ARCADIS

Canada Lands Company
Société immobilière du Canada

Public Services and Procurement Canada
Services publics et Approvisionnement Canada

Tunney's Pasture – Site Servicing and Public Road Redevelopment

Transportation Impact Assessment - Step 4

March 31, 2026

TIA Plan Reports - Certification

On 14 June 2017, the Council of the City of Ottawa adopted new Transportation Impact Assessment (TIA) Guidelines. In adopting the guidelines, Council established a requirement for those preparing and delivering transportation impact assessments and reports to sign a letter of certification.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associate documents) and signing this document, the individual acknowledges that s/he meets the four criteria listed below:

CERTIFICATION

1. I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines;

2. I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;

3. I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and

4. I am either a licensed[1] or registered[1] professional in good standing, whose field of expertise [check √ appropriate field(s)] is either transportation engineering □ or transportation planning □.

[1] **License or registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.**

Dated at Ottawa this 31st day of March, 2026.
(City)

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Tunney's Pasture – Site Servicing and Public Road Redevelopment

Transportation Impact Assessment (TIA)

March 31, 2026

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Version Control

Issue	Revision No.	Date Issued	Description	Reviewed By
Draft	1.0	2024-11-29	TIA Step 1 & 2 Submitted for City Review	David Hook
Draft	2.0	2025-04-23	TIA Step 3 Submitted for City Review	David Hook
Final	3.0	2025-06-30	TIA Step 4 Submitted for City Review	Ben Pascolo-Neveu
Final	4.0	2026-03-06	TIA Step 4 Submitted for Client Review	Ben Pascolo-Neveu
Final	5.0	2026-03-31	TIA Step 4 Resubmitted to address City's Comments	Ben Pascolo-Neveu

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Acronyms and Abbreviations

CLC	Canada Lands Company
DPA	Design Priority Area
GFA	Gross Floor Area
ITE	Institute of Transportation Engineers
MUP	Multi-use Path
MVE	Million Vehicles Entering
NCC	National Capital Commission
OP	Official Plan
PMTSA	Protected Major Transit Station Area
PSPC	Public Services & Procurement Canada
RMA	Roadway Modification Application
ROW	Right-of-Way
TAZ	Traffic Assessment Zone
TIA	Transportation Impact Assessment
TMP	Transportation Master Plan
TOD	Transportation-oriented Development
UDM	Urban Design Manual
v/c	Volume-to-capacity ratio

Executive Summary

Arcadis was retained by Canada Lands Company (CLC) and Public Services and Procurement Canada (PSPC) to undertake a Transportation Impact Assessment (TIA) in support of a Draft Plan of Subdivision application for the proposed mixed-use redevelopment of the existing Tunney's Pasture federal government campus. The subject property is approximately 49 hectares in overall land area and is generally bound by Kichi Zibi Mikan to the north, Parkdale Avenue to the east, Scott Street and the O-Train Line 1 corridor/Tunney's Pasture Station to the south, as well as the Champlain Park community to the west.

Land Use

Despite its proximity to a rapid transit station, Tunney's Pasture is presently a single-use, auto-oriented federal government employment campus, with approximately 3.5 million square feet of office/laboratory uses. As the subject site is transformed into a mixed-use, transit-oriented and 15-minute community, these existing uses will gradually decrease after Phase 1, while residential, local-serving commercial and potential school uses will be introduced incrementally throughout all 3 phases. At full build-out, the site could accommodate up to 9,000 residential dwelling units ranging from stacked townhomes to high-rise buildings, approximately 85,000 square feet of commercial floor area, while retaining only a third of the existing office space.

Development Phasing

For the purpose of long-term planning, it is assumed that the proposed development will be constructed over three general phases: Phase 1 (2038), Phase 2 (2042) and Phase 3 (2046). The full build-out of Tunney's Pasture is expected to align with the City's planning horizon of 2046.

Trip Generation and Mode Share

Based on traffic data collected at the onset of the study, the site historically generated roughly 4,000 to 5,000 person-trips prior to the COVID-19 pandemic, including approximately 2,000 vehicles per hour during weekday peak periods. As Tunney's Pasture is gradually redeveloped, this new community is expected to generate significantly more site activity, with up to 8,000 person-trips during the weekday peak hours at the various stages of development.

The site will generate the greatest volume of vehicular traffic by the completion of Phase 1, but will lessen over time as office space is replaced with new residential developments and the site becomes less reliant on private automobiles as a means of transportation. With consideration of the mode share targets established through this TIA process, total site-generated vehicle volumes of up to 2,510, 1,910 and 1,350 two-way trips in 2038, 2042 and 2046, respectively, are projected during the most constrained weekday peak, with the remaining person-trips divided amongst auto passenger, transit, walking and cycling.

Given the site's pre-pandemic traffic generation, the proposed development will result in a net-increase of approximately 420 two-way weekday peak hour trips in 2038, while net-decreases of about 200 and 780 vehicle trips are expected in 2042 and 2046, respectively. Dispersed amongst six access points, the site-generated traffic impacts are shown to be highest during Phase 1 on the immediate boundary street intersections, with impacts decreasing farther away from the site. As all of the existing office/laboratory uses will remain and approximately half of the residential units and commercial space will be built out, the completion of Phase 1 represents the peak traffic generation of the site, and thus the focus of this study. Upon full build-out, the site is expected to generate less vehicular traffic than it did prior to the COVID-19 pandemic. Furthermore, with a significant reduction in office space, the site will attract far fewer long-distance trips and provide relief to key regional access routes such as Parkdale Avenue to Highway 417, and the Champlain Bridge to Gatineau. In subsequent phases, office space will gradually decrease, while the remaining residential units and commercial space is built.

An 85% non-auto mode share target was established by the City of Ottawa for residential uses within transit-oriented developments, which is not a vast departure from approximately 69% of non-auto trips currently generated by high-rise residential uses across the entire Ottawa West Traffic Assessment Zone (TAZ) and given that the subject site is directly adjacent to Tunney's Pasture Station. This is a long-term target and not expected to be achieved until near the complete build-out of the site in 2046. The high non-auto mode share target established for this site is

supported by the proposed Complete Streets infrastructure of the new internal street network in combination with active transportation linkages planned throughout the site, a host of site-specific Transportation Demand Management (TDM) measures, as well as City initiatives including the LRT Stage 2 Western Extension and the Scott Street Complete Street upgrades.

Transportation Network Impacts

The existing travel patterns associated with Tunney's Pasture are a direct result of employer start and end times, with most trips being inbound in the morning and outbound in the afternoon. With the addition of residential land uses in Phase 1, an increase in site traffic generation of approximately 420 vehicle trips is expected. When considering that residential-based traffic patterns follow an opposing flow to office-based land uses, the vast majority of this additional traffic does not significantly exacerbate existing conditions and results in only a 5% increase (80 vehicle trips) in the peak direction of flow. To this end, the site's transformation from a traffic *generator* to a traffic *source* has the positive effect of utilizing available roadway capacity that is opposite from the peak direction of travel which mitigates operational impacts to the adjacent road network.

Comparison of Pre-Pandemic Site-Generated Traffic with Phase 1 Projections

Scenario	Vehicles – Weekday AM Peak Hour			Vehicles – Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 Site Traffic Projections[1]	1,257	572	1,829	882	1,553	2,435
Pre-Pandemic Site-Generated Traffic	1,495	570	2,065	542	1,473	2,015
Difference (%)	**-238 (-16%)**	**+2 (0%)**	**-236 (-11%)**	**+340 (+63%)**	**+80 (+5%)**	**+420 (+21%)**

[1] Phase 1 traffic volume projections do not include 'pass-by trips'.

Parking 1

It is recognized that Phase 1 of the proposed development will involve the loss of parking for office/employment uses which may remain on-site through the redevelopment timeframe of Tunney's Pasture. Understanding the long-term transition of the site to maximize multi-modal transportation options, Canada Lands Company (CLC) is committed to working with the federal tenants at Tunney's Pasture to develop a Parking Management Strategy. This strategy will manage the remaining parking supply and work to satisfy the functional need of the office uses still existing on site without creating spillover demand to adjacent communities.

The Parking Management Strategy will review the implications of this loss of parking supply so that these effects can be better understood and mitigated accordingly, with consideration of the four main strategies outlined below:

1) Determine if the remaining land outside the property parcel that is being disposed to public market can adequately fulfill the office parking demand;
2) Determine if the parking demand currently accommodated by the surface parking lot can be served by other parking lots on the remaining office lands across the Tunney's Pasture site;
3) Determine if additional parking (surface or structured) on the remaining office lands across the Tunney's Pasture site is required; and
4) Establish whether Transportation Demand Management (TDM) measures are required to reduce parking demand in alignment with the remaining parking supply.

Near-Term Mitigation Measures

Based on a review of Existing conditions, the following near-term modifications were identified as being required to support Tunney's Pasture and strengthen the broader active transportation network within the study area at the onset of redevelopment:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture
  - Optimize signal timing to reduce existing internal queue spillback experienced on the south leg.
- Parkdale & Scott
  - Optimize traffic signal timings to resolve constraints on the west leg of the intersection and to improve transit reliability through this intersection.
- Scott & Holland/Tunney's Pasture
  - Perform traffic signal optimization to resolve existing constraints on the south leg, including capacity constraints on the left-turn movement and queuing constraints on the right-turn.
- Scott & Sir Frederick Banting/Ross
  - Upgrade the existing unsignalized intersection to a 'protected intersection'[1] configuration. Signalization of this intersection aligns with the Scott Street CDP which also supports the prohibition of north-south through movements. This upgrade will provide a controlled active transportation crossing on this section of Scott Street to facilitate access to Tunney's Pasture Station.

Phase 1 Mitigation Measures

To address transportation operation and queuing constraints identified under Future (2038) Total Traffic conditions, the most constrained analysis scenario in this study, the following mitigation measures are proposed to accommodate the combined impacts of background and site-generated travel demands:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture
  - Constraints identified under Existing conditions are not significantly exacerbated in Phase 1. Continue to optimize traffic signal timings; physical modifications are not recommended nor required.
- Parkdale & Colombine
  - Upgrade the existing unsignalized intersection to a signalized intersection with 'protected intersection' elements. This will provide an additional controlled crossing for active users on Parkdale Avenue north of Burnside Avenue which is supported by the Scott Street CDP.
  - Add left-turn lanes on the south and west legs of the intersection.
- Scott & Holland/Tunney's Pasture
  - To close the missing link in the cycling network from Yarrow Driveway to Scott Street, it is proposed to reallocate space within the existing sidewalk adjacent to the LRT plaza to accommodate a segment of southbound cycle track.
  - Lengthen the northbound right-turn auxiliary lane to resolve Existing queuing constraints which are present with or without site-generated traffic contributions and not significantly exacerbated by the Tunney's Pasture redevelopment. These upgrades should be undertaken in conjunction with the planned Holland Avenue 'complete streets' project.
  - Employ regular signal optimization to support improved transit reliability and optimal performance of the intersection for all modes within the study timeframe.
- Parkdale & Scott
  - Optimize traffic signal timings to resolve constraints on the west and south legs of the intersection and to improve transit reliability through this intersection.
  - Re-introduce a left-turn lane on the south leg of the intersection to accommodate growth in Future Background travel demand.

[1] Protected Intersection: https://ottawa.ca/en/parking-roads-and-travel/road-safety/cyclists/cycling-facilities#section-a52229e0-0293-4b6e-8c35-70caa7addf7f

  - Lengthen the eastbound left-turn auxiliary lane to address longstanding queue spillback on this movement. This queuing deficiency is an Existing issue that will not be significantly impacted with the addition of site-generated traffic contributions.

- Based on the results of the MMLOS analysis, the City should implement the following measures during Phase 1 to support the Tunney's Pasture redevelopment and strengthen the broader active transportation network within the study area:
  - Boundary Street 'Protected Intersections': It is recommended that each of the major intersections along the Scott Street and Parkdale Avenue frontages of the site be upgraded to 'protected intersections'. Any geometric improvements required at site access intersections on either Parkdale Avenue or Scott Street to facilitate 'protected intersection' upgrades will be covered through a Roadway Modification Application (RMA).
  - Parkdale Greenway: An active transportation corridor with separated space for cyclists and pedestrians on the west side of Parkdale Avenue and abutting the site should be introduced. This corridor is referred to as the 'Parkdale Greenway' in the Scott Street CDP.
    - Phase 1 – Parkdale Greenway (Northern site limits to just south of Burnside)
- Proposed Internal Active Transportation Connections (Developer-Funded)
  - Eglantine (at Tunney's Pasture) to Parkdale (at Burnside)
    - Providing a direct connection from Eglantine Driveway to Parkdale (at Burnside) and the Mechanicsville community further east.
  - Proposed mid-block connection east of Brooke Claxton Building
    - A proposed north-south active transportation connection linking Colombine Driveway to Goldenrod Driveway within a servicing easement.
  - Tunney's Pasture Driveway (Yarrow to Scott)
    - A proposed southbound buffered bike lane linking Yarrow Driveway to Scott Street.
  - Holland Avenue Cycling Infrastructure: The City should implement dedicated cycling infrastructure on Holland Avenue to provide a safe north-south active transportation corridor and divert cyclists from more congested parallel routes such as Parkdale Avenue and further encourage a shift away from automobile use for short trips. Holland Avenue will serve as an important north-south cycling route to support the redevelopment of Tunney's Pasture, given its alignment with the primary gateway to the site and continuous linear connectivity to the Central Experimental Farm's pathway system.
  - Transit: OC Transpo should consider reinstating local bus service within Tunney's Pasture, which is being removed through the City's New Ways to Bus initiative, and realign the route(s) to conform to the collector road hierarchy of the proposed internal street network. If local transit service is not available during the early stages of development, an early transit service agreement may be required with OC Transpo until regular service is warranted by community occupancy levels.

Phase 2 Mitigation Measures

The multi-modal transportation analysis undertaken for Phase 2 did not identify the need for any additional mitigation measures to support additional vehicular traffic beyond those identified for Phase 1, given that the initial phase of development is the most critical in terms of traffic generation.

Proposed Internal Active Transportation Connections (Developer-Funded)

- Eglantine (at Goldenrod) to Sir Frederick Banting

  - This proposed active transportation connection will provide an east-west link between Goldenrod Driveway and Sir Frederick Banting Driveway and contribute to the formation of a broader connection further east to Parkdale (at Burnside) and the Mechanicsville community.

- Yarrow (at Goldenrod) to Sir Frederick Banting
  - This proposed active transportation connection will provide an east-west link between Goldenrod Driveway and provide a more direct connection between the southwest corner of the site and Yarrow Driveway and the rapid transit station.

Full Build-out Mitigation Measures

The mitigation strategy at full build-out will generally carry forward measures recommended in Phase 1, with the following notable changes:

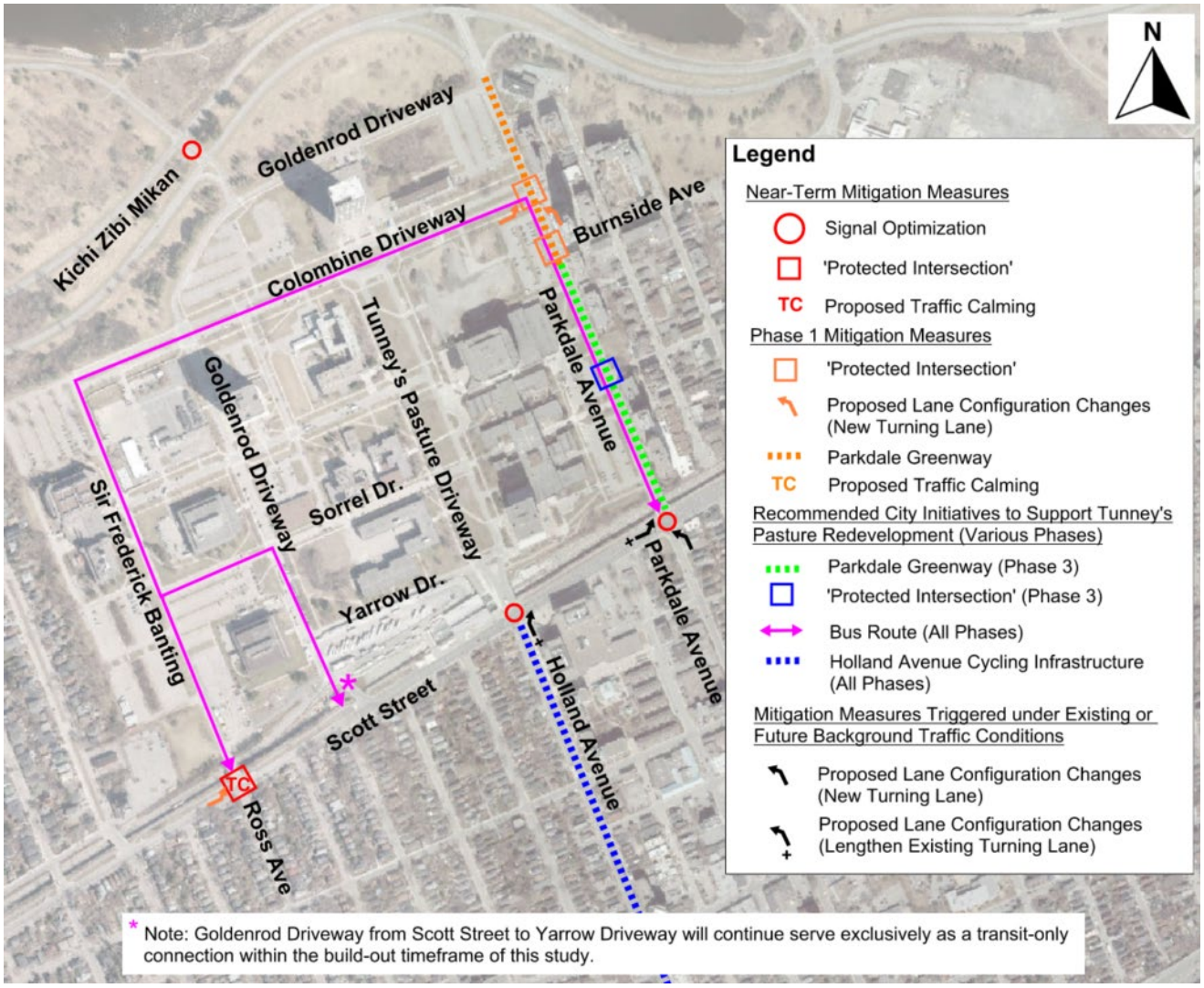
- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture
  - Existing queue spillback constraints on the south leg identified under Existing and Phase 1 conditions will be resolved by full build-out, as on-site land uses evolve over time.
- Proposed Internal Active Transportation Connections (Developer-Funded)
  - Sorrel (at Tunney's Pasture) to Parkdale (at Lyndale)
    - This connection is dependent on the removal of the Main Statistics Building and its alignment is dependent on the built form proposed for this property parcel.
  - Transitway and Parkdale Greenway (Burnside Avenue to Scott Street)
    - Upgrades to the existing pathway linking Tunney's Pasture Driveway to Scott Street to incorporate dedicated space for pedestrians and cyclists.
    - Implement the remainder of the Parkdale Greenway from just south of Burnside Avenue to Scott Street to accommodate bi-directional cycling facilities and a pedestrian facility on the west side off Parkdale Avenue.
  - Kichi Sibi Winter Trail/Scott Street Connector
    - Formalization of the existing trail along the western edge of the site, with linkages to Sir Frederick Banting and the Carleton Avenue underpass.

The remaining study area intersections not discussed in any of the above mitigation strategies were shown to operate at an acceptable Level of Service (LOS 'E') beyond the 2046 study horizon year, according to the transportation modelling conducted for this study.

Through the intersection capacity and queuing analysis conducted for this study, it was determined that a Roadway Modification Application (RMA) is required to accommodate off-site geometric modifications at the site access intersections to support the redevelopment of Tunney's Pasture, including Parkdale & Colombine, Parkdale & Burnside, Scott & Holland/Tunney's Pasture, as well as Scott & Sir Frederick Banting/Ross.

Figure ES-1 below illustrates the mitigation measures outlined previously.

Figure ES-1: Recommended Mitigation Measures



Supporting Technical Studies

The following technical studies were conducted to support the overall TIA process and are appended to this study:

- Monitoring Plan: This strategic planning document is intended to track various transportation-related aspects as the site is developed, such as verifying timelines to implement mitigation strategies noted previously, confirming whether mode share targets are being met, evaluating the effectiveness of the traffic calming measures implemented to support the site's redevelopment, as well as monitor on-site parking occupancy. If there is a disconnect between key TIA study parameters and observed data collected as part of the Monitoring Plan, this process provides an opportunity to intervene and correct course, as needed.
- Neighbourhood Traffic Calming Strategy: This study provides the City with potential solutions to mitigate any existing cut-through traffic issues within communities directly bordering Tunney's Pasture, including Mechanicsville, Hintonburg, Wellington Village and Champlain Park that may be exacerbated by the proposed development.

Based on the findings of this study, it is the overall opinion of Arcadis that the proposed development will integrate well with and can be safely accommodated by the adjacent transportation network, with consideration of the recommendations outlined above.

1 Introduction

Arcadis was retained by Canada Lands Company (CLC) and Public Services and Procurement Canada (PSPC) to undertake a Transportation Impact Assessment (TIA) in support of a Draft Plan of Subdivision application for the proposed mixed-use redevelopment of the existing Tunney's Pasture federal government campus.

In accordance with the City of Ottawa's Transportation Impact Assessment Guidelines (June 2017) and guideline revisions enacted in June 2023, the report is divided into three major components:

- **Step 1 - Screening** – Prior to the commencement of a TIA, an initial assessment of the proposed development is undertaken to establish the need for a comprehensive review of the site based on three triggers: Trip Generation, Location and Safety.
- **Step 2 - Scoping** – This component of the TIA report describes both the existing and planned conditions in the vicinity of the development and defines study parameters such as the study area, analysis periods and analysis years of the development. This section provides an opportunity to identify any scope exemptions that would eliminate elements of scope described in the TIA Guidelines but not relevant to the development proposal, based on consultation with City staff. As part of the final version of the TIA, the trip generation of the proposed development is also estimated, taking into consideration the existing and future context of the site.
- **Step 3 - Analysis** – This component describes the background network travel demand and documents the results of any analyses undertaken to ensure that the transportation related features of the proposed development are in conformance with prescribed technical standards and that its impacts on the transportation network are both sustainable and effectively managed. It also identifies a development strategy to ensure that what is being proposed is aligned with the City of Ottawa's policies and city-building objectives.

Dependent on the findings of this report, the complete submission of this Transportation Impact Assessment may require Functional Design Drawings of recommended roadway improvements to support a Roadway Modification Application (RMA). The submission may also require a post-development Monitoring Plan to track performance of the planned TIA Strategy. The need for these two elements will be confirmed through the analysis undertaken for this report.

1.1 Community Engagement

In 2021, Public Service and Procurement Canada (PSPC) partnered with Canada Lands Company (CLC) under a collaboration project to leverage the strengths of each organization to deliver the long-term vision of Tunney's Pasture that includes the site's transition from a federal employment centre into a mixed-use, sustainable, transit-oriented community. CLC is a self-financing federal Crown corporation specializing in real estate and development with a mandate to transform former Government of Canada properties and reintegrate them into local communities while ensuring their long-term goals. Since the launch of this collaboration project, CLC has been committed to working with the community to define amendments to the Tunney's Pasture Master Plan (TPMP) and proposed upgrades to the existing roadway and servicing infrastructure that support both federal priorities and future development.

A Communities' Perspective Group (CPG) was established at the onset of the Tunney's Pasture redevelopment to allow residents from adjacent communities and special interest groups with a forum to provide input for consideration of the project team. A subset of the CPG, referred to as 'CPG Stream 1', is involved in the TIA process.

The project team is committed to working with CPG Stream 1 to develop solutions that mitigate the impact of the Tunney's Pasture redevelopment on the surrounding transportation network and community, though it does not set out to resolve existing community issues with respect to transportation. As Canada Lands Company (CLC) has a mandate to accelerate the delivery of housing, this community engagement process allows the project team to move ahead with various stages of the Draft Plan of Subdivision application, while receiving input from the CPG.

Over the course of the TIA process, three (3) touch-point meetings were held to allow for input/comment from the CPG Stream 1 members:

- Touchpoint 1 – TIA Terms of Reference (TOR) – December 2, 2024
- Touchpoint 2a – Neighbourhood Traffic Management Workshop (Mechanicsville) – January 8, 2025
- Touchpoint 2b – Neighbourhood Traffic Management Workshop (Hintonburg, Wellington Village & Champlain Park) – February 10, 2025
- Touchpoint 3 – Presentation of Preliminary TIA Conclusions & Recommendations – June 17, 2025

2 TIA Screening

An initial screening was completed to confirm the need for a Transportation Impact Assessment (TIA) by reviewing the following three triggers:

- **Trip Generation**: Based on the number of proposed dwelling units and the size of the proposed employment and commercial land uses, the minimum development size threshold has been exceeded and therefore the Trip Generation Trigger is satisfied.
- **Location**: The proposed development is located within a Design Priority Area (DPA), Transit-Oriented Development (TOD) zone, Hub and the Tunney's Pasture Protected Major Transit Station Area (PMTSA). As such, the Location Trigger is satisfied.
- **Safety**: A review of boundary street conditions was undertaken to determine if there is an elevated potential for safety concerns adjacent to the site with respect to the criteria included in the TIA Screening Form. Based on this review, the Safety Trigger is satisfied.

As the proposed development meets the Trip Generation, Location and Safety Triggers, the need to undertake a TIA is confirmed. The TIA Screening Form is provided in **Appendix A**.

3 Project Scoping

3.1 Proposed Development

3.1.1 Site Location

The subject property covers an area of approximately 49 hectares and is generally bound by Kichi Zibi Mikan to the north, Parkdale Avenue to the east, Scott Street and the O-Train Line 1 corridor/Tunney's Pasture Station to the south, as well as the Champlain Park community to the west.

The site presently accommodates approximately 10,000 federal government employees and is located entirely within the Tunney's Pasture Transit-Oriented Development (TOD) zone which currently serves as the western terminus of O-Train Line 1, Ottawa's east-west LRT network.

The subject site is located within four planning areas:

- Tunney's Pasture Mixed-Use Design Priority Area (DPA)
- Scott Street Secondary Plan (SP)/Scott Street Community Design Plan (CDP)
- Tunney's Pasture Transit-Oriented Development (TOD) Zone
- Scott Street Corridor Study

The site location and its surrounding context area are illustrated in **Exhibit 1** below.

ARCADIS

Tunney's Pasture - Site Servicing and Public Road Redevelopment
Transportation Impact Assessment

Exhibit 1
Site location (Context Area)

PROJECT No. 139833

SCALE: 0m 125m 250m

3.1.2 Land Use Details

Table 3-1 below summarizes the proposed land uses included in this development at full build-out. For reference, the site presently accommodates approximately 324,000 m^2 (3,487,507 ft^2) Gross Floor Area (GFA) of office/laboratory uses.

Table 3-1 – Land Use Statistics at Full Build-out

Land Use	Size
Commercial	~7,900 m^2 (~85,035 ft^2) GFA
Office/Laboratory	~93,723 m^2 (~1,008,826 ft^2) GFA
Residential	~9,000 dwelling units
Possible Institutional Use (Elementary School)	~750 students [1]

Notes:
GFA stands for 'Gross Floor Area'
[1] Assumed for the purposes of traffic-generation, though no schools have been confirmed.

The Draft Plan for the proposed development is presented in **Exhibit 2** below.

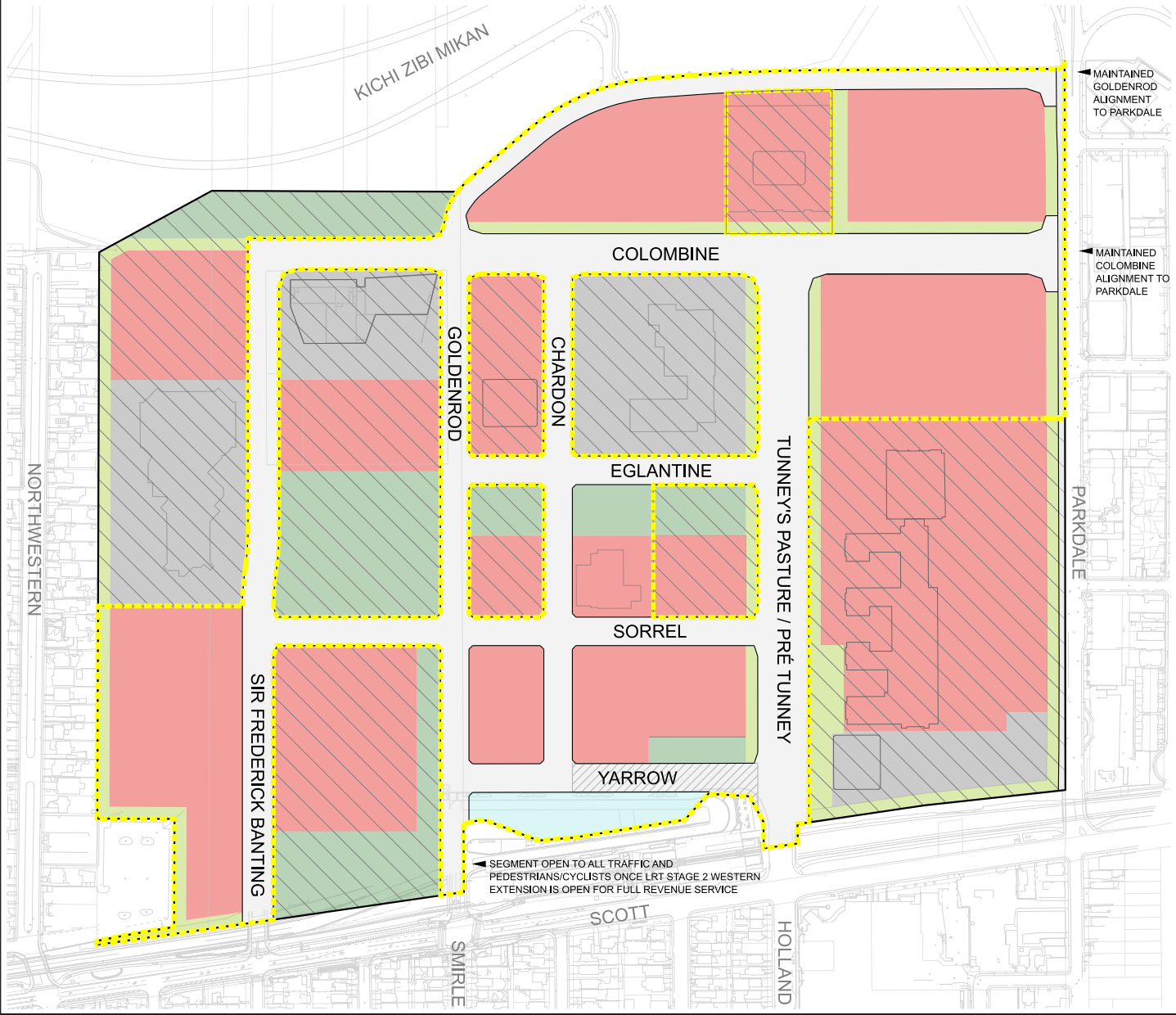
The subject site is presently zoned Mixed-Use Centre, according to GeoOttawa, and is located within an Evolving Neighbourhood and Hub in the 2022 Official Plan. The Evolving Neighbourhood overlay extends beyond the site and into adjacent communities, including Mechanicsville, Hintonburg, Wellington Village and a portion of Champlain Park.

The site presently serves exclusively as a federal government campus which is occupied by 13 buildings dedicated to various departments, including Statistics Canada, Health Canada, Natural Resources Canada and the Department of National Defence.

The proposed development will continue to provide transportation connections to the adjacent road network via six access intersections, including the following:

- Kichi Zībī Mīkan & Tunney's Pasture
- Parkdale & Goldenrod
- Parkdale & Colombine
- Scott & Holland/Tunney's Pasture
- Scott & Goldenrod/Smirle
- Scott & Sir Frederick Banting/Ross

The Scott & Holland/Tunney's Pasture intersection will continue to serve as the primary gateway to the site for all travel modes, following the Tunney's Pasture redevelopment.



NORTH

Proposed Land Use w/ Draft Plan of Subdivision Extent

- Site Boundary
- Draft Plan of Subdivision
- Future Phases
- Yarrow Woonerf

DPS	Future Phase	Proposed Land Use Designations	Area (ha)
		Mixed-Use (Residential, Office, Retail, Community Use)	22.518
		Open Space	3.175
		Park	4.911
		Lab/Office/Utility	6.671
		Transit Station	0.608
		Public Right-of-Way	11.245
		TOTAL:	49.129

Site Statistics

Residential Units	9,000
Retail GFA	7,900m²
Office/Laboratory GFA	93,723m²
Community/School GFA	50,775m²
Students	3,200m²

Notes:
- Proposed road pattern by Arcadis IBI Group, July 2024.
- Parkland dedication discussions with the City are ongoing.
- Site statistics are estimates and may change as the project evolves.

Location: TUNNEY'S PASTURE

Date: 2026-03-11 | Drafted By: SD

Scale: 0 100m, 1:1500 | North

ARCADIS

ARCADIS

Tunney's Pasture - Site Servicing and Public Road Redevelopment Transportation Impact Assessment

Exhibit 2 - Proposed Development

PROJECT No. 139833

SCALE: N.T.S.

3.1.3 Development Phasing

Conveyance to the City of Ottawa and reconstruction of the internal transportation network within Tunney's Pasture is anticipated to occur by 2030 and will establish the resulting property parcels which will then be built out over three primary phases, as outlined in **Table 3-2** below. The majority of these resulting property parcels will be sold and developed by others.

It should be emphasized that the full build-out timeline provided below is preliminary and subject to further refinement based on market conditions as development progresses.

Table 3-2 – Development Phasing

Phase	Anticipated Build-out/ Occupancy	Comments

Phase 1	2038	• Initial build-out phase
		• Represents ~50% build-out of residential and commercial uses
		• Existing office/laboratory GFA to be maintained throughout this phase
		• Total site statistics by end of Phase 1[1]:
		  ○ Residential: 4,950 units
		  ○ Commercial GFA: ~4,230 m^2 (~45,431 ft^2) GFA
		  ○ Office/Lab GFA: ~324,000 m^2 (~3,487,507 ft^2) GFA
		  ○ Possible Elementary School: ~750 students (1 school) [2]

Phase 2	2042	• Interim build-out phase • Represents ~75% build-out of residential and commercial uses • Remaining office/laboratory GFA represents ~65% of existing
Phase 3	2046	• Full build-out/occupancy of the entire Tunney's Pasture redevelopment • Remaining office/lab GFA represents ~30% of existing

Note: GFA stands for 'Gross Floor Area'

[1] *Site statistics are subject to change through individual block development.*

[2] *Assumed for the purposes of traffic generation, though no schools have been confirmed.*

It is important to note that the development of each block resulting from this Draft Plan of Subdivision will undergo a Site Plan Control (SPC) application, with individual Transportation Impact Assessments required for each application.

