	B		A	B	
Approach Delay		35.1			50.4			13.9			12.7	
Approach LOS		D			D			B			B	

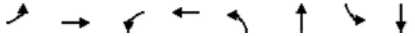
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	30.0	30.0	30.0	30.0	13.0	50.0	10.0	47.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	14.4%	55.6%	11.1%	52.2%
Maximum Green (s)	24.0	24.0	24.0	24.0	10.0	44.0	7.0	41.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	6	6	6	6		6		6
90th %ile Green (s)	24.0	24.0	24.0	24.0	10.0	44.0	7.0	41.0
90th %ile Term Code	Ped	Ped	Ped	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	19.2	19.2	19.2	19.2	8.7	48.4	7.4	47.1
70th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Gap	Coord
50th %ile Green (s)	16.2	16.2	16.2	16.2	7.7	51.8	7.0	51.1
50th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Min	Coord
30th %ile Green (s)	13.1	13.1	13.1	13.1	7.0	54.9	7.0	54.9
30th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
10th %ile Green (s)	8.6	8.6	8.6	8.6	7.0	69.4	0.0	59.4
10th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	235	184	163	1250	82	1194
v/c Ratio	0.73	0.78	0.42	0.61	0.26	0.61
Control Delay	35.1	50.4	8.3	14.7	5.9	13.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	35.1	50.4	8.3	14.7	5.9	13.2
Queue Length 50th (m)	27.0	27.5	7.6	72.5	5.1	62.6
Queue Length 95th (m)	47.6	46.5	18.4	116.4	m2.4	m26.3
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	443	339	425	2051	316	1960
Starvation Cap Reductn	0	0	0	0	0	88
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.54	0.38	0.61	0.26	0.64

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	30	135	85	35	60	160	1075	150	80	1115	55
Future Volume (vph)	65	30	135	85	35	60	160	1075	150	80	1115	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1729			1885		2005	3420		1727	3474	
Flt Permitted		0.83			0.62		0.16	1.00		0.17	1.00	
Satd. Flow (perm)		1447			1198		334	3420		303	3474	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	66	31	138	87	36	61	163	1097	153	82	1138	56
RTOR Reduction (vph)	0	64	0	0	22	0	0	10	0	0	3	0
Lane Group Flow (vph)	0	171	0	0	162	0	163	1240	0	82	1191	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		16.2			16.2		61.2	53.1		56.4	50.7	
Effective Green, g (s)		16.2			16.2		61.2	53.1		56.4	50.7	
Actuated g/C Ratio		0.18			0.18		0.68	0.59		0.63	0.56	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		260			215		377	2017		280	1957	
v/s Ratio Prot							c0.04	c0.36		0.02	0.34	
v/s Ratio Perm		0.12			c0.14		0.25			0.17		
v/c Ratio		0.66			0.75		0.43	0.61		0.29	0.61	
Uniform Delay, d1		34.3			35.0		7.5	11.9		7.7	13.1	
Progression Factor		1.00			1.00		1.00	1.00		1.11	0.89	
Incremental Delay, d2		5.9			13.8		0.8	1.4		0.1	0.1	
Delay (s)		40.2			48.8		8.3	13.3		8.6	11.7	
Level of Service		D			D		A	B		A	B	
Approach Delay (s)		40.2			48.8			12.7			11.5	
Approach LOS		D			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.64			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Future Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3458	0	1711	3418	0	1646	3379	0	1728	3345	0
Flt Permitted	0.248			0.143			0.133			0.133		
Satd. Flow (perm)	451	3458	0	257	3418	0	230	3379	0	241	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			29			21			24	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	278	1000	124	165	577	124	129	948	149	222	1052	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	278	1124	0	165	701	0	129	1097	0	222	1238	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		10.0	34.0		10.0	36.0		10.0	36.0	
Total Split (%)	11.1%	37.8%		11.1%	37.8%		11.1%	40.0%		11.1%	40.0%	
Maximum Green (s)	7.0	28.0		7.0	28.0		7.0	30.0		7.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		11			11			9			9	
Act Effct Green (s)	38.0	28.0		38.0	28.0		40.0	30.0		40.0	30.0	
Actuated g/C Ratio	0.42	0.31		0.42	0.31		0.44	0.33		0.44	0.33	
v/c Ratio	0.96	1.03		0.75	0.65		0.61	0.96		1.00	1.09	
Control Delay	65.2	68.2		37.8	29.9		32.4	40.4		81.8	86.2	

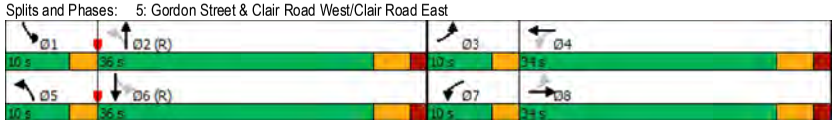
Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	65.2	68.2		37.8	29.9		32.4	40.4		81.8	86.2	
LOS	E	E		D	C		C	D		F	F	
Approach Delay		67.6			31.4			39.5			85.5	
Approach LOS		E			C			D			F	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 59.6		Intersection LOS: E	
Intersection Capacity Utilization 98.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Maximum Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		11		11		9		9
90th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
90th %ile Term Code	Max	Max	Max	Max	Max	Coord	Max	Coord
70th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
70th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
50th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
50th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
30th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
30th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord
10th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	30.0	7.0	30.0
10th %ile Term Code	Max	Max	Max	Hold	Max	Coord	Max	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	278	1124	165	701	129	1097	222	1238
v/c Ratio	0.96	1.03	0.75	0.65	0.61	0.96	1.00	1.09
Control Delay	65.2	68.2	37.8	29.9	32.4	40.4	81.8	86.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.2	68.2	37.8	29.9	32.4	40.4	81.8	86.2
Queue Length 50th (m)	31.6	~116.0	22.4	65.6	4.2	102.1	23.3	~134.1
Queue Length 95th (m)	#76.9	#157.6	m#43.0	75.1	m29.2	#139.7	#70.4	#176.5
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	291	1086	221	1083	212	1140	222	1131
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	1.03	0.75	0.65	0.61	0.96	1.00	1.09

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Future Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1741	3460		1710	3420		1646	3378		1727	3347	
Flt Permitted	0.25	1.00		0.14	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	454	3460		257	3420		231	3378		242	3347	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	278	1000	124	165	577	124	129	948	149	222	1052	186
RTOR Reduction (vph)	0	10	0	0	20	0	0	14	0	0	16	0
Lane Group Flow (vph)	278	1114	0	165	681	0	129	1083	0	222	1222	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.0	28.0		35.0	28.0		37.0	30.0		37.0	30.0	
Effective Green, g (s)	35.0	28.0		35.0	28.0		37.0	30.0		37.0	30.0	
Actuated g/C Ratio	0.39	0.31		0.39	0.31		0.41	0.33		0.41	0.33	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	276	1076		212	1064		205	1126		214	1115	
v/s Ratio Prot	c0.08	c0.32		0.06	0.20		0.05	0.32		c0.08	c0.37	
v/s Ratio Perm	0.31			0.24			0.21			0.34		
v/c Ratio	1.01	1.04		0.78	0.64		0.63	0.96		1.04	1.10	
Uniform Delay, d1	24.9	31.0		22.1	26.7		21.0	29.4		22.5	30.0	
Progression Factor	1.00	1.00		1.09	1.05		1.57	0.77		1.00	1.00	
Incremental Delay, d2	56.0	36.9		14.9	1.2		4.8	16.5		71.6	57.1	
Delay (s)	81.0	67.9		39.1	29.2		37.7	39.2		94.2	87.1	
Level of Service	F	E		D	C		D	D		F	F	
Approach Delay (s)		70.5			31.0			39.1			88.2	
Approach LOS		E			C			D			F	

Intersection Summary				
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.06			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	98.7%	ICU Level of Service	F	
Analysis Period (min)	15			

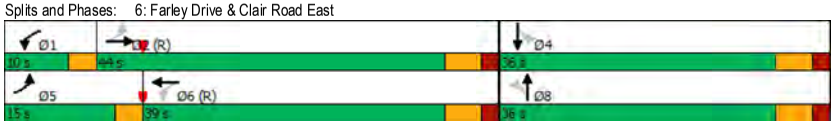
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	915	155	45	565	100	85	55	30	135	65	165
Future Volume (vph)	210	915	155	45	565	100	85	55	30	135	65	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1785	3384	0	1785	3399	0	1705	1753	0	0	1924	0
Flt Permitted	0.307			0.201			0.446				0.841	
Satd. Flow (perm)	571	3384	0	376	3399	0	787	1753	0	0	1632	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			25			31			49	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Adj. Flow (vph)	219	953	161	47	589	104	89	57	31	141	68	172
Shared Lane Traffic (%)												
Lane Group Flow (vph)	219	1114	0	47	693	0	89	88	0	0	381	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	15.0	44.0		10.0	39.0		36.0	36.0		36.0	36.0	
Total Split (%)	16.7%	48.9%		11.1%	43.3%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	12.0	38.0		7.0	33.0		30.0	30.0		30.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		7			7		12	12		12	12	
Act Effct Green (s)	57.5	48.5		51.6	41.6		23.5	23.5			23.5	
Actuated g/C Ratio	0.64	0.54		0.57	0.46		0.26	0.26			0.26	
v/c Ratio	0.44	0.61		0.14	0.44		0.43	0.18			0.82	
Control Delay	5.1	14.2		6.7	14.2		32.9	16.8			41.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	5.1	14.2		6.7	14.2		32.9	16.8			41.8	
LOS	A	B		A	B		C	B			D	
Approach Delay		12.7			13.7			24.9			41.8	
Approach LOS		B			B			C			D	

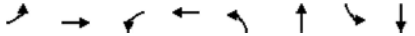
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay: 18.0		Intersection LOS: B	
Intersection Capacity Utilization 78.7%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023



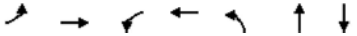
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	15.0	44.0	10.0	39.0	36.0	36.0	36.0	36.0
Total Split (%)	16.7%	48.9%	11.1%	43.3%	40.0%	40.0%	40.0%	40.0%
Maximum Green (s)	12.0	38.0	7.0	33.0	30.0	30.0	30.0	30.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		7		7	12	12	12	12
90th %ile Green (s)	12.0	38.0	7.0	33.0	30.0	30.0	30.0	30.0
90th %ile Term Code	Max	Coord	Max	Coord	Hold	Hold	Max	Max
70th %ile Green (s)	11.9	40.4	7.0	35.5	27.6	27.6	27.6	27.6
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	10.1	43.8	7.0	40.7	24.2	24.2	24.2	24.2
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	8.6	57.5	0.0	45.9	20.5	20.5	20.5	20.5
30th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	62.8	0.0	52.8	15.2	15.2	15.2	15.2
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	219	1114	47	693	89	88	381
v/c Ratio	0.44	0.61	0.14	0.44	0.43	0.18	0.82
Control Delay	5.1	14.2	6.7	14.2	32.9	16.8	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	14.2	6.7	14.2	32.9	16.8	41.8
Queue Length 50th (m)	4.0	96.3	2.1	42.5	13.3	7.9	56.7
Queue Length 95th (m)	m18.2	m101.5	3.7	68.1	25.6	17.7	83.5
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	526	1835	325	1583	262	605	576
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	0.42	0.61	0.14	0.44	0.34	0.15	0.66

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	915	155	45	565	100	85	55	30	135	65	165
Future Volume (vph)	210	915	155	45	565	100	85	55	30	135	65	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.98		1.00	0.98		1.00	0.95			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1780	3385		1784	3400		1677	1754			1905	
Flt Permitted	0.31	1.00		0.20	1.00		0.45	1.00			0.84	
Satd. Flow (perm)	576	3385		377	3400		788	1754			1632	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	219	953	161	47	589	104	89	57	31	141	68	172
RTOR Reduction (vph)	0	12	0	0	13	0	0	23	0	0	36	0
Lane Group Flow (vph)	219	1102	0	47	680	0	89	65	0	0	345	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	54.5	47.3		45.8	41.6		23.5	23.5			23.5	
Effective Green, g (s)	54.5	47.3		45.8	41.6		23.5	23.5			23.5	
Actuated g/C Ratio	0.61	0.53		0.51	0.46		0.26	0.26			0.26	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	481	1779		257	1571		205	457			426	
v/s Ratio Prot	c0.05	c0.33		0.01	0.20			0.04				
v/s Ratio Perm	0.23			0.08			0.11				c0.21	
v/c Ratio	0.46	0.62		0.18	0.43		0.43	0.14			0.81	
Uniform Delay, d1	8.7	15.0		11.6	16.3		27.7	25.5			31.2	
Progression Factor	0.62	0.86		0.71	0.76		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.1		0.3	0.9		1.5	0.1			10.8	
Delay (s)	5.4	13.0		8.6	13.3		29.2	25.7			42.0	
Level of Service	A	B		A	B		C	C			D	
Approach Delay (s)		11.8			13.0			27.4			42.0	
Approach LOS		B			B			C			D	

Intersection Summary				
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	78.7%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Flt Permitted		0.963			0.993			0.996			0.990	
Satd. Flow (perm)	0	1797	0	0	1722	0	0	1834	0	0	1956	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	5		5	5		5	26		22	22		26
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%	0%
Adj. Flow (vph)	94	22	6	11	22	44	6	56	11	56	61	156
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	122	0	0	77	0	0	73	0	0	273	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.8%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Future Volume (vph)	85	20	5	10	20	40	5	50	10	50	55	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	11	22	44	6	56	11	56	61	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	77	73	273
Volume Left (vph)	94	11	6	56
Volume Right (vph)	6	44	11	156
Hadj (s)	0.12	-0.31	-0.07	-0.29
Departure Headway (s)	4.9	4.5	4.6	4.2
Degree Utilization, x	0.17	0.10	0.09	0.32
Capacity (veh/h)	680	725	728	816
Control Delay (s)	8.9	8.0	8.1	9.1
Approach Delay (s)	8.9	8.0	8.1	9.1
Approach LOS	A	A	A	A

Intersection Summary					
Delay			8.8		
Level of Service			A		
Intersection Capacity Utilization			41.8%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Flt Permitted		0.968			0.984			0.988			0.979	
Satd. Flow (perm)	0	1766	0	0	1723	0	0	1795	0	0	1804	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	13		45	45		13	45		15	15		45
Confl. Bikes (#/hr)			2			5						
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	34	6	11	11	6	17	11	23	11	34	34	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	51	0	0	34	0	0	45	0	0	79	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary					
Area Type:	Other				
Control Type: Unsignalized					
Intersection Capacity Utilization 30.2%				ICU Level of Service A	
Analysis Period (min) 15					

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Future Volume (vph)	30	5	10	10	5	15	10	20	10	30	30	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	6	11	11	6	17	11	23	11	34	34	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	51	34	45	79
Volume Left (vph)	34	11	11	34
Volume Right (vph)	11	17	11	11
Hadj (s)	0.00	-0.24	-0.10	0.00
Departure Headway (s)	4.2	4.0	4.1	4.1
Degree Utilization, x	0.06	0.04	0.05	0.09
Capacity (veh/h)	827	870	854	849
Control Delay (s)	7.5	7.1	7.3	7.5
Approach Delay (s)	7.5	7.1	7.3	7.5
Approach LOS	A	A	A	A

Intersection Summary				
Delay			7.4	
Level of Service			A	
Intersection Capacity Utilization			30.2%	ICU Level of Service A
Analysis Period (min)			15	

Lanes, Volumes, Timings
9: Hawkins Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	5	0	120	150	45
Future Volume (vph)	55	5	0	120	150	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1851	0	0	2090	2025	0
Flt Permitted	0.956					
Satd. Flow (perm)	1851	0	0	2090	2025	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Confl. Peds. (#/hr)			8			8
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	1%	16%	0%	0%	0%	0%
Adj. Flow (vph)	62	6	0	135	169	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	0	135	220	0
Sign Control	Stop			Free	Free	

Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization	21.4%			ICU Level of Service A		
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street 12-12-2023

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	5	0	120	150	45
Future Volume (Veh/h)	55	5	0	120	150	45
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	62	6	0	135	169	51
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	338	202	228			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	338	202	228			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	91	99	100			
cM capacity (veh/h)	655	798	1342			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	68	135	220
Volume Left	62	0	0
Volume Right	6	0	51
cSH	666	1342	1700
Volume to Capacity	0.10	0.00	0.13
Queue Length 95th (m)	2.7	0.0	0.0
Control Delay (s)	11.0	0.0	0.0
Lane LOS	B		
Approach Delay (s)	11.0	0.0	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		1.8	
Intersection Capacity Utilization		21.4%	ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	180	30	10	120	30	10
Future Volume (vph)	180	30	10	120	30	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2050	0	0	2044	1750	0
Flt Permitted				0.996	0.964	
Satd. Flow (perm)	2050	0	0	2044	1750	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)		1	1		2	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	2%	0%	0%
Adj. Flow (vph)	196	33	11	130	33	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	229	0	0	141	44	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.9%			ICU Level of Service A
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	180	30	10	120	30	10
Future Volume (Veh/h)	180	30	10	120	30	10
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)	196	33	11	130	33	11
Pedestrians	2			17	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			2	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			230		368	230
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			230		368	230
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	99
cM capacity (veh/h)			1349		629	799

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	229	141	44
Volume Left	0	11	33
Volume Right	33	0	11
cSH	1700	1349	665
Volume to Capacity	0.13	0.01	0.07
Queue Length 95th (m)	0.0	0.2	1.7
Control Delay (s)	0.0	0.7	10.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.7	10.8
Approach LOS			B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	28.9%	ICU Level of Service	A
Analysis Period (min)	15		