3.2 Existing Transportation Network

3.2.1 Existing Road Network

All major roadways and relevant local roads within the study context area are shown in **Exhibit 1** above.

Table 3-3 below summarizes the details of existing key roads within this study's Context Area which the highest potential to be impacted by the proposed development.

Table 3-3 – External Road Network

Name	Classification/ Official Plan Designation[1]	Jurisdiction	Orientation & Extents	Cross-section	ROW Protection [2] (m)	Ex. ROW [3] (m)	Speed Limit (km/h)
Parkdale Avenue	Arterial Road/ Minor Corridor	City of Ottawa	North-South, Kichi Zibi Mikan to Carling Ave	2- Lane Urban, undivided	26	~19	40
Scott Street	Arterial Road/ Mainstreet Corridor	City of Ottawa	East-West, Churchill Ave N to Albert St	2–Lane urban, undivided	26	~20	50
Holland Avenue	Major Collector Road/Minor Corridor	City of Ottawa	North-South, Scott St to Carling Ave	4- lane, urban, undivided	26	~24	50
Kichi Zibi Mikan	Parkway	Federally Owned Roadway	East-West, Carling Ave to Wellington St	4–lane urban, divided	N/A	varies	60
Ross Avenue	Local Road	City of Ottawa	North-South, Scott St to Wellington St W	2–lane urban, undivided	N/A	~18	30
Burnside Avenue	Local Road	City of Ottawa	East-West, Parkdale Ave to Slidell St	2-lane, urban, undivided	N/A	~18	40
Lyndale Avenue	Local Road	City of Ottawa	East-West, Parkdale Ave to Stonehurst Ave	2-lane, urban undivided	N/A	~15	40
Emmerson Avenue	Local Road	City of Ottawa	East-West, Parkdale Ave to Forward Ave	2-lane urban undivided	N/A	~18	40
Smirle Avenue	Local Road	City of Ottawa	North-South, Wellington St W to Scott St	2-lane urban undivided	N/A	~20	30

Notes:

1. *Roadway designation per Schedule B-2 of the 2022 Official Plan (OP). Note that only select roads are designated in the Official Plan.*
2. *ROW protection per Schedule C16 of the 2022 OP.*
3. *Existing ROW per GeoOttawa property parcel fabric.*

3.2.2 Existing Bicycle and Pedestrian Facilities

As illustrated in **Figure 3-1** below, there are a variety of existing internal active transportation and direct connections from either the site's boundary streets or federal lands to the north.

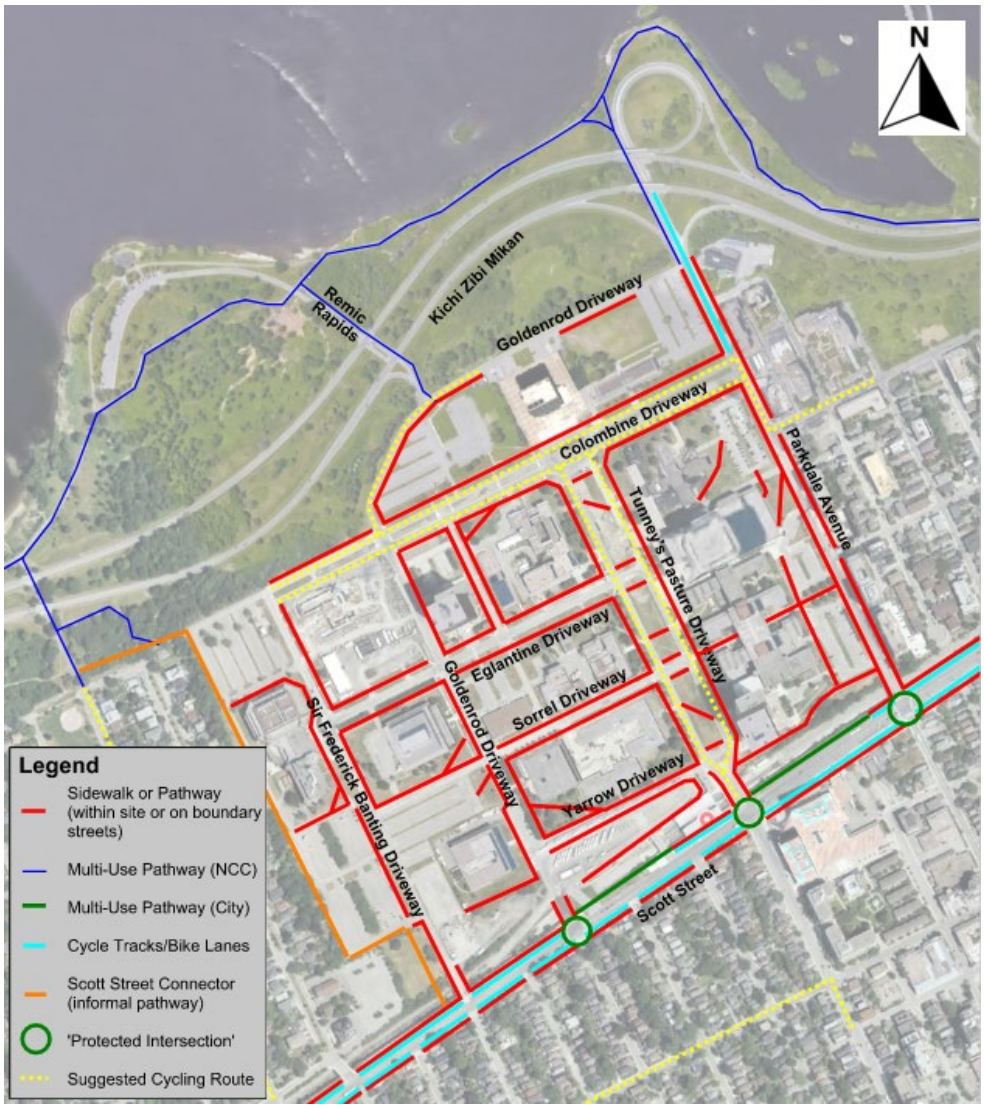
Several key pedestrian and cycling connections are highlighted below:

- Most of the internal street network within Tunney's Pasture presently has concrete sidewalks on both sides and some blocks have diagonal pathway linkages, primarily to provide more direct connections between surface parking lots and primary building entrances.
- Three (3) active transportation connections to the site currently exist via the Ottawa River Pathway system:
    - 1) Pathway linkage from Carleton Avenue Kichi Zibi Mikan underpass to the northwest corner of the site;

- 2) Multi-use pathway connection on the east side of the signalized Remic Rapids and Tunney's Pasture access intersection; and
- 3) Multi-use pathway on the west side of Parkdale Avenue which connects to the eastern terminus of Goldenrod Driveway.

- Scott Street has recently been reconstructed to accommodate raised eastbound cycle tracks from Churchill Avenue to Caroline Avenue, while improvements are being implemented in stages to the existing facilities on the north side. Upgrades to Scott Street will facilitate improved active transportation connectivity along the southern boundary of the site and within the vicinity of Tunney's Pasture Station.
- The Scott Street Connector currently extends from the Carleton Avenue Kichi Zibi Mikan underpass along the western edge of the site to provide a naturalized and informal pathway link between the northwestern edge corner of the site and Scott Street at Sir Frederick Banting Driveway.
- There are also isolated segments of on-road bike lanes on both sides of Parkdale Avenue north of Colombine Driveway to improve connectivity with the NCC existing pathway network to the north.

Figure 3-1 – Existing Active Transportation Facilities



3.2.3 Existing Transit Facilities and Service

Tunney's Pasture is currently served by OC Transpo and the Société de Transport de l'Outaouais (STO) transit agencies.

The proposed development lands are located adjacent to Tunney's Pasture Station, which is presently the western endpoint of O- Train Line 1. The line is set to be extended to Algonquin College. Construction is ongoing to extend the Line 3 from this station to Moodie.

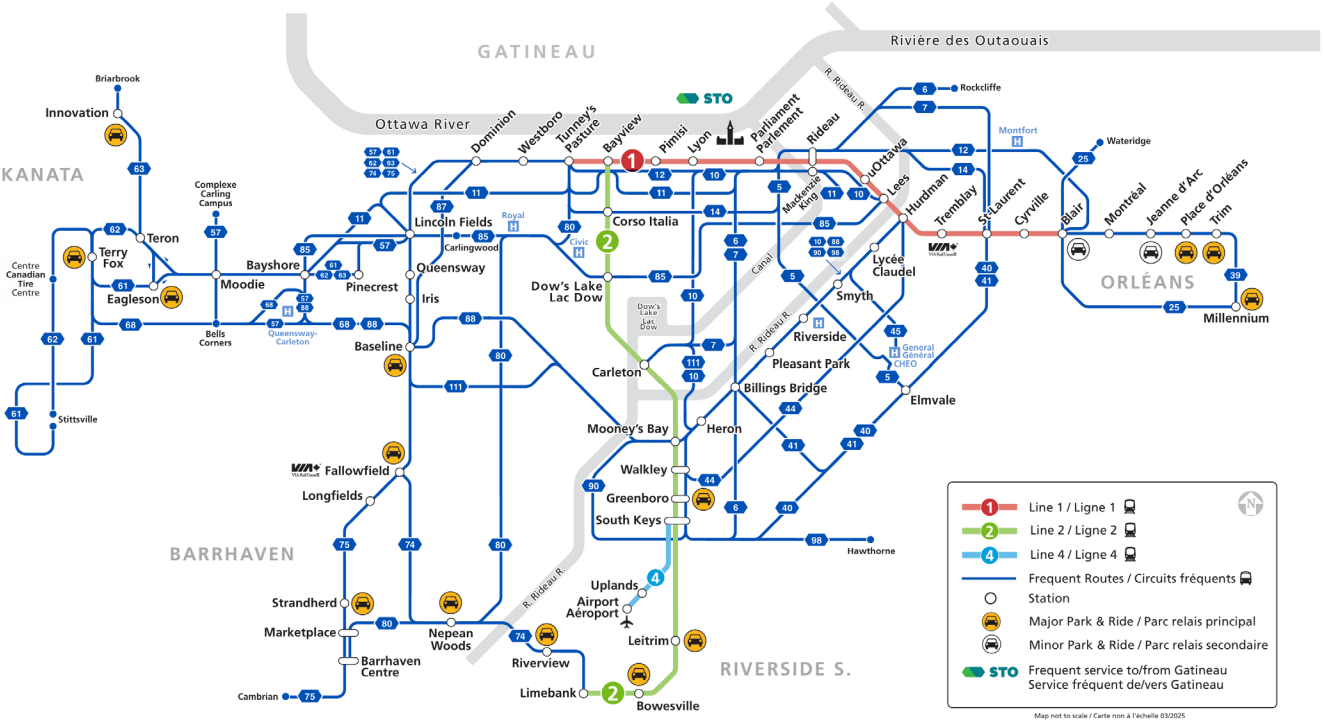
As such, this transit hub currently functions as a major transfer point between LRT and other bus services including numerous local feeder routes and the City's Bus Rapid Transit (BRT) network further west.

A recent expansion of O-Train Line 2 further south to Riverside South, with a spur line branch serving the Ottawa International Airport (O-Train Line 4), was opened for full revenue service in 2025.

The existing City-wide rapid network as it relates to O-Train Lines 1, 2 and 4 is illustrated in **Figure 3-2** below.

A Transit Proximity Study Map illustrating the radial distance to the Tunney's Pasture LRT Station platform, along with local OC Transpo and STO feeder routes and bus stop locations, is provided in **Appendix B**.

Figure 3-2 – City-wide Transit Network in relation to O-Train Line



Source: OC Transpo

3.2.3.1 OC Transpo & STO Routes

Approximately 60 OC Transpo Routes pass through the Tunney's Pasture Station every weekday, consisting of the following main service types:

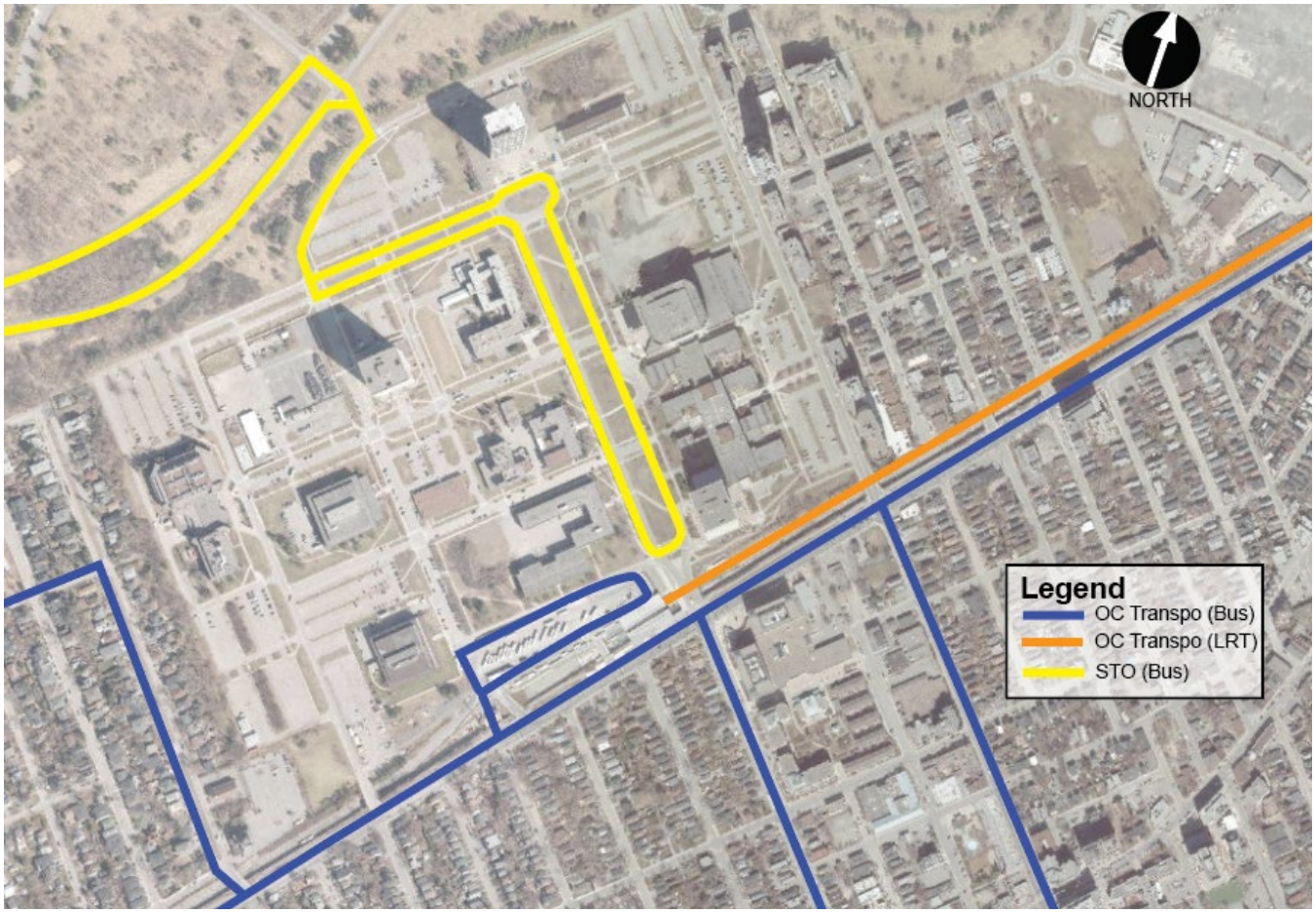
- 19 Frequent (Bus) Routes which operate 7 days a week in all time periods with service every 15 minutes or less from 6am to 6pm on weekdays.
- 18 Connexion (Bus) Routes which operate on weekday peak periods only (Monday-Friday 6:00-9:00 am and 3:00-6:00 pm)

- 17 Local bus routes which serve adjacent communities including Champlain Park, Hintonburg and Wellington West.
- 4 Night bus routes which operates 7 days a week overnight provides station-to-station bus service when Line **1** closes for the day.
- 2 Replacement bus routes run when the O-Train Line 1 is not operating during its regular services or when a section of the line is closed.

STO bus routes 18, 28 and 58 provide direct connections between Gatineau and Tunney's Pasture, during weekday peak hours via the Champlain Bridge and Kichi Zibi Mikan.

Roads within the subject site or on the adjacent network that currently accommodate OC Transpo or STO transit routes are illustrated in **Figure 3-3** below.

Figure 3-3 – Existing OC Transpo Bus/LRT Routes & STO Bus Routes



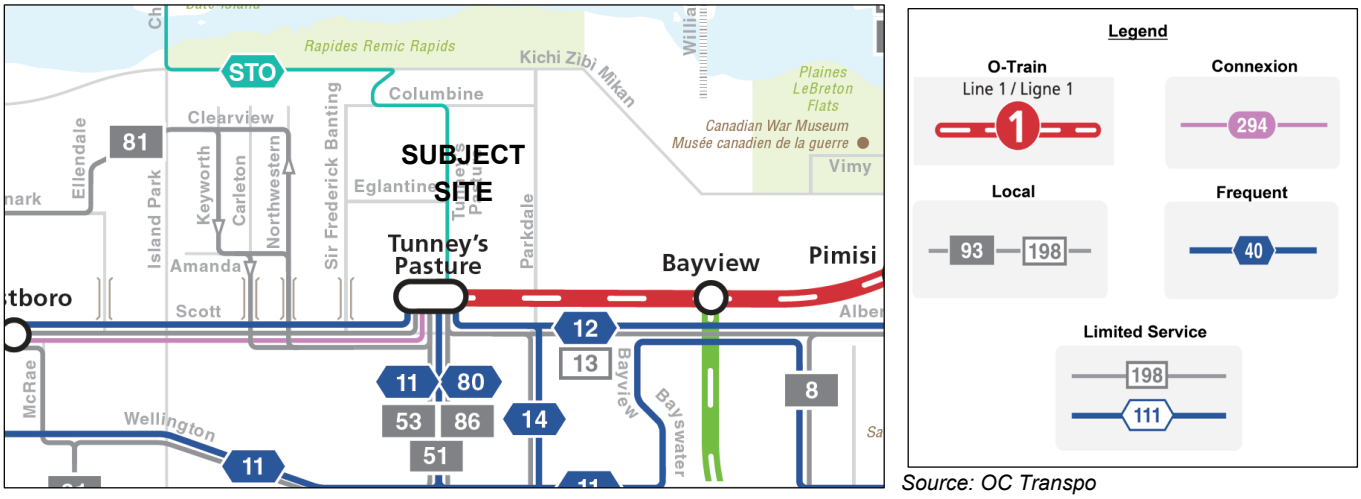
Source: Based on route maps from OC Transpo and STO websites

3.2.3.1 OC Transpo's New Ways to Bus Network

OC Transpo introduced significant changes to the existing bus network on April 27, 2025, an initiative referred to as 'New Ways to Bus'. Within the subject site, some routes that travel through Tunney's Pasture Station will either be replaced, realigned or new routes will be introduced. Notably, Route 54 which travelled through the site has been removed altogether.

An excerpt from the New Ways to Bus Network Map within the context area is shown in **Figure 3-4** below.

Figure 3-4 – New Ways to Bus Network Map



Source: OC Transpo

3.3 Planned Transportation Network

3.3.1 Future Road Network

The redesign of Scott Street within the context area was undertaken from about 2021 to 2025 which involved a phased approach to upgrade this arterial road and study area intersections with enhanced facilities for active transportation users. The eastbound bus lanes were removed to reallocate this ROW width as a green boulevard with street trees. This project is in the final stages of implementation.

The Ottawa Transportation Master Plan (TMP) was updated from 2022 to 2025 and is generally divided into two (2) parts:

- The 2023 TMP Update (Part 1) was approved by City Council in the spring of 2023 and included Policies, Active Transportation Projects, as well as Transit Prioritization Frameworks. This key policy document also built on the 2022 Official Plan concept of a '15-minute neighbourhood'.
- The 2025 TMP Update (Part 2): Capital Infrastructure Plan, which was approved by Transportation Committee and Council in mid-2025, involved a review of City-wide road infrastructure projects, including Transit Priority Corridors, Bus Rapid Transit (BRT) corridor, road widenings and extensions.

The TMP Capital Infrastructure Plan seeks to expand a transit network that serves residents and advances the City's long-term objectives for livability, economic prosperity, and environmental sustainability. It identifies O-Train, Transitway, and bus lane projects designed to boost travel speed and reliability and to encourage a substantial daily shift toward public transit and other sustainable modes.

The plan defines two proposed future transportation networks: the Needs-Based Transit Network and the Priority Transit Network.

The Needs-Based Network identifies the projects that are needed by 2046 to accommodate the Official Plan population and employment growth projections. These projects are needed to address travel demand and support the Official Plan's goal of allocating half of all trips to sustainable modes. Projects mainly cover O-Train extensions, new Transitway corridors, continuous bus lanes, transit priority corridors, and additional transit investments required to support growth and improve transit travel times and reliability. The projects in the Needs-Based Transit Network were evaluated using criteria such as modelled ridership (peak ridership, average corridor ridership, and ridership growth), travel time savings, estimated costs, and city-building impacts.

The Priority Transit Network is a subset of the Needs-Based Transit Network, concentrating on the top-priority projects anticipated to be implemented by 2046 under current funding assumptions. The projects within the Priority Transit Network aim to attract new riders and support growth by enhancing travel speed and reliability on existing

high-ridership urban corridors, as well as by linking suburban communities to the central O-Train and Transitway networks.

According to the 2025 TMP, the Priority Transit Network includes the O-Train Line 1 extension to Barrhaven Centre and the Line 3 extension to Hazeldean Station from Tunney's Pasture station; delivery of these major projects is still fully dependent on funding from other levels of government.

The 2025 TMP also outlines an Ultimate Transit Network that encompasses additional long-term transit projects beyond the Needs-Based Network. These projects are anticipated to be necessary after 2046 to accommodate the City's future growth and intensification.

Ottawa's roads link people, goods, communities, employment centers, services, and neighboring municipalities. They play a vital role in the city's transportation system by facilitating the movement of buses, bicycles, vehicles, and pedestrians. The TMP Capital Infrastructure Plan (Part 2) outlines the needs and priorities for Ottawa's road network to support the city's growth to 2046, aligned with the objectives and policies of the Official Plan and Transportation Master Plan. The Plan includes new roads, road widenings, road urbanizations, and mainstreet enhancements to support growth, with an emphasis on arterial roads (most local and collector streets are delivered through development).

The plan defines two proposed future transportation networks: the Needs-Based Road Network and the Priority Road Network.

The Needs-Based Road Network defines the road capacity projects required to meet the City's mobility needs through 2046, based on the Official Plan's population and employment forecasts. Projects were included if they satisfied at least one of two primary mobility objectives: address a road capacity deficiency; or provide transportation access to support new development.

The Priority Road Network includes three types of projects: road capacity projects, road urbanization projects, and mainstreet improvement projects.

The road capacity projects are a selected subset of the most critical and cost-effective projects from the Needs-Based Road Network, planned for delivery by 2046 based on current funding forecasts. These Priority Network projects include strategic road widenings, new connections, and extensions that directly alleviate congestion bottlenecks and provide access to new developments. They are vital for supporting growth in suburban and emerging areas.

Road urbanization projects help accommodate growth by upgrading existing higher-order roads (mainly arterials) that were constructed with rural cross-sections and no sidewalks. These works will introduce urban amenities such as sidewalks, cycling facilities, bus stops, and lighting; some will also convert roads to urban or semi-urban cross-sections.

According to 2025 TMP, mainstreet improvement projects concentrate on upgrading arterial corridors within Design Priority Areas and along Mainstreet Corridors to directly support intensification, placemaking, and economic development. They enhance the public realm and enable existing streets to carry more people in the same space by investing in walking and cycling infrastructure, better transit access, and public amenities.

No projects are planned within the context area of the site as per the Needs-Based and Priority Network for roads. However, Holland Avenue Transit Priority Corridor improvements near the context area are included on both the Needs-Based and Priority Network.

3.3.1.1 Modifications to the Street Network

Scott Street Community Design Plan (CDP)

The 2014 Scott Street CDP suggested a variety of potential ideas to guide the development of the transportation network within the CDP area, such as:

- Adding a northbound left-turn lane at the Parkdale Avenue and Scott Street intersection.

- Implementing a signalized intersection at the Scott Street & Sir Frederick Banting/Ross intersection, while prohibiting north-south traffic flow at Scott Street to deter cut-through traffic further south into Wellington Village.
- Converting Sir Frederick Banting Driveway, Colombine Driveway, and Tunney's Pasture Driveway into public streets, complete with appropriate sidewalk and bicycling infrastructure to provide alternatives to vehicle travel on Parkdale Avenue and Scott Street.
- Extending Goldenrod Driveway to intersect with Scott Street at a signalized intersection, while aiming to deter cut-through traffic into Smirle Avenue by prohibiting north-south traffic flow at Scott Street.

Tunney's Pasture Master Plan (TPMP) and Tunney's Pasture Urban Design Manual (UDM)

The Tunney's Pasture Master Plan (2014), referred to as the '2014 TPMP', proposed a three-tier hierarchy of streets: primary, secondary, and tertiary. Primary streets, such as Tunney's Pasture Driveway, Colombine Driveway, and Sir Frederick Banting Driveway, would serve as the main north-south and east-west spines, enhanced with bike lanes, high-quality landscaping, and safe pedestrian realms. Secondary streets would provide connectivity, street parking, and tree-lined sidewalks, while tertiary streets would offer access to larger blocks and site edges, enhancing overall site accessibility. The TPMP was updated and approved by the NCC in 2025.

Since the 2014 TPMP, the City of Ottawa adopted a 'Complete Streets' approach which was carried forward to develop the typical cross-sections for each internal street presented in the Urban Design Manual for the Redevelopment of Tunney's Pasture (2024). Among other aspects, the road network hierarchy and network configuration was reviewed and road classifications names were updated where possible to align with the City's terminology (e.g., local or collector), while tertiary streets were mostly removed to allow more flexibility for the introduction of a customized private street network tailored to the unique development needs of each parcel. Further discussion regarding the proposed street network is included in the 'New Streets Network' component of the TIA, located in Section 4.3.3, including proposed typical cross-section details for each internal street within the subject development.

It should be noted as well that the Chardon Driveway extension from Colombine Driveway to Kichi Zībī Mīkan, which was contemplated as part of the 2014 TPMP, is no longer being considered at this time and the internal road network north of Colombine Driveway will retain its current alignment as part of the proposed Draft Plan.

Ottawa River South Shore Riverfront Park Plan

The Ottawa River South Shore Riverfront Park Plan (NCC, 2018) envisions the potential long-term conversion of the Parkdale & Kichi Zibi Mikan interchange into a signalized intersection; however, the nature and timing of these upgrades is presently unknown and is anticipated to occur beyond the 2046 study horizon year.

3.3.2 Future Bicycle and Pedestrian Facilities

Scott Street is identified as a 'Cross-town Bikeway' through the study context area, with the objective of providing continuous connectivity over long distances for cyclists crossing the City.

The Active Transportation Projects policy document developed as part of the TMP Update (Part 2) identifies the need to investigate formal cycling facilities on Holland Avenue from Scott Street to Tyndall Street through a feasibility study.

Scott Street Community Design Plan (CDP) & Secondary Plan (SP)

As discussed previously, the Scott Street CDP and Secondary Plan policy documents were published by the City of Ottawa to guide the development of Tunney's Pasture and the surrounding area. Policy direction was provided in the Scott Street CDP framework which was further developed through the subsequent SP process.

The Secondary Plan identified the need for enhancements to the Parkdale Avenue streetscape through the incorporation of dedicated cycling facilities within a parallel greenway north of Scott Street. The CDP provided additional details on this policy direction, envisioning a long-term plan for a future tree-lined multi-use pathway and linear park on the west side of Parkdale Avenue referred to as the 'Parkdale Greenway' which would significantly

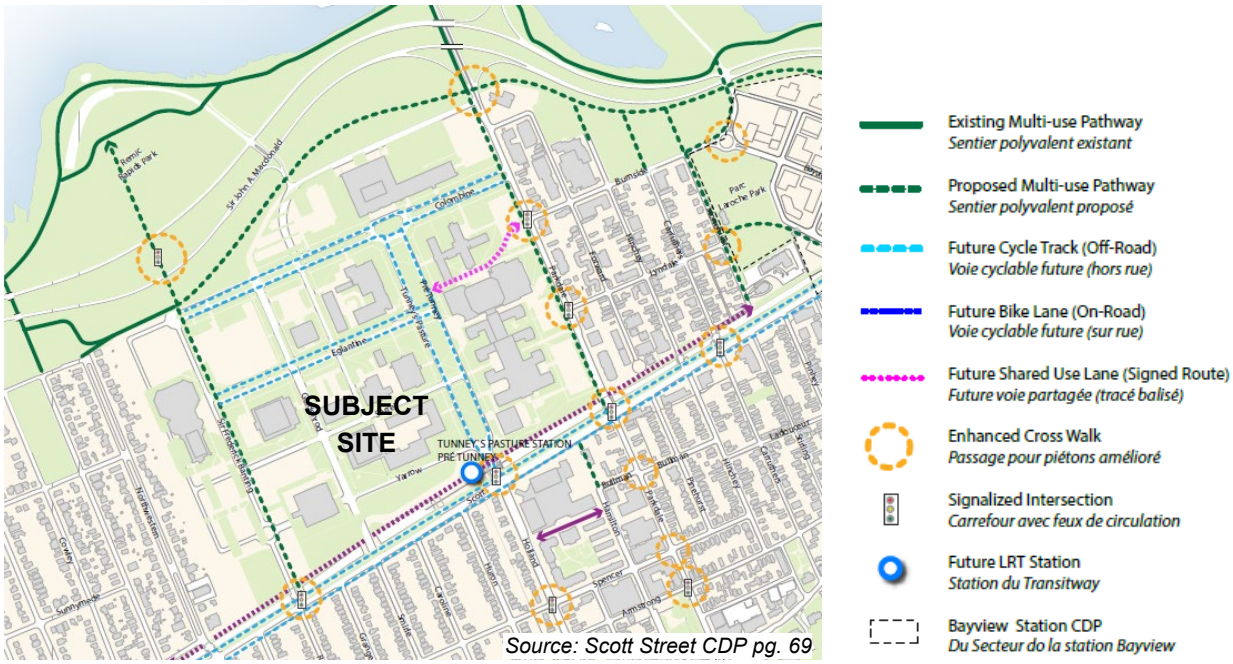
improve active transportation connectivity between Scott Street, Ottawa River Pathway network, as well as the subject site.

Burnside Avenue was envisioned as a 'complete street' in the Scott Street CDP, by accommodating two vehicular lanes, two bike lanes and landscaped boulevards with sidewalks and street trees on both sides.

It is also noteworthy that the Scott Street CDP recommended an 'enhanced crosswalk' on Parkdale Avenue at Goldenrod as a potential idea to address the lack of controlled active transportation crossings north of Burnside Avenue.

An excerpt from the Scott Street CDP illustrating these improvements is provided in **Figure 3-5** below.

Figure 3-5 – Scott Street CDP Proposed Pedestrian Network



Source: Scott Street CDP pg. 69

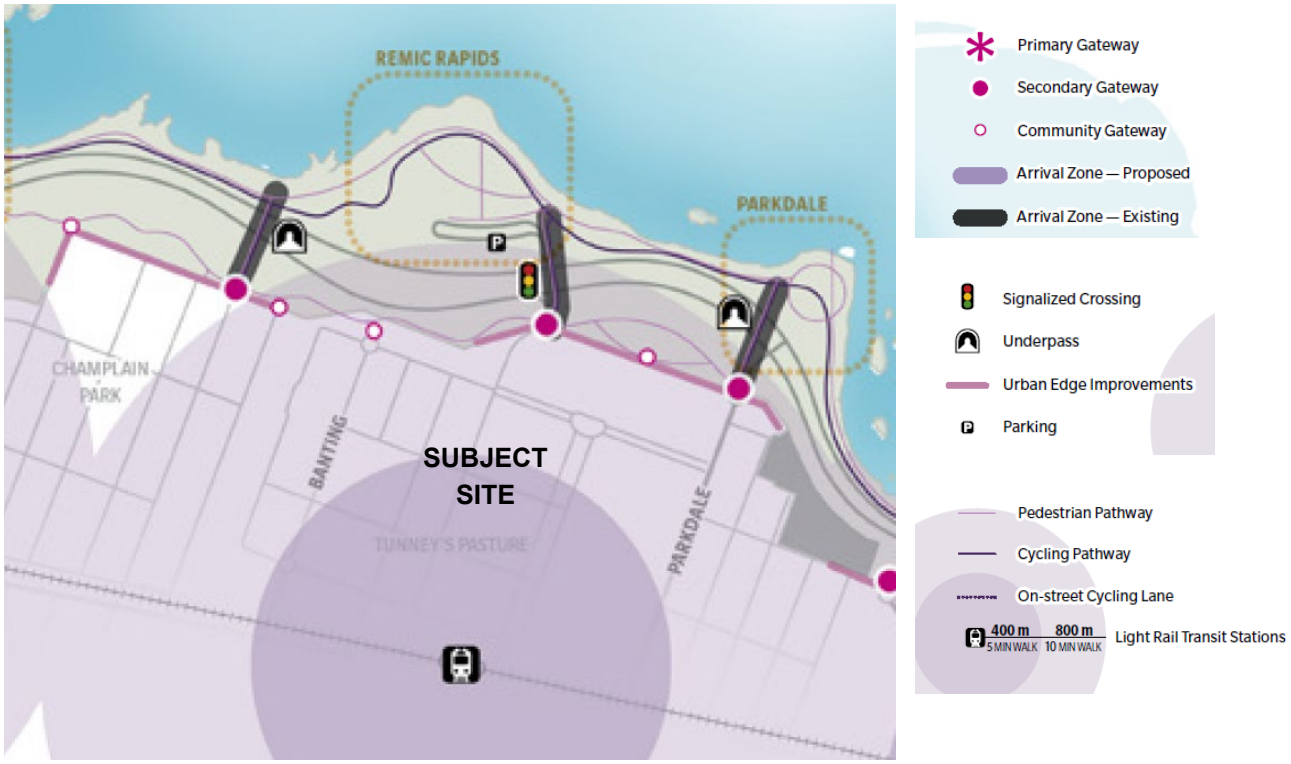
Scott Street Complete Street Upgrades

The City is in the final stages of converting Scott Street into a Complete Street through the upgrades to active transportation infrastructure, including wider sidewalks and grade-separated cycle tracks, a process which is substantially complete to the west of Tunney's Pasture and is well underway further east and adjacent to the site. Each signalized intersection was recently to a 'protected intersection' configuration, with cross-rides for cyclists, while minor intersections will also include 'protected' elements.

Ottawa South Shore Riverfront Park Plan

The Ottawa River South Shore Riverfront Park Plan (NCC, 2018) envisions the potential long-term expansion of the pedestrian pathway network on the south side of Kichi Zibi Mikan, with possible Community Gateway connections to the subject development, as shown in **Figure 3-6** below.

Figure 3-6 – Potential Expansion of NCC Pathway Network north of Tunney's Pasture



Source: Ottawa River South Shore Riverfront Park Plan (2018), Section 4.4.1

3.3.3 Future Transit Facilities and Services

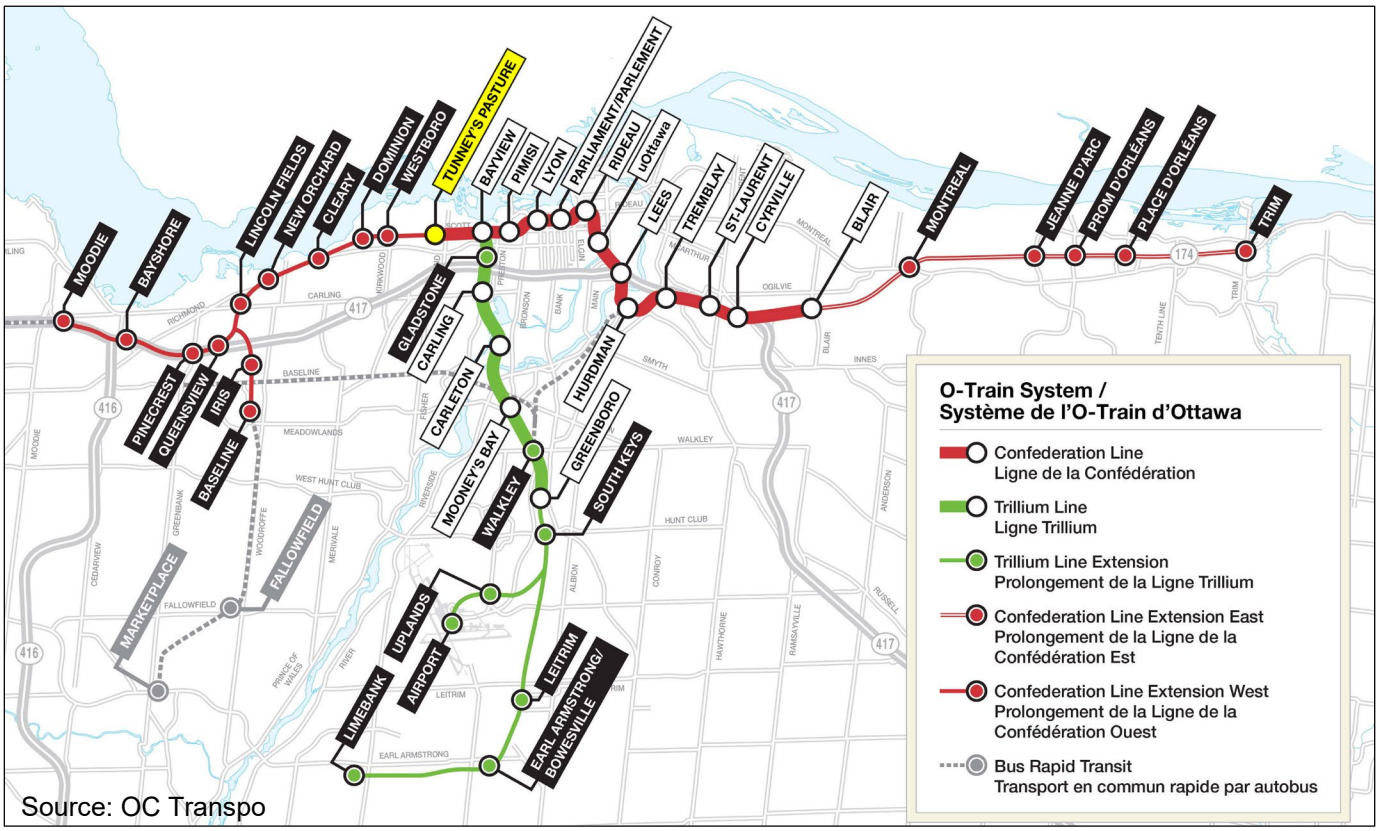
According to 2025 Transportation Master Plan (TMP), a Transit Priority Corridor is a road or road segment that carries frequent bus services and commonly experiences congestion, causing delays that undermine travel times and service reliability. Within the context area, this TMP identifies Holland Avenue as a Transit Priority Corridor with Isolated Measures; however, City technical staff have not indicated a proposed timeline for the implementation of either of these measures.

Construction of the LRT Stage 2 Western Extension is currently underway and is slated to open for full revenue service as early as 2027, expanding light rail service from its current terminus at Tunney's Pasture Station to Moodie Drive and Baseline Road.

Another notable planned expansion to the O-Train involves the opening of the O-Train Line 1 Eastern Extension to Trim Road which is slated to occur open in 2026.

The Stage 2 LRT Rapid Transit Network is illustrated in **Figure 3-7** below.

Figure 3-7 – Stage 2-LRT Rapid Transit Network



3.4 Future Adjacent Developments

The City of Ottawa Transportation Impact Assessment (TIA) Guidelines specify that all significant developments proposed within the context area which are in the planning process, under construction (or completed after the collection of the traffic count data referenced in this report) or likely to occur within the study's horizon year must be identified and taken into consideration in the development of future background traffic projections.

Table 3-4 below summarizes the key details of all development applications of significance within the context area. Adjacent developments are illustrated in **Exhibit 3** below.

Table 3-4 – Future Adjacent Developments

Location	Description	Anticipated Build-out
99 Parkdale Avenue	28-storey apartment building with 240 dwelling units.	Construction Complete
159 Parkdale Avenue	31-storey building with 264 apartment units and ~119 m^2 commercial space.	Construction Complete
1560 Scott Street	29-storey building with 337 apartment units and ~80 m^2 GLA of commercial space.	2024[1]
274 Parkdale Avenue	28- & 32-storey buildings consisting of 499 residential units with ~3,593 m^2 of commercial space and ~3,593 m^2 of office space.	Unknown [1]
1546 Scott Street	25-storey mixed-use apartment building with 230 dwelling units & ~222 m^2 of commercial GLA.	2024[1]
1186-1194 Wellington Street West	18-storey mixed-use building with 240 residential units & ~1,172 m^2 ground floor retail.	2025[1]
Lazy Bay Commons 1-19 Kichi Zibi Mikan	Zoning permissions expanded to include up to 5 principal embassy buildings; Retention of ~24% greenspace	Unknown (long-term build-out)

Note: [1]The build-out date identified in the TIA has passed or can no longer realistically be met, however are assumed to be in place and occupied by the completion of Phase 1 in 2038.

Based on **Table 3-4** above, it is observed that over 1,800 residential units and approximately 5,500 square metres of commercial retail have been approved by the City within the context area, in recognition of the area's transit and active transportation infrastructure.

Lazy Bay Commons Development

In 2021, the NCC initiated a Zoning Bylaw Amendment (ZBLA) application to support the inclusion of embassy zoning permissions within the greenspace lands north of Burnside Avenue, referred to as the Lazy Bay Commons or 1-19 Kichi Zibi Mikan. Through a subsequent Ontario Land Tribunal (OLT) process, which concluded in mid-2023, it was determined that up to five principal embassy buildings (a reduction from the six buildings originally proposed) could potentially be constructed and approximately 24% of the lands would be retained as greenspace. This possible long-term plan was included in the list of future adjacent developments for further consideration in this study, given its potential significance on the boundary street intersections of the subject site. It is recognized, however, that significant uncertainty exists regarding a construction timeline or site-specific details for these lands which would need to be determined through future Site Plan Control (SPC) applications and that development on these lands could potentially occur beyond the 2046 planning horizon year of this TIA.

1km Context Area

NORTH

Remic Rapids

Kichi Zibi Mikan

Goldenrod Driveway

Colombine Driveway

Emmerson Avenue

1-19 Kichi Zibi Mikan

Burnside Avenue

Bayview Station Road

99 Parkdale

159 Parkdale

Lyndale Avenue

Chaldon Driveway

Eglantine Driveway

Tunney's Pasture Driveway

Goldenrod Driveway

Sorrel Driveway

Yarrow Driveway

Sir Fredrick Banting Driveway

Tunney's Pasture Station

Scott Street

Holland Avenue

Smirle Avenue

Ross Avenue

Island Park Drive

274 Parkdale

1546 Scott

1560 Scott

Parkdale Avenue

Baywater Avenue

Wellington Street W

1186-1194 Wellington

Gladstone Avenue

Queensway

Legend

- Signalized Context Area Intersection
- Transitway (BRT)
- Transitway (LRT)
- Site Limits

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Tunney's Pasture - Site Servicing and Public Road Redevelopment
Transportation Impact Assessment

Exhibit 3
Adjacent Developments (Context Area)

PROJECT No. 139833

SCALE: 0m 125m 250m

3.5 Time Periods

As the proposed development will consist of primarily residential and office land uses with street-level, neighbourhood commercial uses distributed around the core station area and throughout the site, traffic generated during the weekday morning and weekday afternoon peak periods will result in the most significant impact to traffic operations on the adjacent transportation network. The traffic analysis conducted for this study will therefore be limited to weekday morning and afternoon peak hours.

3.6 Study Horizon Year

In addition to Existing conditions, the following future analysis years anticipated for build-out milestones of the proposed development will be assessed in this study under Future Background and Future Total traffic scenarios:

- Year 2038: Build-out/occupancy of Phase 1
- Year 2042: Build-out/occupancy of Phases 1 & 2
- Year 2046: Full Build-out/occupancy of Proposed Development (Phases 1, 2 & 3)

As a result of the long-term redevelopment of this site, the study has aligned with the City of Ottawa's 2046 planning horizon with no further analysis beyond this time.

3.7 Study Area Intersections

With consideration of the information presented thus far, the following intersections have been identified as being most impacted by the proposed development and are consistent with the study area defined in the Tunney's Pasture Redevelopment Community Transportation Study (Parsons, 2018):

- Kichi Zībī Mīkan & Remic Rapids/Tunney's Pasture
- Goldenrod Driveway & Parkdale Avenue (right-in/right-out)
- *Parkdale Avenue & Colombine Driveway (higher likelihood of significant intersection upgrades)*
- Parkdale Avenue & Burnside Avenue
- Parkdale Avenue & Lyndale Avenue
- Scott Street & Parkdale Avenue
- Scott Street & Tunney's Pasture Driveway/Holland Avenue
- Scott Street & Goldenrod Driveway/Smirle Avenue
- *Scott Street & Sir Frederick Banting Driveway/Ross Avenue (higher likelihood of significant intersection upgrades)*

Based on the results of the trip generation exercise presented in Section 3.10, site-generated traffic impacts will be significantly reduced beyond the proposed site access intersections and boundary street intersections bordering the site. Motorists have a variety of options to access the broader regional road network, resulting in a significant dispersion of vehicular demand along arterial roads beyond the site's immediate boundary streets. The grid-like street pattern within the site, and access via signalized intersections within the context area, will optimize this dispersion over the broader arterial and regional road network. Furthermore, the significant investments in transit and active transportation infrastructure within the study area by the City of Ottawa will provide alternatives to those who currently travel by car and will support an incremental shift towards sustainable transportation modes.

Sustainable transportation trips will represent a significant proportion of the overall site generated traffic due to the proximity of this development to the Tunney's Pasture LRT Station in an area of the City which is already considered to be highly walkable/bikeable and will be further supported by a suite of Transportation Demand Management (TDM) measures through the incremental development of the subject site into a mixed-use, compact and transit-oriented development.

Peripheral Intersections

As described in subsequent sections of this study, a select number of intersections within the periphery or just outside the 1km context area were also reviewed in a limited capacity to help identify constraints on the adjacent road network to determine a reasonable assignment site-generated traffic. Any additional analysis involving these peripheral intersections was limited to existing conditions to rationalize the assignment of site-generated trips associated with the proposed development. The downstream 'net new' site-generated traffic impacts at these additional intersections are illustrated in **Exhibit 6**, **Exhibit 7** and **Exhibit 8**.

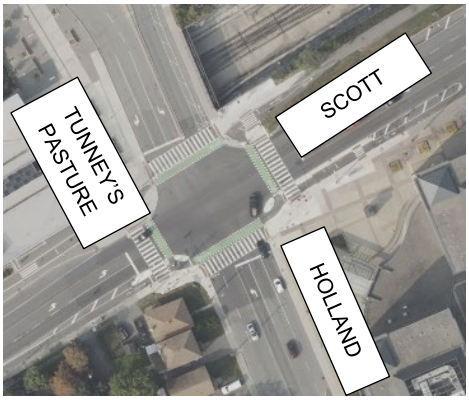
MMLOS

An intersection-based Multi-Modal Level of Service (MMLOS) was conducted for all signalized study area intersections, as well as capacity analysis for all existing and proposed study area intersections (signalized or unsignalized) will be undertaken as part of this TIA. Note that peripheral intersections described above will be exempt from this MMLOS analysis.

In terms of segment-based MMLOS, since a Complete Street concept exists for Scott Street, a multi-modal evaluation of the corridor was not required for this corridor. As such, segment-based MMLOS analysis will be limited to Kichi Zibi Mikan and Parkdale Avenue along the site's frontage.

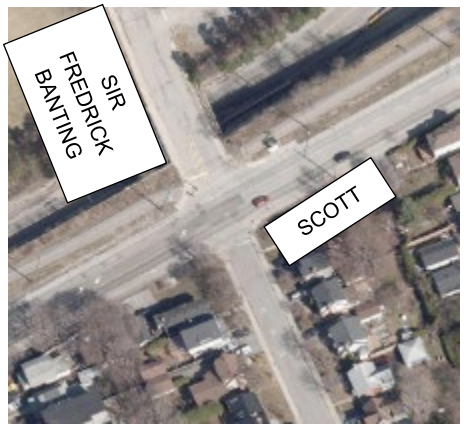
3.7.1 Intersection Descriptions

The following intersections have the greatest potential to be impacted by traffic generation from the subject site:

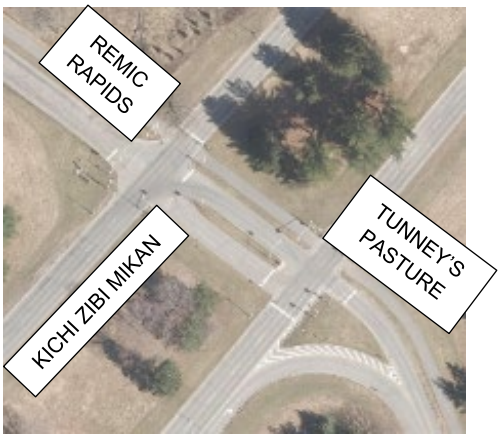


Scott Street & Holland Avenue/Tunney's Pasture Driveway is a four-legged, signalized intersection that has been upgraded to a 'protected intersection' with one through lane for mixed traffic provided on each approach. There are auxiliary left- and right-turn lanes provided on all approaches, with the exception of the eastbound approach, which consists of a shared thru/right and auxiliary left-turn lane configuration. Uni-directional 'cross-rides' have been provided on all approaches.

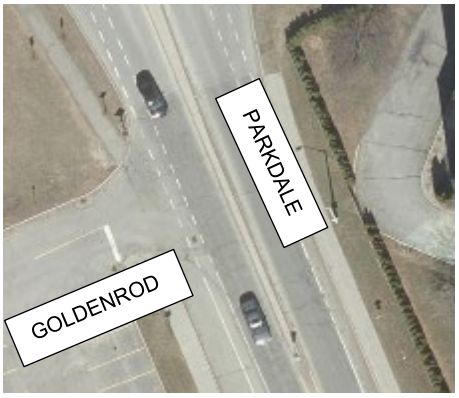
Parkdale Avenue & Scott Street is a four-legged, signalized intersection that has been upgraded to a 'protected intersection', in conjunction with the conversion of the eastbound transit lane to a green boulevard. The intersection now exists with one through lane on each approach, along with dedicated left-turn auxiliary lanes, with the exception of the northbound approach. A transit priority lane and signal exists on the westbound approach to give priority to transit vehicles.



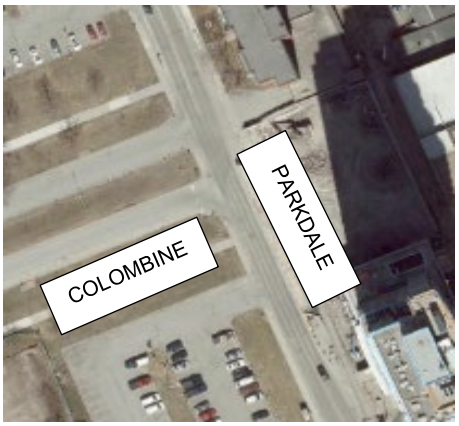
Sir Fredrick Banting Driveway/Ross Avenue & Scott Street is a four-legged, stop-controlled intersection with free flowing traffic in the east-west directions and a left-turn auxiliary lane on the westbound approach. A diverter island exists on the north leg, with the intent of limiting vehicular movements in/out of Sir Frederic Banting Dr. to right-in/right-out, as well as prohibiting north-south through movements.



Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture consists of two signalized intersections separated by approximately 36 metres. A channelized right-turn auxiliary lane exists in the eastbound direction and westbound vehicles travelling on Kichi Zibi Mikan are prohibited from entering the Tunney's Pasture campus from this location.

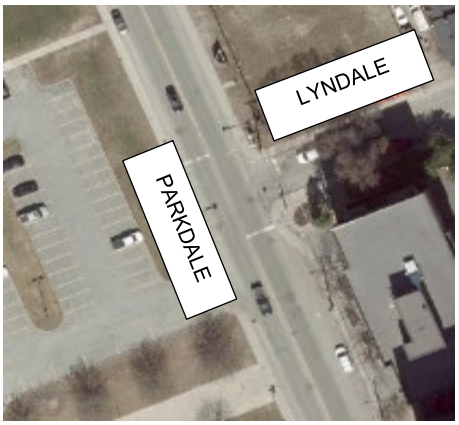


Goldenrod Driveway & Parkdale Avenue is an unsignalized intersection with stop control on the minor road. A raised concrete median extends through the intersection on Parkdale Avenue, limiting movements at Goldenrod Driveway to right-in/right-out.



Parkdale Avenue & Colombine Driveway is a three-legged, all-movements intersection with stop control on Colombine Driveway. A single travel lane is provided on each approach on Parkdale Avenue, while Colombine Driveway effectively provides two vehicular lanes at the approach and departure of the intersection separated by an approximate 9-metre median.

Parkdale Avenue & Burnside Avenue is a three-legged signalized intersection with a single, shared vehicle travel lane provided on each approach.



Parkdale Avenue & Lyndale Avenue is a three-legged, signalized intersection with a single, shared vehicle travel lane on each approach.

3.7.2 Existing Lane Configurations & Traffic Volumes

The following weekday morning and afternoon peak period turning movement counts were collected in May 2023, with the exception of Parkdale & Scott Street intersection which was counted in February 2025. All counts were conducted during the core working days (i.e. Tuesday to Thursday), after the federal government's mandate for federal civil servants to work from the office 2 to 3 days a week:

- Kichi Zibi Mikan Westbound & Remic Rapids
- Kichi Zibi Mikan Eastbound & Tunney's Pasture
- Parkdale Avenue & Goldenrod Driveway
- Parkdale Avenue & Emmerson Avenue
- Parkdale Avenue & Colombine Driveway

- Parkdale Avenue & Burnside Avenue
- Parkdale Avenue & Lyndale Avenue
- Parkdale Avenue & Scott Street
- Scott Street & Goldenrod Driveway/Smirle Avenue
- Scott Street & Sir Frederick Banting Driveway/Ross Avenue

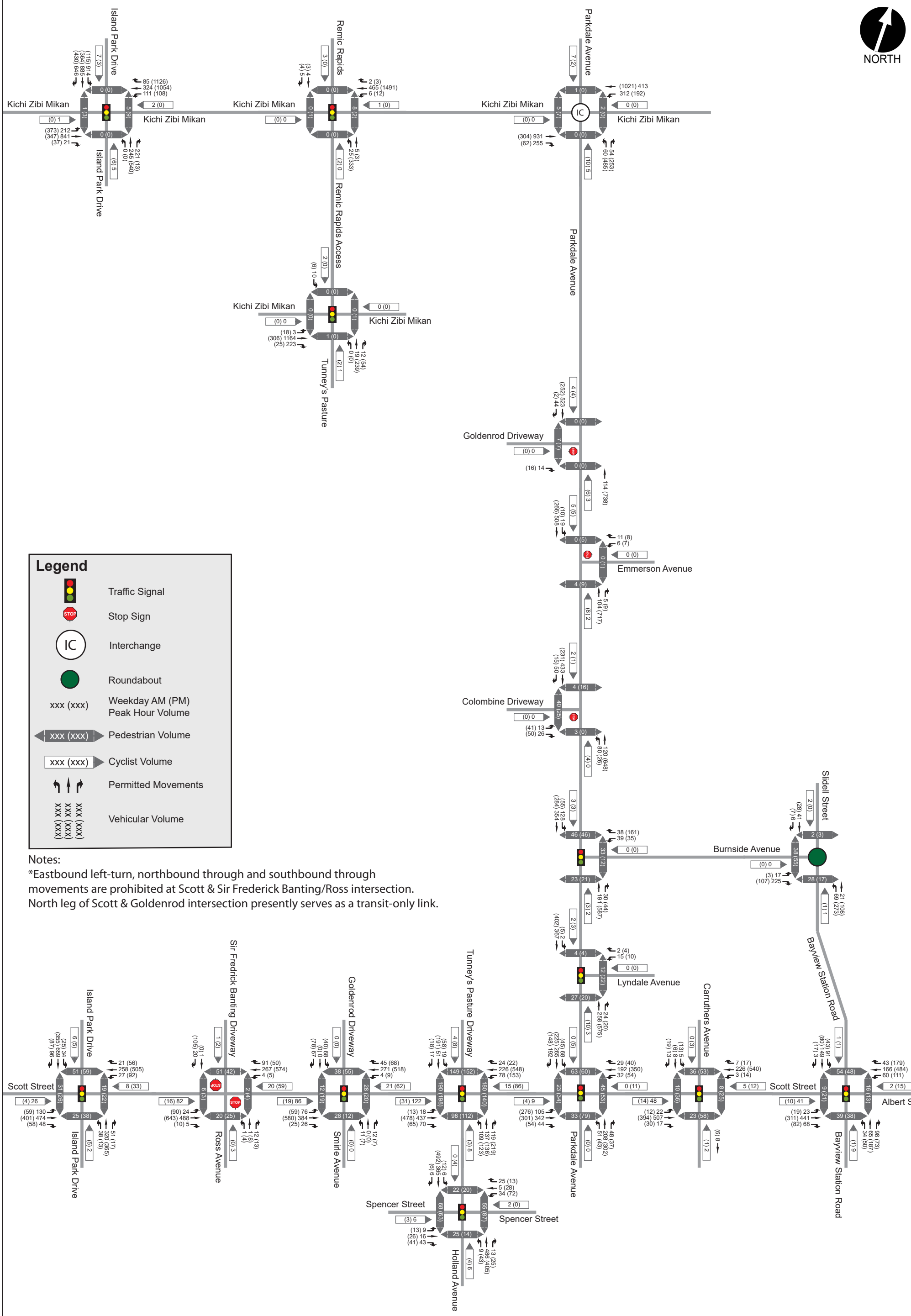
The Kichi Zibi Mikan interchange with Parkdale Avenue was counted to allow for adequate balancing with the adjacent intersections on Parkdale Avenue, however this interchange will not be included in the study area, given its freeflow operation.

Supplemental traffic data was collected in March/April 2025 for intersections on the periphery of the 1km context area to either inform the assignment of site-generated trips on the broader transportation network or to help identify existing cut-through traffic patterns in adjacent neighbourhoods. Based on feedback received from City technical staff, the following six strategic locations were included in this additional data collection exercise:

- Island Park & Kichi Zibi Mikan
- Island Park & Scott
- Holland & Spencer
- Scott & Carruthers
- Scott & Bayview Station/Albert
- Bayview & Burnside/Slidell

The pedestrian, cycling and vehicular volumes during the weekday morning and afternoon peak hours were extracted from the turning movement counts and are shown in **Exhibit 4**. The traffic count data is provided in **Appendix C**. The lane configurations and intersection controls for the study area and peripheral intersections are illustrated in **Exhibit 5**.

The trip generation methodology outlined in subsequent sections of this TIA provides an adjustment factor for site-generated traffic volumes to estimate the impact of office trips in future analysis scenarios. This adjustment factor provisions for further shifts in the Federal Government's policies towards in-office work over the timeframe of this study.



Legend

- Traffic Signal
- Stop Sign
- IC — Interchange
- Roundabout
- xxx (xxx) — Weekday AM (PM) Peak Hour Volume
- xxx (xxx) — Pedestrian Volume
- xxx (xxx) — Cyclist Volume
- Permitted Movements
- xxx (xxx) — Vehicular Volume

Notes:
*Eastbound left-turn, northbound through and southbound through movements are prohibited at Scott & Sir Frederick Banting/Ross intersection.
North leg of Scott & Goldenrod intersection presently serves as a transit-only link.

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Exhibit 4:
Existing Traffic Volumes

PROJECT No. 139833

SCALE: N.T.S.

NORTH

Island Park Drive
Remic Rapids
Kichi Zibi Mikan
Kichi Zibi Mikan
Tunney's Pasture Driveway
Parkdale Avenue
Goldenrod Driveway
Emmerson Avenue
Colombine Driveway
Slidell Street
Burnside Avenue
Bayview Station Road
Lyndale Avenue
Carruthers Avenue
Scott Street
Albert Street
Bayview Station Road
Parkdale Avenue
Holland Avenue
Spencer Street
Smirle Avenue
Goldenrod Driveway
Tunney's Pasture Driveway
Sir Fredrick Banting Driveway
Ross Avenue
Island Park Drive
Scott Street
Island Park Drive

Legend

- Traffic Signal
- Stop Sign
- Lane Configurations for Stop-Controlled & Signalized Intersections
- xxxm — Storage Lengths
- Transit Only
- (c) — Channelized Lane
- Roundabout
- Lane Configurations for Roundabout

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Tunney's Pasture Site Servicing & Public Road Redevelopment Transportation Impact Assessment

Exhibit 5:
Existing Lane Configurations & Intersection Control

PROJECT No. 139833

SCALE: N.T.S.

3.7.3 Collision History

In accordance with the TIA Guidelines, a 5-year review of historical collision data on the boundary streets adjacent to the proposed development was conducted, based on the most recent available data available between January 1, 2016 and December 31, 2020.

The TIA Guidelines require a safety review if at least six collisions for any one movement or of a discernible pattern have occurred over a five-year period.

Table 3-5 below provides a summary of collisions by type for boundary street segment or study area intersection that met or exceeded the threshold six-collision threshold, as specified in the TIA Guidelines.

Table 3-5 – Historical Collisions by Type

Location	# Of Reported Collisions by Type									
	Approaching	Angle	Rear End	Sideswipe	Turning Movement	Single Motor Vehicle	Other	Pedestrian	Bicycle	Total
Intersections										
Holland Tunney's Pasture & Scott	-	1	**9**	**9**	**10**	1	-	2	1	**33**
KZM & Remic Rapids/ Tunney's Pasture	-	3	5	-	**6**	2	-	-	-	**16**
KZM EB Off-Ramp & Parkdale	-	-	5	-	-	1	-	-	-	**6**
Parkdale & Scott	1	**6**	**11**	5	4	2	1	-	3	**32**
Scott & Sir Frederick Banting/ Ross	-	1	-	2	1	-	-	-	2	**6**
Segments										
KZM EB - Island Park to Parkdale	-	-	**10**	2	1	5	1	-	-	**19**
KZM WB - Island Park to Parkdale	-	2	**20**	**12**	-	4	-	1	-	**39**
Parkdale - Lyndale to Scott	-	4	-	-	-	-	-	2	-	**6**
Scott – Parkdale to Tunney's Pasture Dr.	-	1	1	-	2	2	-	-	1	**7**

The results of the collision review indicates that the rear-end, sideswipe and turning movement collisions at the Scott & Holland/Tunney's Pasture intersection meet the threshold warranted for further review, while the frequency of angle, rear-end and turning movement collisions at the Parkdale & Scott intersection highlight these collision types as potential reoccurring patterns. There was also an exceedance of turning movement collisions relative to the City's threshold recorded at the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersection. The above noted intersections will be reviewed in further detail in subsequent sections of this TIA.

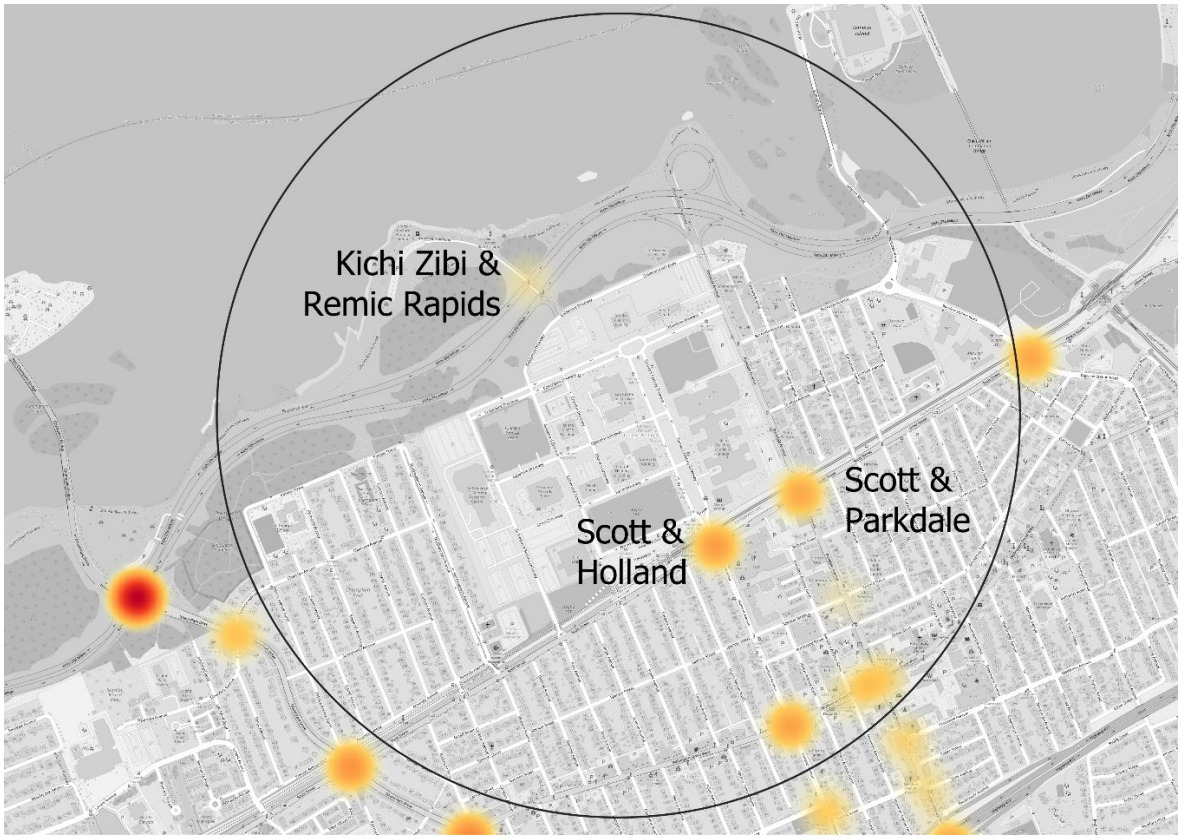
The only segments where a potential pattern of collision types was observed was along Kichi Zibi Mikan between Island Park Drive and Parkdale Avenue in both directions. Both of these segments reported high numbers of rear-end collisions, with side-swipe collisions being notable in the westbound direction as well. The contributing factors associated with these patterns and potential mitigation measures will be discussed in later sections of this report.

It should be noted that within the five (5) years of recorded collision data, there were 12 collisions involving pedestrians and cyclists. The factors contributing to these collisions will be explored further in later sections of this report.

Between 2016 and 2020, there was one fatal collision and 24 non-fatal injury collisions within the study area. The remaining 139 collisions resulted in property-damage only.

Intersections with a higher proportion of reported collisions have been emphasized within a 1km radius of the site, as shown in **Figure 3-8** below.

Figure 3-8 – Collision Heat Map for Context Area Intersections



Source: QGIS with collisions records from 2016 to 2020

Another method of evaluating the relative magnitude of collision frequency at one intersection compared to another is to quantify the average historical number of collisions relative to the daily volume of traffic entering the intersection. This is commonly expressed in terms of average number of collisions per Million Vehicles Entering (MVE) and a rate of greater than 1.0 is considered significant.

As the following intersections were noted as having the highest total number of collisions in the study area, their MVE was calculated.

- Scott & Holland/Tunney's Pasture: 0.89 collisions per MVE
- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture: 0.39 collisions per MVE
- Parkdale & Scott: 0.77 collisions per MVE

As indicated above, none of the study area intersections have experienced more than 1.0 collisions per MVE and therefore number of reported collisions at these locations is not considered exceptional on a city-wide basis. The MVE is reported for context and does not provide any indication of severity, trends or patterns.

Detailed collision records are provided in **Appendix D**.

3.8 Existing Multi-Modal Level of Service

The following sections summarize the results of the Multi-Modal Level of Service (MMLOS) analysis conducted within the study area for pedestrians, cyclists, transit, public realm and auto under existing conditions. Details of the MMLOS analysis are provided in **Appendix E**.

The traffic operations analysis found in subsequent sections is for the weekday morning and afternoon peak hours. For the MMLOS analysis, Auto Level of Service (ALOS) is evaluated on a peak period basis (i.e. 2.5 hours) rather than a one-hour basis. To convert the peak hour results to peak period results, 0.84 and 0.92 conversion factors have been applied to the weekday morning and afternoon peak hour volume-to-capacity results, respectively, in accordance with the MMLOS Guidelines Update (May 2025) and the corresponding MMLOS analysis tool.

3.8.1 Segment-Based MMLOS

Segment-based MMLOS results for boundary street segments adjacent to the subject site are provided in **Table 3-6** below.

Since a Complete Street design has already been established for Scott Street and is in the process of being implemented, segment-based Multi-Modal Level of Service (MMLOS) will not be required as part of this study for this southern boundary street. It should be noted as well that the 'Critical LOS' results represent gaps or deficiencies along a roadway segment and are provided for information purposes only. The 'Overall LOS' results were used for comparison against the 'Target LOS'.