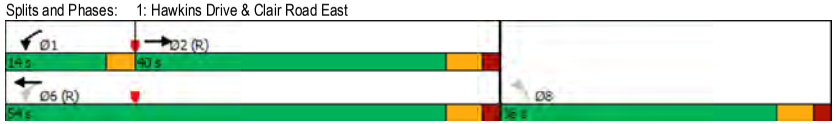
Lanes, Volumes, Timings
1: Hawkins Drive & Clair Road East 12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	715	45	160	580	35	115
Future Volume (vph)	715	45	160	580	35	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	4.5	4.5
Storage Length (m)		0.0	25.0		0.0	0.0
Storage Lanes		0	1		1	0
Taper Length (m)			7.5		7.5	
Satd. Flow (prot)	3485	0	1767	3466	1852	0
Flt Permitted			0.308		0.989	
Satd. Flow (perm)	3485	0	572	3466	1852	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	8				120	
Link Speed (k/h)	60			60	50	
Link Distance (m)	160.7			130.4	64.6	
Travel Time (s)	9.6			7.8	4.7	
Confl. Peds. (#/hr)		6	6			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Adj. Flow (vph)	745	47	167	604	36	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	792	0	167	604	156	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Detector Phase	2		1	6	8	
Switch Phase						
Minimum Initial (s)	10.0		7.0	10.0	7.0	
Minimum Split (s)	35.0		10.0	35.0	35.0	
Total Split (s)	40.0		14.0	54.0	36.0	
Total Split (%)	44.4%		15.6%	60.0%	40.0%	
Maximum Green (s)	34.0		11.0	48.0	30.0	
Yellow Time (s)	4.0		3.0	4.0	4.0	
All-Red Time (s)	2.0		0.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		3.0	6.0	6.0	
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	C-Min		None	C-Min	None	
Walk Time (s)	11.0			11.0	8.0	
Flash Dont Walk (s)	18.0			18.0	18.0	
Pedestrian Calls (#/hr)	7			7	12	
Act Effct Green (s)	55.5		69.7	66.7	11.3	
Actuated g/C Ratio	0.62		0.77	0.74	0.13	
v/c Ratio	0.37		0.30	0.24	0.46	
Control Delay	5.5		5.2	4.9	15.5	
Queue Delay	0.0		0.0	0.0	0.0	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	5.5		5.2	4.9	15.5	
LOS	A		A	A	B	
Approach Delay	5.5			5.0	15.5	
Approach LOS	A			A	B	

Intersection Summary	
Area Type:	Other
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 6.2	Intersection LOS: A
Intersection Capacity Utilization 55.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 1: Hawkins Drive & Clair Road East



Lane Group	EBT	WBL	WBT	NBL
Protected Phases	2	1	6	
Permitted Phases		6		8
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	40.0	14.0	54.0	36.0
Total Split (%)	44.4%	15.6%	60.0%	40.0%
Maximum Green (s)	34.0	11.0	48.0	30.0
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	C-Min	None	C-Min	None
Walk Time (s)	11.0		11.0	8.0
Flash Dont Walk (s)	18.0		18.0	18.0
Pedestrian Calls (#/hr)	7		7	12
90th %ile Green (s)	37.2	11.8	52.0	26.0
90th %ile Term Code	Coord	Gap	Coord	Ped
70th %ile Green (s)	57.7	7.9	68.6	9.4
70th %ile Term Code	Coord	Gap	Coord	Gap
50th %ile Green (s)	60.5	7.2	70.7	7.3
50th %ile Term Code	Coord	Gap	Coord	Gap
30th %ile Green (s)	61.0	7.0	71.0	7.0
30th %ile Term Code	Coord	Min	Coord	Min
10th %ile Green (s)	61.0	7.0	71.0	7.0
10th %ile Term Code	Coord	Min	Coord	Min

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
1: Hawkins Drive & Clair Road East

12-12-2023

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	792	167	604	156
v/c Ratio	0.37	0.30	0.24	0.46
Control Delay	5.5	5.2	4.9	15.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.5	5.2	4.9	15.5
Queue Length 50th (m)	13.8	4.3	11.4	6.3
Queue Length 95th (m)	32.7	20.6	37.3	18.4
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2151	591	2567	697
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.28	0.24	0.22

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	715	45	160	580	35	115
Future Volume (vph)	715	45	160	580	35	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3485		1766	3466	1852	
Flt Permitted	1.00		0.31	1.00	0.99	
Satd. Flow (perm)	3485		572	3466	1852	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	745	47	167	604	36	120
RTOR Reduction (vph)	3	0	0	0	105	0
Lane Group Flow (vph)	789	0	167	604	51	0
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	55.5		66.7	66.7	11.3	
Effective Green, g (s)	55.5		66.7	66.7	11.3	
Actuated g/C Ratio	0.62		0.74	0.74	0.13	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2149		532	2568	232	
v/s Ratio Prot	c0.23		c0.03	0.17		
v/s Ratio Perm			0.20		c0.03	
v/c Ratio	0.37		0.31	0.24	0.22	
Uniform Delay, d1	8.5		3.7	3.7	35.4	
Progression Factor	0.50		1.00	1.00	1.11	
Incremental Delay, d2	0.4		0.3	0.2	0.5	
Delay (s)	4.7		4.1	3.9	39.9	
Level of Service	A		A	A	D	
Approach Delay (s)	4.7			3.9	39.9	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lanes, Volumes, Timings
2: Hawkins Drive & Poppy Drive East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	75	5	50	70	10	5	40	30	5	90	40
Future Volume (vph)	40	75	5	50	70	10	5	40	30	5	90	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	3.6	3.6	3.6	4.5	4.5	4.5	4.5	4.5	4.5
Satd. Flow (prot)	0	2046	0	0	1805	0	0	1971	0	0	1950	0
Flt Permitted		0.984			0.981			0.997			0.998	
Satd. Flow (perm)	0	2046	0	0	1805	0	0	1971	0	0	1950	0
Link Speed (k/h)		40			40			40			40	
Link Distance (m)		63.5			196.8			136.5			121.9	
Travel Time (s)		5.7			17.7			12.3			11.0	
Confl. Peds. (#/hr)	12		11	11		12	6		3	3		6
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 (%)	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	9%
Adj. Flow (vph)	43	81	5	54	75	11	5	43	32	5	97	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	140	0	0	80	0	0	145	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	75	5	50	70	10	5	40	30	5	90	40
Future Volume (Veh/h)	40	75	5	50	70	10	5	40	30	5	90	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	43	81	5	54	75	11	5	43	32	5	97	43
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	98			97			466	386	98	426	384	98
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	98			97			466	386	98	426	384	98
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			96			99	91	97	99	81	95
cM capacity (veh/h)	1489			1492			381	503	951	451	505	921

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	129	140	80	145
Volume Left	43	54	5	5
Volume Right	5	11	32	43
cSH	1489	1492	605	581
Volume to Capacity	0.03	0.04	0.13	0.25
Queue Length 95th (m)	0.7	0.9	3.6	7.8
Control Delay (s)	2.6	3.1	11.9	13.3
Lane LOS	A	A	B	B
Approach Delay (s)	2.6	3.1	11.9	13.3
Approach LOS			B	B

Intersection Summary					
Average Delay	7.4				
Intersection Capacity Utilization	27.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	25	125	110	15	15	35
Future Volume (vph)	25	125	110	15	15	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	0	2073	1970	0	1675	0
Flt Permitted		0.992			0.985	
Satd. Flow (perm)	0	2073	1970	0	1675	0
Link Speed (k/h)		40	40		30	
Link Distance (m)		220.5	90.5		55.2	
Travel Time (s)		19.8	8.1		6.6	
Confl. Peds. (#/hr)	15			15		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%
Adj. Flow (vph)	27	137	121	16	16	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	164	137	0	54	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.7%	ICU Level of Service A	
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	25	125	110	15	15	35
Future Volume (Veh/h)	25	125	110	15	15	35
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	27	137	121	16	16	38
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	152				335	144
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	152				335	144
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	96
cM capacity (veh/h)	1424				644	898

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	164	137	54
Volume Left	27	0	16
Volume Right	0	16	38
cSH	1424	1700	804
Volume to Capacity	0.02	0.08	0.07
Queue Length 95th (m)	0.5	0.0	1.7
Control Delay (s)	1.4	0.0	9.8
Lane LOS	A		A
Approach Delay (s)	1.4	0.0	9.8
Approach LOS			A

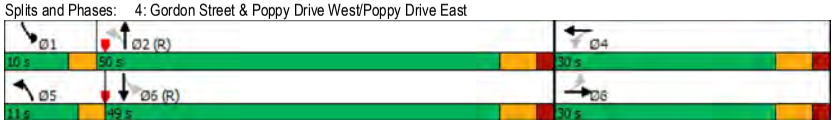
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	30.7%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	20	95	85	30	65	125	895	100	60	1060	40
Future Volume (vph)	55	20	95	85	30	65	125	895	100	60	1060	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	0.0		0.0	0.0		0.0	91.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	0	1699	0	0	1880	0	2046	3504	0	1745	3547	0
Flt Permitted		0.795			0.699		0.158			0.213		
Satd. Flow (perm)	0	1368	0	0	1342	0	340	3504	0	390	3547	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		69			31			18			6	
Link Speed (k/h)		40			40			60			60	
Link Distance (m)		93.0			220.5			196.0			180.5	
Travel Time (s)		8.4			19.8			11.8			10.8	
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Adj. Flow (vph)	60	22	104	93	33	71	137	984	110	66	1165	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	186	0	0	197	0	137	1094	0	66	1209	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	30.0	30.0		30.0	30.0		10.0	35.0		10.0	35.0	
Total Split (s)	30.0	30.0		30.0	30.0		11.0	50.0		10.0	49.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		12.2%	55.6%		11.1%	54.4%	
Maximum Green (s)	24.0	24.0		24.0	24.0		8.0	44.0		7.0	43.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Min		None	C-Min	
Walk Time (s)	8.0	8.0		8.0	8.0			17.0			17.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0			12.0			12.0	
Pedestrian Calls (#/hr)	5	5		5	5			3			3	
Act Effct Green (s)		16.1			16.1		62.9	53.9		61.4	51.4	
Actuated g/C Ratio		0.18			0.18		0.70	0.60		0.68	0.57	
v/c Ratio		0.62			0.74		0.36	0.52		0.18	0.60	
Control Delay		29.0			45.2		7.5	13.1		4.2	9.5	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.1	
Total Delay		29.0			45.2		7.5	13.1		4.2	9.6	
LOS		C			D		A	B		A	A	
Approach Delay		29.0			45.2			12.5			9.3	
Approach LOS		C			D			B			A	

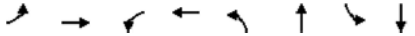
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 14.4		Intersection LOS: B	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



Phasings
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	30.0	30.0	30.0	30.0	11.0	50.0	10.0	49.0
Total Split (%)	33.3%	33.3%	33.3%	33.3%	12.2%	55.6%	11.1%	54.4%
Maximum Green (s)	24.0	24.0	24.0	24.0	8.0	44.0	7.0	43.0
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
Walk Time (s)	8.0	8.0	8.0	8.0		17.0		17.0
Flash Dont Walk (s)	16.0	16.0	16.0	16.0		12.0		12.0
Pedestrian Calls (#/hr)	5	5	5	5		3		3
90th %ile Green (s)	24.0	24.0	24.0	24.0	8.0	44.0	7.0	43.0
90th %ile Term Code	Ped	Ped	Ped	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	19.0	19.0	19.0	19.0	8.1	49.0	7.0	47.9
70th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Min	Coord
50th %ile Green (s)	16.0	16.0	16.0	16.0	7.2	52.0	7.0	51.8
50th %ile Term Code	Hold	Hold	Gap	Gap	Gap	Coord	Min	Coord
30th %ile Green (s)	13.0	13.0	13.0	13.0	7.0	55.0	7.0	55.0
30th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Min	Coord
10th %ile Green (s)	8.7	8.7	8.7	8.7	7.0	69.3	0.0	59.3
10th %ile Term Code	Hold	Hold	Gap	Gap	Min	Coord	Skip	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

12-12-2023

Lane Group	EBT	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	186	197	137	1094	66	1209
v/c Ratio	0.62	0.74	0.36	0.52	0.18	0.60
Control Delay	29.0	45.2	7.5	13.1	4.2	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	29.0	45.2	7.5	13.1	4.2	9.6
Queue Length 50th (m)	19.4	29.0	6.2	58.3	2.6	51.7
Queue Length 95th (m)	37.3	47.6	15.8	94.4	m3.0	34.5
Internal Link Dist (m)	69.0	196.5		172.0		156.5
Turn Bay Length (m)			91.0		70.0	
Base Capacity (vph)	415	380	390	2104	371	2028
Starvation Cap Reductn	0	0	0	0	0	102
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.52	0.35	0.52	0.18	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	20	95	85	30	65	125	895	100	60	1060	40
Future Volume (vph)	55	20	95	85	30	65	125	895	100	60	1060	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.95		1.00	0.98		1.00	0.99	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1693			1877		2045	3503		1744	3546	
Flt Permitted		0.80			0.70		0.16	1.00		0.21	1.00	
Satd. Flow (perm)		1368			1343		341	3503		392	3546	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	60	22	104	93	33	71	137	984	110	66	1165	44
RTOR Reduction (vph)	0	57	0	0	25	0	0	7	0	0	3	0
Lane Group Flow (vph)	0	129	0	0	172	0	137	1087	0	66	1206	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		16.1			16.1		60.8	53.3		57.0	51.4	
Effective Green, g (s)		16.1			16.1		60.8	53.3		57.0	51.4	
Actuated g/C Ratio		0.18			0.18		0.68	0.59		0.63	0.57	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		244			240		372	2074		332	2025	
v/s Ratio Prot							c0.03	0.31		0.01	c0.34	
v/s Ratio Perm		0.09			c0.13		0.22			0.11		
v/c Ratio		0.53			0.71		0.37	0.52		0.20	0.60	
Uniform Delay, d1		33.5			34.8		7.3	10.8		6.9	12.5	
Progression Factor		1.00			1.00		1.00	1.00		0.70	0.62	
Incremental Delay, d2		2.2			9.7		0.6	1.0		0.2	0.8	
Delay (s)		35.7			44.5		7.9	11.8		5.0	8.7	
Level of Service		D			D		A	B		A	A	
Approach Delay (s)		35.7			44.5			11.4			8.5	
Approach LOS		D			D			B			A	

Intersection Summary				
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	68.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Future Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		0.0	32.0		0.0	72.0		0.0	163.0		0.0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3486	0	1711	3400	0	1646	3484	0	1728	3476	0
Flt Permitted	0.255			0.188			0.130			0.148		
Satd. Flow (perm)	463	3486	0	336	3400	0	225	3484	0	268	3476	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			37			18			17	
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Adj. Flow (vph)	196	629	93	180	500	129	108	789	108	222	969	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	196	722	0	180	629	0	108	897	0	222	1098	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	3	8		7	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	10.0		7.0	10.0	
Minimum Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		10.0	35.0	
Total Split (s)	10.0	34.0		10.0	34.0		10.0	35.0		11.0	36.0	
Total Split (%)	11.1%	37.8%		11.1%	37.8%		11.1%	38.9%		12.2%	40.0%	
Maximum Green (s)	7.0	28.0		7.0	28.0		7.0	29.0		8.0	30.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.0		3.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		0.0	2.0		0.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	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	
Recall Mode	None	Min		None	Min		None	C-Min		None	C-Min	
Walk Time (s)		9.0			9.0			10.0			10.0	
Flash Dont Walk (s)		19.0			19.0			19.0			19.0	
Pedestrian Calls (#/hr)		12			12			7			7	
Act Effct Green (s)	33.7	23.5		33.8	23.5		41.4	30.7		46.4	35.5	
Actuated g/C Ratio	0.37	0.26		0.38	0.26		0.46	0.34		0.52	0.39	
v/c Ratio	0.71	0.78		0.76	0.69		0.48	0.75		0.72	0.79	
Control Delay	33.5	36.1		40.1	32.7		27.2	24.3		30.4	31.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	

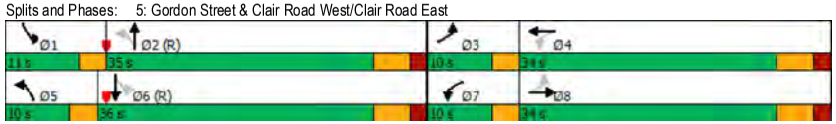
Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	33.5	36.1		40.1	32.7		27.2	24.3		30.4	31.0	
LOS	C	D		D	C		C	C		C	C	
Approach Delay		35.6			34.4			24.6			30.9	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.79			
Intersection Signal Delay: 31.1		Intersection LOS: C	
Intersection Capacity Utilization 85.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	11.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	38.9%	12.2%	40.0%
Maximum Green (s)	7.0	28.0	7.0	28.0	7.0	29.0	8.0	30.0
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	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
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
Walk Time (s)		9.0		9.0		10.0		10.0
Flash Dont Walk (s)		19.0		19.0		19.0		19.0
Pedestrian Calls (#/hr)		12		12		7		7
90th %ile Green (s)	7.0	28.0	7.0	28.0	7.0	29.0	8.0	30.0
90th %ile Term Code	Max	Max	Max	Ped	Max	Coord	Max	Coord
70th %ile Green (s)	7.0	26.3	7.0	26.3	8.7	29.0	9.7	30.0
70th %ile Term Code	Max	Gap	Max	Hold	Max	Coord	Max	Coord
50th %ile Green (s)	7.0	24.2	7.0	24.2	8.5	29.0	11.8	32.3
50th %ile Term Code	Max	Gap	Max	Hold	Gap	Coord	Max	Coord
30th %ile Green (s)	7.0	21.2	7.0	21.2	7.3	31.1	12.7	36.5
30th %ile Term Code	Max	Gap	Max	Hold	Gap	Coord	Gap	Coord
10th %ile Green (s)	8.1	17.9	8.2	18.0	0.0	35.5	10.4	48.9
10th %ile Term Code	Gap	Gap	Gap	Hold	Skip	Coord	Gap	Coord