It should be noted that Parkdale Avenue is not presently served by transit service along the site's frontage, therefore no Transit Level of Service (TLOS) for these segments was undertaken.

Table 3-6 – Segment-Based MMLOS Analysis Results: Existing Conditions

Segment	Travel Mode	Side	Overall LOS	Critical LOS	Target LOS	Deviation [1]
Kichi Zibi Mikan, Island Park to Parkdale	Pedestrian	North	B	B	A	-1
		South	F	F		-5
	Bicycle	North	B	B	B	0
		South	E	E		-3
	Transit	North	E	-	E	0
		South	D			+1
	Public Realm	Both Sides	C	-	B	-1
Parkdale Avenue, Goldenrod to Burnside	Pedestrian	West	B	C	A	-1
		East	B	C		-1
	Bicycle	West	C	D	B	-1
		East	C	D		-1
	Public Realm	Both Sides	A	-	B	+1
Parkdale Avenue, Burnside to Lyndale	Pedestrian	West	B	C	A	-1
		East	B	C		-1
	Bicycle	West	D	D	B	-2
		East	D	D		-2
	Public Realm	Both Sides	B	-	B	0
Parkdale Avenue, Lyndale to Scott	Pedestrian	West	B	C	A	-1
		East	B	C		-1
	Bicycle	West	D	D	B	-2
		East	D	D		-2
	Public Realm	Both Sides	B	-	B	0

Note: [1] A comparison between the 'Overall LOS' and 'Target LOS'. 'Critical LOS' is shown for information purposes only.

The results of the segment-based MMLOS presented in **Table 3-6** above indicate that neither of the boundary streets meet the PLOS or BLOS targets due to the lack of separation between cyclists, pedestrians and motorized traffic. All PLOS scores on Parkdale Avenue within the site's frontage fall short of the targets by 1 deviation point.

The northernmost segment of Parkdale Avenue has on-street bike lanes and received a score of 1 deviation point less than the target, while the segments further south presently have cyclists riding in mixed traffic and therefore received a lower score of 2 deviation points below the target.

On Kichi Zibi Mikan, which presently lacks formalized active transportation facilities on the south side, the PLOS and BLOS scores fall 3 and 5 deviation points below their respective targets, while the north side generally achieves or is just shy of achieving the target. Kichi Zibi Mikan attained its TLOS target but falls short of achieving its Public Realm target due to the significant distance between controlled crossing locations and lack of pedestrian facilities on the south side of the corridor.

3.8.2 Intersection-Based MMLOS

The intersection-based MMLOS results for existing signalized study area intersections are summarized in **Table 3-7** below.

The 'Critical LOS' represents the worst-performing approach at each study area intersection and is provided for information purposes only. The 'Overall LOS' results were used for comparison against the 'Target LOS'.

Table 3-7 – Intersection-Based MMLOS Results: Existing Conditions

Intersection	Travel Mode	Overall LOS	Critical LOS	Target LOS	Deviation [2]
Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	D	E	B	-2
	Transit (TLOS)	C	E	E	+2
	Auto (ALOS) [1]	C	E	E	+2
Parkdale & Burnside	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	B	B	B	0
	Transit (TLOS)	A	A	E	+4
	Auto (ALOS) [1]	A	B	E	+4
Parkdale & Lyndale	Pedestrian (PLOS)	A	B	A	0
	Bicycle (BLOS)	B	C	B	0
	Transit (TLOS)	B	C	E	+3
	Auto (ALOS) [1]	A	A	E	+4
Parkdale & Scott	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	A	B	A	0
	Transit (TLOS)	C	D	B	-1
	Auto (ALOS) [1]	B	E	E	+1
Scott & Holland/Tunney's Pasture	Pedestrian (PLOS)	B	C	A	-1
	Bicycle (BLOS)	B	B	A	-1
	Transit (TLOS)	C	D	B	-1
	Auto (ALOS) [1]	D	E	E	+2

Notes:
[1] Auto Level of Service (ALOS) is based on weekday peak period volumes in accordance with the MMLOS Guidelines Update (May 2025).
[2] A comparison between the 'Overall LOS' and 'Target LOS'.

The results of the analysis presented in **Table 3-7** above indicate that most intersections included in the MMLOS analysis are 1 deviation point shy of achieving their target PLOS scores, including Kichi Zibi Mikan & Tunney's Pasture/Remic Rapids, Parkdale & Burnside, Parkdale & Scott, as well as Scott & Holland/Tunney's Pasture. These

deficiencies can be generally attributed to longer cycle lengths, the number of travel lanes that pedestrians are required to cross, as well as the volume of turning vehicles.

The BLOS targets are not met at the Scott & Holland intersection based on the number of vehicles observed performing left-turning movements on the eastbound and westbound approaches, while the Kichi Zibi Mikan & Tunney's Pasture/Remic Rapids lacks cycling infrastructure to facilitate the mobility of these users on all approaches.

All existing study area intersections meet the TLOS targets, with the exception of the Scott & Holland/Tunney's Pasture and Scott & Parkdale intersections. As there are continuous transit lanes on Scott Street in the westbound direction approaching Parkdale Avenue, the failing TLOS is due to the long delay for transit vehicles on the northbound and eastbound approaches.

Lastly, based on the weekday peak period volumes, all of the signalized study area intersections are presently meeting their respective Auto Level of Service (ALOS) targets.

3.9 Demand Rationalization

The purpose of this section is to rationalize future travel demands within the study area and periphery to account for potential capacity limitations in the transportation network and its ability to effectively accommodate the additional demand generated by a new development. The results of the demand rationalization exercise will be used to inform the existing capacity constraints of the adjacent road network and define the site-generated trip characteristics for the proposed development.

3.9.1 Existing Capacity Constraints

The intersection capacity analysis presented in the following sections employs locally-specific parameters, as described in the TIA Guidelines, and incorporates existing signal timing plans obtained from the City of Ottawa. A peak hour factor (PHF) of 0.90 has been considered in the analysis of existing conditions, as prescribed in the TIA Guidelines. The Synchro output files have been provided in **Appendix F**.

3.9.1.1 Study Area Intersections

Table 3-8 below summarizes the existing traffic operational performance of the study area intersections, based on Existing Traffic volumes.

Table 3-8 – Intersection Capacity Analysis: Existing Traffic (Study Area Intersections)

Study Area Intersection	Traffic Control	AM Peak		PM Peak	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Kichi Zibi Mikan & Remic Rapids	Signalized	A (0.23)	WBTRL (0.23)	D (0.86)	**NBTL (0.99)**
Kichi Zibi Mikan & Tunney's Pasture	Signalized	A (0.51)	EBTL (0.55)	A (0.27)	NBTR (0.63)
Parkdale & Goldenrod (right-in/right-out)	Unsignalized	B (12.8s)	EBR (12.8s)	A (9.9s)	EBR (9.9s)
Parkdale & Emmerson	Unsignalized	B (11.0s)	WBRL (11.0s)	C (18.4s)	WBRL (18.4s)
Parkdale & Colombine	Unsignalized	C (16.2s)	EBRL (16.2s)	C (19.0s)	EBRL (19.0s)
Parkdale & Burnside	Signalized	A (0.49)	SBTL (0.49)	A (0.56)	WBRL (0.65)
Parkdale & Lyndale	Signalized	A (0.27)	SBTL (0.27)	A (0.41)	NBTR (0.41)
Parkdale & Scott	Signalized	A (0.57)	NBTRL (0.58)	D (0.83)	**EBL (1.08)**

Study Area Intersection	Traffic Control	AM Peak		PM Peak	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Scott & Holland/Tunney's Pasture	Signalized	D (0.90)	EBTR (0.94)	E (0.98)	NBL (1.01)
Scott & Goldenrod/Smirle	Signalized	A (0.39)	SBL (0.68)	A (0.48)	SBL (0.55)
Scott & Sir Frederick Banting/Ross	Unsignalized	B (13.8s)	NBTRL (13.8s)	F (51.2s)	NBTRL (51.2s)

Based on the results in **Table 3-8** above, all study area intersections are currently operating at an acceptable Level of Service (i.e. LOS 'E' or better), with the exception of the stop-controlled intersection of Scott & Sir Frederick Banting/Ross during the weekday afternoon peak hour. Non-compliant vehicle turning movements, including the northbound through and eastbound left-turning movements are contributing to this failing Level of Service. Potential upgrades to this intersection to improve safety for all modes were investigated through this TIA process and have been presented in subsequent sections of this study.

It should be noted that the northbound through-left movement at the Kichi Zibi Mikan & Remic Rapids access intersection is approaching its theoretical capacity (i.e. LOS 'E') during the weekday afternoon peak hour, while queue spillback is shown to be in the order of 105 metres, significantly exceeding the 55-metre separation distance to the first internal intersection at Goldenrod & Tunney's Pasture.

According to the results of the Existing conditions analysis, the eastbound left-turn movement at Parkdale & Scott is presently experiencing 95th percentile queue lengths of approximately 94 metres during the most constrained weekday afternoon peak hour, significantly exceeding the 50 metres of existing parallel lane length. This movement is also operating above its theoretical capacity.

The northbound approach of the Scott & Holland/Tunney's Pasture intersection was shown to be experiencing some notable capacity and queuing constraints under Existing conditions. The northbound right-turn at the Scott & Holland/Tunney's Pasture intersection is presently experiencing 95th percentile queue lengths of approximately 97 metres during the weekday afternoon peak hour which is significantly greater than the 40 metres of existing parallel lane length, while the northbound left-turn is shown to be operating slightly above its theoretical capacity with a volume-to-capacity ratio of 1.01.

3.9.1.2 Peripheral Intersections

Table 3-9 below summarizes the existing traffic operational performance beyond the study area at the periphery of the 1km context area, based on Existing Traffic volumes.

Table 3-9 – Intersection Capacity Analysis: Existing Traffic (Peripheral Intersections)

Peripheral Intersection	Traffic Control	AM Peak		PM Peak	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Island Park & Kichi Zibi Mikan	Signalized	C (0.78)	EBL (1.19)	F (1.07)	EBL (1.30)
Island Park & Scott	Signalized	E (0.95)	EBT (1.03)	C (0.73)	WBT (0.86)
Holland & Spencer	Signalized	A (0.42)	NBTRL (0.42)	A (0.49)	WBTRL (0.66)
Scott & Carruthers	Signalized	A (0.44)	EBTRL (0.44)	A (0.41)	WBTRL (0.43)
Scott & Bayview Station/Albert	Signalized	A (0.53)	SBTR (0.55)	B (0.64)	WBTR (0.64)
Bayview & Burnside/Slidell	Roundabout	A (5.8s)	EB (5.8s)	A (7.1s)	NB (7.1s)

Based on the results presented in **Table 3-9** above, the Island Park & Kichi Zibi Mikan intersection is shown to experience capacity or queuing issues on the eastbound left-turn, westbound left-turn, northbound through and southbound through movements during the weekday morning peak hour, while the eastbound left-turn, westbound through/right-turn movements and northbound through movements experienced constrained conditions during the weekday afternoon peak hour.

The Island Park & Scott intersection is also operating slightly above its theoretical capacity on the eastbound through movement during the weekday morning peak hour.

The above noted constraints identified at the peripheral study area intersections were an important consideration in the assignment of future trips on the surrounding road network.

3.9.1.3 Parkdale Avenue

North of Scott Street, peak direction traffic volumes of up to 750 vehicles per hour have been observed on Parkdale Avenue. South of Scott Street, this diminishes to approximately 300 to 400 vehicles per hour which is generally well within the capacity of a two-lane road. Despite these relatively low directional volumes, the portion of Parkdale Avenue between Bullman Street and Highway 417 does become congested and slow-moving during the weekday morning peak period. Additionally, during the weekday afternoon peak period this congestion extends from Kichi Zibi Mikan to Highway 417. Closely-spaced intersections with high pedestrian crossing volumes and an abundance of private driveways result in a slow throughput along this corridor. This roadway also provides the shortest direct route between interchanges at Kichi Zibi Mikan and Highway 417, thereby attracting regional pass-through traffic. The presence of a major employment node (Tunney's Pasture) further exacerbates the need for regional traffic to enter the community from these major roadway systems.

3.9.1.4 Island Park Drive

Traffic count data collected on Island Park Drive for this study indicates that peak direction volumes on this north-south arterial road are in the order of 800 to 1,000 vehicles during the weekday morning peak hour from Kichi Zibi Mikan to Scott Street. Volumes of this magnitude are an indicator that this two-lane road is approaching its capacity during this most constrained weekday peak hour.

3.9.2 Adjustment to Backgrounds Network Demands

Under existing or historical conditions, an analysis of observed (i.e., processed) volumes cannot result in a condition that is over an intersection's theoretical capacity (i.e., v/c > 1.0). In situations where projected traffic demand results in volumes that exceed capacity, it is reasonable to assume that the traffic demand will either spread out over a greater period of time (i.e., peak spreading) or shift to alternatives modes of transportation such as transit. In the analysis of future conditions, a peak hour factor (PHF) of 1.0 will be utilized in accordance with the City of Ottawa TIA Guidelines. It is also standard practice that signal timing optimization will occur on a regular basis.

The proportion of heavy vehicles has been reviewed and adjusted on Scott Street to account for the significant reduction in OC Transpo buses for future scenarios that will require access to the bus loop after the opening of the LRT Stage 2 Western Extension for full revenue service, based on the assumption that 'Rapid' and 'Connexion' routes to the west will be eliminated or significantly reduced as this transit hub changes from its current role as a terminus station.

The results of the intersection capacity analysis under Future Background Traffic conditions are presented in Section 4.10.3.1.

3.9.2.1 Existing Capacity Constraints

As discussed previously in Section 3.9.1, the assignment of site-generated traffic has considered the observed capacity or queuing constraints identified at the study area or peripheral intersections under Existing conditions to which site-generated traffic is likely contribute:

Intersection Capacity Constraints:

- Northbound approach at Kichi Zibi Mikan & Remic Rapids intersection
- Eastbound left-turn at Parkdale & Scott intersection
- Northbound left-turn at Scott & Holland/Tunney's Pasture
- Northbound and westbound approaches at Island Park & Kichi Zibi Mikan intersection
- Eastbound approach at Island Park & Scott intersection

Existing Queuing Constraints:

- Northbound right-turning movement at Scott & Holland/Tunney's Pasture
- Eastbound left-turn at Parkdale & Scott Street
- Northbound through-left at Kichi Zibi Mikan & Tunney's Pasture
- Westbound right-turn and southbound left-turn at the Island Park & Kichi Zibi Mikan intersection

3.9.2.2 Future Background Capacity Constraints

The following queuing and capacity constraints were identified through Future Background Traffic conditions (refer to Section 4.10.3.1):

- Kichi Zibi Mikan & Tunney's Pasture/Remic Rapids
  - Northbound through/left queuing constraints
- Parkdale & Colombine
  - Eastbound approach is experiencing significant delays
- Parkdale & Burnside
  - Capacity and queuing constraints experienced on the southbound approach
- Scott & Holland/Tunney's Pasture
  - Northbound right-turn queuing constraints
- Parkdale & Scott
  - Eastbound left-turn queuing constraints
- Scott & Sir Frederick Banting/Ross
  - Northbound approach is experiencing significant delays

The proposed development will be accessed from the adjacent boundary street road network via six external access intersections, including three locations on Scott Street, two locations on Parkdale Avenue and one location on Kichi Zibi Mikan.

It is acknowledged as well that both Parkdale Avenue and Island Park Drive have long experienced congested conditions during the weekday peak periods and therefore the constraints associated with these north-south arterial routes were factored into the routing of site-generated traffic, along with the queuing and capacity constraints noted previously under Future Background Traffic conditions. As congestion on both Parkdale Avenue and Island Park Drive is highly directional during the weekday peak periods, it should be noted that there is available capacity in the opposing directions. The proposed transformation of Tunney's Pasture from a traffic destination to a lesser traffic origin is an important consideration in the assignment of future trips on the surrounding road network, along with the constraints identified at the peripheral intersections under Existing conditions and the study area intersections under both Existing and Future Background Traffic conditions.

It is also important to recognize that the shared northbound approach of the Parkdale & Scott Street intersection limits the capacity of this approach and its ability to accommodate additional traffic. As such, the sensitivity of this shared approach was taken into consideration when assigning site-generated trips and it was recognized that traffic will seek out alternative and more efficient routes whenever possible. As part of the mitigation strategy proposed under Future Background Traffic conditions, it is recommended that the northbound left-turn auxiliary lane be reinstated at this intersection to manage queue spillback on this approach.

3.9.3 Adjustments to Development Generated Demand

The assignment of site-generated traffic has considered movements with projected capacity or queuing constraints identified at the study area intersections under Existing and Future Background Traffic conditions, as well as peripheral intersections under Existing conditions to which site-generated traffic is likely contribute. It is noteworthy that some intersections will experience improved operations under Future Background Traffic conditions relative to Existing conditions, as a result of 'peak spreading'.

3.10 Development Generated Traffic

3.10.1 Trip Generation Methodology

The trip generation methodology followed a multi-step process:

1. **Estimate Person-Trips:** The first step was to estimate the number of person trips generated by each land use. For residential land uses, person trips are estimated for the peak period (7-9:30am and 3:30-6pm) as whole. In contrast, for non-residential land uses person trips are estimated for the peak hour (60 minutes) only.
2. **Apply Reduction Factors:** The second step was to estimate how many trips remain internal to the site (e.g., trips from residential buildings to commercial land uses within the site), how much existing traffic will be reduced due to office building removals, and what percentage of commercial traffic will be from existing traffic on the adjacent streets that is diverted into the site.
3. **Subdivide Trips by Mode:** The third step was to establish mode share targets for each land use and calculate the number of peak hour person-trips by travel modes.
4. **Distribute and Assign Trips:** The final step was to use the number of vehicle-trips calculated in the preceding step and distribute and assign that traffic to the surrounding road network.

3.10.2 Person Trip Generation

3.10.2.1 Residential Peak Period Person Trip Generation

The 2020 TRANS Trip Generation Summary Report provides Ottawa-specific trip generation rates for residential land uses. These trip generation rates estimate the number of person-trips that residential buildings will generate during the 2.5-hour peak periods in the weekday morning and afternoon (i.e., 7-9:30am and 3:30-6pm). All residential units within the proposed development are anticipated to be housed in buildings 3 storeys or higher and therefore, these fall under the category of 'high-rise multi-family' housing, as defined in the 2020 TRANS Trip Generation Summary Report.

The resulting number of site-generated peak period person-trips for the proposed residential land uses is summarized in **Table 3-10** below. For reference, the weekday morning peak period is from 7:00-9:30am, while the weekday afternoon peak period is from 3:30-6:00pm.

Table 3-10 – Residential Peak Period Person-Trip Generation

PHASE	LAND USE	SIZE	PERIOD	PERSON TRIPS (PPP) [1]		
				IN	OUT	TOTAL
1	Multi-Family Residential (High-Rise) [2]	4,950 units	AM	1,228	2,732	3,960
			PM	2,584	1,871	4,455
1 & 2	Multi-Family Residential (High-Rise) [2]	6,975 units	AM	1,730	3,850	5,580
			PM	3,641	2,637	6,278
1, 2 & 3	Multi-Family Residential (High-Rise) [2]	9,000 units	AM	2,232	4,968	7,200
			PM	4,698	3,402	8,100

Notes: [1] ppp = persons per period

[2] The 2020 TRANS Trip Generation Summary Report defines 'high-rise' as being 3 or more storeys.

3.10.2.2 Non-Residential Peak Hour Person-Trip Generation

The ITE Trip Generation Manual (11th Edition) provides trip generation rates for a large variety of land uses based on data collected throughout North America. Unlike the TRANS trip generation rates, however, these rates only estimate the number of vehicle-trips generated during the peak hour (i.e., a 60-minute period rather than a 2.5-hour period) and a 1.28 conversion factor is applied to translate these vehicle-trips into person-trips. The ITE trip generation rates were used to estimate the person-trips generated by the commercial land uses.

For office/employment uses, a local trip generation rate was developed based on existing turning movement counts collected at the site access intersections in May 2023. This rate also captured the directional splits (i.e. proportion of inbound and outbound movements) which were determined to be more balanced than the closest comparable land use in the ITE Trip Generation Manual (750: Office Park) and more reflective of the unique travel patterns resulting from a blend of both office and laboratory uses on-site.

For the purposes of this study, an adjustment factor of 1.5 was applied to site-generated traffic count data observed in May 2023 to estimate the impact of a potential return to office for the Federal workforce of 4-5 days per week. Since Federal employees were only in-office 2-3 days per week when the site traffic data was collected, the application of this adjustment factor yields similar overall traffic generation to pre-pandemic conditions, as documented in the 2018 Tunney's Pasture Redevelopment Community Transportation Study (Parsons, 2018).

For the possible elementary school, peak hour person-trips were calculated using a first-principles approach based on a student population of 750 students and an estimated 61 staff (i.e., teachers, custodians, etc.). This methodology also accounts for trips associated with parents/guardians picking up and dropping off students.

A summary of the methodology followed to derive the local trip generation rates for the office and possible school uses is provided in **Appendix G**.

Table 3-11 below summarize the peak hour person-trips generated by each land use per development phase.

Table 3-11 – Non-Residential Peak Hour Person Trips

Land Use [1]	Size (Approx. GFA[2] or Students)	Period	Phase 1 (2038)			Phase 2 (2042)			Phase 3 (2046)		
			In	Out	Total	In	Out	Total	In	Out	Total
821: Shopping Plaza w/ Supermarket (40-150k)	2038: ~4,230 m^2 2042: ~6,065 m^2 2046: ~7,900 m^2	AM	128	78	206	183	112	295	238	146	384
		PM	288	311	599	380	413	793	474	513	987
Office/ Laboratory (Local Rate)	2038: ~324,000 m^2 2042: ~208,860 m^2 2046: ~93,723 m^2	AM	2,604	735	3,339	1,679	474	2,153	753	213	966
		PM	1,449	3,226	4,675	934	2,079	3,013	419	933	1,352
Elementary School (First Principles)	2038, 2042 & 2046: 750 students	AM	982	170	1,152	982	170	1,152	982	170	1,152
		PM	63	84	147	63	84	147	63	84	147
TOTAL		**AM**	**3,714**	**983**	**4,697**	**2,844**	**756**	**3,600**	**1,973**	**529**	**2,502**
		PM	**1,800**	**3,621**	**5,421**	**1,377**	**2,576**	**3,953**	**956**	**1,530**	**2,486**

Notes:
[1] Land use codes from the ITE Trip Generation Manual (11th Edition) are provided for commercial and institutional uses.
[2] 'GFA' stands for Gross Floor Area.

3.10.3 Trip Reduction Factors

3.10.3.1 Deduction of Existing Development Trips

The site is currently occupied by single-use federal government buildings, the majority of which are planned to be repurposed or demolished gradually after Phase 1 of the build-out timeframe of the subject lands to contribute to the site's transformation into a mixed-use community.

Post-pandemic site-generated traffic from turning movement count data collected at the study area intersections was removed from the existing traffic volumes, based on existing traffic patterns and logical routing of trips reflective of the surrounding road hierarchy. The trips associated with the office/laboratory Gross Floor Area (GFA) anticipated to remain in each phase are summarized in **Table 3-15** below and were reassigned to the adjacent road network to reflect the incremental shift towards more sustainable modes of transportation relative to existing conditions. Further details regarding the distribution and assignment of site-generated trips are outlined in subsequent sections of this study.

3.10.3.2 Pass-By Trips

Based on the ITE Trip Generation Handbook (3rd Edition) for the 'Shopping Plaza' land use (821), it was assumed that 40% of commercial vehicle-trips will be pass-by trips in 2038, 2042 and 2046, respectively. This pass-by rate is only applicable during the weekday afternoon peak hours.

Relevant extracts from the ITE Trip Generation Handbook are provided in **Appendix G**.

3.10.3.3 Synergy/Internalization

Synergy/internalization occurs when developments contain two or more compatible land uses. These compatible land uses attract trips from each other and therefore some of the person-trip generation of the site is fulfilled internally, reducing the overall number of new trips generated.

Based on data for the Ottawa West Traffic Assessment Zone (TAZ) from the 2011 NCR Household Origin-Destination Survey (January 2013), it is estimated that approximately 8% of weekday morning trips from residential

land uses would be destined for the possible elementary school within the site and thus would have no impact on the external road network.

Internal trips between the residential, commercial and office land uses within the subject lands were estimated using the NCHRP 8-51 Internal Trip Capture Estimation Tool. Separate internalization calculations were completed for each phase of development and the results are provided in **Appendix G**.

3.10.4 Mode Share Targets

The current City of Ottawa non-auto mode share target of 85% for residential uses in TOD zones is even more aggressive than the 75% target assumed in the 2018 Community Transportation Study (Parsons, 2018). This places a strong reliance on the need for effective Transportation Demand Management (TDM) measures and the timely build-out of sustainable transportation infrastructure within the surrounding area. The proposed Tunney's Pasture development is unique to Ottawa in that it will be a major purpose-built, Transit-Oriented Development and a complete mixed-use community catering to future residents who can embrace a more sustainable lifestyle, unlike anything that exists in Ottawa at present. It is for this reason a high non-auto target has been set. It is important to note that this target of 85% is a long-term target and not expected to be met until Phase 3 and full-buildout of this mixed-use, 15-minute community. This study therefore assumes a linear interpolation between the existing high-rise residential mode share of 69% observed within Ottawa West in 2011 and the 85% target in the year 2046.

A 12% cycling mode share target was adopted for residential uses in 2046 to recognize the high-quality cycling infrastructure provided within the study area and to align with the 2013 Ottawa Cycling Plan target for the Inner Urban Area. In terms of active trips to/from work, 2021 Census data provided by City of Ottawa technical staff indicates that approximately 7% and 29% of work trips presently occur by cycling or active trips (both walking and cycling) and therefore this data was considered in determining appropriate mode share targets for office uses. Commercial and office land use mode share targets for 2046 were otherwise determined based on the relative difference between the existing mode share and 2046 targets for residential uses, while mode share targets for interim analysis years (i.e. 2038 & 2042) were interpolated.

The mode share targets for elementary school students were based on the mode share data provided in the Ottawa Student Transportation Association (OSTA) Transportation Survey Overview Report (2022), with appropriate adjustment factors applied to account for the unique travel characteristics of residents within the Ottawa West TAZ. School staff were assumed to follow similar mode share characteristics as office employees.

Existing mode share values for residential, commercial and office land uses are presented in **Table 3-12** below, while mode share targets for each respective land use are presented in **Table 3-13** below and were applied for all future analysis years in this study.

Table 3-12 – Existing Mode Share

Travel Mode	Residential [1,2]	Commercial [2]	Office/Employment	Elementary School Students
Auto Driver	31%	53%	54%	-
Auto Passenger	11%	14%	8%	8%
Transit	34%	11%	28%	1%
Bicycle	5%	3%	5%	4%
Walk	20%	21%	5%	17%
School Bus	-	-	-	70%
Total	**100%**	**100%**	**100%**	**100%**

Notes: [1] Mode share values extracted from the 2020 TRANS Trip Generation Summary Report for 'high-rise' residential uses which are defined as being 3 or more storeys.

[2] Existing residential and commercial mode shares shown above are the average of the AM and PM mode shares.

Source: 2020 TRANS Trip Generation Summary Report and OSTA Transportation Survey Overview Report (2022)

Table 3-13 – Mode Share Targets

Travel Mode	2038 Mode Share Targets				2042 Mode Share Targets				2046 Mode Share Targets			
	Res.	Com.	Emp.	Stu.	Res.	Com.	Emp.	Stu.	Res.	Com.	Emp.	Stu.
Auto Driver	19%	40%	41%	-	17%	38%	39%	-	15%	36%	37%	-
Auto Passenger	6%	10%	6%	8%	6%	9%	6%	8%	5%	9%	6%	8%
Transit	43%	20%	24%	1%	44%	22%	24%	1%	46%	23%	23%	1%
Bicycle	11%	4%	8%	4%	11%	4%	8%	4%	12%	4%	9%	4%
Walk	21%	26%	21%	17%	22%	27%	23%	17%	22%	28%	25%	17%
School Bus	-	-	-	70%	-	-	-	70%	-	-	-	70%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Notes: Res. stands for 'residential'; com. stands for 'commercial'; emp. stands for office/employment; stu. stands for elementary school student.

3.10.5 Total Trip Generation by Mode

Table 3-14 below summarize the number of person-trips per mode generated by the proposed development for each phase of development, with reduction factors applied for both pass-by and internal trips as discussed in the preceding sections. The residential peak period (2.5 hour) person trip volumes from **Table 3-10** above were converted into peak hour (1 hour) person trips using mode-specific conversion factors from the 2020 TRANS Trip Generation Summary Report.

For every student auto passenger, walk and bicycle trip, it was assumed that there was one inbound and outbound trip generated by a parent/guardian accompanying the student. Auto driver trips for commercial uses were also divided into 'new' and 'pass-by' trips.

The site historically generated roughly 4,000 to 5,000 person-trips prior to the COVID-19 pandemic, including approximately 2,000 vehicles per hour during weekday peak periods. By contrast, the proposed development represents a significant increase in person-trip generation, resulting in the order of 6,400 to 7,600 person-trips per weekday peak hour. Despite the increase in person-trips over the three phases of development, a significant reduction in office land uses and changes in mode share over the development timeframe will result in fewer automobile trips at full buildout than at the completion of Phase 1.

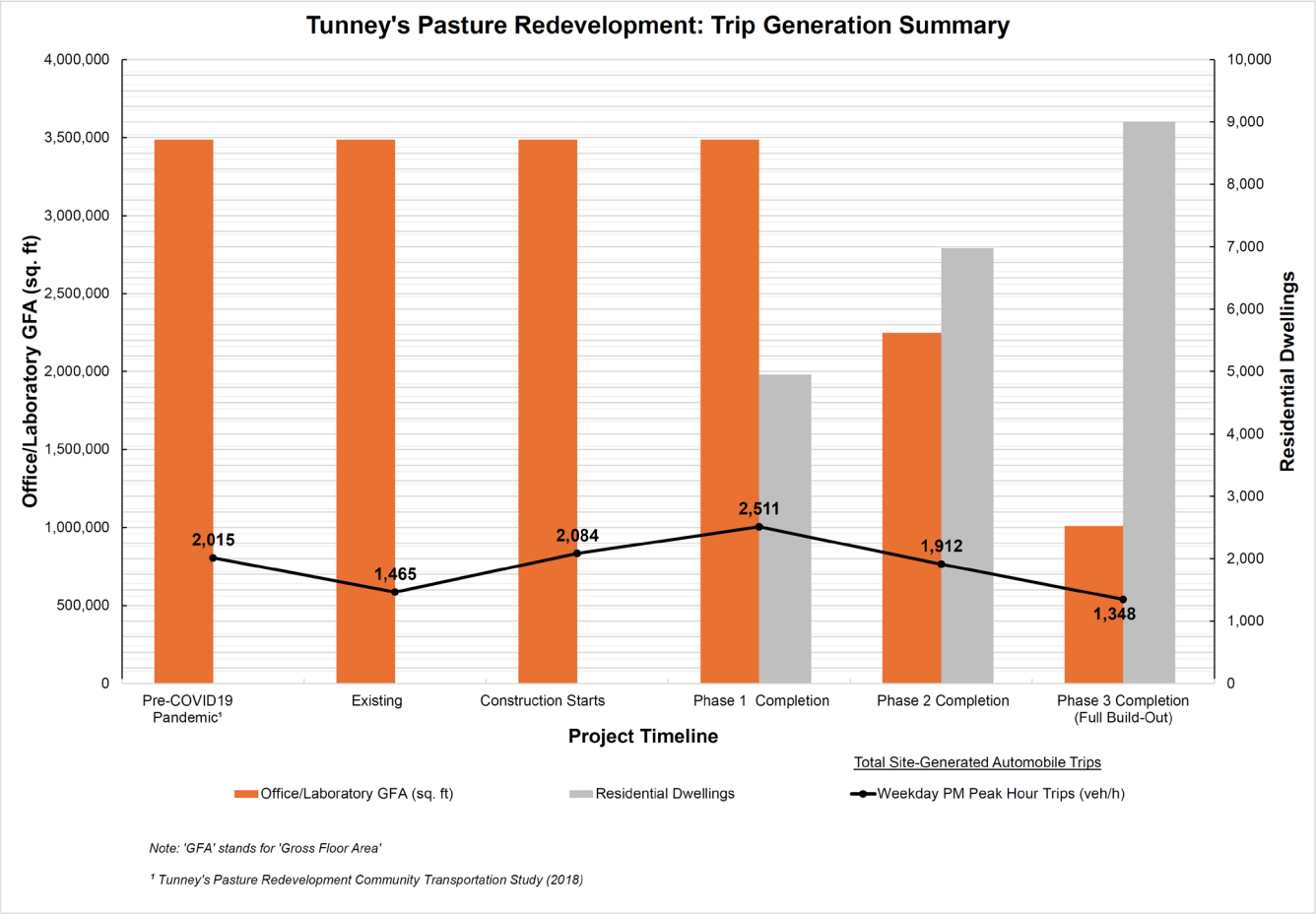
Table 3-14 – Peak Hour Person-Trips by Mode

PHASE	MODE	AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Phase 1 (2038)	Auto Driver	1,257	572	**1,829**	920	1,591	**2,511**
	New Trips	1,257	572	**1,829**	882	1553	**2435**
	Pass-By	*0*	*0*	***0***	*38*	*38*	***76***
	Auto Passenger	250	114	**364**	170	260	**429**
	Transit	913	737	**1,650**	849	1,160	**2,009**
	Cycling	303	215	**518**	244	356	**600**
	Walking	891	509	**1,400**	616	924	**1,540**
	School Bus	458	0	**458**	0	0	**0**
	Internal	302	302	**603**	214	214	**428**
	Total Person Trips	**4,374**	**2,449**	**6,822**	**3,013**	**4,505**	**7,518**
	Auto Driver	877	522	**1,399**	767	1,145	**1,912**

PHASE	MODE	AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Phases 1 & 2 (2042)	*New Trips*	877	522	**1,399**	719	1,097	**1,815**
	Pass-By	*0*	*0*	***0***	*48*	*48*	***96***
	Auto Passenger	209	131	**340**	170	215	**384**
	Transit	820	951	**1,771**	967	1,063	**2,030**
	Cycling	260	263	**523**	258	306	**564**
	Walking	805	616	**1,421**	676	838	**1,514**
	School Bus	458	0	**458**	0	0	**0**
	Internal	350	350	**699**	257	257	**514**
	Total Person Trips	**3,779**	**2,833**	**6,611**	**3,095**	**3,824**	**6,919**
Phases 1, 2 & 3 (2046)	Auto Driver	541	474	**1,016**	616	732	**1,348**
	New Trips	541	474	**1,016**	559	675	**1,234**
	Pass-By	*0*	*0*	***0***	*57*	*57*	***114***
	Auto Passenger	163	128	**291**	154	158	**312**
	Transit	747	1,218	**1,965**	1,116	982	**2,098**
	Cycling	240	343	**583**	300	280	**580**
	Walking	687	713	**1,400**	707	702	**1,409**
	School Bus	458	0	**458**	0	0	**0**
	Internal	348	348	**695**	288	288	**576**
	Total Person Trips	**3,184**	**3,224**	**6,407**	**3,181**	**3,142**	**6,323**

Figure 3-9 below illustrates the relationship between office/laboratory Gross Floor Area (GFA), residential dwelling unit count and the total site-generated automobile trip generation during the most constrained weekday peak hour from pre-pandemic to full-build-out conditions in 2046. Total site-generated traffic volumes will experience an overall moderate increase relative to pre-pandemic observations by 2038, the highest traffic-generating scenario. Thereafter, site-generated vehicle volumes will continue to decline with the decrease in office uses on-site and the incremental shift towards more sustainable modes. At full build-out in 2046, the site will generate far fewer automobile trips during the weekday afternoon peak hour than it did prior to the COVID-19 pandemic.

Figure 3-9 – Tunney's Pasture Redevelopment: Trip Generation Summary



3.10.6 'Net New' Site-Generated Trips

'Net New Site-Generated Trips (Relative to Post-Pandemic Site Traffic Volumes)

'Net new' site-generated trips relative to the post-pandemic traffic count data collected as part of this study are presented below. As discussed previously, 'new auto trips' includes trips from office/laboratory buildings that will be retained. 'Pass-by' trips are not included in the 'net new' trips, as they are already present on the adjacent road network and will simply detour into the site before continuing on their route, rather than being new traffic that is added to the adjacent roads. For each phase of development, a summary of 'net new' site-generated trips has been provided in **Table 3-15** below.

Table 3-15 – 'Net 'New' Site-Generated Trips (Relative to Post-pandemic Traffic Volumes)

PHASE	TRIP TYPE	AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Phase 1	Overall Auto Trips	1,257	572	**1,829**	920	1,591	**2,511**
	Pass-By (Auto)	*0*	*0*	***0***	*38*	*38*	***76***
	New Auto Trips	1,257	572	**1,829**	882	1,553	**2,435**
	Existing Site Traffic [1]	-1,224	-345	**-1,569**	-681	-1,516	**-2,197**
	'Net New' Auto Trips	**33**	**227**	**260**	**201**	**37**	**238**
Phases 1 & 2	Overall Auto Trips	877	522	**1,399**	767	1,145	**1,912**
	Pass-By (Auto)	*0*	*0*	***0***	*48*	*48*	***96***
	New Auto Trips	877	522	**1,399**	719	1,097	**1,816**
	Existing Site Traffic [1]	-1,224	-345	**-1,569**	-681	-1,516	**-2,197**
	'Net New' Auto Trips	**-347**	**177**	**-170**	**38**	**-419**	**-381**
Phases 1, 2 & 3	Overall Auto Trips	541	474	**1,052**	616	732	**1,348**
	Pass-By (Auto)	*0*	*0*	***0***	*57*	*57*	***114***
	New Auto Trips	541	474	**1,015**	559	675	**1,224**
	Existing Site Traffic [1]	-1,224	-345	**-1,569**	-681	-1,516	**-2,197**
	'Net New' Auto Trips	**-683**	**129**	**-517**	**-122**	**-841**	**-973**

Note: [1] Based on turning movement count data collected in May 2023, with volumes adjusted to include impacts of additional site access driveways on Parkdale Ave and to reflect the potential 5 days a week return to the office for federal civil servants.

'Net New Site-Generated Trips (Relative to Pre-Pandemic Site Traffic Volumes)

For the sake of comparison, the volume of 'net new' site-generated trips relative to pre-pandemic traffic count data collected as part of the 2018 Tunney's Pasture Redevelopment Community Transportation Study (CTS, 2018) is presented as well. For each phase of development, a summary of 'net new' site-generated trips has been provided in **Table 3-16** below.

Table 3-16 – 'Net 'New' Site-Generated Trips (Relative to Pre-pandemic Traffic Volumes)

PHASE	TRIP TYPE	AM			PM		
		IN	OUT	TOTAL	IN	OUT	TOTAL
Phase 1	Overall Auto Trips	1,257	572	**1,829**	920	1,591	**2,511**
	Pass-By (Auto)	*0*	*0*	***0***	*38*	*38*	***76***
	New Auto Trips	1,257	572	**1,829**	882	1,553	**2,435**
	Pre-Pandemic Site Traffic [1]	-1,495	-570	**-2,065**	-542	-1,473	**-2,015**
	'Net New' Auto Trips (Pre-Pandemic Comparison)	**-238**	**2**	**-236**	**340**	**80**	**420**
Phases 1 & 2	Overall Auto Trips	877	522	**1,399**	767	1,145	**1,912**
	Pass-By (Auto)	*0*	*0*	***0***	*48*	*48*	***96***
	New Auto Trips	877	522	**1,399**	719	1,097	**1,816**
	Pre-Pandemic Site Traffic [1]	-1,495	-570	**-2,065**	-542	-1473	**-2,015**
	'Net New' Auto Trips (Pre-Pandemic Comparison)	**-618**	**-48**	**-666**	**177**	**-376**	**-199**
Phases 1, 2 & 3	Overall Auto Trips	541	474	**1,015**	616	732	**1,348**
	Pass-By (Auto)	*0*	*0*	***0***	*57*	*57*	***114***
	New Auto Trips	541	474	**1,015**	559	675	**1,234**
	Pre-Pandemic Site Traffic [1]	-1,495	-570	**-2,065**	-542	-1473	**-2,015**
	'Net New' Auto Trips (Pre-Pandemic Comparison)	**-954**	**-96**	**-1,050**	**17**	**-798**	**-781**

Note: [1] Traffic observations from the Tunney's Pasture Redevelopment Community Transportation Study (2018)

As indicated in **Table 3-16** above, the proposed development will result in a net-increase of approximately 420 two-way weekday peak hour trips in 2038, while net-decreases of about 199 and 781 vehicle trips are expected in 2042 and 2046, respectively, with the removal of pre-pandemic trips.

3.10.7 Trip Distribution and Assignment

The distribution of external residential trips will generally align with commuter travel patterns, taking into consideration existing network capacity constraints noted previously in Section 3.9.3. Based on travel patterns associated with trips from the Ottawa West Traffic Assessment Zone (TAZ) as identified in the 2011 O-D Survey, existing travel patterns from turning movement counts and the configuration of the higher-order road network surrounding the subject site, external residential trips have been distributed as follows:

- 40% to/from the South (40% from the South; 35% to the south)
  - 25% via Holland Avenue (in good; out good)
  - 10% via Parkdale Avenue (10% in; 10% out)
  - 5% via Island Park Drive (in good; out good)
- 30% to/from the East (30% from the East; 30% to/from the East)
  - 15% via Kichi Zibi Mikan (in good; 17.5% out)
  - 10% via Scott Street (10% in; 10% out)
  - 5% via Parkdale Avenue to Highway 417 (in good; out good)
- 30% to/from the West (30% from the West; 30% to the West)
  - 15% via Kichi Zibi Mikan (in good; 20% out)

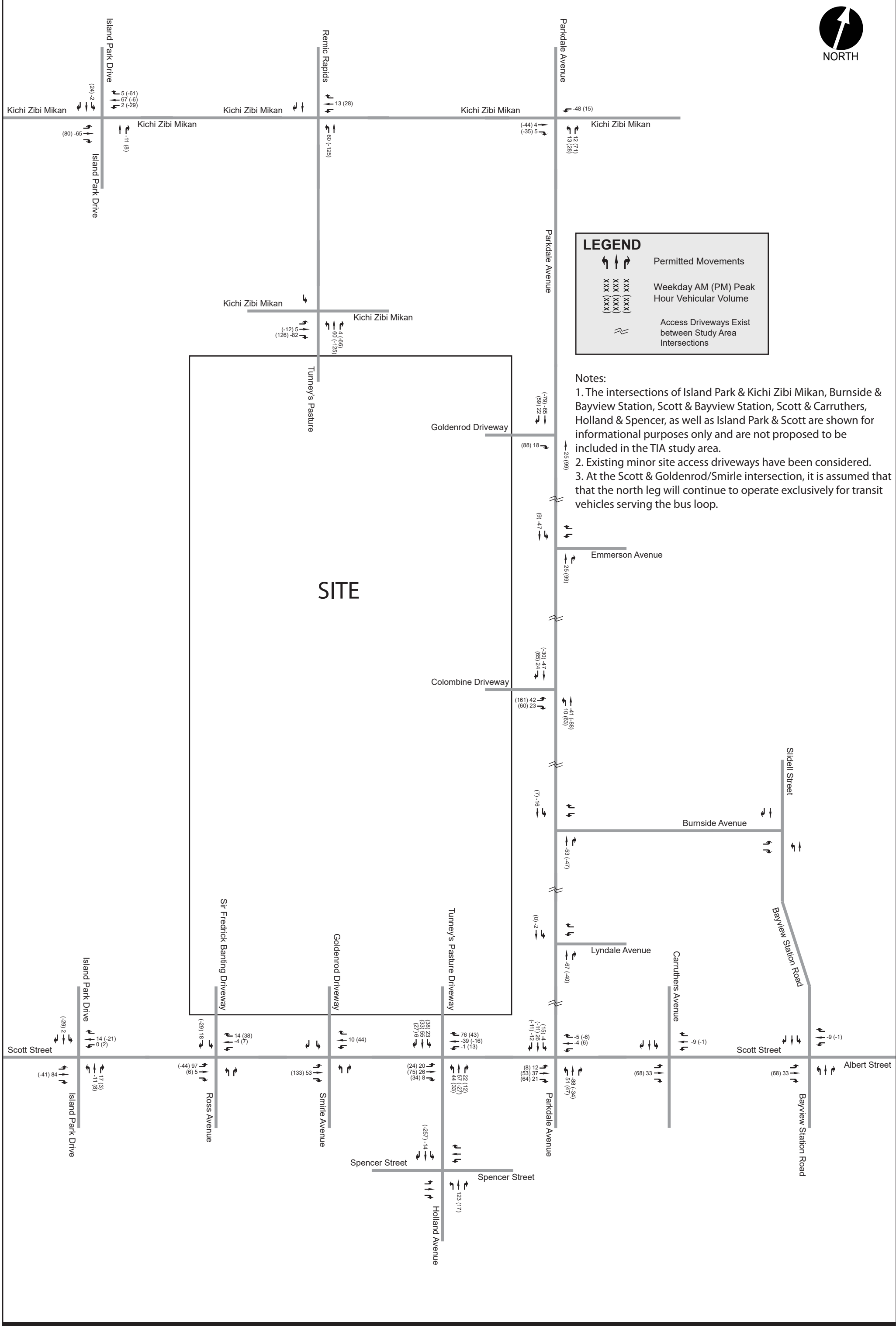
  - 10% via Scott Street (in good; 10% out)
  - 5% via Parkdale Avenue to Highway 417 (in good; out good)

Based on a logical routing of trips, external non-residential trips will generally follow the distribution of trips to the Ottawa West TAZ identified in the 2011 O-D Survey, with consideration also given to traffic patterns derived from turning movement count data, network capacity constraints and the configuration of the adjacent road network. External non-residential trips have therefore been distributed as follows:

- 10% to/from the North (10% to/from the North)
  - 5% via Island Park Drive (in good; out good)
  - 5% via Kichi Zibi Mikan to Gatineau (in good; out good)
- 35% to/from the South (35% from the South; 35% to the South)
  - 25% via Holland Avenue (25% in; 25% out)
  - 5% via Parkdale Avenue (in good; out good)
  - 5% via Island Park Drive (in good; out good)
- 20% to/from the East (20% to/from East)
  - 10% via Scott Street (10% in; 10% out)
  - 5% via Kichi Zibi Mikan (in good; out good)
  - 5% via Parkdale Avenue to Highway 417 (in good; out good)
- 35% to/from the West (32.5% from the West; 35% to the West)
  - 20% via Kichi Zibi Mikan (in good; 20% out)
  - 10% via Scott Street (in good; 7.5% out)
  - 5% via Parkdale Avenue to Highway 417 (5% in; 5% out)

Applying the estimated number of new auto trips to the above distributions, future 'net new' site-generated traffic volumes are illustrated in 2038, 2042 and 2046 relative to post-pandemic site traffic volume data collected at each of the study area and peripheral intersections to provide a comparison with the most recent traffic data collected for the subject site and are presented in **Exhibit 6**, **Exhibit 7** and **Exhibit 8**, respectively. All post-pandemic site traffic volumes have been adjusted to reflect the potential return to the office 5 days a week for federal civil servants.

In order to present passenger car equivalent (PCE) site-generated traffic volumes, it is assumed that school buses have 48 students per bus and that a school bus is equivalent to 2.0 passenger cars.



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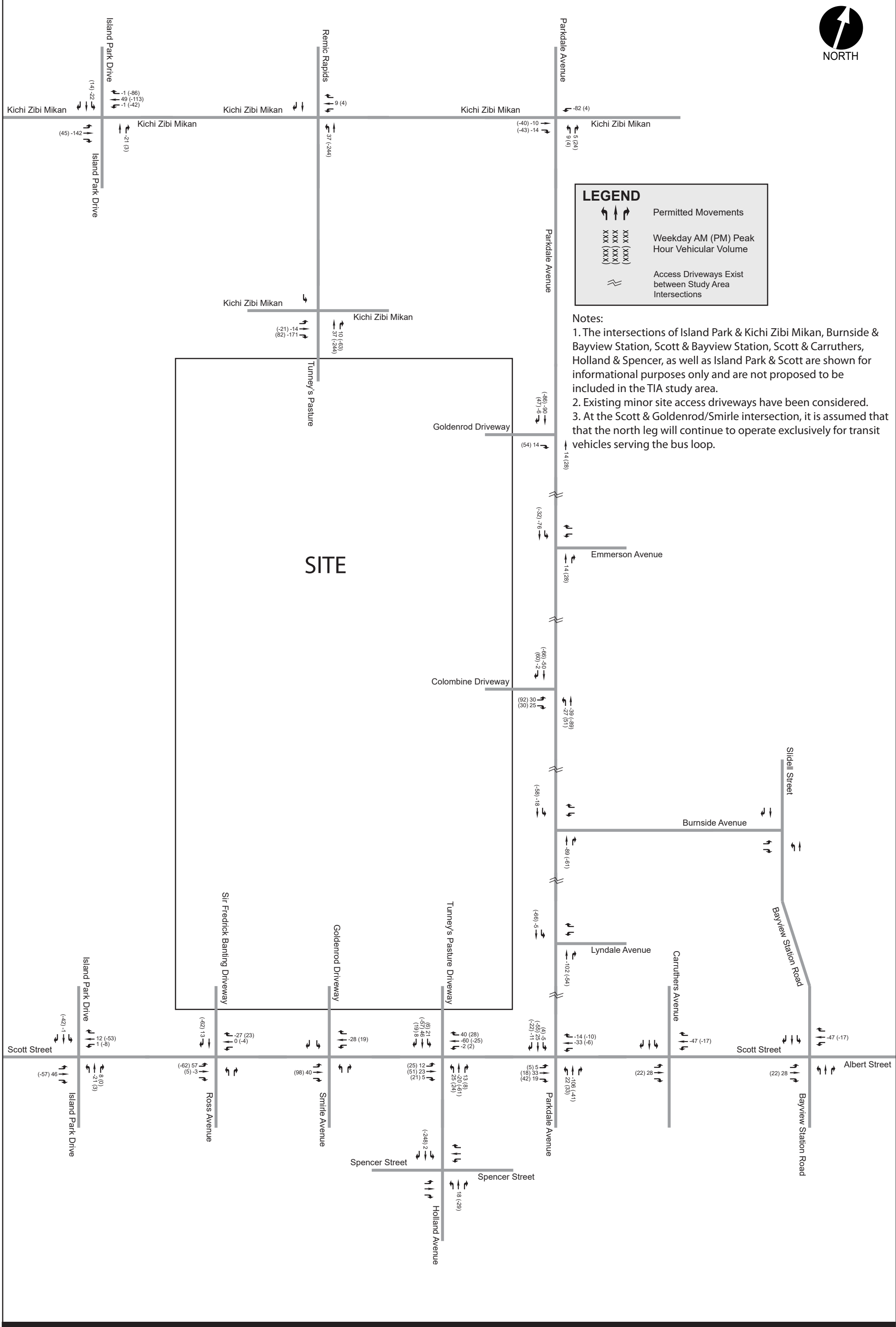
Tunney's Pasture
Site Servicing & Public Road Redevelopment
Transportation Impact Assessment

Exhibit 6:
'Net New' Site-Generated
Traffic (Phase 1 - 2038)

PROJECT No. 139833

SCALE: N.T.S.



Notes:

1. The intersections of Island Park & Kichi Zibi Mikan, Burnside & Bayview Station, Scott & Bayview Station, Scott & Carruthers, Holland & Spencer, as well as Island Park & Scott are shown for informational purposes only and are not proposed to be included in the TIA study area.
2. Existing minor site access driveways have been considered.
3. At the Scott & Goldenrod/Smirle intersection, it is assumed that that the north leg will continue to operate exclusively for transit vehicles serving the bus loop.

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Exhibit 7:
'Net New' Site-Generated Traffic
(Phases 1 & 2 - 2042)

PROJECT No. 139833

SCALE: N.T.S.

3.11 Exemptions Review

The exemption considerations, per the TIA Guidelines, and applicability in this study are summarized in **Table 3-17** below.

Table 3-17 – Exemptions Review

TIA MODULE	ELEMENT	EXEMPTION CONSIDERATIONS	REQUIRED
DESIGN REVIEW COMPONENT			
4.1 Development Design	4.1.2 Circulation and Access	• Only required for site plans	✗
	4.1.3 New Street Networks	• Only required for plans of subdivision	✓
4.2 Parking	4.2.1 Parking Supply	• Only required for site plans	✗
	4.2.2 Spillover Parking	• No longer required based on the June 2023 summary of revisions to the TIA guidelines.	✗
NETWORK IMPACT COMPONENT			
4.5 Transportation Demand Management	All Elements	• Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time	✓
4.6 Neighbourhood Traffic Calming	All Elements	• Only required when all of the following conditions are met: 1. Access via a collector or local road 2. Adjacent to a significant sensitive land use 3. Zoning By-Law Amendment or Draft Plan of Subdivision application 4. At least 75 vehicle-trips 5. Site-generated traffic will increase peak hour volumes by 50% or more	✓
4.7 Transit	4.7.1 Transit Route Capacity	• Only required when the proposed development generates 75 transit trips or more	✓
	4.7.2 Transit Priority Requirements	• Only required when the proposed development generates 75 vehicle trips or more	✓
4.8 Network Concept	All Elements	• Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	✓
4.9 Intersection Design	All Elements	• Only required when the proposed development generates 75 vehicle trips or more	✓

4 Analysis

4.1 Background Network Traffic

4.1.1 Changes to Background Transportation Network

As discussed previously, the transportation network within the study area is expected to undergo significant changes within the timeframe of this study which will further support the use of sustainable modes including transit, walking and cycling. Scott Street will continue to be incrementally reconstructed as a Complete Street and the expansion of O-Train Line 1 further west of Tunney's Pasture Station is expected to be open for full revenue service well within the timeframe of this study.

4.1.2 General background Growth Rates

The background growth rate is intended to represent regional growth from outside the study area that will travel along the adjacent road network. Historical traffic count data collected on core weekday peak hours (i.e. Tuesday to Thursday) was reviewed and volumes on Scott Street, Parkdale Avenue and Kichi Zibi Mikan were shown to be stable or declining since 2011. Based on this analysis and to remain conservative, a 0% background growth rate was applied to the arterial and regional road network throughout the study area for the purposes of this TIA. It is noteworthy that this assumption is also consistent with the Tunney's Master Plan Transportation Study and that known adjacent developments within the study area were accounted for explicitly in the assembly of background traffic.

Further information regarding the derivation of the background growth rates for this study is located in **Appendix H**.

4.1.3 Other Area Development

All known adjacent developments that would have a significant impact on traffic volumes within the study area were previously identified in **Table 3-4**. These developments have been explicitly accounted for in the estimation of Future Background traffic volume projections, representing specific areas of growth within the study area and are therefore considered in addition to the general background growth rate discussed in the preceding section.

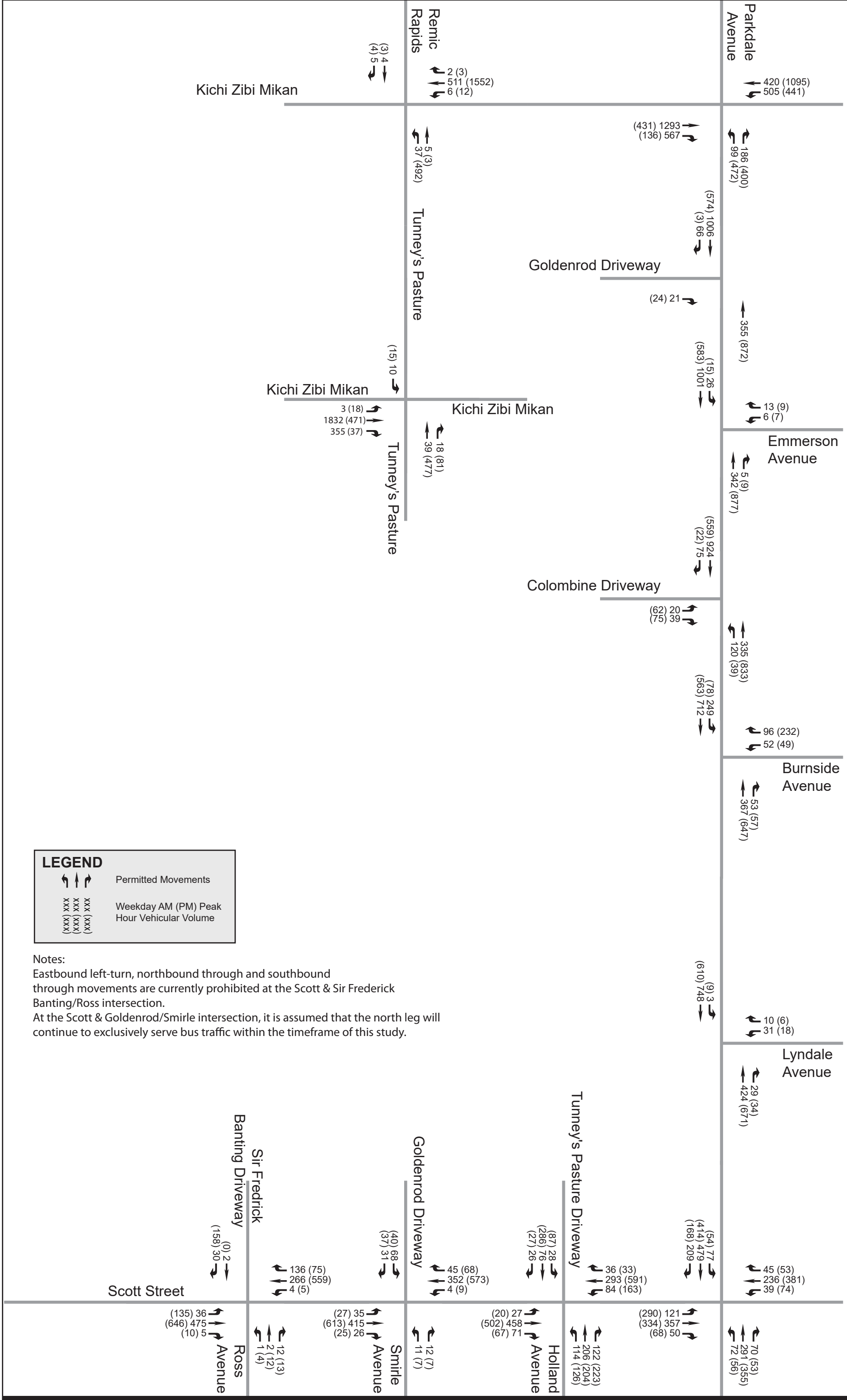
4.2 Traffic Volume Summary

4.2.1 Future Background Traffic Volumes

Future background traffic volumes projections have been established by combining the adjacent development traffic and background traffic derived through the application of a growth rate, as discussed previously. **Exhibit 9** below presents Future Background Traffic volumes anticipated for the 2038, 2042 and 2046 analysis years.

4.2.2 Future Total Traffic Volumes

Future total volumes have been derived by combining the site-generated traffic volumes with future background volumes. **Exhibit 10** through **Exhibit 12** below present the Future Total Traffic volumes anticipated for the 2038, 2042 and 2046 analysis years, respectively.



Notes:
Eastbound left-turn, northbound through and southbound through movements are currently prohibited at the Scott & Sir Frederick Banting/Ross intersection.
At the Scott & Goldenrod/Smirle intersection, it is assumed that the north leg will continue to exclusively serve bus traffic within the timeframe of this study.

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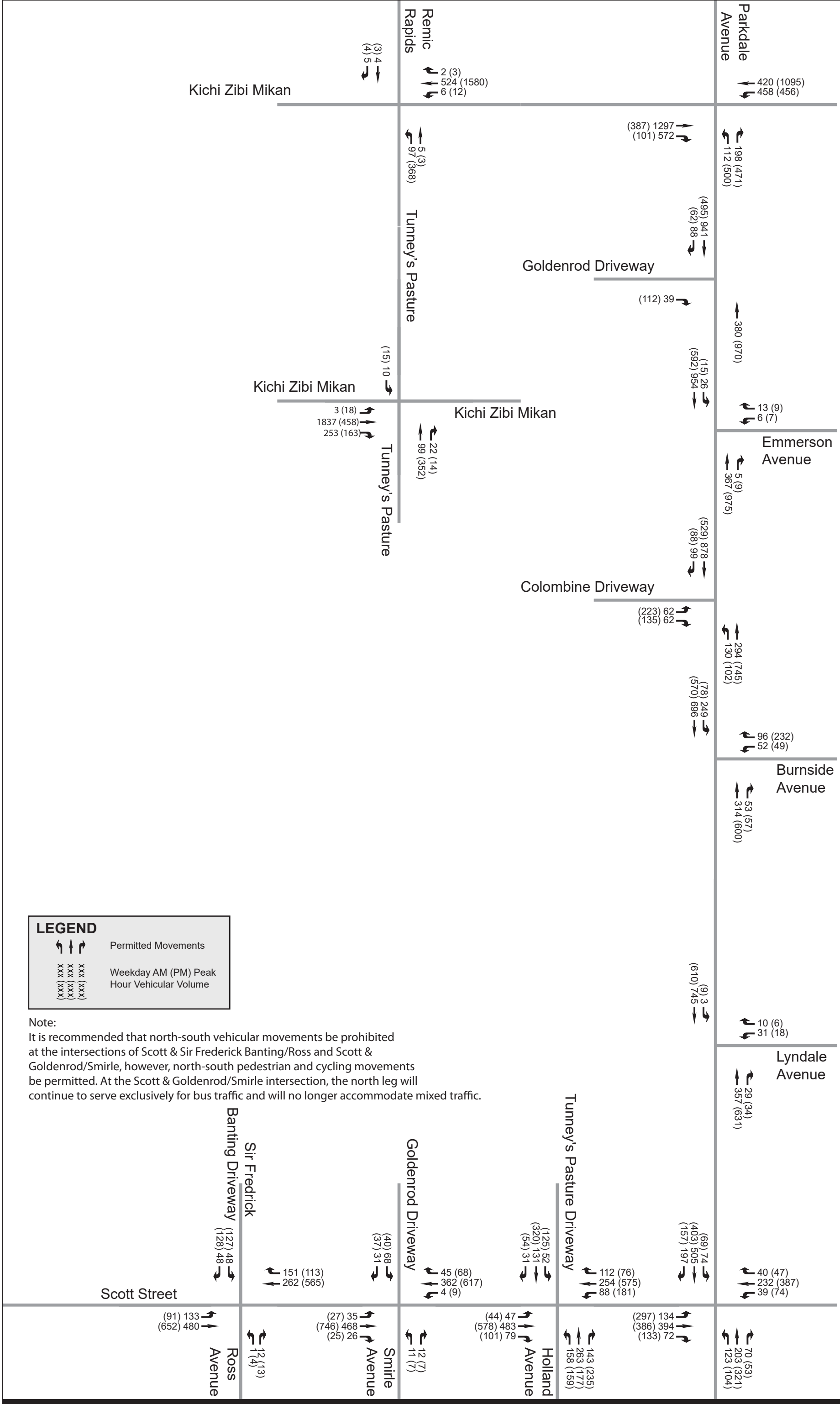
Exhibit 9:
Future Background Traffic

PROJECT No. 139833

SCALE: N.T.S.



LEGEND

Permitted Movements

xxx (xxx) — Weekday AM (PM) Peak Hour Vehicular Volume

Note:
It is recommended that north-south vehicular movements be prohibited at the intersections of Scott & Sir Frederick Banting/Ross and Scott & Goldenrod/Smirle, however, north-south pedestrian and cycling movements be permitted. At the Scott & Goldenrod/Smirle intersection, the north leg will continue to serve exclusively for bus traffic and will no longer accommodate mixed traffic.

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Tunney's Pasture
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Transportation Impact Assessment

Exhibit 10:
Future (2038) Total Traffic

PROJECT No. 139833

SCALE: N.T.S.

NORTH

Parkdale Avenue

Remic Rapids

Kichi Zibi Mikan

Tunney's Pasture

Goldenrod Driveway

Colombine Driveway

Emmerson Avenue

Burnside Avenue

Lyndale Avenue

Tunney's Pasture Driveway

Holland Avenue

Smirle Avenue

Sir Fredrick Banting Driveway

Ross Avenue

Scott Street

LEGEND

Permitted Movements

Weekday AM (PM) Peak Hour Vehicular Volume

Note:
It is recommended that north-south vehicular movements be prohibited at the intersections of Scott & Sir Frederick Banting/Ross and Scott & Goldenrod/Smirle, however, north-south pedestrian and cycling movements be permitted. At the Scott & Goldenrod/Smirle intersection, the north leg will continue to serve exclusively for bus traffic and will no longer accommodate mixed traffic.

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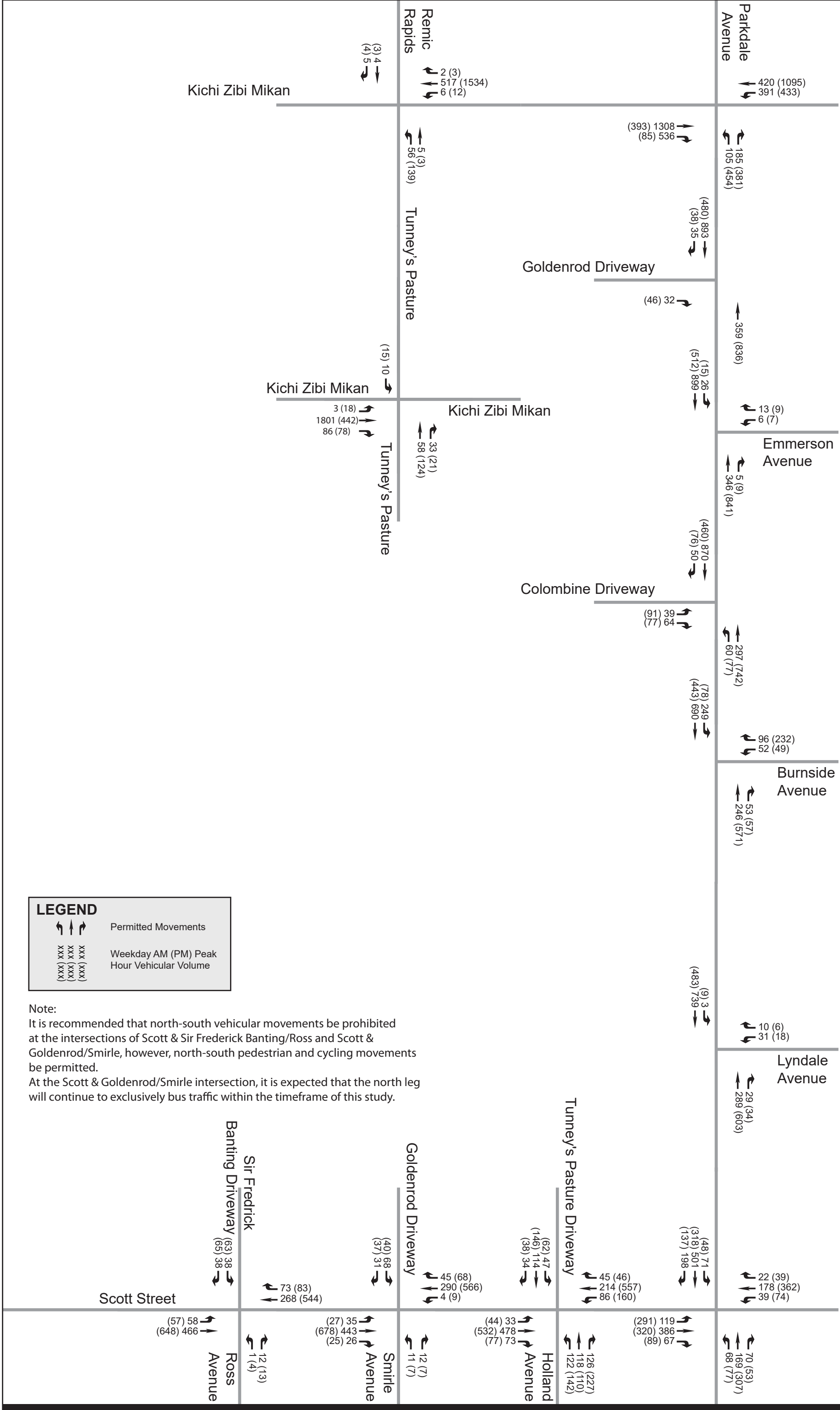
Tunney's Pasture
Site Servicing & Public Road Redevelopment
Transportation Impact Assessment

Exhibit 11:
Future (2042) Total Traffic

PROJECT No. 139833

SCALE: N.T.S.



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Tunney's Pasture
Site Servicing & Public Road Redevelopment
Transportation Impact Assessment

Exhibit 12:
Future (2046) Total Traffic

PROJECT No. 139833

SCALE: N.T.S.

4.3 Development Design

4.3.1 Design for Sustainable Modes

The proposed development will leverage its direct adjacency to high quality transit by establishing a multi-modal transportation network in accordance with the City's latest design standards to support a high-rise, compact and mixed-use community that aims to offer daily amenities within a 15-minute walk.

As the subject site is located within a Transit-oriented Development (TOD) zone, all streets will be designed in accordance with the City of Ottawa's 'Complete Streets' approach. To promote active transportation mobility at the periphery of the site, all signalized site access intersections that will be conveyed to the City will be redesigned as 'protected intersections' to designate separate space for pedestrians and cyclists and increase safety/comfort among these vulnerable users.