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	196	722	180	629	108	897	222	1098
v/c Ratio	0.71	0.78	0.76	0.69	0.48	0.75	0.72	0.79
Control Delay	33.5	36.1	40.1	32.7	27.2	24.3	30.4	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	36.1	40.1	32.7	27.2	24.3	30.4	31.0
Queue Length 50th (m)	23.0	61.9	22.5	58.4	4.0	78.0	21.0	95.3
Queue Length 95th (m)	#38.5	77.7	m#40.8	60.5	27.0	57.2	#62.6	#143.1
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	276	1097	236	1083	225	1200	308	1383
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.66	0.76	0.58	0.48	0.75	0.72	0.79

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Future Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1740	3484		1709	3400		1646	3484		1727	3478	
Flt Permitted	0.26	1.00		0.19	1.00		0.13	1.00		0.15	1.00	
Satd. Flow (perm)	467	3484		338	3400		225	3484		269	3478	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	196	629	93	180	500	129	108	789	108	222	969	129
RTOR Reduction (vph)	0	14	0	0	27	0	0	12	0	0	10	0
Lane Group Flow (vph)	196	708	0	180	602	0	108	885	0	222	1088	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	30.7	23.5		30.7	23.5		37.1	30.8		44.3	35.0	
Effective Green, g (s)	30.7	23.5		30.7	23.5		37.1	30.8		44.3	35.0	
Actuated g/C Ratio	0.34	0.26		0.34	0.26		0.41	0.34		0.49	0.39	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	261	909		224	887		192	1192		302	1352	
v/s Ratio Prot	0.06	0.20		c0.06	0.18		0.04	0.25		c0.09	c0.31	
v/s Ratio Perm	0.20			c0.21			0.19			0.28		
v/c Ratio	0.75	0.78		0.80	0.68		0.56	0.74		0.74	0.80	
Uniform Delay, d1	23.0	30.8		22.9	29.9		18.5	26.1		16.3	24.5	
Progression Factor	1.00	1.00		1.10	1.05		1.67	0.77		1.00	1.00	
Incremental Delay, d2	11.5	4.3		16.9	1.9		3.3	3.7		9.0	5.2	
Delay (s)	34.5	35.1		42.0	33.1		34.0	23.9		25.2	29.6	
Level of Service	C	D		D	C		C	C		C	C	
Approach Delay (s)		35.0			35.1			25.0			28.9	
Approach LOS		C			D			C			C	

Intersection Summary

HCM 2000 Control Delay	30.5	HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.82				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		18.0	
Intersection Capacity Utilization	85.6%	ICU Level of Service		E	
Analysis Period (min)	15				

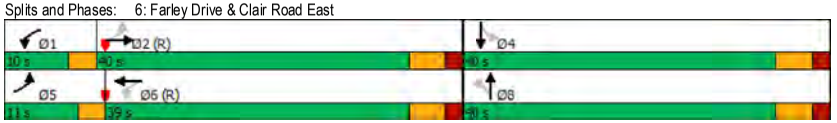
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	590	165	35	485	100	125	70	35	140	65	170
Future Volume (vph)	135	590	165	35	485	100	125	70	35	140	65	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Storage Length (m)	131.0		0.0	64.0		0.0	20.0		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		
Satd. Flow (prot)	1767	3400	0	1785	3339	0	1705	1765	0	0	1954	0
Flt Permitted	0.335			0.309			0.445				0.829	
Satd. Flow (perm)	617	3400	0	578	3339	0	790	1765	0	0	1638	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		45			30			32			53	
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		217.7			160.7			63.9			196.5	
Travel Time (s)		13.1			9.6			7.7			17.7	
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
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%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	147	641	179	38	527	109	136	76	38	152	71	185
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	820	0	38	636	0	136	114	0	0	408	0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	5	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		7.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	10.0	35.0		10.0	35.0		32.0	32.0		32.0	32.0	
Total Split (s)	11.0	40.0		10.0	39.0		40.0	40.0		40.0	40.0	
Total Split (%)	12.2%	44.4%		11.1%	43.3%		44.4%	44.4%		44.4%	44.4%	
Maximum Green (s)	8.0	34.0		7.0	33.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	0.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Walk Time (s)		11.0			11.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		18.0	18.0	
Pedestrian Calls (#/hr)		6			6		8	8		8	8	
Act Effct Green (s)	55.0	46.4		51.3	41.1		25.4	25.4			25.4	
Actuated g/C Ratio	0.61	0.52		0.57	0.46		0.28	0.28			0.28	
v/c Ratio	0.30	0.46		0.09	0.41		0.61	0.22			0.81	
Control Delay	7.1	13.4		5.6	14.2		38.6	16.8			38.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	7.1	13.4		5.6	14.2		38.6	16.8			38.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS	A	B		A	B		D	B			D	
Approach Delay		12.5			13.7			28.7			38.8	
Approach LOS		B			B			C			D	

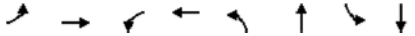
Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 74.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 6: Farley Drive & Clair Road East



Phasings
6: Farley Drive & Clair Road East

12-12-2023



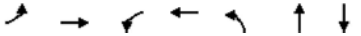
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	11.0	40.0	10.0	39.0	40.0	40.0	40.0	40.0
Total Split (%)	12.2%	44.4%	11.1%	43.3%	44.4%	44.4%	44.4%	44.4%
Maximum Green (s)	8.0	34.0	7.0	33.0	34.0	34.0	34.0	34.0
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
Walk Time (s)		11.0		11.0	8.0	8.0	8.0	8.0
Flash Dont Walk (s)		18.0		18.0	18.0	18.0	18.0	18.0
Pedestrian Calls (#/hr)		6		6	8	8	8	8
90th %ile Green (s)	9.2	33.3	7.7	31.8	34.0	34.0	34.0	34.0
90th %ile Term Code	Max	Coord	Gap	Coord	Hold	Hold	Gap	Gap
70th %ile Green (s)	10.0	38.7	7.0	35.7	29.3	29.3	29.3	29.3
70th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
50th %ile Green (s)	8.6	42.3	7.0	40.7	25.7	25.7	25.7	25.7
50th %ile Term Code	Gap	Coord	Min	Coord	Hold	Hold	Gap	Gap
30th %ile Green (s)	7.4	56.1	0.0	45.7	21.9	21.9	21.9	21.9
30th %ile Term Code	Gap	Coord	Skip	Coord	Hold	Hold	Gap	Gap
10th %ile Green (s)	7.0	61.7	0.0	51.7	16.3	16.3	16.3	16.3
10th %ile Term Code	Min	Coord	Skip	Coord	Hold	Hold	Gap	Gap

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Control Type: Actuated-Coordinated

Queues
6: Farley Drive & Clair Road East

12-12-2023



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	147	820	38	636	136	114	408
v/c Ratio	0.30	0.46	0.09	0.41	0.61	0.22	0.81
Control Delay	7.1	13.4	5.6	14.2	38.6	16.8	38.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	13.4	5.6	14.2	38.6	16.8	38.8
Queue Length 50th (m)	3.9	63.1	2.6	38.0	21.3	11.1	60.3
Queue Length 95th (m)	m26.5	89.4	2.4	63.2	36.3	21.1	83.7
Internal Link Dist (m)		193.7		136.7		39.9	172.5
Turn Bay Length (m)	131.0		64.0		20.0		
Base Capacity (vph)	488	1780	425	1550	298	686	651
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	0.30	0.46	0.09	0.41	0.46	0.17	0.63

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	590	165	35	485	100	125	70	35	140	65	170
Future Volume (vph)	135	590	165	35	485	100	125	70	35	140	65	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.97		1.00	0.97		1.00	0.95			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1762	3401		1783	3340		1688	1765			1939	
Flt Permitted	0.33	1.00		0.31	1.00		0.45	1.00			0.83	
Satd. Flow (perm)	621	3401		580	3340		791	1765			1638	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	641	179	38	527	109	136	76	38	152	71	185
RTOR Reduction (vph)	0	22	0	0	16	0	0	23	0	0	38	0
Lane Group Flow (vph)	147	798	0	38	620	0	136	91	0	0	370	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	52.6	45.3		45.5	41.2		25.4	25.4			25.4	
Effective Green, g (s)	52.6	45.3		45.5	41.2		25.4	25.4			25.4	
Actuated g/C Ratio	0.58	0.50		0.51	0.46		0.28	0.28			0.28	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	469	1711		350	1528		223	498			462	
v/s Ratio Prot	c0.03	c0.23		0.01	0.19			0.05				
v/s Ratio Perm	0.15			0.05			0.17				c0.23	
v/c Ratio	0.31	0.47		0.11	0.41		0.61	0.18			0.80	
Uniform Delay, d1	8.9	14.5		11.3	16.2		28.0	24.4			30.0	
Progression Factor	0.67	0.82		0.58	0.78		1.00	1.00			1.00	
Incremental Delay, d2	0.3	0.7		0.1	0.8		4.7	0.2			9.6	
Delay (s)	6.2	12.6		6.7	13.4		32.7	24.6			39.6	
Level of Service	A	B		A	B		C	C			D	
Approach Delay (s)		11.6			13.0			29.0			39.6	
Approach LOS		B			B			C			D	

Intersection Summary				
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.58			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
7: Farley Drive & Internal E-W Street

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	4.8	4.8	4.8
Satd. Flow (prot)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Flt Permitted		0.962			0.990						0.986	
Satd. Flow (perm)	0	1789	0	0	1722	0	0	1853	0	0	1979	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		57.2			91.1			54.0			63.9	
Travel Time (s)		6.9			10.9			6.5			7.7	
Confl. Peds. (#/hr)	6		6	6		6	26		22	22		26
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	121	23	11	23	29	63	0	92	11	80	63	144
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	155	0	0	115	0	0	103	0	0	287	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.2%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Future Volume (vph)	105	20	10	20	25	55	0	80	10	70	55	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	23	29	63	0	92	11	80	63	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	115	103	287
Volume Left (vph)	121	23	0	80
Volume Right (vph)	11	63	11	144
Hadj (s)	0.11	-0.29	-0.06	-0.25
Departure Headway (s)	5.1	4.8	4.9	4.5
Degree Utilization, x	0.22	0.15	0.14	0.36
Capacity (veh/h)	649	683	678	757
Control Delay (s)	9.5	8.6	8.7	10.0
Approach Delay (s)	9.5	8.6	8.7	10.0
Approach LOS	A	A	A	A

Intersection Summary					
Delay			9.4		
Level of Service			A		
Intersection Capacity Utilization			43.2%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access

12-12-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Satd. Flow (prot)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Flt Permitted		0.970			0.990			0.994			0.980	
Satd. Flow (perm)	0	1766	0	0	1683	0	0	1756	0	0	1769	0
Link Speed (k/h)		30			30			30			30	
Link Distance (m)		31.6			39.2			55.2			54.0	
Travel Time (s)		3.8			4.7			6.6			6.5	
Confl. Peds. (#/hr)	5		49	49		5	43		8	8		43
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	49	12	18	12	6	43	6	24	24	43	30	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	79	0	0	61	0	0	54	0	0	103	0
Sign Control		Stop			Stop			Stop			Stop	

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

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access/Existing Site Access 12-12-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Future Volume (vph)	40	10	15	10	5	35	5	20	20	35	25	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	12	18	12	6	43	6	24	24	43	30	30

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	79	61	54	103
Volume Left (vph)	49	12	6	43
Volume Right (vph)	18	43	24	30
Hadj (s)	-0.01	-0.38	-0.24	-0.09
Departure Headway (s)	4.3	3.9	4.1	4.2
Degree Utilization, x	0.09	0.07	0.06	0.12
Capacity (veh/h)	804	871	842	833
Control Delay (s)	7.7	7.2	7.3	7.7
Approach Delay (s)	7.7	7.2	7.3	7.7
Approach LOS	A	A	A	A

Intersection Summary					
Delay			7.5		
Level of Service			A		
Intersection Capacity Utilization			32.5%	ICU Level of Service	A
Analysis Period (min)			15		

Lanes, Volumes, Timings
9: Hawkins Drive & Internal E-W Street 12-12-2023

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	65	0	5	90	135	70
Future Volume (vph)	65	0	5	90	135	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.1	4.1	4.5	4.5	4.5	4.5
Satd. Flow (prot)	1905	0	0	2084	1994	0
Flt Permitted	0.950			0.997		
Satd. Flow (perm)	1905	0	0	2084	1994	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	71.6			121.9	64.6	
Travel Time (s)	8.6			11.0	5.8	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	80	0	6	111	167	86
Shared Lane Traffic (%)						
Lane Group Flow (vph)	80	0	0	117	253	0
Sign Control	Stop			Free	Free	

Intersection Summary					
Area Type:	Other				
Control Type: Unsignalized					
Intersection Capacity Utilization	21.6%			ICU Level of Service	A
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

12-12-2023

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	0	5	90	135	70
Future Volume (Veh/h)	65	0	5	90	135	70
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	80	0	6	111	167	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	333	210	253			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	333	210	253			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	100	100			
cM capacity (veh/h)	663	835	1324			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	80	117	253
Volume Left	80	6	0
Volume Right	0	0	86
cSH	663	1324	1700
Volume to Capacity	0.12	0.00	0.15
Queue Length 95th (m)	3.3	0.1	0.0
Control Delay (s)	11.2	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.2	0.4	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		2.1		
Intersection Capacity Utilization		21.6%	ICU Level of Service	A
Analysis Period (min)		15		

Lanes, Volumes, Timings
10: 1888 Gordon Street Access & Poppy Drive East

12-12-2023

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	120	20	5	115	20	15
Future Volume (vph)	120	20	5	115	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (m)	4.5	4.5	4.5	4.5	3.5	3.5
Satd. Flow (prot)	2033	0	0	2028	1683	0
Flt Permitted				0.998	0.972	
Satd. Flow (perm)	2033	0	0	2028	1683	0
Link Speed (k/h)	40			40	30	
Link Distance (m)	90.5			63.5	67.2	
Travel Time (s)	8.1			5.7	8.1	
Confl. Peds. (#/hr)		1	1		3	6
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	1%	0%	0%	3%	4%	0%
Adj. Flow (vph)	138	23	6	132	23	17
Shared Lane Traffic (%)						
Lane Group Flow (vph)	161	0	0	138	40	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.9%		ICU Level of Service A	
Analysis Period (min) 15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access & Poppy Drive East 12-12-2023

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	120	20	5	115	20	15
Future Volume (Veh/h)	120	20	5	115	20	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	138	23	6	132	23	17
Pedestrians	3			6	1	
Lane Width (m)	4.5			4.5	3.5	
Walking Speed (m/s)	1.2			1.2	1.2	
Percent Blockage	0			1	0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (m)	311					
pX, platoon unblocked						
vC, conflicting volume			162		298	156
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			162		298	156
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	98
cM capacity (veh/h)			1428		684	888

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	161	138	40
Volume Left	0	6	23
Volume Right	23	0	17
cSH	1700	1428	758
Volume to Capacity	0.09	0.00	0.05
Queue Length 95th (m)	0.0	0.1	1.3
Control Delay (s)	0.0	0.4	10.0
Lane LOS		A	B
Approach Delay (s)	0.0	0.4	10.0
Approach LOS			B

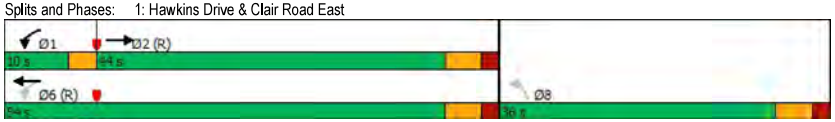
Intersection Summary			
Average Delay		1.3	
Intersection Capacity Utilization		21.9%	ICU Level of Service A
Analysis Period (min)		15	

Queues
1: Hawkins Drive & Clair Road East 06-27-2024

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	520	90	995	35
Future Volume (vph)	520	90	995	35
Lane Group Flow (vph)	622	105	1157	163
Turn Type	NA	pm+pt	NA	Perm
Protected Phases	2	1	6	
Permitted Phases		6		8
Detector Phase	2	1	6	8
Switch Phase				
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	44.0	10.0	54.0	36.0
Total Split (%)	48.9%	11.1%	60.0%	40.0%
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	C-Min	None	C-Min	None
v/c Ratio	0.29	0.16	0.46	0.49
Control Delay	4.6	4.4	6.5	17.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.6	4.4	6.5	17.4
Queue Length 50th (m)	8.7	2.7	28.1	8.4
Queue Length 95th (m)	20.6	13.0	78.3	m17.7
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2165	648	2535	662
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	8	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.29	0.16	0.46	0.25

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hawkins Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	520	15	90	995	35	105
Future Volume (vph)	520	15	90	995	35	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	1.00		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3362		1783	3433	1742	
Flt Permitted	1.00		0.39	1.00	0.99	
Satd. Flow (perm)	3362		726	3433	1742	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	605	17	105	1157	41	122
RTOR Reduction (vph)	1	0	0	0	106	0
Lane Group Flow (vph)	621	0	105	1157	57	0
Confl. Peds. (#/hr)		5	5			
Heavy Vehicles (%)	5%	14%	0%	4%	8%	6%
Bus Blockages (#/hr)	2	0	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	57.4		66.5	66.5	11.5	
Effective Green, g (s)	57.4		66.5	66.5	11.5	
Actuated g/C Ratio	0.64		0.74	0.74	0.13	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2144		608	2536	222	
v/s Ratio Prot	0.18		0.01	c0.34		
v/s Ratio Perm			0.12		c0.03	
v/c Ratio	0.29		0.17	0.46	0.25	
Uniform Delay, d1	7.2		3.4	4.6	35.4	
Progression Factor	0.48		1.00	1.00	1.20	
Incremental Delay, d2	0.3		0.1	0.6	0.6	
Delay (s)	3.8		3.5	5.2	43.0	
Level of Service	A		A	A	D	
Approach Delay (s)	3.8			5.1	43.0	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	65	0	40	80	10	10	50	40	5	40	35
Future Volume (Veh/h)	60	65	0	40	80	10	10	50	40	5	40	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	76	82	0	51	101	13	13	63	51	6	51	44
Pedestrians		15			17			15			24	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		2			1			2			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	138			97			543	489	114	567	482	146
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	138			97			543	489	114	567	482	146
tC, single (s)	4.2			4.1			7.1	6.5	6.2	7.1	6.5	6.4
tC, 2 stage (s)												
tF (s)	2.3			2.2			3.5	4.0	3.3	3.5	4.0	3.5
p0 queue free %	94			97			96	85	94	98	88	95
cM capacity (veh/h)	1369			1485			342	422	916	319	426	821