Transit Coverage

Once the internal road network is reconstructed and conveyed to the City of Ottawa, it is expected that transit will serve the site's new continuous collector road network, including Sir Frederick Banting Driveway, Colombine Driveway and Tunney's Pasture Driveway. Providing local transit service, particularly within the northern half of the site, will allow the OC Transpo Transit Service Policy to be met, which aims to provide a bus stop within 400-metres (5-minute walk) of at least 95% of dwelling units in the urban area. To achieve this target, it is recommended that, at a minimum, bus stops be situated near the following intersections or mid-block locations:

- Sir Frederick Banting Dr. & Sorrel Dr.
- Sir Frederick Banting Dr. & Colombine Dr.
- Tunney's Pasture Dr. & Colombine Dr.
- Tunney's Pasture Dr. (mid-block between Eglantine Dr. and Sorrel Dr.)
- Tunney's Pasture Dr. & Yarrow Dr. (within close proximity to LRT station entrance)

Future potential bus stop locations noted above were overlaid on the proposed active transportation plan, as shown on **Exhibit 13** below.

Adequacy of On-Site Active Transportation Infrastructure

The dense, fine-grained pedestrian and cycling network on-site was designed to complement the proposed internal street network and support the mobility of significant site-generated active users, particularly during weekday peak periods.

The potential assignment of active trips at full build-out of the site is shown on the proposed active transportation plan at key access locations at or near the periphery of the site (see **Exhibit 13** below). These active volume projections were used to verify whether these key locations will adequately accommodate peak active transportation volumes within the timeframe of this study.

Table 4-1 below identifies potential existing or proposed active transportation facility types that are being considered for full build-out of the site. In nearly all cases, the sustainable mode volume projections indicate that the segregation of pedestrians and cyclists should be considered by the 2046 horizon year, based on the exceedance of thresholds provided in Ontario Traffic Manual (OTM) Book 18. The need for segregated or mixed-use facilities, however, is also dependent on competing objectives such as space for tree plantings which will be an important consideration for more naturalized areas of the site, including the formalization of the Kichi Sibi Winter Trail (KSWT).

Given the likelihood that the Tunney's Pasture redevelopment will contribute significantly to the use of the active transportation facility at KZM & Remic Rapids/Tunney's Pasture, it is reasonable to assume that this internal connection will require segregated active transportation facilities, while internal connections to the 3-metre pathway connection at the northwest corner of the site should provision for a wider 4-metre multi-use path. The proponent is willing to work collaboratively with the NCC on active transportation improvements at this intersection, as well as upgrades to the substandard approximate 2.0-metre pathway on the west side of Parkdale Avenue from Goldenrod to Kichi Zibi Mikan to a standard 3.0-metre multi-use pathway configuration.

The feasibility of providing segregated pedestrian and cycling facilities will be investigated through the design of the internal street network north of Colombine Driveway (i.e. the future reconstruction of Goldenrod Driveway).

Table 4-1 – Active Transportation Facilities Review

Active Transportation Facility Location	Active Transportation Volumes[1]				Existing (Ex.) or Proposed (P) Facility	Are >20% of path users pedestrians & > 33 users per metre of width? [2] (% peds, # of users)	Consider Pathway Segregation?
	Cyclists/Weekday Peak Hour		Pedestrians/Weekday Peak Hour				
	IN	OUT	IN	OUT			
Internal Connections to Carleton Ave Underpass Path	16	18	29	43	~3.0m Pathway (Ex.) on NCC land	Yes (~68% peds, 36 users/metre)	No – recommend upgrade to 4m MUP, if feasible
Internal Connections to Kichi Zibi Mikan & Remic Rapids	71	81	49	74	~3.0m Multi-Use Pathway (Ex.) on NCC land	Yes (~45% peds, 92 users/metre)	Yes – feasibility to be investigated during design stage
Parkdale & Colombine	11	13	30	45	Sidewalks & cycle tracks (P)	Yes (~75% peds, 33 users/metre)	Yes – segregation already proposed in concept plan
Parkdale & Burnside	15	17	40	60	Assume 4.0m Multi-Use Path (P)	Yes (~75% peds, 25 users/metre)	Yes – feasibility to be investigated during design stage
Tunney's Pasture & Scott	64	74	215	320	Sidewalks & cycle tracks (P)	Yes (~80% peds, 224 users/metre)	Yes – segregation already proposed in concept plan
Goldenrod (Scott to Yarrow)	23	26	136	203	Sidewalks & bike lanes (P)	Yes (~87% peds, 129 users/metre)	Yes – segregation already proposed in concept plan
Sir Frederick Banting (north of KSWT connection)	22	26	63	94	Sidewalks & cycle tracks (P)	Yes (~73%, 130 users/metre)	Yes – segregation already proposed in concept plan
Kichi Sibi Winter Trail (KSWT)	22	26	63	94	Informal Pathway (Ex.)	Yes (~73%, 130 users/metre)	No – recommend upgrade to 4m path, if feasible
Total	**244**	**280**	**626**	**932**			

Notes: [1] 2046 site-generated traffic volumes under weekday morning peak hour conditions, representing peak active transportation volumes
[2] *Ontario Traffic Manual, Book 18 (2021), p.70*

Transportation Demand Management (TDM) Infrastructure Checklist

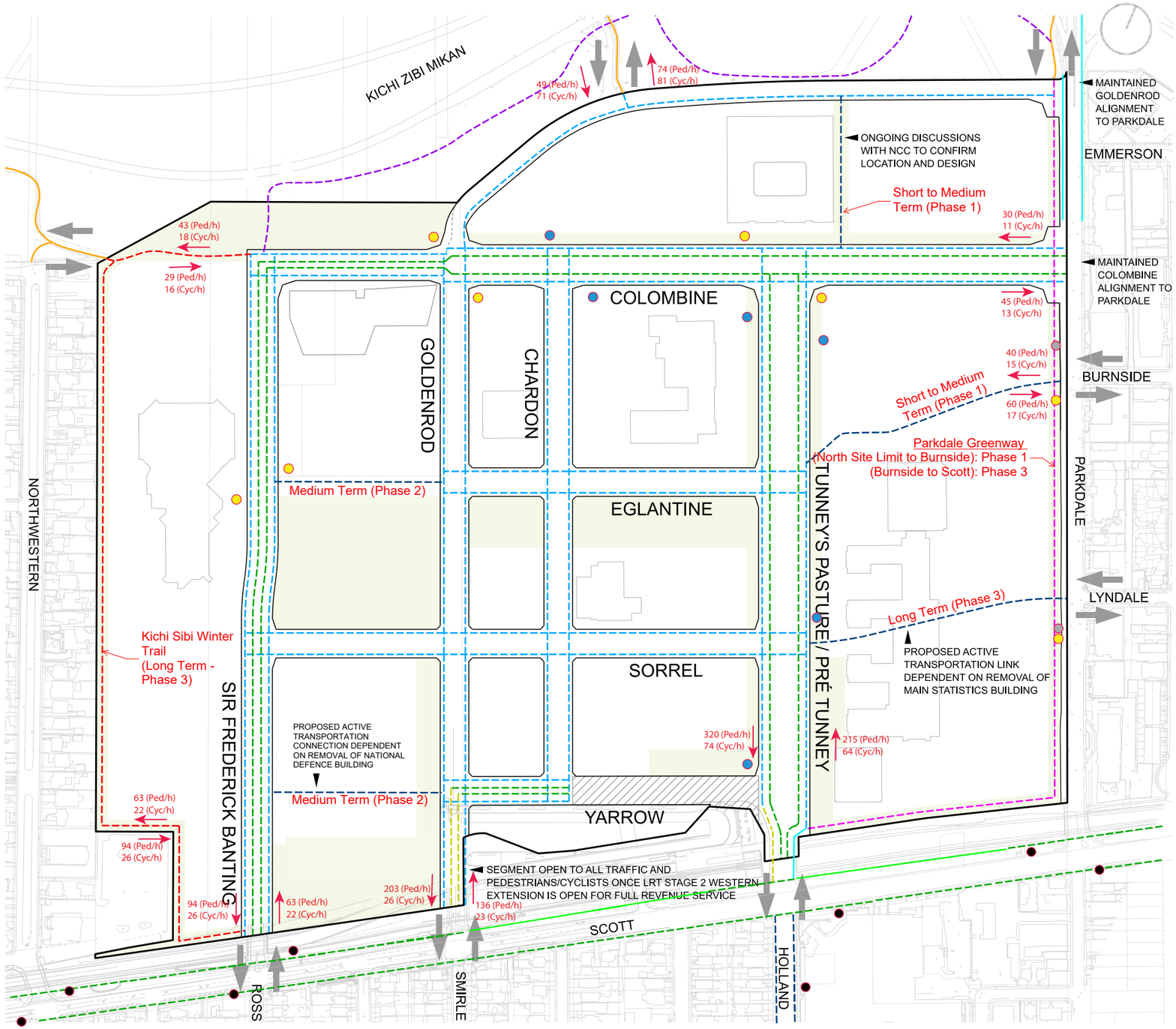
The Transportation Demand Management (TDM)-Supportive Development Design and Infrastructure Checklist (as referenced in **Appendix I**) identifies a range of potential measures which could be considered as part of future Site Plan Control (SPC) applications, following the successful completion of the Draft Plan process, to offset the vehicular impact on the adjacent road network. Some noteworthy potential measures are listed below:

- Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multifamily residential developments;
- Integrate a permanent bike repair station with commonly used tools adjacent to indoor bike parking area;
- Provide secure and sheltered bike parking on the ground floor and upper level of the underground parking garage for residents, as well as some additional bike stalls outdoors near the primary building entrances.
- Locate buildings close to street entrance with no vehicular parking area in between; and
- Design roads used for access or circulation by cyclists with a target operating speed of no more than 30 km/h, or provide a separated cycling facility.

4.3.2 Circulation and Access

Not Applicable: Per Section 3.11, this TIA element is not required to support the City of Ottawa's Draft Plan of Subdivision application process.

It is important to note that any future Site Control Plan applications should be consistent with the City of Ottawa's Accessibility Design Standards (COADS). Passenger loading zones that are compatible with paratransit vehicle specifications should be provided as close as possible to the nearest accessible entrance or within 30 metres maximum.



Active Transportation Plan

- Site Boundary
- Yarrow Woonerf
- Existing Bus Stop Locations (OC Transpo)
- Existing Bus Stop Locations (STO)
- Existing Bus Stop Location on Boundary Streets (No Longer In Use)
- Future Potential Bus Stop Location (OC Transpo)
- Open Space
- 45 (Ped/h) 48 (Cyc/h) Assignment of Peak Active Transportation Trips (2038 Site-Generated Traffic, Weekday PM Peak Hour)
- Future Parkdale & Transitway Greenway (City Initiative) - includes In-Boulevard Cycle Tracks
- Proposed Sidewalks
- Proposed In-Boulevard Cycle Tracks
- Proposed On-Road Cycling Facilities
- Proposed Kichi Sibi Winter Trail Formalization to All-Season Facility
- Proposed Active Transportation Link
- Proposed Pedestrian Transportation Link
- Existing Sidewalk
- Existing NCC Pathway
- Existing On-Road Cycling Facilities
- Existing Multi-Use Pathway (MUP)
- External Connection Point for Active Users

Notes:
- Proposed road pattern by Arcadis IBI Group, July 2024.
- Plans are subject to change following NCC Board approvals.

Location: TUNNEY'S PASTURE

Date: 2025-06-02 | Drafted By: SD

Scale: 0 100m, 1:1500 | North | ARCADIS

NORTH

4.3.3 New Street Networks

As discussed previously, the Urban Design Manual (UDM) for the Redevelopment of Tunney's Pasture (2024) reflects CLC/PSPC's commitment to building a sustainable development that promotes mobility by non-auto modes. Through the UDM process, typical cross-sections for each street were developed in alignment with the UDM objectives and sustainability goals, as well as the City of Ottawa's Complete Streets Framework (2015) reflected in the Designing Neighbourhood Collector Streets (2019), Local Residential Streets 30km/h Design Toolbox (2021) and the City's most recent local street cross-sections (2022).

The proposed right-of-way for each internal street within Tunney's Pasture is outlined in **Table 4-2** below and corresponding typical cross-sections are provided in **Appendix J**.

Table 4-2 – Proposed Roadways

Roadway	Classification	Proposed Right-of-Way (m)
Yarrow Driveway (Chardon extension to Tunney's Pasture)	Woonerf	22-24.0
Yarrow Driveway (Goldenrod to Chardon extension)	Local	24.0
Sorrel Driveway, Eglantine Driveway, Goldenrod Driveway	Local	24.0
Sir Frederick Banting Driveway	Collector	26.0
Colombine Driveway	Collector	34.0
Tunney's Pasture Driveway	Collector	43.0

In keeping with the City's mobility objectives for each road type, it is recommended that all collector streets be posted at 40 km/h, while all local roads be posted at 30 km/h.

Tunney's Pasture Driveway and Colombine Driveway will have unique cross-sections which build off of the ideal '26A – Treed Boulevard' road cross-section in the Designing Neighbourhood Collector Streets policy document but were widened to accommodate double rows of trees on each side of the ROW and space for Low Impact Development (LID) features. All of the collector road cross-sections include concrete sidewalks and uni-directional cycle tracks on both sides per the City's policy direction for these road classifications.

Yarrow Driveway from Goldenrod Driveway to the proposed Chardon Driveway extension will serve as a commercial local street with sidewalks and uni-directional cycle tracks on both sides to support safe and convenient 'last-mile' connections to the LRT station, bus loop and future high-rise built form envisioned in adjacent parcels.

The remainder of Yarrow Driveway, from the proposed Chardon Driveway extension to Tunney's Pasture Driveway, is contemplated as a 'woonerf' or shared street where all users have equal priority. This design will prohibit cut-through traffic while also prioritizing active travel modes and provide seamless integration between the LRT station plaza, bus loop and high-density, mixed-use development surrounding the LRT station where pedestrian activity is anticipated to be the highest across the entire site.

All local streets will be designed with a 24-metre ROW to accommodate 2.0-metre concrete sidewalks on both sides, an 8.5m pavement width to support one vehicle travel lane per direction, alternating on-street parking and street trees on both sides, as well as Low Impact Development (LID) features, where feasible. These local streets conform to the City's definition of a 'Complete Street', supporting local vehicle volumes and operating speeds to allow cyclists to ride comfortably and safely in mixed traffic and represent an expansion of the 20-metre ideal local cross-section width.

In accordance with the City of Ottawa's Local Residential Streets 30km/h Design Toolbox (September 2021), a conceptual traffic calming plan has been prepared for the subject site and is illustrated in **Exhibit 14** below.

NORTH

GOLDENROD

COLOMBINE

SIR FREDERICK BANTING

GOLDENROD

CHARDON

EGLANTINE

TUNNEY'S PASTURE DRIVEWAY

SORREL

YARROW

Proposed Woonerf

Note: Goldenrod Dr from Yarrow Dr to Scott St will remain as a bus-only access post-LRT Stage 2.

Note: Preliminary on-street parking estimates provided for each road segment. Total on-street parking estimates range from 187 to 233 spaces.

LEGEND

- Future Potential Pedestrian Crossover (PXO) or Uncontrolled Crossing
- Future Potential Private Connection
- Future Potential Site Access
- Future Potential Curb Extension
- Existing AWSC* - Potential Raised Intersection
- Future Potential Raised Intersection/AWSC*
- Future Potential Speed Hump
- Future Potential Speed Cushion
- Proposed Collector Streets
- Future Potential 'Modal Filter'
- Future Potential Bus Routes
- Stop Control on a Single Approach

AWSC - All-Way Stop Control

4.3.3.1 Intersection Control

As shown in **Exhibit 14** above, the vast majority of internal intersections currently exist as all-way stop-controlled. Arcadis recommends generally retaining the existing all-way stop configurations, as they support pedestrian mobility and align with the redevelopment's vision for a compact, walkable community.

The City of Ottawa all-way stop control warrant procedures were undertaken for each proposed public intersection within the subject development using Future (2038) Total Traffic volumes developed for the proposed internal street within the subject site and the following notable observations were made, based on the results of this analysis:

- All-way stop control is justifiable at the local street intersections with Tunney's Pasture Driveway based on potential sightline limitations created by the proposed 6-metre raised centre median.
- The collector-to-collector intersections are expected to achieve appropriate balances of 75/25 and 65/35 for three- and four-legged intersections, respectively, including Sir Frederick Banting & Colombine and Colombine & Tunney's Pasture. Similarly, the intersection of Goldenrod & Tunney's Pasture access to Kichi Zibi Mikan is expected to achieve a balanced threshold of vehicle volumes in alignment, given that the north and west legs of the intersection are effectively collector roads.
- Traffic signal warrants were not met at the following locations, based on the Future (2038) Total Traffic volume projections developed for the internal intersections:
    - **Colombine & Chardon** – This intersection is presently configured with all-way stop control, however the analysis undertaken in this study indicates that this form of intersection control may not actually meet the warrant criteria within the timeframe of this study. A Pedestrian Crossover (PXO) or uncontrolled crossing is therefore proposed on the east leg of the intersection to accommodate north-south pedestrian crossing activity within its vicinity.
    - **Sorrel & Sir Frederick Banting** – This intersection is presently configured with stop control on Sorrel Driveway and free-flow on Sir Frederick Banting Driveway. The results of the signal warrant analysis indicate that this location is not anticipated to achieve the balance in volumes required to trigger the warrant. As such, a potential Pedestrian Crossover (PXO) or uncontrolled crossing is proposed to facilitate east-west connectivity for pedestrians within proximity of this intersection.
    - **Eglantine & Goldenrod –** The intersection of Eglantine & Goldenrod is not anticipated to achieve the balance in vehicle volumes required to trigger all-way stop control, based on the future potential 'modal filter' which would significantly reduce traffic volumes on the south leg of this intersection. As such, it is proposed that the westbound approach will be stop-controlled (Eglantine), while the north-south directions remain freeflow (Goldenrod). An east-west pedestrian crossing on the north leg of the intersection would help to subdivide the approximate 300-metre length of Goldenrod between Sorrel and Colombine with no designated crossings through either the implementation of a Pedestrian Crossover (PXO) or uncontrolled crossing.

Despite the above-noted results, it is recognized that these all-way stop control warrants will need to be investigated further through future Site Plan Control (SPC) applications to support the development of adjacent property parcels and verified based on observed traffic volumes.

A review of all-way stop control warrants for internal intersections and supporting analysis is provided in **Appendix M**.

4.4 Parking

Although the parking component of the TIA is not specifically required to support the Draft Plan of Subdivision process, a brief discussion on pertinent topics have been included in this section, including the loss of existing surface parking and a preliminary estimate of the proposed on-street parking supply across subject site. It is important to note that parking supply for new development will be appropriately justified and reviewed through subsequent Site Plan Control applications to the City of Ottawa for each development block (by others).

Loss of Existing On-Site Surface Parking

It is recognized that Phase 1 of the proposed development will involve the loss of parking for office/employment uses which may remain on-site through the redevelopment timeframe of Tunney's Pasture. Understanding the long-term transition of the site to maximize multi-modal transportation options, Canada Lands Company (CLC) is committed to working with the federal tenants at Tunney's Pasture to develop a Parking Management Strategy. This strategy will manage the remaining parking supply and work to satisfy the functional need of the office uses still existing on site without creating spillover demand to adjacent communities.

The Parking Management Strategy will review the implications of this loss of parking supply so that these effects can be better understood and mitigated accordingly, with consideration of the four main strategies outlined below:

1) Determine if the remaining land outside the property parcel that is being disposed to public market can adequately fulfill the office parking demand;
2) Determine if the parking demand currently accommodated by the surface parking lot can be served by other parking lots on the remaining office lands across the Tunney's Pasture site;
3) Determine if additional parking (surface or structured) on the remaining office lands across the Tunney's Pasture site is required; and
4) Establish whether Transportation Demand Management (TDM) measures are required to reduce parking demand in alignment with the remaining parking supply.

Regardless of the mitigation strategies recommended through the parking study, any new off-street parking supplies should generally be concealed and structured, wherever feasible, to complement the compact and pedestrian-oriented environment of the proposed development. Parking facilities will also consider emerging technologies such as Electric Vehicle (EV) charging infrastructure, as well as their potential conversion to more pedestrian-oriented uses in the future, should there be a reduced need for parking as the site is built out.

Preliminary On-Street Parking Estimate

A preliminary estimate of on-street, parallel parking stalls was developed with reference to the Traffic and Parking By-law (2017-301), the proposed typical cross-sections discussed previously for each street, as well as the potential placement of bulb-outs indicated on the Conceptual Traffic Calming and Mobility Plan shown previously in **Exhibit 14**. Based on the typical cross-sections, Tunney's Pasture Driveway will support parking on both sides, while other street types will generally accommodate alternating parking. With consideration of the above, the future on-street parking supply is estimated to be in the order of approximately 187 to 233 spaces and will continue to be reviewed and refined through the detailed design of these internal streets. The incorporation of features such as Low Impact Development (LID) infrastructure or consolidated pick-up/drop-off areas that optimize use of space within the ROW will be considered as well.

By comparison, the existing on-street parking supply within Tunney's Pasture is approximately 400 spaces or roughly half of what is proposed now. This reduction in parking is in line with the policy objectives of the Official Plan which encourages low parking supplies in transit-oriented developments to promote the use of alternative modes, while weighing the need to retain some on-street parking to support local businesses.[2]

4.5 Transportation Demand Management (TDM)

The City of Ottawa requires that Transportation Demand Management (TDM) measures be included as part of all new development applications in an effort to reduce automobile dependence, particularly during the weekday peak travel periods. TDM initiatives are aimed at encouraging individuals to use non-auto modes of travel during the peak periods. Transportation Demand Management, through the design of public infrastructure and the design of private development, is an essential tool for meeting the 85% non-auto modes share targeted for this development by 2046. The Draft Plan of Subdivision process has a direct influence on public infrastructure (i.e. internal

[2] 2022 Official Plan, Section 4.1.4, subsections 2) and 4)

transportation network), while the subsequent development of property parcels will provide complementary measures to meet this target.

4.5.1 Context for TDM

As discussed previously, the proposed development is located within the Tunney's Pasture Station Transit-oriented Development (TOD) zone, Community Design Plan (CDP) and Design Priority Area (DPA) planning policy areas. This development is envisioned as a high-density site with a compact built form. The proposed development will offer a range of dwelling sizes, layouts and unit typologies, as well as a mix of other complementary land uses, including the retention of some existing office/laboratory components across the site and the integration of ground-floor commercial uses in new or existing mid- to high-rise buildings to help promote the development of a sustainable, diverse and inclusive community.

In the Scoping section of this report, the mode share distributions from the 2020 TRANS Trip Generation Summary Report for the Ottawa West TAZ were refined beyond the use of a typical 'blended rate' with consideration of the site's proximity to high quality transit and active transportation facilities. Sustainable modes are expected to incrementally offset vehicular demands within the study area with the planned opening of LRT Stage 2 Western Extension, in combination with the strengthening of active transportation infrastructure within the timeframe of this study and gradual transformation of Tunney's Pasture into a mixed-use community.

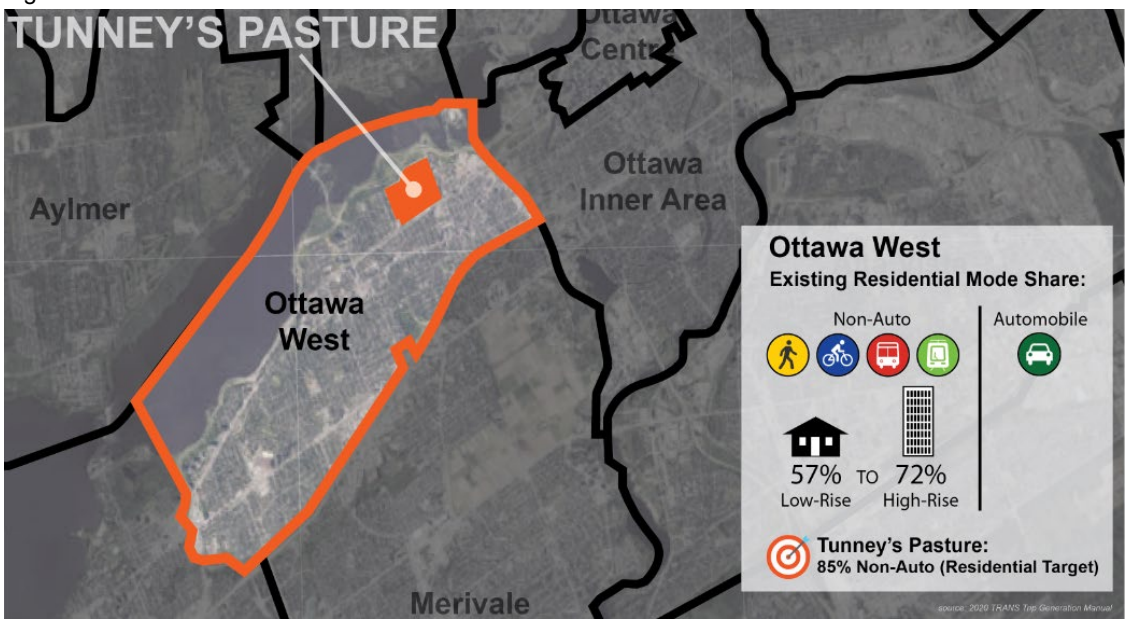
4.5.2 Need and Opportunity

With the proximity of this site to Tunney's Pasture, a major rapid transit hub, there is an important opportunity to shift the existing auto-oriented environment of the site to be more pedestrian-friendly and align with the City's policy objectives.

It is acknowledged that a suite of Transportation Demand Management (TDM) measures, as described in the following section, will be required to achieve the significant 85% non-auto mode share target proposed in this study for residential uses and mandated by the City of Ottawa for transit-oriented developments at full build-out.

For comparison, the 2020 TRANS Trip Generation Summary Report indicates that between 57% and 72% of residential trips presently occur by non-auto modes across the entire Ottawa West Traffic Assessment Zone (TAZ), as shown in **Figure 4-1** below.

Figure 4-1 – Ottawa West TAZ



4.5.3 TDM Program & Guiding Principles

At the Draft Plan of Subdivision stage, the implementation of TDM measures to serve the development throughout its lifetime are limited to the design of the proposed internal street network as 'Complete Streets', and includes infrastructure within the ROW to support sustainable modes of transportation. Site-specific TDM measures cannot be defined with certainty at this time, however, key Guiding Principles were developed to direct future decisions regarding TDM and help foster a more sustainable and less auto-oriented community.

One of the City's key planning documents guiding development within Tunney's Pasture, the Scott Street CDP, recommended consideration be given to a range of Transportation Demand Management (TDM) measures through the build-out of Tunney's Pasture, such as:

- Reduced parking supply rates for new developments;
- Providing employee incentives to support use of ride-share;
- Offering transit incentives such as free transit pass for new residents upon move-in for first year;
- Encouraging cycling and walking by improving the on-site cycling and pedestrian networks;
- Contributing to the enhancement of the study area's bicycle and sidewalk network;
- Offering high quality on-site bicycle parking (e.g. frequent, visible, secure and weather-protected facilities)
- Requiring condo owners to pay the actual cost for a parking space (i.e. no discounted rates);
- Provisioning for car sharing parking spaces on-site;
- Offer on-site cycling courses for residents, or subsidize off-site courses; and
- Provision for shower and locker facilities for non-residential land uses.

Subsequent to the Scott Street CDP, the City of Ottawa's TDM Measures Checklist was developed and is provided in **Appendix I** for reference. A few applicable measures pertaining to subdivision applications or future potential site plan applications are provided below:

- Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress;
- Offer preloaded PRESTO cards to encourage commuters to use public transit;
- Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels; and
- Provide a multimodal travel option information package to new residents.

Based on TDM discussions provided in the Scott Street CDP and a review of the City of Ottawa's TDM Checklists identified previously, a list of key Guiding Principles, along with some potential TDM measures for further consideration through future Site Plan Control (SPC) applications within Tunney's Pasture, are outlined below:

- **Guiding Principle #1 (Built Form & Pedestrian Connectivity):** Site-specific developments should be designed to accommodate compact, street-oriented development and promote safety, comfort and connectivity for active users.
    - Locate buildings close to the street and do not locate parking areas between the street and building entrances.
    - Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort.
- **Guiding Principle #2 (Inclusivity & Accessibility):** Residents or visitors to Tunney's Pasture should not be obligated to own a private automobile to feel welcome in this proposed mixed-use, 15-minute community. Transportation infrastructure should also be inclusive and accessible, catering to individuals across all ages and stages of life.
    - Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress;
    - Provide up to three carshare parking spaces in place of general vehicle parking for residents/employees or visitors to reduce reliance on private automobile ownership.

- Provide a designated area for carpool drivers, taxis or ride-hailing services to facilitate pick-up/drop-off activities without using a fire lane or no stopping zones.
- Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails.

- **Guiding Principle #3 (Transit):** Transit infrastructure and incentives should encourage the use of sustainable modes of transportation as a feasible and competitive alternative to driving.
  - Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building.
  - Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit.
  - Provide transit schedules and route maps at building entrances.
- **Guiding Principle #4 (Cycling):** Cycling infrastructure should be strategically located to promote its usage in a variety of situations and to serve individuals with a range of cycling abilities.
  - Provide a permanent bike repair station with commonly used tools adjacent to the primary bicycle parking area;
  - Provide secure and sheltered bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments.

To complement Guiding Principle #4 and in alignment with the City's Public Bike Parking Strategy, it is recommended to introduce destination-oriented bike parking for short and long-term needs at key locations within Tunney's Pasture as well.

4.6 Road Safety

A summary of all reported collisions within the study period over the past five years was presented previously in the Scoping component of this TIA. The City requires a safety review if at least six collisions of a discernible pattern have occurred over the study period. Based on these criteria, the collision types at each of the locations listed below required further review.

Scott & Holland/Tunney's Pasture

Rear-End – Of the nine observed rear-end collisions, there was a roughly even distribution amongst the four intersection legs. Most were attributed to 'following too close'. All rear-end collisions were classified as 'property damage only', with the exception of a 'non-fatal injury' collision that occurred during snowy and dark conditions.

Sideswipe – Six of the nine sideswipe collisions occurred during the weekday peak hour periods under congested conditions. Half of the sideswipe collisions involved northbound vehicles, while the east and westbound directions experienced a similar distribution of the remaining collisions. A single 'non-fatal injury' collision was reported, with the remaining sideswipes being classified as 'property damage only'.

Turning Movement – Seven of the 10 turning movement collisions occurred during the weekday peak hour periods under congested conditions. All turning movement collisions involved left-turning vehicles, while each leg of the intersection experienced between one and four collisions of this type. All but one 'non-fatal injury' collision were classified as 'property damage only'.

Pedestrian – Within the 5 years of collision records reviewed for this study, there were 2 reported collisions involving pedestrians, both of which resulted in 'non-fatal injuries'. One of these collisions was due to a driver failing to yield the right of way, while there is no evident cause for the second pedestrian collision. Both collisions occurred during the day under clear weather conditions.

Bicycle – There was one property-damage only bicycle collision recorded in which a vehicle sideswiped a cyclist. There are no evident causes for this collision, however.

It is noteworthy that Scott Street & Holland/Tunney's Pasture was recently reconstructed as 'protected intersection' to improve safety and reduce opportunities for a variety of collision types amongst all modes of travel.

Parkdale & Scott

Angle – Three of the six angle collisions occurred under dark or rainy conditions and may reflect driver behaviour during less than ideal conditions. Most of these collisions involved northbound or westbound vehicles either turning left or going straight, while disobeying traffic control.

Rear-End – Of the 11 rear-end collisions, five occurred under dark/dusk lighting conditions or during rainy conditions which may be a reflection of driver behaviour during nighttime conditions, particularly as nearly all of the collisions involved motorists 'following too closely'. Most of the collisions involved northbound vehicles, while the remainder were associated with west or southbound vehicles. All of the collisions were considered minor in nature and involved 'property damage only'.

Bicycle – Within the 5 years of collision records reviewed for this study, there were 3 reported collisions involving cyclists, two of which resulted in 'non-fatal injuries', and one collision involving 'property damage only'. Two collisions were due to motorists failing to yield the right of way, while one was due to the cyclist. All collisions occurred during the day under clear weather conditions.

Similar to the Scott & Holland/Tunney's Pasture intersection, Parkdale & Scott was also recently reconstructed as 'protected intersection'. These upgrades are anticipated to significantly improve safety among vulnerable road users, while reducing the opportunity and severity of all collision types.

KZM & Remic Rapids/Tunney's Pasture

Turning Movement – Three of the six turning movement collisions occurred under dark/dusk lighting and/or snowy conditions. The majority of collisions involved northbound vehicles going straight and colliding with southbound vehicles performing left-turning movements. All collisions were considered minor in nature and were classified as 'property damage only'.

KZM Eastbound - Island Park to Parkdale

Rear-End – Four of the 10 rear-end collisions occurred under dawn/dusk lighting or during rainy conditions. Half of the rear-end collisions occurred during weekday peak periods when traffic is most likely to be in a congested state. All collisions were considered minor in nature and were classified as 'property damage only'.

KZM Westbound - Island Park to Parkdale

Sideswipe – Seven of the 12 rear-end collisions occurred during weekday peak periods when traffic is most likely to be in a congested state and occurred during a lane change maneuver. All 'rear-end' collisions were classified as 'property damage only' with the exception of one 'non-fatal injury' collision.

Rear-End – Of the 20 collisions, 18 occurred during either weekday peak periods (congested conditions) or during dusk/dark or snowy conditions when driving conditions are not ideal. All collisions are minor in nature resulting in 'property damage only' or 'non-fatal injuries'.

Pedestrian – A motorist lost control of their vehicle which resulted in the fatality of a pedestrian and serious injuries to a cyclist. The collision occurred during the day under clear weather conditions.

Based on the Road Safety Analysis presented above, it is recommended that each of the major intersections along the Scott Street and Parkdale Avenue frontages of the site be upgraded to 'protected intersections'. Any geometric improvements required at site access intersections on either Parkdale Avenue or Scott Street to facilitate 'protected intersection' upgrades will be covered through functional-level Roadway Modification Application (RMA) drawings, included in **Appendix O**.

The Ottawa South Shore Riverfront Park Plan (NCC, 2018) also indicates long-term plans to implement measures on Kichi Zibi Mikan to support speed limit reductions, as well as introducing enhanced crossings for active users.

4.7 Neighbourhood Traffic Calming

Despite the subject site's multiple connections to the arterial and regional road network, there have been concerns expressed by Communities' Perspective Group (CPG) members regarding the potential exacerbation of any existing cut-through traffic patterns resulting from the Tunney's Pasture redevelopment. These concerns are based on the site's direct vehicular connections with adjacent neighborhoods and widely-known congestion issues on nearby key commuter routes, including Island Park Drive and Parkdale Avenue during the weekday peak periods.

This Neighbourhood Traffic Calming component of the TIA is intended to highlight key infiltration routes that were identified through the Touch-Point #2 Meeting held on February 10, 2025 with Communities' Perspective Group (CPG) Stream 1 members and other prior meetings with the broader CPG. A separate Neighbourhood Traffic Calming Strategy was developed to evaluate potential concept-level traffic calming solutions within adjacent communities, as well as at the site access intersections. The primary objectives of this strategy are to limit cut-through between Tunney's Pasture and adjacent communities, including Mechanicsville, Hintonburg, Wellington Village and Champlain Park, while facilitating access by active modes.

Potential neighborhood traffic infiltration routes within adjacent communities are identified in **Exhibit 15** below.

Traffic count data collected in March/April 2025 at select peripheral intersections referenced in preceding sections was analysed further in the Neighbourhood Traffic Calming Strategy (see **Appendix K**) to verify existing cut-through traffic patterns and develop appropriate traffic calming solutions to mitigate these issues within the above noted neighbourhoods immediately surrounding Tunney's Pasture.

The effectiveness of the implemented traffic calming strategy to mitigate vehicular cross-traffic between the site and surrounding communities will be evaluated at reoccurring intervals over the timeframe of the Tunney's Pasture redevelopment, as outlined in the Monitoring Plan (see **Appendix N**).

The proposed solutions and mitigation strategies investigated in the Neighbourhood Traffic Calming Strategy will serve to limit the amount of cut-through traffic within a range of measures with varying degrees of intensity to suit the context and complement the existing traffic calming within each neighbourhood. Potential solutions included high-friction, traffic-calmed streets and turning movement restrictions at the site's boundary street intersections. It is also noteworthy that in the near-term (Phase 1), the introduction of residential land uses within Tunney's Pasture will generate traffic opposite the existing peak flow of traffic which is less likely to utilize neighbourhood shortcuts. At full build-out, the site will ultimately generate fewer automobile trips in comparison with pre-COVID-19 pandemic volumes.

ARCADIS

Tunney's Pasture - Site Servicing and Public Road Redevelopment
Transportation Impact Assessment

Exhibit 15
Potential Neighbourhood Infiltration Routes

PROJECT No. 139833

SCALE: 0m 125m 250m

4.8 Transit

4.8.1 Route Capacity

The estimated future total transit passenger demand within the study area was provided previously in the Forecasting component for each phase of development considered in this study. The resulting transit trips have been summarized in **Table 4-3** below, and are divided by inbound/outbound transit trips, as well as cardinal direction.

Table 4-3 – Future Peak Hour Site-Generated Transit Trips

Phase	Period	Peak Hour Transit Demand (Person Trips/Hour)						
		In/Out Transit Volumes Projections		Transit Volume Projections by Cardinal Direction				TOTAL
		IN	OUT	North	South	East	West	
Phase 1 (2038)	AM	913	737	66	594	446	545	**1,650**
	PM	849	1,160	80	723	542	663	**2,009**
Phases 1 & 2 (2042)	AM	820	951	53	655	514	549	**1,771**
	PM	967	1,063	61	751	589	629	**2,030**
Phases 1, 2 & 3 (2046)	AM	747	1,218	39	727	609	590	**1,965**
	PM	1,116	982	42	776	650	629	**2,098**

Based on **Table 4-3** above, the site-generated transit ridership in Phases 1, 2 and 3 will result in at most 2,098 additional transit riders during either the weekday morning or weekday afternoon peak hours.

Overall transit demand at full build-out of the site is expected to be accommodated by its direct adjacency to Tunney's Pasture Station, a major transit hub that is served by O-Train Line 1, as well as numerous local and feeder bus routes which will continue to either provide service coverage within the site by accessing the Tunney's Pasture bus loop or directly through the internal street network of the site.

The majority of site-generated transit trips will be accommodated on the Ottawa LRT system via Tunney's Pasture Station. O-Train Line 1 double-car trains presently support total ridership of approximately 14,400 passengers per hour in both directions with existing 5-minute headways during weekday peak periods and with the capability to further reduce headways to 3-minute gaps to carry an upper limit of approximately 24,000 passengers per hour in both directions. As such, O-Train Line 1 LRT service represents an important opportunity to provide high quality transit service to the subject site, given its significant capacity to carry transit riders and its direct connections to the remainder of Ottawa's City-wide rapid transit network.

The remainder of site-generated transit trips will be accommodated by OC Transpo and STO bus service. Given that there are expected to be numerous bus routes operating along both existing boundary streets of the site with frequencies of 15 to 30 minutes and that an OC-Transpo buses can accommodate approximately 45 passengers, increases in transit frequency may not be required to accommodate transit ridership contributions from the subject site. STO buses also provide weekday peak period service within the internal street network of the site, with similar overlapping frequencies. Regardless, it is recommended that OC Transpo review ridership data in conjunction with the site-generated transit demand projections presented above to determine if there is sufficient transit capacity to accommodate these additional transit trips.

4.8.1.1 Early Transit Service Agreement

As discussed previously in the Transportation Demand Management (TDM) section in Section 4.5.3, an early transit service agreement may be required to service development parcels located beyond the 600-metre radius from the Tunney's Pasture LRT Station, given the recent removal of OC Transpo bus service within the site's internal street network as part of the New Ways to Bus program.

It is estimated that transit ridership demand to/from the northernmost property parcels located within the Tunney's Pasture development, which are most likely to use local bus service, would be in the order of 150 and 160 transit costumer trips during the weekday morning and afternoon peak hours, respectively. These candidate development parcels with the highest reliance on potential local feeder transit service routes are either located north of Colombine Driveway or west of Sir Frederick Banting Driveway.

Standard bus equivalent (SBE) volumes were calculated to be approximately 4 buses for each weekday peak hour for local trips within the site. This assumes a standard 45 passenger capacity per transit vehicle, as specified by City technical staff, and is in line with the capacity provided for Route 54 prior to its removal as part of the City's New Ways to Bus initiative.

4.8.2 Transit Priority Measures

As discussed previously, the 2025 TMP identifies a future Transit Priority Corridor with Isolated Measures on Holland Avenue within the vicinity of the site. Isolated measures projects will consist of intersection upgrades and/or modifications to bus stop layouts to boost operational efficiency, reduce transit delays, improve service reliability and enhance the customer experience. Examples include rebuilding a signalized intersection to add queue-jump lanes or removing bus bays along a corridor. Given the constrained urban context of this corridor, however, it is possible that isolated transit priority measures such as queue jump lanes at major intersections may be the only feasible option along this corridor, given potentially competing objectives to support active users, for example. Regardless, there is currently no proposed timeline for any transit priority upgrades on Holland Avenue.

These transit priority measures would allow for more efficient transit routes on the adjacent road network to feed more seamlessly into the Tunney's Pasture LRT Station which would be beneficial in improving transit reliability and service quality to support the overall sustainable growth and development within the broader area.

As discussed during the existing conditions MMLOS analysis, however, substandard TLOS at the Scott & Holland intersection is associated with delays on the northbound and eastbound approaches. The substandard TLOS can be attributed to existing and Future Background growth and is not a result of site-generated traffic demands.

As such, it is not anticipated that additional transit priority measures will be required to support the projected site-generated transit demands, the majority of which are expected to be accommodated by LRT service rather than buses.

4.9 Review of Network Concept

A screenline is an artificial boundary between areas of major traffic generation that captures all significant points of entry from one area to another to compare crossing demand with the available roadway capacity. Screenlines are typically located along geographical barriers such as rivers, rail lines or within the Greenbelt. To capture existing flow and model future demand, count stations are established by the City of Ottawa at each crossing point along the screenline.

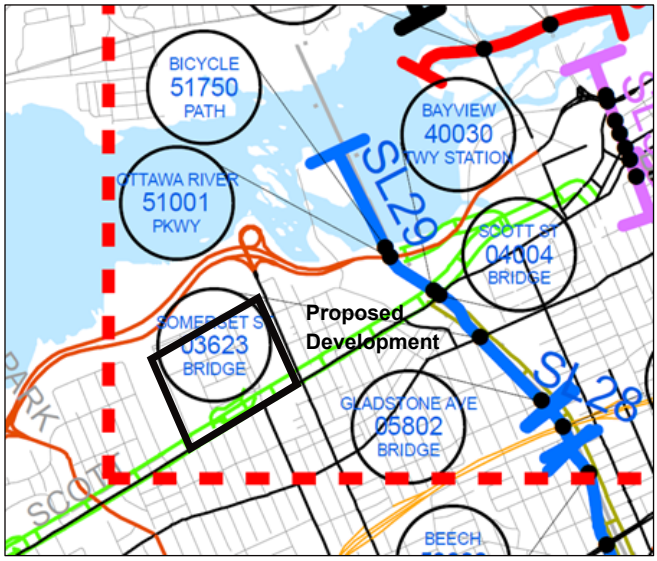
The nearest strategic planning screenlines adjacent to the development have been identified as follows:

- **SL28 – O-Train (Central):** This screenline has one vehicular crossing point: Highway 417.
- **SL29 – O-Train (North):** This screenline has five vehicular crossing points: Kichi Zibi Mikan, Bayview Station, Scott Street Bridge, Somerset Street Bridge and Gladstone Avenue.

SL28 and SL29 are shown in **Figure 4-2** (right), as determined from the City of Ottawa's Road Network Development Report (2013), a supporting document to the Transportation Master Plan (TMP).

Table 4-4 below summarizes the City 2031 Network Concept demand and capacity across these two screenlines.

Figure 4-2 – Nearest Screenlines w.r.t. Proposed Development



Source: TRANS Screenline System (2010)

Table 4-4 – Screenline Analysis

Screenline	2011 - Base Network Peak Direction			2031 - Base Network Peak Direction			2031 - Network Concept Peak Direction		
	Demand	Capacity	v/c Ratio	Demand	Capacity	v/c Ratio	Demand	Capacity	v/c Ratio
SL28 O-Train (Central)	6,082	5,400	**1.13**	6,176	5,400	**1.14**	6,192	5,400	**1.15**
SL29 O-Train (North)	3,195	6,800	0.47	3,298	6,800	0.49	3,117	5,400	0.58

Source: Exhibits 3-4 & 4-8 of the Road Network Development Report: Final Report (December 2013)

As indicated in **Table 4-4** above, there is a long-standing volume-to-capacity deficiency across SL28 which is predicted to remain during the most constrained weekday peak period until at least 2031. Highway 417 is busy and congested conditions experienced on Parkdale Avenue are likely attributable to its full interchange connection to this 400-series highway and direct link to Kichi Zibi Mikan, the latter of which appears to have available capacity per the SL29 results outlined above.

The capacity issues experienced across SL28 underscore the need for more transit-oriented developments such as Tunney's Pasture to help resolve City-wide congestion issues.

Comparison with Pre-Pandemic Counts

In order to determine whether the additional site-generated traffic demands associated with the Tunney's Pasture redevelopment will be sufficiently absorbed across SL28 & SL29, a comparison with pre-pandemic volume observations was undertaken.

According to the pre-pandemic traffic counts collected for the Tunney's Pasture Redevelopment Community Transportation Study (Parsons, 2018), the site was generating more than 2,000 vehicles per weekday peak hour prior to the COVID-19 pandemic. A comparison of the traffic volumes associated with Phase 1, which represents the highest overall traffic generation scenario for the subject site within the time of this study, is provided for comparison against the pre-pandemic observed ground counts from the 2018 CTS in **Table 4-5** below.

Table 4-5 – Comparison of Pre-Pandemic Site-Generated Traffic with Phase 1 Projections

Scenario	Vehicles – Weekday AM Peak Hour			Vehicles – Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 Site Traffic Projections[1]	1,257	572	1,829	882	1,553	2,435
Pre-Pandemic Site-Generated Traffic	1,495	570	2,065	542	1,473	2,015
Difference (%)	**-238 (-16%)**	**+2 (0%)**	**-236 (-11%)**	**+340 (+63%)**	**+80 (+5%)**	**+420 (+21%)**

Notes:
[1] Phase 1 traffic volume projections do not include 'pass-by trips'.
[2] 2018 Tunney's Pasture Redevelopment Community Transportation Study (Parsons, 2018), page 10.

Based on the difference calculated in **Table 4-5** above, there would only be an additional 60 vehicles per hour, or approximately 4% more traffic, in the peak direction, added during the weekday afternoon peak hour relative to the pre-pandemic counts conducted for the 2018 Community Transportation Study (CTS). The majority of the additional traffic is added in the off-peak direction of travel which has sufficient excess capacity to absorb additional vehicular demand.

Relevant extracts from the 2018 CTS are provided in **Appendix L**.

4.10 Intersection Operational Review

4.10.1 Access Intersection Review

4.10.1.1 Location and Design of Access

As discussed previously, the proposed development will continue to provide transportation connections to the adjacent road network via six access intersections, including:

- **Kichi Zībī Mīkan & Tunney's Pasture:** This existing signalized intersection will retain its existing movement restrictions and will continue to be the only access serving the site directly via Kichi Zibi Mikan.
- **Parkdale & Goldenrod:** This existing right-in/right-out intersection will remain in its current configuration and location, with eastbound stop control and north-south free-flow movements.
- **Parkdale & Colombine:** This existing two-way stop-controlled intersection will be upgraded to include 'protected intersection' elements and will be controlled with traffic signals.
- **Scott & Holland/Tunney's Pasture:** This signalized intersection and main gateway to the site was recently reconstructed as a 'protected intersection'. It is recommended that the northwest corner of this

intersection be modified to close a gap in the cycling network through the reallocation of existing pedestrian space to accommodate a segment of southbound uni-directional cycle track.

- **Scott & Goldenrod:** This existing intersection was recently upgraded to a 'protected intersection'. The north leg which provides exclusive access for transit vehicles to access the bus loop, will be open for public use prior to the completion of Phase 1 of the subject site.
- **Scott & Sir Frederick Banting/Ross:** This existing two-way stop-controlled intersection will be upgraded to a 'protected intersection' controlled with traffic signals. It is recommended that these upgrades occur prior to Phase 1 of the Tunney's Pasture redevelopment to address existing capacity constraints identified through this study.

4.10.1.2 Intersection Control

4.10.1.2.1 Traffic Signal Warrants

Traffic signal warrants analysis was conducted for the intersections of Parkdale & Colombine, as well as Scott & Sir Frederick Banting/Ross under the most constrained Future (2038) Total Traffic and the results indicate that traffic signals are warranted at just Parkdale & Colombine.

Despite the warrants not being met at Scott & Sir Frederick Banting/Ross, the implementation of traffic signals is recommended at both intersections for the following reasons:

- Provides opportunities to significantly improve safety and connectivity for vulnerable road users through the introduction of fully 'protected intersection' configurations, with controlled crosswalks and crossrides.
- Resolves traffic operational issues and mitigates high vehicular delays which also pose increased safety risks for active users.

At the Scott & Sir Frederick Banting/Ross intersection, there were existing capacity issues resulting from non-compliant vehicular movements that also result in elevated safety risks for active users. The recommendation to upgrade this intersection with traffic signals is also consistent with the vision for the adjacent road network, as outlined in the Scott Street CDP. Further, this intersection is located along an approximately 440-metre segment of Scott Street, in which signalization would provide another controlled crossing opportunity for pedestrians and cyclists while increasing connectivity to the planned cycling network within Tunney's Pasture and the formalization of the Kichi Sibi Winter Trail, as previously illustrated in **Exhibit 13** and **Exhibit 14.**

The results of the traffic signal warrant analysis are provided in **Appendix M**.

4.10.2 Intersection Analysis Criteria (Automobile)

For signalized intersections, the City of Ottawa has developed criteria for signalized intersections as part of the TIA Guidelines which directly relate the v/c ratio to a Level of Service (LOS) designation. In contrast, the LOS for unsignalized intersections is based on average delay using the criteria outlined in the Highway Capacity Manual (HCM) 2010. These criteria are presented in **Table 4-6** below.

The MMLOS Guidelines Update (May 2025) indicate that a Level of Service 'E' or better is acceptable City-wide.

Table 4-6 – Level of Service Thresholds

Level of Service	Signalized	Unsignalized
	V/C Ratio	Delay (Seconds per Vehicle)
A	0 to 0.60	<10
B	0.61 to 0.70	>10 and <15
C	0.71 to 0.80	>15 and <25
D	0.81 to 0.90	>25 and <35

Level of Service	Signalized	Unsignalized
	V/C Ratio	Delay (Seconds per Vehicle)
E	0.91 to 1.00	>35 and <50
F	> 1.00	>50

4.10.3 Intersection Capacity Analysis

The Level of Service (LOS) results are based on locally-specific parameters as described in the TIA Guidelines and incorporates existing signal timing plans obtained from the City of Ottawa. The analysis of existing conditions utilized a Peak Hour Factor (PHF) of 0.90, while future conditions considers optimized signal timing plans and the use of a Peak Hour Factor (PHF) of 1.0 to recognize peak 'spreading' beyond a 15-minute period in congested conditions and therefore some of the study area intersections are shown to perform better in comparison with Existing Traffic conditions under Future Background Traffic conditions.

Following the established intersection capacity analysis criteria described above, future traffic conditions were analysed using the weekday peak hour traffic volumes derived in this study.

The subsequent sections present the results of the intersection capacity analysis. All tables summarize study area intersection LOS results during the weekday morning and afternoon peak hours.

The intersection capacity analysis reports have been provided in **Appendix F**.

4.10.3.1 Future Background Traffic

An intersection capacity analysis has been undertaken using the Future Background Traffic volumes presented previously in **Exhibit 9**. The results of the intersection capacity analysis are summarized below.

Table 4-7 – Intersection Capacity Analysis: Future Background Traffic

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Kichi Zibi Mikan & Remic Rapids	Signalized	A (0.24)	WBTRL (0.24)	D (0.86)	**NBTL (1.32)**
> *Kichi Zibi Mikan & Remic Rapids*	Signalized [1]	A (0.22)	WBTRL (0.22)	**E (0.94)**	**NBTL (0.98)**
Kichi Zibi Mikan & Tunney's Pasture	Signalized	C (0.78)	EBTL (0.85)	A (0.42)	**NBTR (1.08)**
> *Kichi Zibi Mikan & Tunney's Pasture*	Signalized [1]	C (0.72)	EBTL (0.78)	A (0.45)	NBTR (0.80)
Parkdale & Goldenrod (right-in/right-out)	Unsignalized	C (19.3s)	EBR (19.3s)	B (12.4s)	EBR (12.4s)
Parkdale & Emmerson	Unsignalized	C (16.9s)	WBRL (16.9s)	C (24.6s)	WBRL (24.6s)
Parkdale & Colombine	Unsignalized	**E (41.5s)**	**EBRL (41.5s)**	**F (55.6s)**	**EBRL (55.6s)**
Parkdale & Burnside	Signalized	**F (1.02)**	**SBTL (1.02)**	B (0.63)	WBRL (0.67)
> *Parkdale & Burnside*	Signalized [1,2]	A (0.55)	SBT (0.55)	A (0.58)	WBRL (0.71)
Parkdale & Lyndale	Signalized	A (0.56)	SBTL (0.56)	A (0.49)	NBTR (0.49)
> *Parkdale & Lyndale*	Signalized [1]	A (0.55)	SBTL (0.55)	A (0.48)	NBTR (0.48)
Parkdale & Scott	Signalized	C (0.73)	**NBTRL (1.10)**	**E (0.99)**	**NBTRL (1.01)**
> *Parkdale & Scott*	Signalized [1,3]	A (0.55)	SBT (0.79)	C (0.72)	NBTR (0.76)
Scott & Holland/Tunney's Pasture	Signalized	D (0.83)	EBTR (0.87)	**E (0.95)**	**NBL (1.07)**
> *Scott & Holland/Tunney's Pasture*	Signalized [1,4]	C (0.72)	NBL (0.72)	**E (0.99)**	**WBL (0.99)**
Scott & Goldenrod/Smirle	Signalized	A (0.36)	SBL (0.57)	A (0.44)	EBTR (0.45)
> *Scott & Goldenrod/Smirle*	Signalized [1]	A (0.36)	SBL (0.55)	A (0.47)	EBTR (0.47)
Scott & Sir Frederick Banting/Ross	Unsignalized	B (13.8s)	NBTRL (13.8s)	**F (55.1s)**	**NBTRL (55.1s)**

Notes: [1] *Corridor or signal timing plan optimization*
[2] *Introduce southbound left-turn auxiliary lane*
[3] *Re-introduce northbound left-turn auxiliary lane and extend eastbound left-turn auxiliary lane*
[4] *Extend northbound right-turn auxiliary lane*

Under Future Background Traffic conditions and without any modifications to the intersection geometry or signal timings, a number of capacity or queuing constraints were identified at study area intersections, including Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture, Parkdale & Colombine, Parkdale & Burnside, Parkdale & Scott, Scott & Holland/Tunney's Pasture, as well as Scott & Sir Frederick Banting/Ross. It is important to note that these results reflect a scenario where federal employees at Tunney's Pasture would return to the office 5 days a week, while Existing conditions represented a 'hybrid' scenario of federal employees working 2 to 3 days per week in the office.

Signal timing plan optimization was employed as a potential strategy to mitigate existing internal queuing identified on the northbound approach of the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersections during the weekday afternoon peak hour. A slight increase in cycle length from 145s to 150s would allow queuing Tunney's Pasture access to be more manageable, while improving the traffic operational performance of the intersection from LOS 'F' to 'E'.

The Parkdale & Burnside intersection is shown to experience capacity and queuing constraints during the weekday morning afternoon peak hour which are resolvable through the introduction of a southbound left-turn auxiliary lane and signal optimization. It is recommended that the need for a southbound left-turn auxiliary lane at this location be further investigated if the Embassy Row development proceeds, as this adjacent development would be anticipated to contribute over 100 vehicles during the weekday morning peak hour to this movement based on the 1-19 Kich Zibi Mikan TIA, thereby triggering the need for this dedicated turning lane.

Existing queue spillback issues on the northbound right-turn at the Scott & Holland/Tunney's Pasture intersection, as well as the eastbound left-turn at the Parkdale & Scott intersection can be mitigated through corridor optimization, although these still represent constraints with respect to the assignment of site-generated traffic contributions.

It is recommended that the lengthening of the northbound right-turn lane at Scott & Holland/Tunney's Pasture and the eastbound left-turn auxiliary lane at Parkdale & Scott be coordinated through future 'complete streets' upgrades planned on Holland Avenue and with the development of properties on the south side of Scott Street west of Parkdale Avenue. The performance of the Parkdale & Scott intersection would also benefit from the re-introduction of the northbound left-turn auxiliary lane to mitigate queuing impacts on the northbound approach which are anticipated to result in spillback of approximately 150 metres and well beyond Bullman Street during both weekday peak hours.

The Parkdale & Colombine and Scott & Sir Frederick Banting/Ross intersections are shown to operate slightly above their theoretical capacities (i.e. LOS 'F') during the weekday afternoon peak hour as a result of high sidestreet delays, with their existing two-way stop-controlled configurations. Given that both locations are site access intersections and are directly related to the redevelopment of the site, potential mitigation strategies were investigated through Future Total Traffic conditions.

4.10.3.2 Future (2038) Total Traffic

An intersection capacity analysis has been undertaken using the Future (2038) Total Traffic volumes presented previously in **Exhibit 10**. The results of the intersection capacity analysis are summarized below.

A 'demonstration intersection' configuration was evaluated at Parkdale & Kichi Zibi Mikan, with this existing interchange modelled as a potential at-grade, signalized intersection, in alignment with the NCC's potential long-term vision for this location.

Table 4-8 – Intersection Capacity Analysis: Future (2038) Total Traffic

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Remic Rapids & Kichi Zibi Mikan	Signalized	A (0.27)	NBTL (0.54)	D (0.82)	**NBTL (0.98)**
> *Remic Rapids & Kichi Zibi Mikan*	Signalized [1]	A (0.27)	NBTL (0.48)	D (0.88)	**NBTL (0.98)**
Kichi Zibi Mikan & Tunney's Pasture	Signalized	D (0.81)	EBTL (0.85)	A (0.34)	NBTR (0.70)
> *Remic Rapids & Tunney's Pasture*	Signalized [1]	D (0.86)	EBTL (0.86)	A (0.36)	NBTR (0.70)
Parkdale & Goldenrod (right-in/right-out)	Unsignalized	C (19.1s)	EBR (19.1s)	B (13.3s)	EBR (13.3s)
Parkdale & Emmerson	Unsignalized	C (16.7s)	WBRL (16.7s)	D (28.1s)	WBRL (28.1s)
Parkdale & Colombine	Unsignalized	**F (115.6s)**	**EBRL (115.6s)**	**F (788.7s)**	**EBRL (788.7s)**
> *Parkdale & Colombine*	Signalized [1,2]	D (0.82)	SBTL (0.82)	D (0.83)	NBTR (0.85)
Parkdale & Burnside	Signalized	**E (0.96)**	**SBTL (0.96)**	B (0.62)	WBRL (0.67)
> *Parkdale & Burnside*	Signalized [1,3]	C (0.71)	SBT (0.71)	C (0.80)	WBRL (0.84)
Parkdale & Lyndale	Signalized	A (0.55)	SBTL (0.55)	A (0.47)	NBTR (0.47)
> *Parkdale & Lyndale*	Signalized [1]	C (0.73)	SBTL (0.73)	B (0.65)	NBTR (0.65)
Parkdale & Scott	Signalized	D (0.84)	**NBTRL (1.51)**	**F (1.20)**	**NBTRL (1.36)**
> *Parkdale & Scott*	Signalized [1,4]	D (0.81)	SBT (0.88)	D (0.81)	SBT (0.90)
Scott & Holland/Tunney's Pasture	Signalized	**E (0.91)**	**EBTR (0.94)**	**F (1.14)**	**NBL (1.53)**
> *Scott & Holland/Tunney's Pasture*	Signalized [1,5]	D (0.88)	EBTR (0.88)	**D (0.98)**	**WBL (0.98)**
Scott & Goldenrod/Smirle	Signalized	A (0.41)	SBL (0.64)	A (0.54)	EBTR (0.55)
> *Scott & Goldenrod/Smirle*	Signalized [1]	D (0.90)	EBTR (0.90)	C (0.75)	EBTR (0.75)
Scott & Sir Frederick Banting/Ross	Unsignalized	D (30.7s)	SBTRL (30.7s)	**F (469.1s)**	**SBTRL (469.1s)**
> *Scott & Sir Frederick Banting/Ross*	Signalized [1,6]	C (0.79)	EBT (0.79)	D (0.90)	**SBTRL (0.92)**
> *Parkdale & Kichi Zibi Mikan*	Signalized [1,7]	**E (0.97)**	**EBT (0.98)**	D (0.82)	WBL (0.86)

Notes:
[1] Corridor or signal timing plan optimization
[2] Proposed eastbound left-turn auxiliary lane and northbound left-turn auxiliary lane
[3] Introduce southbound left-turn auxiliary lane
[4] Re-introduce northbound left-turn auxiliary lane and extend eastbound left-turn auxiliary lane
[5] Extend northbound right-turn auxiliary lane
[6] Introduce eastbound left-turn auxiliary lane
[7] 'Demonstration at-grade intersection' with dual northbound and westbound left-turn auxiliary lanes

With the addition of Phase 1 site-generated traffic, and without any modifications to the intersection geometry or signal timings, a number of capacity constraints were identified at study area intersections, including Parkdale & Colombine, Parkdale & Scott, Scott & Holland/Tunney's Pasture, as well as Scott & Sir Frederick Banting/Ross. It is important to note that most of these constraints are also present under Existing or Future Background Traffic conditions.

Signal timing plan optimization was employed as a potential strategy to mitigate existing internal queuing identified on the northbound approach of the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersections during the weekday afternoon peak hour. Similar to Future Background Traffic Conditions, this optimization would result in a slight increase in capacity constraints on Kichi Zibi Mikan, however all movements at these intersections would

continue to remain within acceptable operating conditions (i.e. LOS 'E' or better) and Phase 1 of the Tunney's Pasture redevelopment will not exacerbate this existing queuing constraint. It should be noted as well that the far set of traffic signals stays green longer than the near set of signals when travelling north-south to help clear out queues within the centre median on Kichi Zibi Mikan at the Tunney's Pasture intersection.

The Parkdale & Colombine and Scott & Sir Frederick Banting/Ross intersections were shown to operate with an overall LOS 'F' at one or both of the weekday peak hours as a result of high sidestreet delays, with their existing two-way stop-controlled configurations. Upgrading these intersections to signalized and 'protected intersection' configurations would provide safe and comfortable controlled crossings to promote travel by active modes, while resolving these capacity issues, most of which a present under Existing or Future Background Traffic conditions.

The intersections of Scott Street with Parkdale Avenue and Holland/Tunney's Pasture are both expected to operate with an overall LOS 'F' during the weekday afternoon peak hour on the northbound approaches which represent the worst-performing approaches of each intersection. Similar to Future Background Traffic conditions, signal optimization was shown to mitigate these operational constraints, while contributing to a reduction in queuing associated with the northbound right-turn and eastbound through movements at Scott & Holland/Tunney's Pasture, as well as the eastbound left-turn at Scott & Parkdale. The following mitigation strategies are recommended to resolve capacity constrains at these two key study area intersections:

- **Parkdale & Scott** – Consistent with Future Background Traffic conditions, it is recommended that the northbound left-turn auxiliary lane be re-introduced at the Parkdale & Scott intersection to resolve background queuing constraints on this approach, while the eastbound left-turn auxiliary lane should be lengthened to better accommodate queuing under Existing and Future Background Traffic conditions.
- **Scott & Holland/Tunney's Pasture** – At the Scott & Holland/Tunney's Pasture intersection to support Existing and Future Background Traffic demand, consideration should be given to incorporating a longer storage length for the northbound right-turn auxiliary lane to resolve existing queuing constraints associated with this movement through the future Holland Avenue redesign.

The overall performance of both Scott & Holland/Tunney's Pasture and Parkdale & Scott will be tracked through the Monitoring Plan (see **Appendix N**).

In keeping with the NCC's potential long-term vision for Parkdale & KZM, this junction was modelled with a possible at-grade, signalized intersection configuration as part of this intersection capacity analysis exercise. This 'demonstration intersection' was shown to operate at acceptable levels of service during weekday peak hours, with results during the more constrained weekday morning peak hour approaching its theoretical capacity (i.e. LOS 'E'). This analysis identified the need for dual westbound and northbound left-turn auxiliary lanes to accommodate heavy vehicle volumes, in the order of 450 to 500 vehicles per hour on each movement during the weekday afternoon peak hour. With these dual turning lanes, queue lengths are anticipated to be manageable, particularly on the northbound approach and well within 100 metres. As such, based on this analysis, the conversion of Parkdale & KZM would be unlikely to impact traffic operations at Parkdale & Emmerson Avenue or further south during the weekday peak hours.

4.10.3.3 Future (2042) Total Traffic

An intersection capacity analysis has been undertaken using the Future (2042) Total Traffic volumes presented previously in **Exhibit 11**. The results of the intersection capacity analysis are summarized below.

Table 4-9 – Intersection Capacity Analysis: Future (2042) Total Traffic

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Kichi Zibi Mikan & Remic Rapids	Signalized	A (0.24)	NBTL (0.39)	C (0.76)	WBTRL (0.78)
> Kichi Zibi Mikan & Remic Rapids	Signalized [1]	A (0.26)	NBTL (0.38)	D (0.82)	WBTRL (0.85)
Kichi Zibi Mikan & Tunney's Pasture	Signalized	C (0.73)	EBTL (0.77)	A (0.28)	NBTR (0.48)

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
> Kichi Zibi Mikan & Tunney's Pasture	Signalized [1]	D (0.85)	EBTL (0.85)	A (0.30)	NBTR (0.48)
Parkdale & Goldenrod (right-in/right-out)	Unsignalized	C (18.0s)	EBR (18.0s)	B (12.5s)	EBR (12.5s)
Parkdale & Emmerson	Unsignalized	C (16.2s)	WBRL (16.2s)	C (24.8s)	WBRL (24.8s)
Parkdale & Colombine	Unsignalized	**F (59.7s)**	**EBRL (59.7s)**	**F (355.9s)**	**EBRL (355.9s)**
> Parkdale & Colombine	Signalized [1,2]	D (0.85)	SBTL (0.85)	C (0.74)	NBTR (0.74)
Parkdale & Burnside	Signalized	**E (0.94)**	**SBTL (0.94)**	A (0.59)	WBRL (0.67)
> Parkdale & Burnside	Signalized [1,3]	C (0.71)	SBT (0.71)	C (0.80)	WBRL (0.82)
Parkdale & Lyndale	Signalized	A (0.55)	SBTL (0.55)	A (0.46)	NBTR (0.46)
> Parkdale & Lyndale	Signalized [1]	C (0.73)	SBTL (0.73)	B (0.64)	NBTR (0.64)
Parkdale & Scott	Signalized	C (0.76)	**NBTRL (1.16)**	**F (1.05)**	**NBTRL (1.11)**
> Parkdale & Scott	Signalized [1,4]	C (0.80)	SBT (0.86)	D (0.82)	SBT (0.88)
Scott & Holland/Tunney's Pasture	Signalized	B (0.64)	NBL (0.77)	D (0.90)	EBTR (0.91)
> Scott & Holland/Tunney's Pasture	Signalized [1,5]	D (0.87)	EBTR (0.88)	**E (0.98)**	**WBL (0.98)**
Scott & Goldenrod/Smirle	Signalized	A (0.40)	SBL (0.64)	A (0.53)	EBTR (0.53)
> Scott & Goldenrod/Smirle	Signalized [1]	D (0.87)	EBTR (0.87)	D (0.83)	EBTR (0.83)
Scott & Sir Frederick Banting/Ross	Unsignalized	(23.6s)	SBTRL (23.6s)	F (205.1s)	SBTRL (205.1s)
> Scott & Sir Frederick Banting/ Ross	Signalized [1,6]	B (0.65)	EBT (0.65)	D (0.84)	WBTR (0.86)
Parkdale & Kichi Zibi Mikan	Signalized [1,7]	**E (0.95)**	**EBT (0.97)**	C (0.79)	WBL (0.84)

Notes: *[1] Corridor or signal timing plan optimization*
[2] Proposed eastbound left-turn auxiliary lane and northbound left-turn auxiliary lane
[3] Introduce southbound left-turn auxiliary lane
[4] Re-introduce northbound left-turn auxiliary lane and extend eastbound left-turn auxiliary lane
[5] Extend northbound right-turn auxiliary lane
[6] Introduce eastbound left-turn auxiliary lane
[7] 'Demonstration at-grade intersection' with dual northbound and westbound left-turn auxiliary lanes

Due to the significant reduction in office land uses in Phase 2, site-generated traffic during the weekday afternoon peak hour is expected to decrease by approximately 24% by 2042 in comparison with its peak in 2038, while peak direction volumes are expected to decrease by as much as 28%.