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	158	165	127	101
Volume Left	76	51	13	6
Volume Right	0	13	51	44
cSH	1369	1485	523	526
Volume to Capacity	0.06	0.03	0.24	0.19
Queue Length 95th (m)	1.4	0.9	7.6	5.6
Control Delay (s)	4.0	2.5	14.1	13.5
Lane LOS	A	A	B	B
Approach Delay (s)	4.0	2.5	14.1	13.5
Approach LOS			B	B

Intersection Summary					
Average Delay	7.6				
Intersection Capacity Utilization	29.4%	ICU Level of Service		A	
Analysis Period (min)	15				

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	30	130	200	10	10	85
Future Volume (Veh/h)	30	130	200	10	10	85
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	33	143	220	11	11	93
Pedestrians					8	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	239				442	234
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	239				442	234
tC, single (s)	4.4				6.5	6.3
tC, 2 stage (s)						
tF (s)	2.5				3.6	3.4
p0 queue free %	97				98	88
cM capacity (veh/h)	1172				540	776

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	176	231	104
Volume Left	33	0	11
Volume Right	0	11	93
cSH	1172	1700	742
Volume to Capacity	0.03	0.14	0.14
Queue Length 95th (m)	0.7	0.0	3.9
Control Delay (s)	1.7	0.0	10.6
Lane LOS	A		B
Approach Delay (s)	1.7	0.0	10.6
Approach LOS			B

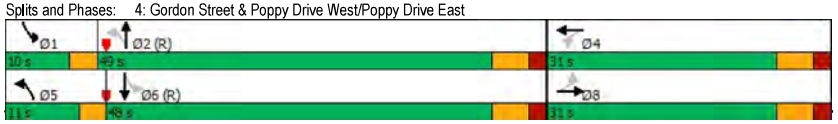
Intersection Summary			
Average Delay			2.8
Intersection Capacity Utilization			36.0%
Analysis Period (min)			15
		ICU Level of Service	A

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	25	105	70	165	1175	35	700
Future Volume (vph)	45	25	105	70	165	1175	35	700
Lane Group Flow (vph)	0	156	0	307	172	1344	36	812
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	11.0	49.0	10.0	48.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	12.2%	54.4%	11.1%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.49		0.86	0.37	0.73	0.14	0.48
Control Delay		22.1		51.0	8.8	19.8	6.3	10.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		22.1		51.0	8.8	19.8	6.3	10.9
Queue Length 50th (m)		13.6		45.9	11.1	103.8	2.0	25.8
Queue Length 95th (m)		31.8		#84.3	20.2	140.7	m2.5	m31.1
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		362		411	470	1836	253	1679
Starvation Cap Reductn		0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.43		0.75	0.37	0.73	0.14	0.48

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	25	80	105	70	120	165	1175	115	35	700	80
Future Volume (vph)	45	25	80	105	70	120	165	1175	115	35	700	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.95		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1456			1678		1894	3258		1678	3291	
Flt Permitted		0.77			0.81		0.27	1.00		0.13	1.00	
Satd. Flow (perm)		1140			1383		536	3258		227	3291	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	47	26	83	109	73	125	172	1224	120	36	729	83
RTOR Reduction (vph)	0	48	0	0	29	0	0	7	0	0	9	0
Lane Group Flow (vph)	0	108	0	0	278	0	172	1337	0	36	803	0
Confl. Peds. (#/hr)	4		2	2		4	3		8	8		3
Heavy Vehicles (%)	75%	22%	0%	0%	50%	5%	8%	7%	16%	4%	5%	20%
Bus Blockages (#/hr)	0	0	0	2	2	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		21.5			21.5		56.5	49.3		49.9	45.7	
Effective Green, g (s)		21.5			21.5		56.5	49.3		49.9	45.7	
Actuated g/C Ratio		0.24			0.24		0.63	0.55		0.55	0.51	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		272			330		454	1784		193	1671	
v/s Ratio Prot							c0.03	c0.41		0.01	0.24	
v/s Ratio Perm		0.09			c0.20		0.21			0.09		
v/c Ratio		0.40			0.84		0.38	0.75		0.19	0.48	
Uniform Delay, d1		28.8			32.6		7.7	15.6		10.9	14.4	
Progression Factor		1.00			1.00		1.00	1.00		0.86	0.68	
Incremental Delay, d2		1.0			17.4		0.5	2.9		0.3	0.6	
Delay (s)		29.8			50.1		8.3	18.5		9.6	10.4	
Level of Service		C			D		A	B		A	B	
Approach Delay (s)		29.8			50.1			17.4			10.4	
Approach LOS		C			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	79.1%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

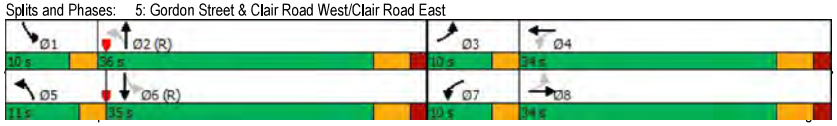
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	155	450	145	885	165	1035	90	585
Future Volume (vph)	155	450	145	885	165	1035	90	585
Lane Group Flow (vph)	172	600	161	1150	183	1289	100	911
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	11.0	36.0	10.0	35.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	12.2%	40.0%	11.1%	38.9%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.82	0.58	0.53	1.09	0.83	1.09	0.46	0.83
Control Delay	47.4	27.5	25.2	86.7	51.9	81.3	20.5	34.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	27.5	25.2	86.7	51.9	81.3	20.5	34.0
Queue Length 50th (m)	18.4	45.7	26.4	~129.0	24.2	~141.7	9.7	74.3
Queue Length 95th (m)	#49.3	63.4	29.4	#166.6	m#41.5	#185.3	18.8	#101.0
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	211	1033	301	1058	220	1179	216	1095
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.58	0.53	1.09	0.83	1.09	0.46	0.83

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	450	90	145	885	150	165	1035	125	90	585	235
Future Volume (vph)	155	450	90	145	885	150	165	1035	125	90	585	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1630	3261		1568	3356		1586	3288		1677	3251	
Flt Permitted	0.14	1.00		0.32	1.00		0.13	1.00		0.14	1.00	
Satd. Flow (perm)	245	3261		522	3356		214	3288		244	3251	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	500	100	161	983	167	183	1150	139	100	650	261
RTOR Reduction (vph)	0	19	0	0	15	0	0	10	0	0	48	0
Lane Group Flow (vph)	172	581	0	161	1135	0	183	1279	0	100	863	0
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.0	28.0		35.0	28.0		39.4	31.4		34.6	29.0	
Effective Green, g (s)	35.0	28.0		35.0	28.0		39.4	31.4		34.6	29.0	
Actuated g/C Ratio	0.39	0.31		0.39	0.31		0.44	0.35		0.38	0.32	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	203	1014		284	1044		215	1147		182	1047	
v/s Ratio Prot	c0.07	0.18		0.04	c0.34		c0.08	c0.39		0.03	0.27	
v/s Ratio Perm	0.26			0.18			0.30			0.18		
v/c Ratio	0.85	0.57		0.57	1.09		0.85	1.12		0.55	0.82	
Uniform Delay, d1	22.3	26.0		19.1	31.0		19.0	29.3		21.8	28.1	
Progression Factor	1.00	1.00		1.23	1.15		1.72	0.95		1.00	1.00	
Incremental Delay, d2	26.4	0.8		2.2	52.6		20.1	61.1		3.4	7.4	
Delay (s)	48.8	26.8		25.6	88.2		52.8	88.8		25.2	35.5	
Level of Service	D	C		C	F		D	F		C	D	
Approach Delay (s)		31.7			80.5			84.3			34.5	
Approach LOS		C			F			F			C	

Intersection Summary				
HCM 2000 Control Delay	63.3	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.09			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	93.5%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Queues
6: Farley Drive & Clair Road East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	110	475	10	945	75	15	55	20
Future Volume (vph)	110	475	10	945	75	15	55	20
Lane Group Flow (vph)	124	596	11	1163	84	34	0	241
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	11.0	48.0	10.0	47.0	32.0	32.0	32.0	32.0
Total Split (%)	12.2%	53.3%	11.1%	52.2%	35.6%	35.6%	35.6%	35.6%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.36	0.27	0.02	0.59	0.72	0.12		0.67
Control Delay	6.8	7.1	1.5	10.6	66.0	18.4		27.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0		0.0
Total Delay	6.8	7.1	1.5	10.7	66.0	18.4		27.8
Queue Length 50th (m)	2.6	7.7	0.2	67.0	14.9	2.7		23.3
Queue Length 95th (m)	m24.0	m56.5	m0.2	114.7	26.4	9.2		40.0
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	353	2185	634	1962	207	471		556
Starvation Cap Reductn	0	0	0	115	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	0.35	0.27	0.02	0.63	0.41	0.07		0.43

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East

HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	475	55	10	945	90	75	15	15	55	20	140
Future Volume (vph)	110	475	55	10	945	90	75	15	15	55	20	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.93			0.91	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1716	3199		1781	3330		1625	1591			1828	
Flt Permitted	0.17	1.00		0.43	1.00		0.42	1.00			0.90	
Satd. Flow (perm)	312	3199		800	3330		716	1591			1668	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	124	534	62	11	1062	101	84	17	17	62	22	157
RTOR Reduction (vph)	0	6	0	0	6	0	0	14	0	0	88	0
Lane Group Flow (vph)	124	590	0	11	1157	0	84	20	0	0	153	0
Confl. Peds. (#/hr)	9		8	8		9	14		10	10		14
Confl. Bikes (#/hr)						2						
Heavy Vehicles (%)	4%	10%	5%	0%	6%	0%	4%	0%	16%	8%	0%	3%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	63.3	58.9		54.2	52.8		14.7	14.7			14.7	
Effective Green, g (s)	63.3	58.9		54.2	52.8		14.7	14.7			14.7	
Actuated g/C Ratio	0.70	0.65		0.60	0.59		0.16	0.16			0.16	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	336	2093		497	1953		116	259			272	
v/s Ratio Prot	c0.03	0.18		0.00	c0.35			0.01				
v/s Ratio Perm	0.23			0.01			c0.12				0.09	
v/c Ratio	0.37	0.28		0.02	0.59		0.72	0.08			0.56	
Uniform Delay, d1	6.3	6.6		7.2	11.8		35.7	31.9			34.7	
Progression Factor	0.99	0.94		0.28	0.70		1.00	1.00			1.00	
Incremental Delay, d2	0.5	0.3		0.0	1.2		19.9	0.1			2.7	
Delay (s)	6.7	6.4		2.0	9.5		55.7	32.0			37.3	
Level of Service	A	A		A	A		E	C			D	
Approach Delay (s)		6.5			9.4			48.9			37.3	
Approach LOS		A			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	69.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	25	5	0	75	10	70	0	10	25	20	15	40
Future Volume (vph)	25	5	0	75	10	70	0	10	25	20	15	40
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Hourly flow rate (vph)	34	7	0	103	14	96	0	14	34	27	21	55

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	41	213	48	103
Volume Left (vph)	34	103	0	27
Volume Right (vph)	0	96	34	55
Hadj (s)	0.21	-0.17	-0.40	-0.16
Departure Headway (s)	4.7	4.1	4.2	4.4
Degree Utilization, x	0.05	0.24	0.06	0.12
Capacity (veh/h)	734	836	799	772
Control Delay (s)	7.9	8.4	7.4	8.0
Approach Delay (s)	7.9	8.4	7.4	8.0
Approach LOS	A	A	A	A

Intersection Summary			
Delay	8.2		
Level of Service	A		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	5	5	5	35	90	0
Future Volume (vph)	5	5	5	35	90	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	7	7	7	47	120	0

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	14	54	120
Volume Left (vph)	7	7	0
Volume Right (vph)	7	0	0
Hadj (s)	-0.20	0.20	0.10
Departure Headway (s)	4.1	4.2	4.1
Degree Utilization, x	0.02	0.06	0.14
Capacity (veh/h)	842	829	872
Control Delay (s)	7.1	7.5	7.7
Approach Delay (s)	7.1	7.5	7.7
Approach LOS	A	A	A

Intersection Summary				
Delay		7.6		
Level of Service		A		
Intersection Capacity Utilization		25.3%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	0	0	125	80	25
Future Volume (Veh/h)	15	0	0	125	80	25
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	19	0	0	160	103	32
Pedestrians	12					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	291	131	147			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	291	131	147			
tC, single (s)	6.6	7.2	4.1			
tC, 2 stage (s)						
tF (s)	3.6	4.2	2.2			
p0 queue free %	97	100	100			
cM capacity (veh/h)	664	703	1431			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	19	160	135
Volume Left	19	0	0
Volume Right	0	0	32
cSH	664	1431	1700
Volume to Capacity	0.03	0.00	0.08
Queue Length 95th (m)	0.7	0.0	0.0
Control Delay (s)	10.6	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.6	0.0	0.0
Approach LOS	B		

Intersection Summary				
Average Delay		0.6		
Intersection Capacity Utilization		18.4%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	105	5	5	135	0	40	0	15	0	0	60
Future Volume (Veh/h)	20	105	5	5	135	0	40	0	15	0	0	60
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.89	0.89	0.89	0.89	0.92	0.89	0.92	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	22	118	6	6	152	0	45	0	17	0	0	65
Pedestrians					6							
Lane Width (m)					4.5							
Walking Speed (m/s)					1.2							
Percent Blockage					1							
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	152			124			394	329	127	352	332	152
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	152			124			394	329	127	352	332	152
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			100			91	100	98	100	100	93
cM capacity (veh/h)	1429			1475			517	579	923	579	576	894

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	146	158	62	65
Volume Left	22	6	45	0
Volume Right	6	0	17	65
cSH	1429	1475	588	894
Volume to Capacity	0.02	0.00	0.11	0.07
Queue Length 95th (m)	0.4	0.1	2.8	1.9
Control Delay (s)	1.2	0.3	11.8	9.3
Lane LOS	A	A	B	A
Approach Delay (s)	1.2	0.3	11.8	9.3
Approach LOS			B	A

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	32.0%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

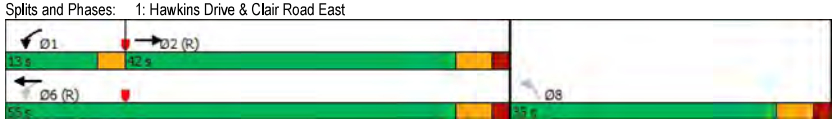
Intersection Summary				
Delay	0.0			
Level of Service	A			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Queues
1: Hawkins Drive & Clair Road East 06-27-2024

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	1035	155	665	35
Future Volume (vph)	1035	155	665	35
Lane Group Flow (vph)	1107	158	679	164
Turn Type	NA	pm+pt	NA	Perm
Protected Phases	2	1	6	
Permitted Phases		6		8
Detector Phase	2	1	6	8
Switch Phase				
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	42.0	13.0	55.0	35.0
Total Split (%)	46.7%	14.4%	61.1%	38.9%
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	C-Min	None	C-Min	None
v/c Ratio	0.53	0.37	0.26	0.48
Control Delay	5.8	6.3	5.0	15.7
Queue Delay	0.1	0.0	0.0	0.0
Total Delay	5.9	6.3	5.0	15.7
Queue Length 50th (m)	18.4	4.0	13.0	5.4
Queue Length 95th (m)	30.9	19.6	42.2	m17.9
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2090	450	2617	682
Starvation Cap Reductn	104	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.35	0.26	0.24

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Hawkins Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1035	50	155	665	35	125
Future Volume (vph)	1035	50	155	665	35	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.89	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3458		1784	3535	1849	
Flt Permitted	1.00		0.19	1.00	0.99	
Satd. Flow (perm)	3458		365	3535	1849	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1056	51	158	679	36	128
RTOR Reduction (vph)	2	0	0	0	112	0
Lane Group Flow (vph)	1105	0	158	679	52	0
Confl. Peds. (#/hr)		13	13		1	
Confl. Bikes (#/hr)		1				
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	54.3		66.6	66.6	11.4	
Effective Green, g (s)	54.3		66.6	66.6	11.4	
Actuated g/C Ratio	0.60		0.74	0.74	0.13	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2086		416	2615	234	
v/s Ratio Prot	c0.32		c0.04	0.19		
v/s Ratio Perm			0.24		c0.03	
v/c Ratio	0.53		0.38	0.26	0.22	
Uniform Delay, d1	10.4		5.0	3.8	35.3	
Progression Factor	0.40		1.00	1.00	1.16	
Incremental Delay, d2	0.8		0.6	0.2	0.5	
Delay (s)	4.9		5.6	4.0	41.4	
Level of Service	A		A	A	D	
Approach Delay (s)	4.9			4.3	41.4	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	125	10	60	60	5	10	50	40	15	95	45
Future Volume (Veh/h)	70	125	10	60	60	5	10	50	40	15	95	45
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	83	149	12	71	71	6	12	60	48	18	113	54
Pedestrians		8			4			13			33	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			3	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	110			174			668	586	172	652	589	115
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	110			174			668	586	172	652	589	115
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	94			95			95	83	94	93	69	94
cM capacity (veh/h)	1441			1396			232	362	862	271	361	887

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	244	148	120	185
Volume Left	83	71	12	18
Volume Right	12	6	48	54
cSH	1441	1396	440	420
Volume to Capacity	0.06	0.05	0.27	0.44
Queue Length 95th (m)	1.5	1.3	8.8	17.6
Control Delay (s)	2.9	3.9	16.2	20.2
Lane LOS	A	A	C	C
Approach Delay (s)	2.9	3.9	16.2	20.2
Approach LOS			C	C

Intersection Summary				
Average Delay	10.0			
Intersection Capacity Utilization	31.5%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	65	245	145	15	20	50
Future Volume (Veh/h)	65	245	145	15	20	50
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	74	278	165	17	23	57
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	197				614	188
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	197				614	188
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	95				95	93
cM capacity (veh/h)	1371				428	848

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	352	182	80
Volume Left	74	0	23
Volume Right	0	17	57
cSH	1371	1700	662
Volume to Capacity	0.05	0.11	0.12
Queue Length 95th (m)	1.4	0.0	3.3
Control Delay (s)	2.0	0.0	11.2
Lane LOS	A		B
Approach Delay (s)	2.0	0.0	11.2
Approach LOS			B

Intersection Summary				
Average Delay	2.6			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A	
Analysis Period (min)	15			

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East

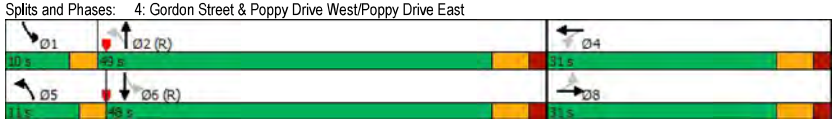
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	65	55	100	60	160	1075	105	1115
Future Volume (vph)	65	55	100	60	160	1075	105	1115
Lane Group Flow (vph)	0	260	0	240	163	1286	107	1194
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	31.0	31.0	31.0	31.0	11.0	49.0	10.0	48.0
Total Split (%)	34.4%	34.4%	34.4%	34.4%	12.2%	54.4%	11.1%	53.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.73		0.85	0.46	0.67	0.37	0.65
Control Delay		36.3		54.8	10.2	17.7	12.0	11.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.1
Total Delay		36.3		54.8	10.2	17.7	12.0	11.9
Queue Length 50th (m)		33.2		37.4	9.1	85.6	4.9	51.4
Queue Length 95th (m)		56.6		61.6	19.1	124.6	m3.3	m25.4
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		444		361	362	1919	286	1851
Starvation Cap Reductn		0		0	0	0	0	75
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.59		0.66	0.45	0.67	0.37	0.67

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	55	135	100	60	75	160	1075	185	105	1115	55
Future Volume (vph)	65	55	135	100	60	75	160	1075	185	105	1115	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1757			1895		2005	3405		1727	3474	
Flt Permitted		0.81			0.64		0.15	1.00		0.14	1.00	
Satd. Flow (perm)		1436			1235		313	3405		258	3474	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	66	56	138	102	61	77	163	1097	189	107	1138	56
RTOR Reduction (vph)	0	49	0	0	20	0	0	13	0	0	3	0
Lane Group Flow (vph)	0	211	0	0	220	0	163	1273	0	107	1191	0
Confl. Peds. (#/hr)	18		3	3		18	6		17	17		6
Heavy Vehicles (%)	18%	0%	0%	1%	0%	3%	2%	2%	1%	1%	2%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		19.3			19.3		57.6	49.8		53.8	47.9	
Effective Green, g (s)		19.3			19.3		57.6	49.8		53.8	47.9	
Actuated g/C Ratio		0.21			0.21		0.64	0.55		0.60	0.53	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		307			264		346	1884		250	1848	
v/s Ratio Prot							c0.04	c0.37		0.03	0.34	
v/s Ratio Perm		0.15			c0.18		0.26			0.23		
v/c Ratio		0.69			0.83		0.47	0.68		0.43	0.64	
Uniform Delay, d1		32.6			33.8		9.2	14.3		9.8	15.0	
Progression Factor		1.00			1.00		1.00	1.00		1.93	0.71	
Incremental Delay, d2		6.2			19.5		1.0	2.0		0.1	0.2	
Delay (s)		38.8			53.3		10.2	16.3		19.0	10.8	
Level of Service		D			D		B	B		B	B	
Approach Delay (s)		38.8			53.3			15.6			11.5	
Approach LOS		D			D			B			B	

Intersection Summary

HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	77.9%	ICU Level of Service	D	
Analysis Period (min)	15			

c Critical Lane Group

Queues
5: Gordon Street & Clair Road West/Clair Road East

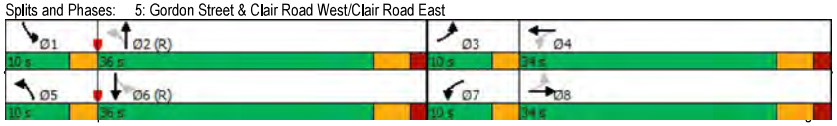
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	270	965	160	560	125	935	220	1045
Future Volume (vph)	270	965	160	560	125	935	220	1045
Lane Group Flow (vph)	278	1119	165	716	129	1113	227	1263
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	36.0	10.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	40.0%	11.1%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.98	1.03	0.75	0.66	0.61	0.98	1.02	1.12
Control Delay	71.4	66.9	37.5	29.5	33.1	43.9	87.8	94.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.4	66.9	37.5	29.5	33.1	43.9	87.8	94.4
Queue Length 50th (m)	31.6	~115.0	22.0	67.2	8.4	97.2	~25.2	~139.3
Queue Length 95th (m)	#78.3	#156.3	m#42.6	74.3	m26.4	#143.6	#73.2	#181.9
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	284	1086	221	1084	212	1140	222	1131
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.98	1.03	0.75	0.66	0.61	0.98	1.02	1.12

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 100
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	965	120	160	560	135	125	935	145	220	1045	180
Future Volume (vph)	270	965	120	160	560	135	125	935	145	220	1045	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1741	3459		1710	3409		1646	3379		1727	3349	
Flt Permitted	0.24	1.00		0.14	1.00		0.13	1.00		0.13	1.00	
Satd. Flow (perm)	437	3459		257	3409		231	3379		242	3349	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	278	995	124	165	577	139	129	964	149	227	1077	186
RTOR Reduction (vph)	0	10	0	0	23	0	0	13	0	0	15	0
Lane Group Flow (vph)	278	1109	0	165	693	0	129	1100	0	227	1248	0
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	35.0	28.0		35.0	28.0		37.0	30.0		37.0	30.0	
Effective Green, g (s)	35.0	28.0		35.0	28.0		37.0	30.0		37.0	30.0	
Actuated g/C Ratio	0.39	0.31		0.39	0.31		0.41	0.33		0.41	0.33	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	271	1076		212	1060		205	1126		214	1116	
v/s Ratio Prot	c0.08	c0.32		0.06	0.20		0.05	0.33		c0.08	c0.37	
v/s Ratio Perm	0.32			0.24			0.21			0.35		
v/c Ratio	1.03	1.03		0.78	0.65		0.63	0.98		1.06	1.12	
Uniform Delay, d1	24.8	31.0		22.1	26.8		21.0	29.7		22.6	30.0	
Progression Factor	1.00	1.00		1.07	1.03		1.68	0.84		1.00	1.00	
Incremental Delay, d2	61.5	35.5		14.9	1.3		4.4	18.1		78.5	65.5	
Delay (s)	86.3	66.5		38.6	28.9		39.7	43.0		101.1	95.5	
Level of Service	F	E		D	C		D	D		F	F	
Approach Delay (s)		70.5			30.8			42.6			96.3	
Approach LOS		E			C			D			F	

Intersection Summary

HCM 2000 Control Delay	64.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Queues
6: Farley Drive & Clair Road East

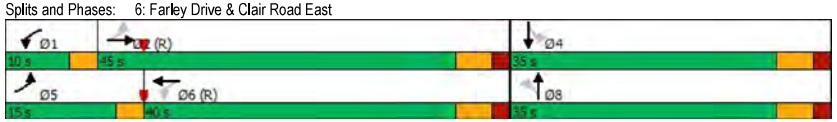
06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	210	915	45	565	100	40	135	60
Future Volume (vph)	210	915	45	565	100	40	135	60
Lane Group Flow (vph)	219	1114	47	693	104	78	0	376
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	15.0	45.0	10.0	40.0	35.0	35.0	35.0	35.0
Total Split (%)	16.7%	50.0%	11.1%	44.4%	38.9%	38.9%	38.9%	38.9%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.44	0.60	0.14	0.43	0.52	0.17		0.83
Control Delay	4.9	13.8	6.5	13.7	36.9	15.0		42.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	4.9	13.8	6.5	13.7	36.9	15.0		42.5
Queue Length 50th (m)	4.1	96.0	1.8	41.8	16.1	5.8		55.8
Queue Length 95th (m)	m17.6	m100.4	4.0	66.6	30.4	15.4		83.3
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	531	1855	329	1606	254	577		560
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	0.41	0.60	0.14	0.43	0.41	0.14		0.67

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	915	155	45	565	100	100	40	35	135	60	165
Future Volume (vph)	210	915	155	45	565	100	100	40	35	135	60	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.98			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.98	1.00			0.99	
Frt	1.00	0.98		1.00	0.98		1.00	0.93			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1780	3385		1784	3400		1677	1715			1902	
Flt Permitted	0.31	1.00		0.20	1.00		0.45	1.00			0.84	
Satd. Flow (perm)	579	3385		381	3400		791	1715			1634	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	219	953	161	47	589	104	104	42	36	141	62	172
RTOR Reduction (vph)	0	13	0	0	14	0	0	27	0	0	37	0
Lane Group Flow (vph)	219	1101	0	47	679	0	104	51	0	0	339	0
Confl. Peds. (#/hr)	20		13	13		20	36		29	29		36
Confl. Bikes (#/hr)			2									
Heavy Vehicles (%)	0%	3%	0%	0%	2%	1%	0%	0%	0%	2%	1%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	55.0	47.8		46.3	42.1		23.0	23.0			23.0	
Effective Green, g (s)	55.0	47.8		46.3	42.1		23.0	23.0			23.0	
Actuated g/C Ratio	0.61	0.53		0.51	0.47		0.26	0.26			0.26	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	485	1797		261	1590		202	438			417	
v/s Ratio Prot	c0.05	c0.33		0.01	0.20			0.03				
v/s Ratio Perm	0.23			0.08			0.13				c0.21	
v/c Ratio	0.45	0.61		0.18	0.43		0.51	0.12			0.81	
Uniform Delay, d1	8.4	14.7		11.4	15.9		28.7	25.7			31.5	
Progression Factor	0.62	0.86		0.72	0.76		1.00	1.00			1.00	
Incremental Delay, d2	0.1	0.1		0.3	0.8		2.2	0.1			11.5	
Delay (s)	5.2	12.7		8.5	12.9		30.9	25.8			42.9	
Level of Service	A	B		A	B		C	C			D	
Approach Delay (s)		11.5			12.6			28.7			42.9	
Approach LOS		B			B			C			D	

Intersection Summary

HCM 2000 Control Delay	17.5	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.67				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		15.0	
Intersection Capacity Utilization	78.4%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

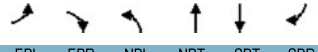
HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	85	20	5	40	20	60	5	35	65	75	25	140
Future Volume (vph)	85	20	5	40	20	60	5	35	65	75	25	140
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	94	22	6	44	22	67	6	39	72	83	28	156

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	122	133	117	267
Volume Left (vph)	94	44	6	83
Volume Right (vph)	6	67	72	156
Hadj (s)	0.12	-0.24	-0.36	-0.27
Departure Headway (s)	5.1	4.7	4.5	4.4
Degree Utilization, x	0.17	0.17	0.15	0.33
Capacity (veh/h)	646	693	738	767
Control Delay (s)	9.1	8.7	8.3	9.6
Approach Delay (s)	9.1	8.7	8.3	9.6
Approach LOS	A	A	A	A

Intersection Summary				
Delay		9.1		
Level of Service		A		
Intersection Capacity Utilization		41.5%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access 06-27-2024



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	30	10	10	75	60	10
Future Volume (vph)	30	10	10	75	60	10
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	34	11	11	85	68	11

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	45	96	79
Volume Left (vph)	34	11	0
Volume Right (vph)	11	0	11
Hadj (s)	0.00	0.02	-0.08
Departure Headway (s)	4.3	4.1	4.0
Degree Utilization, x	0.05	0.11	0.09
Capacity (veh/h)	805	855	880
Control Delay (s)	7.5	7.6	7.4
Approach Delay (s)	7.5	7.6	7.4
Approach LOS	A	A	A

Intersection Summary				
Delay		7.5		
Level of Service		A		
Intersection Capacity Utilization		29.1%	ICU Level of Service	A
Analysis Period (min)		15		

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street 06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	5	0	120	150	55
Future Volume (Veh/h)	40	5	0	120	150	55
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	45	6	0	135	169	62
Pedestrians	8					
Lane Width (m)	4.1					
Walking Speed (m/s)	1.2					
Percent Blockage	1					
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	343	208	239			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	343	208	239			
tC, single (s)	6.4	6.4	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	93	99	100			
cM capacity (veh/h)	650	792	1329			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	51	135	231
Volume Left	45	0	0
Volume Right	6	0	62
cSH	664	1329	1700
Volume to Capacity	0.08	0.00	0.14
Queue Length 95th (m)	2.0	0.0	0.0
Control Delay (s)	10.9	0.0	0.0
Lane LOS	B		
Approach Delay (s)	10.9	0.0	0.0
Approach LOS	B		

Intersection Summary				
Average Delay	1.3			
Intersection Capacity Utilization	21.9%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	180	30	10	120	0	30	0	10	0	0	35
Future Volume (Veh/h)	40	180	30	10	120	0	30	0	10	0	0	35
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	43	196	33	11	130	0	33	0	11	0	0	38
Pedestrians		2			17			1				
Lane Width (m)		4.5			4.5			3.6				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		0			2			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	130			230			492	452	230	478	468	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	130			230			492	452	230	478	468	132
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			93	100	99	100	100	96
cM capacity (veh/h)	1455			1349			455	484	799	468	474	915

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	272	141	44	38
Volume Left	43	11	33	0
Volume Right	33	0	11	38
cSH	1455	1349	510	915
Volume to Capacity	0.03	0.01	0.09	0.04
Queue Length 95th (m)	0.7	0.2	2.3	1.0
Control Delay (s)	1.4	0.7	12.7	9.1
Lane LOS	A	A	B	A
Approach Delay (s)	1.4	0.7	12.7	9.1
Approach LOS			B	A

Intersection Summary				
Average Delay	2.8			
Intersection Capacity Utilization	37.9%	ICU Level of Service		A
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

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

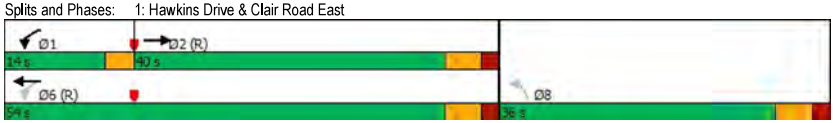
Queues
1: Hawkins Drive & Clair Road East

06-27-2024

Lane Group	EBT	WBL	WBT	NBL
Lane Configurations				
Traffic Volume (vph)	720	160	580	35
Future Volume (vph)	720	160	580	35
Lane Group Flow (vph)	797	167	604	140
Turn Type	NA	pm+pt	NA	Perm
Protected Phases	2	1	6	
Permitted Phases		6		8
Detector Phase	2	1	6	8
Switch Phase				
Minimum Initial (s)	10.0	7.0	10.0	7.0
Minimum Split (s)	35.0	10.0	35.0	35.0
Total Split (s)	40.0	14.0	54.0	36.0
Total Split (%)	44.4%	15.6%	60.0%	40.0%
Yellow Time (s)	4.0	3.0	4.0	4.0
All-Red Time (s)	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	3.0	6.0	6.0
Lead/Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	C-Min	None	C-Min	None
v/c Ratio	0.37	0.30	0.24	0.43
Control Delay	5.1	5.2	4.9	16.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	5.1	5.2	4.9	16.1
Queue Length 50th (m)	13.8	4.2	11.3	6.4
Queue Length 95th (m)	29.7	20.6	37.3	18.1
Internal Link Dist (m)	136.7		106.4	40.6
Turn Bay Length (m)		25.0		
Base Capacity (vph)	2153	588	2569	688
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.37	0.28	0.24	0.20

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 2 (2%), Referenced to phase 2:EBT and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 1: Hawkins Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
1: Hawkins Drive & Clair Road East

06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	720	45	160	580	35	100
Future Volume (vph)	720	45	160	580	35	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	4.5	4.5
Total Lost time (s)	6.0		3.0	6.0	6.0	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frpb, ped/bikes	1.00		1.00	1.00	1.00	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.90	
Flt Protected	1.00		0.95	1.00	0.99	
Satd. Flow (prot)	3485		1766	3466	1857	
Flt Permitted	1.00		0.31	1.00	0.99	
Satd. Flow (perm)	3485		568	3466	1857	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	750	47	167	604	36	104
RTOR Reduction (vph)	3	0	0	0	91	0
Lane Group Flow (vph)	794	0	167	604	49	0
Confl. Peds. (#/hr)		6	6			
Heavy Vehicles (%)	1%	0%	1%	3%	0%	0%
Bus Blockages (#/hr)	2	2	0	0	0	0
Turn Type	NA		pm+pt	NA	Perm	
Protected Phases	2		1	6		
Permitted Phases			6		8	
Actuated Green, G (s)	55.5		66.7	66.7	11.3	
Effective Green, g (s)	55.5		66.7	66.7	11.3	
Actuated g/C Ratio	0.62		0.74	0.74	0.13	
Clearance Time (s)	6.0		3.0	6.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	2149		530	2568	233	
v/s Ratio Prot	c0.23		c0.03	0.17		
v/s Ratio Perm			0.20		c0.03	
v/c Ratio	0.37		0.32	0.24	0.21	
Uniform Delay, d1	8.6		3.7	3.7	35.3	
Progression Factor	0.45		1.00	1.00	1.12	
Incremental Delay, d2	0.4		0.3	0.2	0.5	
Delay (s)	4.3		4.1	3.9	40.0	
Level of Service	A		A	A	D	
Approach Delay (s)	4.3			3.9	40.0	
Approach LOS	A			A	D	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
2: Hawkins Drive & Poppy Drive East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	75	5	50	70	10	5	40	30	5	90	40
Future Volume (Veh/h)	40	75	5	50	70	10	5	40	30	5	90	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
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
Hourly flow rate (vph)	43	81	5	54	75	11	5	43	32	5	97	43
Pedestrians		6			3			11			12	
Lane Width (m)		4.5			3.6			4.5			4.5	
Walking Speed (m/s)		1.2			1.2			1.2			1.2	
Percent Blockage		1			0			1			1	
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		375										
pX, platoon unblocked												
vC, conflicting volume	98			97			466	386	98	426	384	98
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	98			97			466	386	98	426	384	98
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.3
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.4
p0 queue free %	97			96			99	91	97	99	81	95
cM capacity (veh/h)	1489			1492			381	503	951	451	505	921

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	129	140	80	145
Volume Left	43	54	5	5
Volume Right	5	11	32	43
cSH	1489	1492	605	581
Volume to Capacity	0.03	0.04	0.13	0.25
Queue Length 95th (m)	0.7	0.9	3.6	7.8
Control Delay (s)	2.6	3.1	11.9	13.3
Lane LOS	A	A	B	B
Approach Delay (s)	2.6	3.1	11.9	13.3
Approach LOS			B	B

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	27.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
3: Poppy Drive East & Farley Drive 06-27-2024

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	165	150	15	15	65
Future Volume (Veh/h)	40	165	150	15	15	65
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	44	181	165	16	16	71
Pedestrians					15	
Lane Width (m)					3.5	
Walking Speed (m/s)					1.2	
Percent Blockage					1	
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (m)		220				
pX, platoon unblocked						
vC, conflicting volume	196				457	188
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	196				457	188
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				97	92
cM capacity (veh/h)	1372				541	849

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	225	181	87
Volume Left	44	0	16
Volume Right	0	16	71
cSH	1372	1700	768
Volume to Capacity	0.03	0.11	0.11
Queue Length 95th (m)	0.8	0.0	3.1
Control Delay (s)	1.7	0.0	10.3
Lane LOS	A		B
Approach Delay (s)	1.7	0.0	10.3
Approach LOS			B

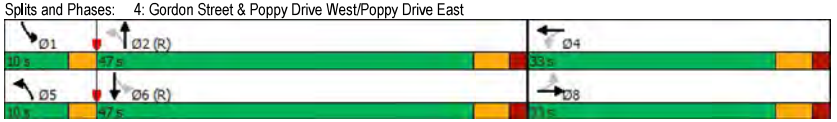
Intersection Summary			
Average Delay			2.6
Intersection Capacity Utilization			36.4%
Analysis Period (min)			15
		ICU Level of Service	A

Queues
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	35	105	60	125	895	80	1060
Future Volume (vph)	55	35	105	60	125	895	80	1060
Lane Group Flow (vph)	0	202	0	274	137	1116	88	1209
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	8	8	4	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	30.0	30.0	30.0	30.0	10.0	35.0	10.0	35.0
Total Split (s)	33.0	33.0	33.0	33.0	10.0	47.0	10.0	47.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	11.1%	52.2%	11.1%	52.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	3.0	6.0	3.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Min	None	C-Min
v/c Ratio		0.58		0.81	0.40	0.58	0.27	0.65
Control Delay		26.9		47.6	9.8	16.3	5.1	9.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.1
Total Delay		26.9		47.6	9.8	16.3	5.1	9.7
Queue Length 50th (m)		22.4		42.4	7.8	68.8	3.0	45.3
Queue Length 95th (m)		40.9		65.5	17.5	104.6	m4.2	34.1
Internal Link Dist (m)		69.0		196.5		172.0		156.5
Turn Bay Length (m)					91.0		70.0	
Base Capacity (vph)		448		440	342	1931	332	1866
Starvation Cap Reductn		0		0	0	0	0	57
Spillback Cap Reductn		0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0	0	0
Reduced v/c Ratio		0.45		0.62	0.40	0.58	0.27	0.67

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Gordon Street & Poppy Drive West/Poppy Drive East



HCM Signalized Intersection Capacity Analysis
4: Gordon Street & Poppy Drive West/Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	35	95	105	60	85	125	895	120	80	1060	40
Future Volume (vph)	55	35	95	105	60	85	125	895	120	80	1060	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	4.2	4.2	4.2	4.5	4.5	4.5	4.8	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99			0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.93			0.95		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1718			1890		2045	3492		1744	3546	
Flt Permitted		0.78			0.73		0.14	1.00		0.19	1.00	
Satd. Flow (perm)		1355			1399		307	3492		347	3546	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	60	38	104	115	66	93	137	984	132	88	1165	44
RTOR Reduction (vph)	0	47	0	0	22	0	0	10	0	0	2	0
Lane Group Flow (vph)	0	155	0	0	252	0	137	1106	0	88	1207	0
Confl. Peds. (#/hr)	14		6	6		14	10		10	10		10
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	23%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	0	0	2	2	2	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)		20.3			20.3		56.3	48.9		53.1	47.3	
Effective Green, g (s)		20.3			20.3		56.3	48.9		53.1	47.3	
Actuated g/C Ratio		0.23			0.23		0.63	0.54		0.59	0.53	
Clearance Time (s)		6.0			6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		305			315		334	1897		294	1863	
v/s Ratio Prot							c0.03	0.32		0.02	c0.34	
v/s Ratio Perm		0.11			c0.18		0.22			0.16		
v/c Ratio		0.51			0.80		0.41	0.58		0.30	0.65	
Uniform Delay, d1		30.5			32.9		9.5	13.7		9.0	15.4	
Progression Factor		1.00			1.00		1.00	1.00		0.61	0.51	
Incremental Delay, d2		1.3			13.2		0.8	1.3		0.4	1.1	
Delay (s)		31.8			46.1		10.3	15.1		5.8	8.9	
Level of Service		C			D		B	B		A	A	
Approach Delay (s)		31.8			46.1			14.5			8.7	
Approach LOS		C			D			B			A	

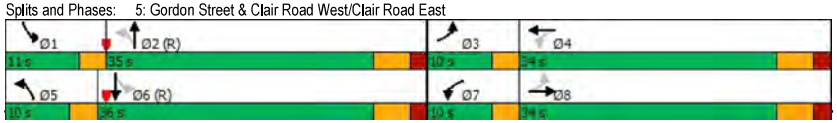
Intersection Summary				
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	73.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Queues
5: Gordon Street & Clair Road West/Clair Road East 06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	190	600	175	485	105	785	215	960
Future Volume (vph)	190	600	175	485	105	785	215	960
Lane Group Flow (vph)	196	712	180	644	108	917	222	1119
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	5	2	1	6
Permitted Phases	8		4		2		6	
Detector Phase	3	8	7	4	5	2	1	6
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	10.0	7.0	10.0
Minimum Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	10.0	35.0
Total Split (s)	10.0	34.0	10.0	34.0	10.0	35.0	11.0	36.0
Total Split (%)	11.1%	37.8%	11.1%	37.8%	11.1%	38.9%	12.2%	40.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	0.0	2.0	0.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	3.0	6.0	3.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	C-Min	None	C-Min
v/c Ratio	0.73	0.78	0.75	0.71	0.48	0.77	0.73	0.81
Control Delay	35.5	36.1	38.6	32.8	27.6	24.3	31.8	31.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.5	36.1	38.6	32.8	27.6	24.3	31.8	31.4
Queue Length 50th (m)	23.2	61.1	22.1	39.2	5.5	80.3	20.9	97.4
Queue Length 95th (m)	#40.1	76.6	m#39.8	61.7	m25.9	63.7	#65.6	#147.2
Internal Link Dist (m)		244.6		193.7		156.5		209.4
Turn Bay Length (m)	70.0		32.0		72.0		163.0	
Base Capacity (vph)	269	1096	239	1083	225	1195	306	1390
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.65	0.75	0.59	0.48	0.77	0.73	0.81

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	600	90	175	485	140	105	785	105	215	960	125
Future Volume (vph)	190	600	90	175	485	140	105	785	105	215	960	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00		1.00	0.99		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.97		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1741	3483		1709	3388		1646	3486		1727	3480	
Flt Permitted	0.24	1.00		0.19	1.00		0.13	1.00		0.14	1.00	
Satd. Flow (perm)	445	3483		348	3388		226	3486		250	3480	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	196	619	93	180	500	144	108	809	108	222	990	129
RTOR Reduction (vph)	0	14	0	0	32	0	0	11	0	0	10	0
Lane Group Flow (vph)	196	698	0	180	612	0	108	906	0	222	1109	0
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Actuated Green, G (s)	30.6	23.4		30.6	23.4		36.9	30.6		44.4	35.1	
Effective Green, g (s)	30.6	23.4		30.6	23.4		36.9	30.6		44.4	35.1	
Actuated g/C Ratio	0.34	0.26		0.34	0.26		0.41	0.34		0.49	0.39	
Clearance Time (s)	3.0	6.0		3.0	6.0		3.0	6.0		3.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	254	905		227	880		192	1185		300	1357	
v/s Ratio Prot	0.06	0.20		c0.06	0.18		0.04	0.26		c0.09	c0.32	
v/s Ratio Perm	0.20			c0.21			0.19			0.28		
v/c Ratio	0.77	0.77		0.79	0.70		0.56	0.76		0.74	0.82	
Uniform Delay, d1	23.1	30.8		22.9	30.1		18.6	26.5		16.5	24.6	
Progression Factor	1.00	1.00		1.06	1.03		1.74	0.75		1.00	1.00	
Incremental Delay, d2	13.5	4.1		15.6	2.2		3.1	3.9		9.2	5.5	
Delay (s)	36.7	34.9		39.9	33.3		35.5	23.9		25.7	30.1	
Level of Service	D	C		D	C		D	C		C	C	
Approach Delay (s)		35.3			34.7			25.1			29.4	
Approach LOS		D			C			C			C	

Intersection Summary				
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	86.3%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

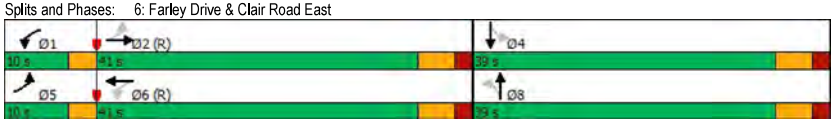
Queues
6: Farley Drive & Clair Road East

06-27-2024

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	135	590	35	485	140	60	140	55
Future Volume (vph)	135	590	35	485	140	60	140	55
Lane Group Flow (vph)	147	809	38	636	152	108	0	397
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	7.0	10.0	7.0	10.0	7.0	7.0	7.0	7.0
Minimum Split (s)	10.0	35.0	10.0	35.0	32.0	32.0	32.0	32.0
Total Split (s)	10.0	41.0	10.0	41.0	39.0	39.0	39.0	39.0
Total Split (%)	11.1%	45.6%	11.1%	45.6%	43.3%	43.3%	43.3%	43.3%
Yellow Time (s)	3.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	0.0	2.0	0.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	3.0	6.0	3.0	6.0	6.0	6.0		6.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Min	None	C-Min	None	None	None	None
v/c Ratio	0.30	0.45	0.09	0.41	0.69	0.21		0.81
Control Delay	6.7	13.0	5.6	13.8	44.6	15.1		39.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	6.7	13.0	5.6	13.8	44.6	15.1		39.1
Queue Length 50th (m)	3.8	61.7	2.5	37.2	24.6	9.0		58.4
Queue Length 95th (m)	m25.7	88.4	2.4	62.8	41.5	18.8		81.7
Internal Link Dist (m)		193.7		136.7		39.9		172.5
Turn Bay Length (m)	131.0		64.0		20.0			
Base Capacity (vph)	493	1811	437	1587	294	666		633
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	0.30	0.45	0.09	0.40	0.52	0.16		0.63

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Farley Drive & Clair Road East



HCM Signalized Intersection Capacity Analysis
6: Farley Drive & Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	590	155	35	485	100	140	60	40	140	55	170
Future Volume (vph)	135	590	155	35	485	100	140	60	40	140	55	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.5	3.5	3.5	3.5	3.5	3.5	3.1	3.5	3.5	4.8	4.8	4.8
Total Lost time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99			0.98	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		0.99	1.00			0.99	
Frt	1.00	0.97		1.00	0.97		1.00	0.94			0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1762	3407		1783	3340		1688	1743			1933	
Flt Permitted	0.34	1.00		0.32	1.00		0.45	1.00			0.83	
Satd. Flow (perm)	625	3407		596	3340		803	1743			1631	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	641	168	38	527	109	152	65	43	152	60	185
RTOR Reduction (vph)	0	21	0	0	17	0	0	30	0	0	40	0
Lane Group Flow (vph)	147	788	0	38	619	0	152	78	0	0	357	0
Confl. Peds. (#/hr)	17		9	9		17	23		21	21		23
Heavy Vehicles (%)	1%	1%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	53.3	46.0		46.1	41.8		24.7	24.7			24.7	
Effective Green, g (s)	53.3	46.0		46.1	41.8		24.7	24.7			24.7	
Actuated g/C Ratio	0.59	0.51		0.51	0.46		0.27	0.27			0.27	
Clearance Time (s)	3.0	6.0		3.0	6.0		6.0	6.0			6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	477	1741		361	1551		220	478			447	
v/s Ratio Prot	c0.03	c0.23		0.01	0.19			0.04				
v/s Ratio Perm	0.15			0.05			0.19				c0.22	
v/c Ratio	0.31	0.45		0.11	0.40		0.69	0.16			0.80	
Uniform Delay, d1	8.6	14.0		11.0	15.8		29.2	24.8			30.3	
Progression Factor	0.66	0.82		0.60	0.77		1.00	1.00			1.00	
Incremental Delay, d2	0.3	0.6		0.1	0.8		9.0	0.2			9.6	
Delay (s)	6.0	12.2		6.7	13.0		38.2	25.0			40.0	
Level of Service	A	B		A	B		D	C			D	
Approach Delay (s)		11.2			12.7			32.7			40.0	
Approach LOS		B			B			C			D	

Intersection Summary				
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0	
Intersection Capacity Utilization	73.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

HCM Unsignalized Intersection Capacity Analysis
7: Farley Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	105	20	10	60	20	100	0	45	45	85	20	125
Future Volume (vph)	105	20	10	60	20	100	0	45	45	85	20	125
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	121	23	11	69	23	115	0	52	52	98	23	144

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	155	207	104	265
Volume Left (vph)	121	69	0	98
Volume Right (vph)	11	115	52	144
Hadj (s)	0.11	-0.27	-0.30	-0.25
Departure Headway (s)	5.2	4.8	4.9	4.7
Degree Utilization, x	0.22	0.27	0.14	0.35
Capacity (veh/h)	632	693	663	711
Control Delay (s)	9.7	9.6	8.7	10.2
Approach Delay (s)	9.7	9.6	8.7	10.2
Approach LOS	A	A	A	B

Intersection Summary			
Delay	9.7		
Level of Service	A		
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
8: Farley Drive & Existing Adjacent Site Access

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	40	15	5	55	65	25
Future Volume (vph)	40	15	5	55	65	25
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Hourly flow rate (vph)	49	18	6	67	79	30

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	67	73	109
Volume Left (vph)	49	6	0
Volume Right (vph)	18	0	30
Hadj (s)	-0.01	0.02	-0.17
Departure Headway (s)	4.3	4.2	4.0
Degree Utilization, x	0.08	0.08	0.12
Capacity (veh/h)	806	835	888
Control Delay (s)	7.6	7.6	7.5
Approach Delay (s)	7.6	7.6	7.5
Approach LOS	A	A	A

Intersection Summary			
Delay		7.6	
Level of Service		A	
Intersection Capacity Utilization		29.8%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
9: Hawkins Drive & Internal E-W Street

06-27-2024

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	0	5	90	135	70
Future Volume (Veh/h)	50	0	5	90	135	70
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	62	0	6	111	167	86
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					65	
pX, platoon unblocked						
vC, conflicting volume	333	210	253			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	333	210	253			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	91	100	100			
cM capacity (veh/h)	663	835	1324			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	62	117	253
Volume Left	62	6	0
Volume Right	0	0	86
cSH	663	1324	1700
Volume to Capacity	0.09	0.00	0.15
Queue Length 95th (m)	2.5	0.1	0.0
Control Delay (s)	11.0	0.4	0.0
Lane LOS	B	A	
Approach Delay (s)	11.0	0.4	0.0
Approach LOS	B		

Intersection Summary			
Average Delay		1.7	
Intersection Capacity Utilization		21.4%	ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
10: 1888 Gordon Street Access/Internal N-S Street & Poppy Drive East 06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	120	20	5	115	0	20	0	15	0	0	40
Future Volume (Veh/h)	40	120	20	5	115	0	20	0	15	0	0	40
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.87	0.87	0.87	0.87	0.92	0.87	0.92	0.87	0.92	0.92	0.92
Hourly flow rate (vph)	43	138	23	6	132	0	23	0	17	0	0	43
Pedestrians		3			6			1				
Lane Width (m)		4.5			4.5			3.6				
Walking Speed (m/s)		1.2			1.2			1.2				
Percent Blockage		0			1			0				
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (m)		311										
pX, platoon unblocked												
vC, conflicting volume	132			162			426	380	156	402	392	135
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	132			162			426	380	156	402	392	135
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			95	100	98	100	100	95
cM capacity (veh/h)	1453			1428			494	533	888	530	525	911

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	204	138	40	43
Volume Left	43	6	23	0
Volume Right	23	0	17	43
cSH	1453	1428	609	911
Volume to Capacity	0.03	0.00	0.07	0.05
Queue Length 95th (m)	0.7	0.1	1.7	1.2
Control Delay (s)	1.8	0.4	11.3	9.1
Lane LOS	A	A	B	A
Approach Delay (s)	1.8	0.4	11.3	9.1
Approach LOS			B	A

Intersection Summary				
Average Delay	3.0			
Intersection Capacity Utilization	32.8%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Unsignalized Intersection Capacity Analysis
11: Internal N-S Street & Internal E-W Street 06-27-2024

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total (vph)	0	0	0
Volume Left (vph)	0	0	0
Volume Right (vph)	0	0	0
Hadj (s)	0.00	0.00	0.00
Departure Headway (s)	3.9	3.9	3.9
Degree Utilization, x	0.00	0.00	0.00
Capacity (veh/h)	917	917	917
Control Delay (s)	6.9	6.9	6.9
Approach Delay (s)	0.0	0.0	0.0
Approach LOS	A	A	A

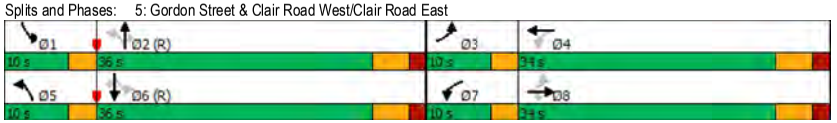
Intersection Summary				
Delay	0.0			
Level of Service	A			
Intersection Capacity Utilization	0.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Future Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		50.0	32.0		0.0	72.0		50.0	163.0		50.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1631	3368	1493	1572	3375	0	1586	3412	1304	1678	3479	1461
Flt Permitted	0.142			0.397			0.288			0.134		
Satd. Flow (perm)	243	3368	1444	650	3375	0	479	3412	1263	236	3479	1426
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109		17				109			241
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	172	494	100	161	967	128	183	1111	139	94	639	261
Shared Lane Traffic (%)												
Lane Group Flow (vph)	172	494	100	161	1095	0	183	1111	139	94	639	261
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Detector Phase	3	8	8	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0		10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	10.0	34.0	34.0	10.0	34.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%		11.1%	40.0%	40.0%	11.1%	40.0%	40.0%
Maximum Green (s)	7.0	28.0	28.0	7.0	28.0		7.0	30.0	30.0	7.0	30.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	Min	Min	None	Min		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		9.0	9.0		9.0			10.0	10.0		10.0	10.0
Flash Dont Walk (s)		19.0	19.0		19.0			19.0	19.0		19.0	19.0
Pedestrian Calls (#/hr)		10	10		10			9	9		9	9
Act Effct Green (s)	38.2	28.1	28.1	38.1	28.0		40.5	31.9	31.9	39.9	29.9	29.9
Actuated g/C Ratio	0.42	0.31	0.31	0.42	0.31		0.45	0.35	0.35	0.44	0.33	0.33
v/c Ratio	0.81	0.47	0.19	0.46	1.03		0.61	0.92	0.27	0.43	0.55	0.41
Control Delay	46.6	26.8	5.1	23.5	70.0		22.5	38.0	9.2	19.6	26.8	6.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	26.8	5.1	23.5	70.0		22.5	38.0	9.2	19.6	26.8	6.1
LOS	D	C	A	C	E		C	D	A	B	C	A
Approach Delay		28.4			64.1			33.3			20.7	
Approach LOS		C			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.03			
Intersection Signal Delay: 38.3		Intersection LOS: D	
Intersection Capacity Utilization 86.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4	5	2		1	6	
Permitted Phases	8		8	4		2		2	6		6
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	36.0	36.0	10.0	36.0	36.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	11.1%	40.0%	40.0%	11.1%	40.0%	40.0%
Maximum Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		9.0	9.0		9.0		10.0	10.0		10.0	10.0
Flash Dont Walk (s)		19.0	19.0		19.0		19.0	19.0		19.0	19.0
Pedestrian Calls (#/hr)		10	10		10		9	9		9	9
90th %ile Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
90th %ile Term Code	Max	Ped	Ped	Max	Max	Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
70th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
50th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Coord	Coord	Max	Coord	Coord
30th %ile Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
30th %ile Term Code	Max	Hold	Hold	Max	Max	Max	Coord	Coord	Max	Coord	Coord
10th %ile Green (s)	7.6	28.3	28.3	7.3	28.0	7.0	39.4	39.4	0.0	29.4	29.4
10th %ile Term Code	Max	Hold	Hold	Gap	Max	Max	Coord	Coord	Skip	Coord	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	172	494	100	161	1095	183	1111	139	94	639	261
v/c Ratio	0.81	0.47	0.19	0.46	1.03	0.61	0.92	0.27	0.43	0.55	0.41
Control Delay	46.6	26.8	5.1	23.5	70.0	22.5	38.0	9.2	19.6	26.8	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	26.8	5.1	23.5	70.0	22.5	38.0	9.2	19.6	26.8	6.1
Queue Length 50th (m)	18.4	37.9	0.0	25.7	~117.4	19.9	105.2	7.6	9.1	49.5	2.4
Queue Length 95th (m)	#49.5	53.1	9.8	32.0	#156.6	32.8	#145.8	m16.6	17.9	66.8	19.5
Internal Link Dist (m)		244.6			193.7		156.5			209.4	
Turn Bay Length (m)	70.0		50.0	32.0		72.0		50.0	163.0		50.0
Base Capacity (vph)	212	1049	525	347	1061	301	1208	517	217	1159	636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.47	0.19	0.46	1.03	0.61	0.92	0.27	0.43	0.55	0.41

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East 12-13-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Future Volume (vph)	155	445	90	145	870	115	165	1000	125	85	575	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1630	3368	1444	1566	3377		1585	3412	1263	1677	3479	1426
Flt Permitted	0.14	1.00	1.00	0.40	1.00		0.29	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	244	3368	1444	654	3377		481	3412	1263	237	3479	1426
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	494	100	161	967	128	183	1111	139	94	639	261
RTOR Reduction (vph)	0	0	69	0	12	0	0	0	71	0	0	161
Lane Group Flow (vph)	172	494	31	161	1083	0	183	1111	68	94	639	100
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Actuated Green, G (s)	35.2	28.1	28.1	35.2	28.1		38.2	31.2	31.2	35.4	29.8	29.8
Effective Green, g (s)	35.2	28.1	28.1	35.2	28.1		38.2	31.2	31.2	35.4	29.8	29.8
Actuated g/C Ratio	0.39	0.31	0.31	0.39	0.31		0.42	0.35	0.35	0.39	0.33	0.33
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	204	1051	450	327	1054		290	1182	437	182	1151	472
v/s Ratio Prot	c0.07	0.15		0.04	c0.32		c0.05	c0.33		0.03	0.18	
v/s Ratio Perm	0.26		0.02	0.15			0.22		0.05	0.17		0.07
v/c Ratio	0.84	0.47	0.07	0.49	1.03		0.63	0.94	0.16	0.52	0.56	0.21
Uniform Delay, d1	22.1	24.9	21.8	18.7	30.9		17.5	28.5	20.3	20.3	24.7	21.6
Progression Factor	1.00	1.00	1.00	1.26	1.18		0.97	0.90	1.15	1.00	1.00	1.00
Incremental Delay, d2	25.8	0.3	0.1	1.0	32.8		3.7	13.4	0.6	2.5	1.9	1.0
Delay (s)	47.9	25.3	21.8	24.5	69.2		20.6	39.0	24.0	22.8	26.6	22.7
Level of Service	D	C	C	C	E		C	D	C	C	C	C
Approach Delay (s)		29.9			63.5			35.2			25.2	
Approach LOS		C			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	40.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	86.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East 12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Future Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		50.0	32.0		0.0	72.0		50.0	163.0		50.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3535	1566	1711	3418	0	1646	3479	1503	1728	3479	1434
Flt Permitted	0.229			0.148			0.140			0.136		
Satd. Flow (perm)	416	3535	1515	266	3418	0	242	3479	1449	246	3479	1394
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109		29				128			144
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Adj. Flow (vph)	278	1000	124	165	577	124	129	948	149	222	1052	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	278	1000	124	165	701	0	129	948	149	222	1052	186
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Detector Phase	3	8	8	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0		10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	11.0	35.0	35.0	10.0	34.0		10.0	35.0	35.0	10.0	35.0	35.0
Total Split (%)	12.2%	38.9%	38.9%	11.1%	37.8%		11.1%	38.9%	38.9%	11.1%	38.9%	38.9%
Maximum Green (s)	8.0	29.0	29.0	7.0	28.0		7.0	29.0	29.0	7.0	29.0	29.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	Min	Min	None	Min		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		9.0	9.0		9.0			10.0	10.0		10.0	10.0
Flash Dont Walk (s)		19.0	19.0		19.0			19.0	19.0		19.0	19.0
Pedestrian Calls (#/hr)		11	11		11			9	9		9	9
Act Effct Green (s)	39.8	28.3	28.3	37.3	27.1		38.5	28.5	28.5	40.0	29.4	29.4
Actuated g/C Ratio	0.44	0.31	0.31	0.41	0.30		0.43	0.32	0.32	0.44	0.33	0.33
v/c Ratio	0.90	0.90	0.23	0.73	0.67		0.61	0.86	0.27	0.93	0.92	0.34
Control Delay	52.1	41.5	7.0	35.5	30.5		31.9	30.3	6.5	64.3	44.2	8.6

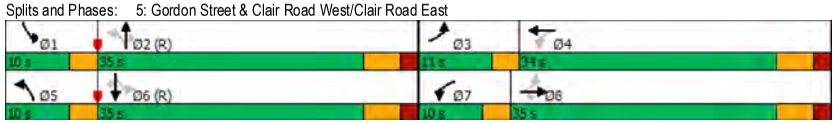
Lanes, Volumes, Timings
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	41.5	7.0	35.5	30.5		31.9	30.3	6.5	64.3	44.2	8.6
LOS	D	D	A	D	C		C	C	A	E	D	A
Approach Delay		40.6			31.5			27.6			42.7	
Approach LOS		D			C			C			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 36.4		Intersection LOS: D	
Intersection Capacity Utilization 91.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4	5	2		1	6	
Permitted Phases	8		8	4		2		2	6		6
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	11.0	35.0	35.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (%)	12.2%	38.9%	38.9%	11.1%	37.8%	11.1%	38.9%	38.9%	11.1%	38.9%	38.9%
Maximum Green (s)	8.0	29.0	29.0	7.0	28.0	7.0	29.0	29.0	7.0	29.0	29.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		9.0	9.0		9.0		10.0	10.0		10.0	10.0
Flash Dont Walk (s)		19.0	19.0		19.0		19.0	19.0		19.0	19.0
Pedestrian Calls (#/hr)		11	11		11		9	9		9	9
90th %ile Green (s)	8.0	29.0	29.0	7.0	28.0	7.0	29.0	29.0	7.0	29.0	29.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	8.0	29.0	29.0	7.0	28.0	7.0	29.0	29.0	7.0	29.0	29.0
70th %ile Term Code	Max	Max	Max	Max	Hold	Max	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	8.0	29.0	29.0	7.0	28.0	7.0	29.0	29.0	7.0	29.0	29.0
50th %ile Term Code	Max	Max	Max	Max	Hold	Max	Coord	Coord	Max	Coord	Coord
30th %ile Green (s)	8.0	29.0	29.0	7.0	28.0	7.0	29.0	29.0	7.0	29.0	29.0
30th %ile Term Code	Max	Max	Max	Max	Hold	Max	Coord	Coord	Max	Coord	Coord
10th %ile Green (s)	10.3	25.6	25.6	8.2	23.5	7.0	26.7	26.7	11.5	31.2	31.2
10th %ile Term Code	Max	Gap	Gap	Gap	Hold	Min	Coord	Coord	Max	Coord	Coord

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection	
Control Type: Actuated-Coordinated	

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	278	1000	124	165	701	129	948	149	222	1052	186
v/c Ratio	0.90	0.90	0.23	0.73	0.67	0.61	0.86	0.27	0.93	0.92	0.34
Control Delay	52.1	41.5	7.0	35.5	30.5	31.9	30.3	6.5	64.3	44.2	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.1	41.5	7.0	35.5	30.5	31.9	30.3	6.5	64.3	44.2	8.6
Queue Length 50th (m)	30.9	89.7	1.9	22.2	65.6	4.5	85.5	3.9	~23.8	97.0	5.3
Queue Length 95th (m)	#67.1	#126.1	14.1	m#41.7	75.1	m29.1	#83.7	m13.8	#70.8	#138.7	21.0
Internal Link Dist (m)		244.6			193.7		156.5			209.4	
Turn Bay Length (m)	70.0		50.0	32.0		72.0		50.0	163.0		50.0
Base Capacity (vph)	309	1139	562	226	1083	213	1121	553	239	1138	552
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.88	0.22	0.73	0.65	0.61	0.85	0.27	0.93	0.92	0.34

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Future Volume (vph)	270	970	120	160	560	120	125	920	145	215	1020	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1742	3535	1515	1710	3420		1646	3479	1449	1727	3479	1394
Flt Permitted	0.23	1.00	1.00	0.15	1.00		0.14	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	420	3535	1515	266	3420		243	3479	1449	247	3479	1394
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	278	1000	124	165	577	124	129	948	149	222	1052	186
RTOR Reduction (vph)	0	0	75	0	20	0	0	0	87	0	0	97
Lane Group Flow (vph)	278	1000	49	165	681	0	129	948	62	222	1052	89
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Actuated Green, G (s)	36.9	28.4	28.4	34.3	27.1		35.5	28.5	28.5	37.3	29.4	29.4
Effective Green, g (s)	36.9	28.4	28.4	34.3	27.1		35.5	28.5	28.5	37.3	29.4	29.4
Actuated g/C Ratio	0.41	0.32	0.32	0.38	0.30		0.39	0.32	0.32	0.41	0.33	0.33
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	297	1115	478	216	1029		204	1101	458	232	1136	455
v/s Ratio Prot	c0.09	0.28		0.06	0.20		0.05	0.27		c0.08	0.30	
v/s Ratio Perm	c0.30		0.03	0.23			0.20		0.04	c0.31		0.06
v/c Ratio	0.94	0.90	0.10	0.76	0.66		0.63	0.86	0.13	0.96	0.93	0.20
Uniform Delay, d1	21.8	29.4	21.8	21.4	27.4		20.5	28.9	21.9	20.6	29.3	21.8
Progression Factor	1.00	1.00	1.00	1.08	1.04		1.49	0.78	0.91	1.00	1.00	1.00
Incremental Delay, d2	35.3	9.6	0.1	13.5	1.5		5.1	7.3	0.5	46.6	14.0	1.0
Delay (s)	57.1	39.0	21.9	36.5	30.0		35.7	29.8	20.4	67.1	43.2	22.8
Level of Service	E	D	C	D	C		D	C	C	E	D	C
Approach Delay (s)		41.1			31.3			29.3			44.3	
Approach LOS		D			C			C			D	

Intersection Summary				
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	91.2%	ICU Level of Service	F	
Analysis Period (min)	15			

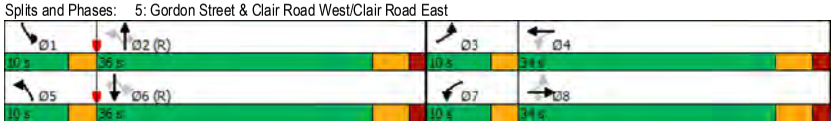
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Future Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (m)	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Storage Length (m)	70.0		50.0	32.0		0.0	72.0		50.0	163.0		50.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Satd. Flow (prot)	1745	3570	1597	1711	3400	0	1646	3570	1566	1728	3570	1536
Flt Permitted	0.233			0.240			0.185			0.206		
Satd. Flow (perm)	423	3570	1539	428	3400	0	319	3570	1517	373	3570	1488
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			109		37				109			110
Link Speed (k/h)		60			60			60			60	
Link Distance (m)		268.6			217.7			180.5			233.4	
Travel Time (s)		16.1			13.1			10.8			14.0	
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Adj. Flow (vph)	196	629	93	180	500	129	108	789	108	222	969	129
Shared Lane Traffic (%)												
Lane Group Flow (vph)	196	629	93	180	629	0	108	789	108	222	969	129
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Detector Phase	3	8	8	7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0		7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0		10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	10.0	34.0	34.0	10.0	34.0		10.0	36.0	36.0	10.0	36.0	36.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%		11.1%	40.0%	40.0%	11.1%	40.0%	40.0%
Maximum Green (s)	7.0	28.0	28.0	7.0	28.0		7.0	30.0	30.0	7.0	30.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0		3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0		0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Recall Mode	None	Min	Min	None	Min		None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		9.0	9.0		9.0			10.0	10.0		10.0	10.0
Flash Dont Walk (s)		19.0	19.0		19.0			19.0	19.0		19.0	19.0
Pedestrian Calls (#/hr)		12	12		12			7	7		7	7
Act Effct Green (s)	33.1	21.9	21.9	32.9	21.8		42.6	31.7	31.7	47.1	36.1	36.1
Actuated g/C Ratio	0.37	0.24	0.24	0.37	0.24		0.47	0.35	0.35	0.52	0.40	0.40
v/c Ratio	0.71	0.73	0.20	0.66	0.74		0.41	0.63	0.18	0.64	0.68	0.19
Control Delay	34.4	36.0	4.8	30.3	34.0		18.2	21.0	4.9	24.3	26.8	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay	34.4	36.0	4.8	30.3	34.0		18.2	21.0	4.9	24.3	26.8	6.7
LOS	C	D	A	C	C		B	C	A	C	C	A
Approach Delay		32.5			33.2			18.9			24.4	
Approach LOS		C			C			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 26.6		Intersection LOS: C	
Intersection Capacity Utilization 85.0%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Phasings
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	3	8		7	4	5	2		1	6	
Permitted Phases	8		8	4		2		2	6		6
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	36.0	36.0	10.0	36.0	36.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	11.1%	40.0%	40.0%	11.1%	40.0%	40.0%
Maximum Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	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	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	None	C-Min	C-Min	None	C-Min	C-Min
Walk Time (s)		9.0	9.0		9.0		10.0	10.0		10.0	10.0
Flash Dont Walk (s)		19.0	19.0		19.0		19.0	19.0		19.0	19.0
Pedestrian Calls (#/hr)		12	12		12		7	7		7	7
90th %ile Green (s)	7.0	28.0	28.0	7.0	28.0	7.0	30.0	30.0	7.0	30.0	30.0
90th %ile Term Code	Max	Ped	Ped	Max	Ped	Max	Coord	Coord	Max	Coord	Coord
70th %ile Green (s)	7.0	24.0	24.0	7.0	24.0	9.5	30.0	30.0	11.0	31.5	31.5
70th %ile Term Code	Max	Hold	Hold	Max	Gap	Gap	Coord	Coord	Max	Coord	Coord
50th %ile Green (s)	8.5	21.9	21.9	8.5	21.9	8.4	28.6	28.6	13.0	33.2	33.2
50th %ile Term Code	Max	Gap	Gap	Max	Hold	Gap	Coord	Coord	Gap	Coord	Coord
30th %ile Green (s)	10.6	19.4	19.4	10.1	18.9	7.4	31.2	31.2	11.3	35.1	35.1
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	Gap	Coord	Coord	Gap	Coord	Coord
10th %ile Green (s)	8.2	16.1	16.1	8.1	16.0	0.0	38.9	38.9	8.9	50.8	50.8
10th %ile Term Code	Gap	Gap	Gap	Gap	Hold	Skip	Coord	Coord	Gap	Coord	Coord

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Control Type: Actuated-Coordinated

Queues
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	196	629	93	180	629	108	789	108	222	969	129
v/c Ratio	0.71	0.73	0.20	0.66	0.74	0.41	0.63	0.18	0.64	0.68	0.19
Control Delay	34.4	36.0	4.8	30.3	34.0	18.2	21.0	4.9	24.3	26.8	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	36.0	4.8	30.3	34.0	18.2	21.0	4.9	24.3	26.8	6.7
Queue Length 50th (m)	23.4	55.4	0.0	22.5	59.2	4.0	67.6	3.3	20.6	79.0	2.2
Queue Length 95th (m)	#41.5	67.6	8.5	m#37.6	59.0	21.7	49.6	8.1	#53.2	109.1	14.6
Internal Link Dist (m)		244.6			193.7		156.5			209.4	
Turn Bay Length (m)	70.0		50.0	32.0		72.0		50.0	163.0		50.0
Base Capacity (vph)	276	1110	553	272	1083	266	1270	610	349	1432	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.57	0.17	0.66	0.58	0.41	0.62	0.18	0.64	0.68	0.19

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

12-13-2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Future Volume (vph)	190	610	90	175	485	125	105	765	105	215	940	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1741	3570	1539	1708	3400		1645	3570	1517	1726	3570	1488
Flt Permitted	0.23	1.00	1.00	0.24	1.00		0.18	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	428	3570	1539	432	3400		320	3570	1517	374	3570	1488
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	196	629	93	180	500	129	108	789	108	222	969	129
RTOR Reduction (vph)	0	0	70	0	28	0	0	0	70	0	0	67
Lane Group Flow (vph)	196	629	23	180	601	0	108	789	38	222	969	62
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Actuated Green, G (s)	30.3	22.0	22.0	29.9	21.8		38.2	31.7	31.7	44.9	35.4	35.4
Effective Green, g (s)	30.3	22.0	22.0	29.9	21.8		38.2	31.7	31.7	44.9	35.4	35.4
Actuated g/C Ratio	0.34	0.24	0.24	0.33	0.24		0.42	0.35	0.35	0.50	0.39	0.39
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	265	872	376	258	823		231	1257	534	339	1404	585
v/s Ratio Prot	c0.07	0.18		0.06	0.18		0.03	0.22		c0.07	c0.27	
v/s Ratio Perm	c0.18		0.01	0.17			0.16		0.03	0.25		0.04
v/c Ratio	0.74	0.72	0.06	0.70	0.73		0.47	0.63	0.07	0.65	0.69	0.11
Uniform Delay, d1	23.0	31.2	26.1	23.0	31.4		16.9	24.2	19.4	14.7	22.7	17.3
Progression Factor	1.00	1.00	1.00	1.02	0.99		1.19	0.75	0.95	1.00	1.00	1.00
Incremental Delay, d2	10.3	3.0	0.1	7.2	3.0		1.3	2.1	0.2	4.5	2.8	0.4
Delay (s)	33.3	34.2	26.1	30.7	34.1		21.5	20.3	18.5	19.3	25.5	17.7
Level of Service	C	C	C	C	C		C	C	B	B	C	B
Approach Delay (s)		33.2			33.4			20.2			23.7	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	85.0%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

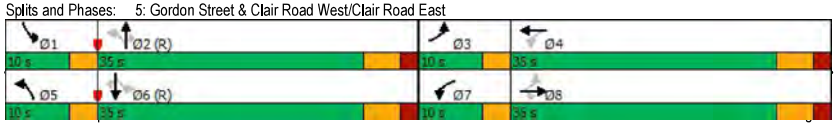
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	155	450	90	145	885	165	1035	125	90	585	235
Future Volume (vph)	155	450	90	145	885	165	1035	125	90	585	235
Lane Group Flow (vph)	172	500	100	161	1150	183	1150	139	100	650	261
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4	5	2		1	6	
Permitted Phases	8		8	4		2		2	6		6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	10.0	35.0	35.0	10.0	35.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (%)	11.1%	38.9%	38.9%	11.1%	38.9%	11.1%	38.9%	38.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	3.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.82	0.46	0.19	0.46	1.05	0.64	0.98	0.27	0.46	0.58	0.42
Control Delay	47.4	26.0	4.9	21.6	73.2	24.9	47.9	11.6	21.0	27.9	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.4	26.0	4.9	21.6	73.2	24.9	47.9	11.6	21.0	27.9	6.8
Queue Length 50th (m)	18.0	37.7	0.0	24.6	~124.9	14.7	~94.6	4.3	9.9	51.4	3.4
Queue Length 95th (m)	#49.4	52.8	9.7	29.2	#163.2	m27.0	#158.2	m11.8	19.3	69.5	21.3
Internal Link Dist (m)		244.6			193.7		156.5			209.4	
Turn Bay Length (m)	70.0		50.0	32.0		72.0		50.0	163.0		50.0
Base Capacity (vph)	210	1085	539	353	1096	288	1175	506	216	1121	618
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.82	0.46	0.19	0.46	1.05	0.64	0.98	0.27	0.46	0.58	0.42

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	450	90	145	885	150	165	1035	125	90	585	235
Future Volume (vph)	155	450	90	145	885	150	165	1035	125	90	585	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1630	3368	1444	1566	3356		1585	3412	1263	1677	3479	1426
Flt Permitted	0.14	1.00	1.00	0.40	1.00		0.28	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	237	3368	1444	654	3356		460	3412	1263	244	3479	1426
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	172	500	100	161	983	167	183	1150	139	100	650	261
RTOR Reduction (vph)	0	0	68	0	16	0	0	0	72	0	0	159
Lane Group Flow (vph)	172	500	32	161	1134	0	183	1150	67	100	650	102
Confl. Peds. (#/hr)	31		22	22		31	12		21	21		12
Confl. Bikes (#/hr)						1						2
Heavy Vehicles (%)	7%	6%	7%	11%	3%	6%	10%	4%	21%	4%	2%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Actuated Green, G (s)	36.0	29.0	29.0	36.0	29.0		37.4	30.4	30.4	34.6	29.0	29.0
Effective Green, g (s)	36.0	29.0	29.0	36.0	29.0		37.4	30.4	30.4	34.6	29.0	29.0
Actuated g/C Ratio	0.40	0.32	0.32	0.40	0.32		0.42	0.34	0.34	0.38	0.32	0.32
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	203	1085	465	332	1081		278	1152	426	182	1121	459
v/s Ratio Prot	c0.07	0.15		0.04	c0.34		c0.05	c0.34		0.03	0.19	
v/s Ratio Perm	0.27		0.02	0.16			0.22		0.05	0.18		0.07
v/c Ratio	0.85	0.46	0.07	0.48	1.05		0.66	1.00	0.16	0.55	0.58	0.22
Uniform Delay, d1	22.0	24.3	21.1	18.2	30.5		18.1	29.8	20.8	21.3	25.4	22.3
Progression Factor	1.00	1.00	1.00	1.20	1.15		1.06	0.95	1.45	1.00	1.00	1.00
Incremental Delay, d2	26.4	0.3	0.1	0.9	39.1		4.0	22.1	0.6	3.4	2.2	1.1
Delay (s)	48.4	24.6	21.2	22.8	74.0		23.2	50.3	30.9	24.7	27.6	23.4
Level of Service	D	C	C	C	E		C	D	C	C	C	C
Approach Delay (s)		29.5			67.8			45.1			26.2	
Approach LOS		C			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	44.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.99			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	89.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

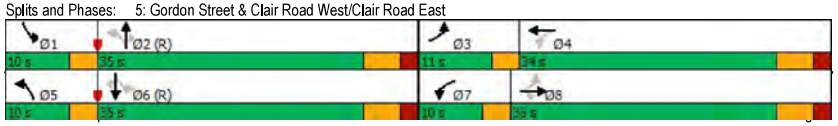
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	270	965	120	160	560	125	935	145	220	1045	180
Future Volume (vph)	270	965	120	160	560	125	935	145	220	1045	180
Lane Group Flow (vph)	278	995	124	165	716	129	964	149	227	1077	186
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4	5	2		1	6	
Permitted Phases	8		8	4		2		2	6		6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	11.0	35.0	35.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (%)	12.2%	38.9%	38.9%	11.1%	37.8%	11.1%	38.9%	38.9%	11.1%	38.9%	38.9%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	3.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.93	0.90	0.23	0.74	0.68	0.61	0.86	0.27	0.96	0.94	0.34
Control Delay	58.5	41.2	7.0	35.8	30.0	32.8	32.2	9.0	71.9	46.5	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.5	41.2	7.0	35.8	30.0	32.8	32.2	9.0	71.9	46.5	8.9
Queue Length 50th (m)	30.9	89.1	1.9	21.8	67.4	8.3	60.6	0.3	~27.1	100.3	5.8
Queue Length 95th (m)	#68.3	#125.1	14.1	m#42.3	75.3	m26.5	#96.5	m14.1	#73.8	#144.0	21.7
Internal Link Dist (m)		244.6			193.7		156.5			209.4	
Turn Bay Length (m)	70.0		50.0	32.0		72.0		50.0	163.0		50.0
Base Capacity (vph)	298	1139	562	224	1084	213	1121	552	236	1144	552
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.87	0.22	0.74	0.66	0.61	0.86	0.27	0.96	0.94	0.34

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



HCM Signalized Intersection Capacity Analysis
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	270	965	120	160	560	135	125	935	145	220	1045	180
Future Volume (vph)	270	965	120	160	560	135	125	935	145	220	1045	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97	1.00	0.99		1.00	1.00	0.96	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1742	3535	1515	1710	3409		1646	3479	1449	1727	3479	1394
Flt Permitted	0.22	1.00	1.00	0.15	1.00		0.14	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	410	3535	1515	264	3409		240	3479	1449	246	3479	1394
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	278	995	124	165	577	139	129	964	149	227	1077	186
RTOR Reduction (vph)	0	0	75	0	24	0	0	0	86	0	0	94
Lane Group Flow (vph)	278	995	49	165	692	0	129	964	63	227	1077	92
Confl. Peds. (#/hr)	34		21	21		34	18		26	26		18
Confl. Bikes (#/hr)			1									
Heavy Vehicles (%)	0%	1%	2%	2%	1%	0%	6%	2%	5%	1%	2%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	3	0	3	3
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Actuated Green, G (s)	36.4	28.3	28.3	34.4	27.3		35.9	28.9	28.9	37.3	29.6	29.6
Effective Green, g (s)	36.4	28.3	28.3	34.4	27.3		35.9	28.9	28.9	37.3	29.6	29.6
Actuated g/C Ratio	0.40	0.31	0.31	0.38	0.30		0.40	0.32	0.32	0.41	0.33	0.33
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	285	1111	476	214	1034		205	1117	465	228	1144	458
v/s Ratio Prot	c0.09	0.28		0.06	0.20		0.05	0.28		c0.08	0.31	
v/s Ratio Perm	c0.31		0.03	0.23			0.20		0.04	c0.33		0.07
v/c Ratio	0.98	0.90	0.10	0.77	0.67		0.63	0.86	0.14	1.00	0.94	0.20
Uniform Delay, d1	22.9	29.4	21.9	21.4	27.4		20.5	28.7	21.7	21.3	29.4	21.7
Progression Factor	1.00	1.00	1.00	1.06	1.02		1.61	0.86	1.30	1.00	1.00	1.00
Incremental Delay, d2	46.1	9.5	0.1	14.3	1.5		4.4	6.8	0.5	58.0	15.8	1.0
Delay (s)	69.0	39.0	22.0	36.9	29.6		37.4	31.4	28.7	79.3	45.2	22.7
Level of Service	E	D	C	D	C		D	C	C	E	D	C
Approach Delay (s)		43.4			30.9			31.7			47.6	
Approach LOS		D			C			C			D	

Intersection Summary				
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.01			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	92.0%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

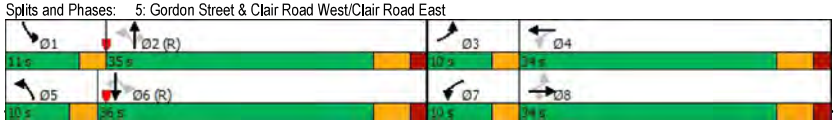
Queues
5: Gordon Street & Clair Road West/Clair Road East

06-27-2024

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	190	600	90	175	485	105	785	105	215	960	125
Future Volume (vph)	190	600	90	175	485	105	785	105	215	960	125
Lane Group Flow (vph)	196	619	93	180	644	108	809	108	222	990	129
Turn Type	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4	5	2		1	6	
Permitted Phases	8		8	4		2		2	6		6
Detector Phase	3	8	8	7	4	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	7.0	10.0	10.0	7.0	10.0	7.0	10.0	10.0	7.0	10.0	10.0
Minimum Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	10.0	35.0	35.0
Total Split (s)	10.0	34.0	34.0	10.0	34.0	10.0	35.0	35.0	11.0	36.0	36.0
Total Split (%)	11.1%	37.8%	37.8%	11.1%	37.8%	11.1%	38.9%	38.9%	12.2%	40.0%	40.0%
Yellow Time (s)	3.0	4.0	4.0	3.0	4.0	3.0	4.0	4.0	3.0	4.0	4.0
All-Red Time (s)	0.0	2.0	2.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	3.0	6.0	6.0	3.0	6.0	3.0	6.0	6.0	3.0	6.0	6.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min	None	C-Min	C-Min	None	C-Min	C-Min
v/c Ratio	0.73	0.71	0.20	0.66	0.75	0.41	0.65	0.18	0.64	0.69	0.19
Control Delay	36.1	35.4	4.8	29.3	33.4	19.1	21.2	5.5	23.9	27.2	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.1	35.4	4.8	29.3	33.4	19.1	21.2	5.5	23.9	27.2	6.8
Queue Length 50th (m)	23.9	54.6	0.0	22.2	39.3	4.9	45.5	0.0	20.1	79.8	2.3
Queue Length 95th (m)	#42.7	66.4	8.5	m#36.6	61.7	m21.9	58.2	m9.8	#49.6	112.0	14.7
Internal Link Dist (m)		244.6			193.7		156.5			209.4	
Turn Bay Length (m)	70.0		50.0	32.0		72.0		50.0	163.0		50.0
Base Capacity (vph)	270	1110	553	272	1083	261	1251	602	345	1434	663
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.56	0.17	0.66	0.59	0.41	0.65	0.18	0.64	0.69	0.19

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Gordon Street & Clair Road West/Clair Road East



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	600	90	175	485	140	105	785	105	215	960	125
Future Volume (vph)	190	600	90	175	485	140	105	785	105	215	960	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5	3.3	3.5	3.5
Total Lost time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96	1.00	0.99		1.00	1.00	0.97	1.00	1.00	0.97
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1741	3570	1539	1707	3388		1645	3570	1517	1726	3570	1488
Flt Permitted	0.22	1.00	1.00	0.25	1.00		0.18	1.00	1.00	0.19	1.00	1.00
Satd. Flow (perm)	411	3570	1539	444	3388		307	3570	1517	353	3570	1488
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	196	619	93	180	500	144	108	809	108	222	990	129
RTOR Reduction (vph)	0	0	70	0	33	0	0	0	70	0	0	66
Lane Group Flow (vph)	196	619	23	180	611	0	108	809	38	222	990	63
Confl. Peds. (#/hr)	36		26	26		36	21		19	19		21
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	0%	0%	0%	2%	1%	0%	6%	0%	2%	1%	0%	4%
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8		8	4			2		2	6		6
Actuated Green, G (s)	30.1	22.0	22.0	29.9	21.9		38.0	31.5	31.5	45.0	35.5	35.5
Effective Green, g (s)	30.1	22.0	22.0	29.9	21.9		38.0	31.5	31.5	45.0	35.5	35.5
Actuated g/C Ratio	0.33	0.24	0.24	0.33	0.24		0.42	0.35	0.35	0.50	0.39	0.39
Clearance Time (s)	3.0	6.0	6.0	3.0	6.0		3.0	6.0	6.0	3.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	257	872	376	259	824		226	1249	530	336	1408	586
v/s Ratio Prot	c0.07	0.17		0.06	0.18		0.03	0.23		c0.08	c0.28	
v/s Ratio Perm	c0.19		0.01	0.17			0.17		0.02	0.25		0.04
v/c Ratio	0.76	0.71	0.06	0.69	0.74		0.48	0.65	0.07	0.66	0.70	0.11
Uniform Delay, d1	23.2	31.1	26.1	23.0	31.4		17.1	24.6	19.5	14.9	22.8	17.2
Progression Factor	1.00	1.00	1.00	0.97	0.97		1.26	0.74	1.05	1.00	1.00	1.00
Incremental Delay, d2	12.6	2.7	0.1	7.1	3.3		1.3	2.2	0.2	4.8	3.0	0.4
Delay (s)	35.8	33.8	26.1	29.5	33.6		23.0	20.4	20.6	19.7	25.8	17.6
Level of Service	D	C	C	C	C		C	C	C	B	C	B
Approach Delay (s)		33.4			32.7			20.7			24.0	
Approach LOS		C			C			C			C	

Intersection Summary				
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	85.2%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group