The mitigation measures recommended under Future (2038) Total Traffic conditions were carried forward to allow for the study area intersections to function within acceptable levels of service (i.e. LOS 'E' or better), however due to the significant decrease in volumes expected by 2042, as described above, study area intersections will experience notable improvements in relation to the initial development phase.

4.10.3.4 Future (2046) Total Traffic

An intersection capacity analysis has been undertaken using the Future (2046) Total Traffic volumes presented previously in **Exhibit 12**. The results of the intersection capacity analysis are summarized below.

Table 4-10 – Intersection Capacity Analysis: Future (2046) Total Traffic

Intersection	Traffic Control	AM Peak		PM Peak	
		Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)	Overall LOS (V/C or Delay)	Most Constrained Movements (V/C or Delay)
Kichi Zibi Mikan & Remic Rapids	Signalized	A (0.24)	NBTL (0.30)	C (0.71)	WBTRL (0.77)
Kichi Zibi Mikan & Tunney's Pasture	Signalized	C (0.72)	EBTL (0.77)	A (0.24)	NBTR (0.29)
Parkdale & Goldenrod (right-in/right-out)	Unsignalized	C (17.2s)	EBR (17.2s)	B (11.9s)	EBR (11.9s)
Parkdale & Emmerson	Unsignalized	C (15.7s)	WBRL (15.7s)	C (22.2s)	WBRL (22.2s)
Parkdale & Colombine	Unsignalized	**E (40.0s)**	**EBRL (40.0s)**	**F (88.5s)**	**EBRL (88.5s)**
>Parkdale & Colombine	Signalized [1,2]	C (0.76)	SBTL (0.76)	B (0.66)	NBTR (0.66)
Parkdale & Burnside	Unsignalized	**E (0.93)**	**SBTL (0.93)**	A (0.55)	WBRL (0.67)
>Parkdale & Burnside	Signalized [1,3]	B (0.70)	SBT (0.70)	C (0.78)	WBRL (0.82)
Parkdale & Lyndale	Signalized	A (0.55)	SBTL (0.55)	A (0.45)	NBTR (0.45)
>Parkdale & Lyndale	Signalized [1]	C (0.73)	SBTL (0.73)	B (0.62)	NBTR (0.62)
Parkdale & Scott	Signalized	B (0.67)	NBTRL (0.85)	**E (0.92)**	**EBL (0.93)**
> Parkdale & Scott	Signalized [1,4]	C (0.79)	SBT (0.87)	C (0.73)	EBL (0.83)
Scott & Holland/Tunney's Pasture	Signalized	A (0.60)	NBL (0.74)	D (0.85)	EBTR (0.85)
> Scott & Holland/Tunney's Pasture	Signalized [1,5]	D (0.86)	EBTR (0.87)	D (0.82)	EBTR (0.82)
Scott & Goldenrod/Smirle	Signalized	A (0.39)	SBL (0.64)	A (0.50)	EBTR (0.50)
> Scott & Goldenrod/Smirle	Signalized [1]	C (0.79)	EBTR (0.79)	C (0.79)	EBTR (0.79)
Scott & Sir Frederick Banting/Ross	Signalized	C (19.7s)	SBTRL (19.7s)	F (72.9s)	SBTRL (72.9s)
> Scott & Sir Frederick Banting/Ross	Signalized [1,6]	C (0.72)	EBT (0.72)	C (0.80)	WBTR (0.83)
Parkdale & Kichi Zibi Mikan	Signalized [1,7]	**E (0.94)**	**EBT (0.97)**	C (0.76)	WBL (0.83)

Notes: [1] *Corridor or signal timing plan optimization*
[2] *Proposed eastbound left-turn auxiliary lane and northbound left-turn auxiliary lane*
[3] *Introduce southbound left-turn auxiliary lane*
[4] *Re-introduce northbound left-turn auxiliary lane and extend eastbound left-turn auxiliary lane*
[5] *Extend northbound right-turn auxiliary lane*
[6] *Introduce eastbound left-turn auxiliary lane*

As indicated in **Table 4-10** above, with the mitigation measures proposed in the previous analysis years, all study area intersections are shown to continue operating at acceptable levels of service (LOS 'E' or better) under Future (2046) Total Traffic conditions. Without signalization, the Parkdale & Colombine and Scott & Sir Frederick Banting/Ross intersections are shown to continue operating at LOS 'F' during the weekday afternoon peak hour.

By the study horizon under weekday afternoon peak hour conditions, total site-generated traffic volumes are expected to decrease significantly by approximately 46% in comparison with the highest vehicular activity in Phase 1 (2038), while peak direction volumes are expected to decrease by about 54% within the same timeframe. Longstanding queue spillback constraints on the northbound approach of the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersections identified under Existing Conditions, as well as Phases 1 and 2 will be resolved by full build-out, as on-site uses evolve and directional splits become increasingly more balanced.

4.11 Geometric Review

4.11.1 Auxiliary Lane Analysis

4.11.1.1 Auxiliary Left-Turn Lane Requirements (Signalized Intersections)

A review of auxiliary left-turn lane storage requirements was completed under Future (2038) and Future (2046) Total Traffic conditions, comparing the highest queue lengths on each intersection approach under weekday morning and afternoon peak hours. The review compared the projected 95th percentile queue lengths from Synchro operational results and the standard queue length calculation based on the following equation:

$$Storage\ Length = \frac{NL}{C} \times 1.5$$

Where:
N = number of vehicles per hour
L = Length occupied by a vehicle in the queue = 7 m
C = number of traffic signal cycles per hour

The results of the auxiliary left-turn lane analysis are summarized below in **Table 4-11** below. It should be noted that the analysis was generally limited to movements which will experience contributions from site-generated traffic volumes.

Table 4-11 – Auxiliary Left-Turn Storage Analysis at Signalized Intersections

Intersection	Approach	Future (2038) Total Traffic		Future (2046) Total Traffic		Ex. Parallel Lane OR Planned (P) Storage Length (m)	Storage Deficiency (m)		Recommended Min. Additional Storage (m)
		Max. 95th % Queue (m)	Max. Calc. Queue (m)	Max. 95th % Queue (m)	Max. Calc. Queue (m)		2038	2046	
KZM & Remic Rapids/ Tunney's Pasture [1]	NB	95	115	30	40	55 [2] (Ex.)	- [3]	-	None - Queuing issues resolvable within study timeframe
Parkdale & Colombine	NB	35	35	20	20	-	37	20	37
	EB	55	55	25	25	-	55	25	55
Parkdale & Scott [1]	EB	70	115	75	95	50 (Ex.)	50	45	Not at this time - Queuing not exacerbated by site traffic
	WB	30	30	25	25	55 (Ex.)	-	-	-
	NB	40	40	25	25	40 (P)	-	-	40 [4]
	SB	30	30	20	20	65 (Ex.)	-	-	-
Scott & Holland/ Tunney's Pasture [1]	EB	10	20	15	15	50 (Ex.)	-	-	-
	WB	85	70	65	55	135 (Ex.)	-	-	-
	NB	74	60	50	50	70 (Ex.)	-	-	- [5]
	SB	71	50	25	20	65 (Ex.)	-	-	- [5]
Scott & Sir Frederick Banting/Ross	EB	40	35	25	20	40 (P)	-	-	40

Notes:
[1] Corridor or signal optimization
[2] Refers to separation distance between KZM and first internal Tunney's Pasture intersection at Goldenrod Driveway.
[3] No auxiliary lane storage lane deficiencies. Technically a northbound thru-left but serves as a de-facto left-turn lane.
[4] Northbound left-turn auxiliary lane triggered by Future Background Traffic and not exclusively as a result of site-generated traffic.
[5] Queuing deficiencies remain within one vehicle length and are resolvable through full build-out of the subject site.

The results in **Table 4-11** above indicate several storage deficiencies associated with left-turning movements at the study area intersections. Further review indicates that most of these constraints are attributable to existing conditions or background traffic.

The shared northbound approach of the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersection serves as a de-facto left-turn lane, given that the vast majority of traffic turns left onto KZM, while only nominal traffic continues northbound to Remic Rapids. Existing queue spillback constraints identified on the northbound approach under Existing Conditions will not be exacerbated by Phases 1 and 2 and will be mitigated by signal plan optimization. Ultimately, these existing queuing issues will be resolved upon full build-out of the site, as on-site land uses evolve over time.

Based on the queue length analysis conducted for this study, it is recommended that the Parkdale & Colombine intersection be configured with northbound and eastbound left-turn auxiliary lanes with at least 37 metres and 55 metres of available storage capacity, respectively, to accommodate the highest weekday peak hour traffic generation of the subject site in 2038.

The re-introduction of the northbound left-turn auxiliary lane at the Parkdale & Scott intersection is required with or without site-generated traffic contributions and was exclusively triggered by growth in background travel demand. Based on the most constrained Future (2038) Total Traffic scenario, a vehicle storage length of 40 metres would be sufficient to accommodate background and site-generated traffic contributions. It is noteworthy that this storage length is very similar to that of the dedicated left-turn lane which existed on the northbound approach until about 2021 and therefore it should be feasible to re-introduced a dedicated turning lane with similar dimensions at this location in the future, as required.

At the Scott & Holland intersection, slight queue spillback is identified beyond the defined storage lengths of the northbound and southbound left-turn auxiliary lanes under Future (2038) Total Traffic conditions; however, these overages are shown to remain within one car length and will be resolved through the full build-out of the site.

The eastbound left-turn movement at Parkdale & Scott has existing queuing deficiencies which show spillback exceeding the 50-metre storage capacity on this approach by approximately 65 metres. Through the analysis undertaken in this study, it was determined that that this queuing deficiency is manageable through signal optimization. Further, the 'net site-generated' trip contributions are anticipated to be nominal at 7 to 13 vehicles during the most constrained weekday peak hour, equivalent to less than one vehicle per cycle length. Any decision to modify this left-turn auxiliary lane would need to be carefully undertaken by City technical staff, with consideration of access implications for properties on the south side of Scott Street. It should be noted that the performance of the Parkdale & Scott intersection, the overall operations of the intersection will be tracked at regular intervals through the execution of the Monitoring Plan (see **Appendix N**) accompanying this TIA.

4.11.1.2 Auxiliary Right-Turn Lane Requirements (Signalized Intersections)

Section 9.14 of TAC suggests that auxiliary right-turn lanes should be considered when more than 10% of vehicles on an approach are turning right and when the peak hour demand exceeds 60 vehicles. The purpose of this guideline is to mitigate operational impacts to through-traffic, particularly on high-speed arterial roadways, and may not be applicable in all circumstances. The highest of the weekday morning and weekday afternoon peak hour volumes under Future (2038) Total Traffic and Future (2046) Total Traffic conditions were considered in this evaluation. Auxiliary right-turn lane warrants were not evaluated for movements with existing right-turn lanes and this evaluation was limited to site access intersections only.

As the Parkdale & Colombine intersection meets both criteria to trigger a southbound right-turn auxiliary lane and to alleviate queuing pressures on the southbound through movement, it is recommended that a dedicated turning lane with 20 metres of vehicle storage be introduced at this location, based on the queuing analysis undertaken for this study considering the most constrained Future (2038) Total Traffic projections.

4.12 Future MMLOS Analysis

4.12.1 Segment-Based MMLOS

Segment-based MMLOS results for boundary street segments adjacent to the subject site are provided in **Table 4-12** below for future conditions.

Based on relevant policy documents, future potential improvements to the adjacent road network are outlined below which are most likely to have a bearing on the segment-based MMLOS analysis. On Kichi Zibi Mikan, it is possible that a pedestrian pathway could be implemented on the south side of this parkway per the Ottawa River South Shore Riverfront Park Plan (NCC, 2018). The 'Parkdale Greenway' envisioned in the Scott Street CDP was assumed to exist along the eastern boundary of the site for the purposes of this segment-based MMLOS analysis. The plans for both of the above-noted improvements are highly-conceptual at this time and therefore the scores below provide an overall indication of the benefits of each initiative from a MMLOS evaluation perspective.

Table 4-12 – Segment-Based MMLOS Analysis Results: Future Conditions

Segment	Travel Mode	Side	Overall LOS	Critical LOS	Target LOS	Deviation[1]
Kichi Zibi Mikan, Island Park to Parkdale	Pedestrian (PLOS)	North	B	B	A	-1
		South [2]	B	B		-1
	Bicycle (BLOS)	North	B	D	B	0
		South	B	E		0
	Transit (TLOS)	North	E	N/A	E	0
		South	D			+1
	Public Realm (PRLOS)	Both Sides	C	N/A	B	-1
Parkdale Avenue, Goldenrod to Burnside	Pedestrian (PLOS)	West [3]	B	B	A	-1
		East	B	B		-1
	Bicycle (BLOS)	West [3]	B	B	B	0
		East	D	D		-2
	Public Realm (PRLOS)	Both Sides	B	N/A	B	0
Parkdale Avenue, Burnside to Lyndale	Pedestrian (PLOS)	West [3]	B	C	A	-1
		East	B	C		-1
	Bicycle (BLOS)	West [3]	B	B	B	0
		East	D	D		-2
	Public Realm (PRLOS)	Both Sides	A	N/A	B	+1
Parkdale Avenue, Lyndale to Scott	Pedestrian (PLOS)	West [3]	B	C	A	-1
		East	B	C		-1
	Bicycle (BLOS)	West [3]	B	B	B	0
		East	D	D		-2
	Public Realm (PRLOS)	Both Sides	A	N/A	B	+1

Notes: [1] *A comparison of 'Overall LOS' and 'Target LOS'. 'Critical LOS' is shown for information purposes only.*
[2] *Pedestrian pathway on the south side of Kichi Zibi Mikan per Ottawa South Shore Riverfront Park Plan (NCC, 2018).*
[3] *Parkdale Greenway on the west side of Parkdale Ave per Scott St CDP.*

The results of the segment-based MMLOS analysis presented in **Table 4-12** above indicate that none of the boundary street segments meet both the PLOS or BLOS targets on both sides due to either a lack of separation between cyclists, pedestrians and motorized traffic or distances between controlled crossings. Both elements, however, have the potential to improve significantly if the additional active transportation facilities are introduced per the NCC and City of Ottawa policy planning documents, including a pedestrian pathway on the south side of

Kichi Zibi Mikan and the future potential 'Parkdale Greenway' on the west side of Parkdale Avenue. It is recognized that both of these are long-term initiatives that may not necessarily occur within this study timeframe.

On either Kichi Zibi Mikan or Parkdale Avenue within the study area, if there is a high-quality, bi-directional facility on one side of the roadway, a substandard score on the other side of the road could be tolerated, provided there are frequent controlled crossing points.

Segment-based Transit LOS will have a similar score under both existing and future conditions, given that there are no plans to introduce Transit Priority Measures on Kichi Zibi Mikan. The Public Realm LOS scores are based on whether there is available right-of-way to potentially introduce improvements to the pedestrian environment and therefore the scores are similar to existing conditions, given that functional-level plans do not exist for these improvements at this time.

4.12.2 Intersection-Based MMLOS

Future intersection-based MMLOS results are summarized in **Table 4-13** below and were evaluated based on Future (2038) Total Traffic conditions. The analysis assumes that all signalized study area intersections, excluding the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersections, will be 'fully protected' and include dedicated cycling infrastructure such as 'crossrides' on all approaches under future conditions.

Table 4-13 – Intersection-based MMLOS Results: Future Conditions

Intersection	Travel Mode	Overall LOS	Critical LOS	MMLOS Target	Deviation [1]
Kichi Zibi Mikan & Tunney's Pasture / Remic Rapids	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	D	E	B	-2
	Transit (TLOS)	C	D	E	+2
	Auto (ALOS) [1]	D	D	E	+1
Parkdale & Colombine	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	C	D	B	-1
	Transit (TLOS)	B	C	E	+3
	Auto (ALOS) [1]	C	C	E	+2
Parkdale & Burnside	Pedestrian (PLOS)	A	A	A	0
	Bicycle (BLOS)	B	C	B	0
	Transit (TLOS)	A	B	E	+4
	Auto (ALOS) [1]	B	B	E	+3
Parkdale & Lyndale	Pedestrian (PLOS)	A	B	A	0
	Bicycle (BLOS)	A	A	B	+1
	Transit (TLOS)	B	C	E	+3
	Auto (ALOS) [1]	B	B	E	+3
Parkdale & Scott	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	B	B	A	-1
	Transit (TLOS)	C	E	E	+2
	Auto (ALOS) [1]	C	D	E	+2
Scott & Holland/Tunney's Pasture	Pedestrian (PLOS)	B	C	A	-1
	Bicycle (BLOS)	A	B	A	0
	Transit (TLOS)	C	D	D	+1
	Auto (ALOS) [1]	D	D	E	+1
Scott & Goldenrod/Smirle	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	A	A	B	+1
	Transit (TLOS)	B	D	D	+2
	Auto (ALOS) [1]	C	C	E	+2
Scott & Sir Frederick Banting/Ross	Pedestrian (PLOS)	B	B	A	-1
	Bicycle (BLOS)	B	D	A	-1
	Transit (TLOS)	B	D	D	+2
	Auto (ALOS) [1]	D	D	E	+1

Notes:
[1] 'A comparison of 'Overall LOS' and 'Target LOS'. 'Critical LOS' is shown for information purposes only.
[2] Auto Level of Service (ALOS) is based on weekday peak period volumes per the MMLOS Guidelines Update (May 2025).

The results of the analysis presented in **Table 4-13** above indicate that the majority of signalized study area intersections are one deviation point shy of achieving their respective PLOS target scores under Future (2038) Total Traffic conditions. These deficiencies can be attributed to the number of travel lanes that the pedestrian is required to cross, which is the case at the Scott & Holland/Tunney's Pasture intersection, and of particular importance as this is the nearest intersection to the Tunney's Pasture LRT station. The PLOS targets are met for the intersections of Parkdale with Burnside and Lyndale, assuming that shorter cycle lengths in the order of 80s are maintained to reduce delays for pedestrian and cyclists. Consideration should be given to implementing Leading Pedestrian Intervals (LPIs), 'right turn on red' prohibitions and high-visibility crosswalk markings at all signalized study area intersections wherever feasible to provide enhanced safety and comfort for pedestrians at the remaining study area intersections, although these measures will not be sufficient to achieve the PLOS targets. Cycle lengths below 120s have been carried forward, wherever feasible, to reduce crossing delays for pedestrians and cyclists, as well as reduce travel delays for transit vehicles.

BLOS targets are not met at the following intersections: Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture, Parkdale & Colombine, Parkdale & Scott, as well as Scott & Sir Frederick Banting/Ross. Failure to meet the BLOS targets is primarily due to a lack of cycling infrastructure at the Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture intersections for cyclists on all approaches, while the number of travel lanes crossed and right-turn volumes impact the level of traffic stress for cyclists. Consideration should be given to implementing additional measures for cyclists, including two-stage left-turn bike boxes, Leading Bike Intervals (LBIs), prohibiting 'right turns on red', wherever feasible, to improve operating conditions for these vulnerable road users; however, it is noted that these measures may still not result in an achievement of the respective BLOS targets and may not always be feasible to implement in a constrained urban environment.

The TLOS and ALOS targets are met or exceeded for all study area signalized intersections under Future (2038) Total Traffic conditions.

4.13 Summary of Recommended Network Improvements

Based on the analysis conducted for this study, the following phased mitigation strategy is required to address the multi-modal site-generated travel demands:

Near-Term Mitigation Measures

Based on a review of Existing conditions, the following near-term modifications were identified as being required to support Tunney's Pasture at the onset of redevelopment:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture
  - Optimize signal timing to reduce existing internal queue spillback experienced on the northbound approach; no physical modifications required.
- Parkdale & Scott
  - Optimize traffic signal timings to resolve constraints on the eastbound approach; no physical modifications required.
- Scott & Sir Frederick Banting/Ross (Developer-Funded with Repayment Mechanism)
  - Upgrade the existing unsignalized intersection to a 'protected intersection' configuration. Signalization of this intersection aligns with the Scott Street CDP which also supports the prohibition of north-south through movements. This upgrade will provide a controlled active transportation crossing on this section of Scott Street.

Phase 1 Mitigation Measures

To address multi-modal transportation constraints identified under Future (2038) Total Traffic conditions, the most constrained analysis scenario in this study, the following mitigation measures are proposed to accommodate the combined multi-modal impacts of background and site-generated travel demands:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture

  - Constraints identified under Existing conditions are not significantly exacerbated in Phase 1. Continue to optimize traffic signal timings; physical modifications are not recommended nor required.

- Parkdale & Colombine (Developer-Funded with Repayment Mechanism)
  - Upgrade the existing unsignalized intersection to a 'protected intersection' (signalized). This will provide an additional controlled crossing for active users on Parkdale Avenue north of Burnside Avenue which is supported by the Scott Street CDP.
  - Introduce a 37-metre northbound auxiliary lane and a 55m eastbound left-turn auxiliary lane.
- Scott & Holland/Tunney's Pasture (Funded through City Capital Projects)
  - Signal timing plan optimization to support transit reliability and overall improvements to transportation operations at the Scott & Holland/Tunney's Pasture intersection (to be undertaken by the City).
  - Consider increasing the northbound right-turn auxiliary lane length to resolve Existing queuing constraints. Given that this is a well documented issue that is not exacerbated by site-generated traffic, it is anticipated that any required physical modifications will be designed and implemented in conjunction with the future Holland Avenue 'complete streets' renewal project.
- Parkdale & Scott (Funded through City-led Initiatives or Developer-Funded with Repayment Mechanism)
  - Re-introduce a northbound left-turn auxiliary lane with 40 metres of storage to accommodate growth in Future Background travel demand. This dedicated turning lane would be required with or without site-generated traffic contributions and is therefore not the responsibility of the proponent to design or implement.
  - Lengthen the eastbound left-turn auxiliary lane to address longstanding queue spillback on this movement. This queuing deficiency is an Existing issue that will not be significantly impacted with the addition of site-generated traffic contributions.
- The City should also consider implementing the following multi-modal initiatives to support the redevelopment of the site through its own funding mechanisms:
  - Boundary Street 'Protected Intersections': It is recommended that each of the signalized intersections along the Scott Street and Parkdale Avenue frontages of the site be upgraded to 'protected intersections', including Parkdale & Burnside and Parkdale & Lyndale. Any geometric improvements required at site access intersections on either Parkdale Avenue or Scott Street to facilitate 'protected intersection' upgrades will be covered through a Roadway Modification Application (RMA), as discussed previously.
  - Holland Avenue Cycling Infrastructure: The City should implement dedicated cycling infrastructure on Holland Avenue to provide a safe north-south active transportation corridor and divert cyclists from more congested parallel routes such as Parkdale Avenue and further encourage a shift away from automobile use for short trips. Holland Avenue will serve as an important north-south cycling route to support the redevelopment of Tunney's Pasture, given its alignment with the primary gateway to the site and continuous linear connectivity to the Central Experimental Farm's pathway system.
  - Transit: To ensure all resident of Tunney's Pasture are within an acceptable walking distance to public transit (particularly in the northwestern area of the site where the walking distance to Tunney's LRT station is in excess of 800 metres), OC Transpo should consider reinstating local bus service within Tunney's Pasture, which is being removed through the City's New Ways to Bus initiative, and realign the route(s) to conform to the collector road hierarchy of the proposed internal street network. If local transit service is not available during the early stages of development, an early transit service agreement may be required with OC Transpo until regular service is warranted by community occupancy levels.
  - Parkdale Greenway: An active transportation corridor with separated space for cyclists and pedestrians on the west side of Parkdale Avenue and abutting the site should be introduced. This corridor is referred to as the 'Parkdale Greenway' in the Scott Street CDP and is expected to be built in two primary phases as part of Phase 1 (north site limits to just south of Burnside) and Phase 3 (Burnside Avenue to Scott Street).
    - Phase 1 – Parkdale Greenway (Northern site limits to just south of Burnside)

- Proposed Internal Active Transportation Connections (Developer-Funded)
    - Eglantine (at Tunney's Pasture) to Parkdale (at Burnside)
        - Providing a direct connection from Eglantine Driveway to Parkdale (at Burnside) and the Mechanicsville community further east.
    - Proposed mid-block connection east of Brooke Claxton Building
        - A proposed north-south active transportation connection linking Colombine Driveway to Goldenrod Driveway within a servicing easement.
    - Tunney's Pasture Driveway (Yarrow to Scott)
        - A proposed southbound buffered bike lane linking Yarrow Driveway to Scott Street.

Phase 2 Mitigation Measures

- The multi-modal transportation analysis undertaken for Phase 2 did not identify the need for any additional mitigation measures to support additional vehicular traffic beyond those identified for Phase 1, given that the initial phase of development is the most critical in terms of traffic generation.
- Proposed Internal Active Transportation Connections (Developer-Funded)
    - Eglantine (at Goldenrod) to Sir Frederick Banting
        - This proposed active transportation connection will provide an east-west link between Goldenrod Driveway and Sir Frederick Banting Driveway and contribute to the formation of a broader connection further east to Parkdale (at Burnside) and the Mechanicsville community.
    - Yarrow (at Goldenrod) to Sir Frederick Banting
        - This proposed active transportation connection will provide an east-west link between Goldenrod Driveway and provide a more direct connection between the southwest corner of the site and Yarrow Driveway and the rapid transit station.

Full Build-out Mitigation Measures

The mitigation strategy at full build-out will generally carry forward measures recommended in Phase 1, with the following notable changes, primarily focused on improving active transportation connectivity as resulting property parcels within Tunney's Pasture are developed:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture
    - Existing queue spillback constraints on the northbound approach identified under Existing and Phase 1 conditions will be resolved by full build-out, as on-site land uses evolve over time.
- Proposed Internal Active Transportation Connections (Developer-Funded)
    - Sorrel (at Tunney's Pasture) to Parkdale (at Lyndale)
        - This connection is dependent on the removal of the Main Statistics Building and its alignment is dependent on the built from proposed for this property parcel.
    - Transitway and Parkdale Greenway (Burnside Avenue to Scott Street)
        - Upgrades to the existing pathway linking Tunney's Pasture Driveway to Scott Street to incorporate dedicated space for pedestrians and cyclists.
        - Implement the remainder of the Parkdale Greenway from just south of Burnside Avenue to Scott Street to accommodate bi-directional cycling facilities and a pedestrian facility on the west side of Parkdale Avenue.
    - Kichi Sibi Winter Trail/Scott Street Connector
        - Formalization of the existing trail along the western edge of the site, with linkages to Sir Frederick Banting and the Carleton Avenue underpass.

Any geometric improvements required at the site access intersections on either Scott Street or Parkdale Avenue relating to 'protected intersection' upgrades will be addressed through the functional-level design Roadway Modification Application (RMA) process in support of this TIA (see **Appendix O**).

5 Conclusion

Tunney's Pasture is presently a single-use, auto-oriented federal government employment campus. As the subject site is transformed into a mixed-use, transit-supportive and 15-minute community, travel patterns and mode choice among site-generated trips will change significantly.

Based on traffic data collected at the onset of the study, the site historically generated roughly 4,000 to 5,000 person-trips per weekday peak hour prior to the COVID-19 pandemic. As Tunney's Pasture is gradually redeveloped, this new community is expected to generate significantly more person-trips, with estimates of up to 7,518, 6,919 and 6,407 two-way person-trips in 2038 (Phase 1), 2042 (Phases 1 & 2) and 2046 (Phases 1, 2 & 3), respectively, during each weekday peak hour.

Segregating person-trips by the mode share targets established through this TIA process and accounting for existing site-generated vehicular trips observed through traffic count data collected for this study, the proposed development is anticipated to generate up to 260, -170 and -517 'net new' two-way weekday peak hour vehicle-trips in 2038, 2042 and 2046, respectively. These 'net new' site-generated trips were determined by comparing total site-generated traffic at each development phase with post-pandemic site-generated traffic observations adjusted to reflect the potential for federal civil servants to return to the office 5 days a week.

Dispersed amongst six access points, the site-generated traffic impacts are shown to be highest during Phase 1 on the immediate boundary street intersections, with impacts decreasing farther away from the site as a result of more potential arterial and regional travel routes.

The high non-auto mode share targets established for this study will be supported by the Complete Streets infrastructure of the proposed internal street network in combination with active transportation linkages planned throughout the site, as well as a host of site-specific Transportation Demand Management (TDM) measures. City initiatives such as the Scott Street Complete Street upgrades, the LRT Stage 2 Western Extension, the 'Parkdale Greenway' active transportation corridor and Holland Avenue cycling infrastructure will contribute to reductions in automobile usage during the weekday peak hours for both background and site-generated trips.

The existing travel patterns associated with Tunney's Pasture are a direct result of employer start and end times, with most trips being inbound in the morning and outbound in the afternoon. With the addition of residential land uses in Phase 1, an increase in site traffic generation of approximately 420 vehicle trips is expected above pre-pandemic traffic count data. When considering that residential-based traffic patterns follow an opposing flow to office-based land uses, the vast majority of this additional traffic does not significantly exacerbate conditions and results in only a 5% increase (80 vehicle trips) in the peak direction of flow. To this end, the site's transformation from a traffic *generator* to a traffic *source* has the positive effect of utilizing available roadway capacity that is opposite from the peak direction of travel which mitigates operational impacts to the adjacent road network.

It is recognized that Phase 1 of the proposed development will involve the loss of parking for office/employment uses which may remain on-site through the redevelopment timeframe of Tunney's Pasture. Understanding the long-term transition of the site to maximize multi-modal transportation options, Canada Lands Company (CLC) is committed to working with the federal tenants at Tunney's Pasture to develop a Parking Management Strategy. This strategy will manage the remaining parking supply and work to satisfy the functional need of the office uses still existing on site without creating spillover demand to adjacent communities.

The Parking Management Strategy will review the implications of this loss of parking supply so that these effects can be better understood and mitigated accordingly, with consideration of the four main strategies outlined below:

1) Determine if the remaining land outside the property parcel that is being disposed to public market can adequately fulfill the office parking demand;
2) Determine if the parking demand currently accommodated by the surface parking lot can be served by other parking lots on the remaining office lands across the Tunney's Pasture site;
3) Determine if additional parking (surface or structured) on the remaining office lands across the Tunney's Pasture site is required; and
4) Establish whether Transportation Demand Management (TDM) measures are required to reduce parking demand in alignment with the remaining parking supply.

To address the intersection capacity and queuing constraints identified through this study, the following mitigation measures are proposed to accommodate the combined impacts of background and site-generated travel demands:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture – Internal queue spillback on the northbound approach identified under Existing conditions is not significantly exacerbated in Phase 1 and is resolved by full build-out. Optimize traffic signal timings, without the need for physical modifications.
- Parkdale & Colombine – Upgrade the existing unsignalized intersection to a 'fully protected' intersection configuration. Introduce an auxiliary northbound left-turn lane with 37 metres of storage and an eastbound left-turn auxiliary lane with 55 metres of storage.
- Parkdale & Scott – Employ regular signal optimization to address existing queuing constraints on the eastbound and northbound capacity constraints expected with the addition of Phase 1 site-generated traffic and support the reliability of transit routes travelling through this intersection. The re-introduction of the northbound left-turn auxiliary lane with 40 metres of storage, as well as possible increase in the eastbound left-turn storage lane length, if feasible, should be considered to accommodate Existing and Future Background travel demand.
- Scott & Holland/Tunney's Pasture – Regular signal optimization will support improved transit reliability within the study timeframe at this key study area intersection. It also is recommended that consideration be given to reinstating a longer northbound right-turn auxiliary lane through the future City-led Holland Avenue 'complete street' renewal project.
- Scott & Goldenrod/Smirle – No geometric modifications are proposed to this recently-constructed 'protected intersection' which was shown to perform acceptably throughout the study timeframe. It is understood based on feedback received from City technical staff that the north leg of this intersection will remain as an exclusive bus-only access after LRT Stage 2 is open for full revenue service and therefore this intersection will not serve as a direct multi-modal connection from Scott Street to Tunney's Pasture.
- Scott & Sir Frederick Banting/Ross – Upgrade the existing unsignalized intersection to a 'protected intersection' configuration and incorporate traffic calming measures to mitigate north-south cut-through traffic at this intersection. An eastbound left-turn auxiliary lane with 40 metres of storage is also proposed as part of this intersection upgrade.

The remaining study area intersections were determined to be operating at an acceptable Level of Service (LOS 'E') beyond the 2046 study horizon year, based on the intersection capacity analysis conducted for this study.

Through the intersection capacity and queuing analysis conducted for this study, it was determined that a Roadway Modification Application (RMA) is required to accommodate off-site geometric modifications at the site access intersections to support the redevelopment of Tunney's Pasture, including Parkdale & Colombine, Parkdale & Burnside, Scott & Holland/Tunney's Pasture, as well as Scott & Sir Frederick Banting/Ross.

A Multi-Modal Level of Service (MMLOS) analysis was conducted for the roadway segments and signalized intersections within the study area. Based on the results of the analysis, it is recommended that the City consider implementing measures, including 'protected intersections' at each of the boundary street intersections, an active transportation corridor with separated space for cyclists and pedestrians on the west side of Parkdale Avenue adjacent to the site (referred to as the 'Parkdale Greenway'), dedicated cycling infrastructure on Holland Avenue, as well as reinstating local bus service within Tunney's Pasture.

A Monitoring Plan was prepared and is attached to this study to support the overall TIA process. This document is intended serve as a guide to track various transportation-related aspects as the site is built out, such as confirming timelines to implement mitigation strategies outlined previously, verifying whether mode share targets are being met, evaluating the effectiveness of the traffic calming measures implemented to support the site's redevelopment, as well as tracking on-site parking occupancy rates. If there is a disconnect between key TIA study parameters and observed data collected as part of the Monitoring Plan, this strategic process provides opportunities to intervene and correct course, as needed.

A Neighbourhood Traffic Calming Strategy is also appended to this TIA to provide the City with potential solutions regarding the mitigation of any existing cut-through traffic issues within communities directly bordering Tunney's Pasture, including Mechanicsville, Hintonburg, Wellington Village and Champlain Park that may be exacerbated by the proposed development.

Based on the findings of this study, it is the overall opinion of Arcadis that the proposed development will integrate well with and can be safely accommodated by the adjacent transportation network, with consideration of the recommendations outlined above.

Appendix A – TIA Screening Form

City of Ottawa 2017 TIA Guidelines Screening Form

*Revised per City of Ottawa update to the TIA Guidelines, effective June 14, 2023

1. Description of Proposed Development

Municipal Address	Tunney's Pasture Campus - Various municipal addresses including 120 Parkdale Avenue, 101 & 203 Goldenrod Driveway, as well as 251 Sir Frederick Banting Driveway
Description of Location	The site is generally bound by Kichi Zībī Mīkan to the north, Parkdale Avenue to the east, Scott Street to the south and Northwestern Avenue to the west.

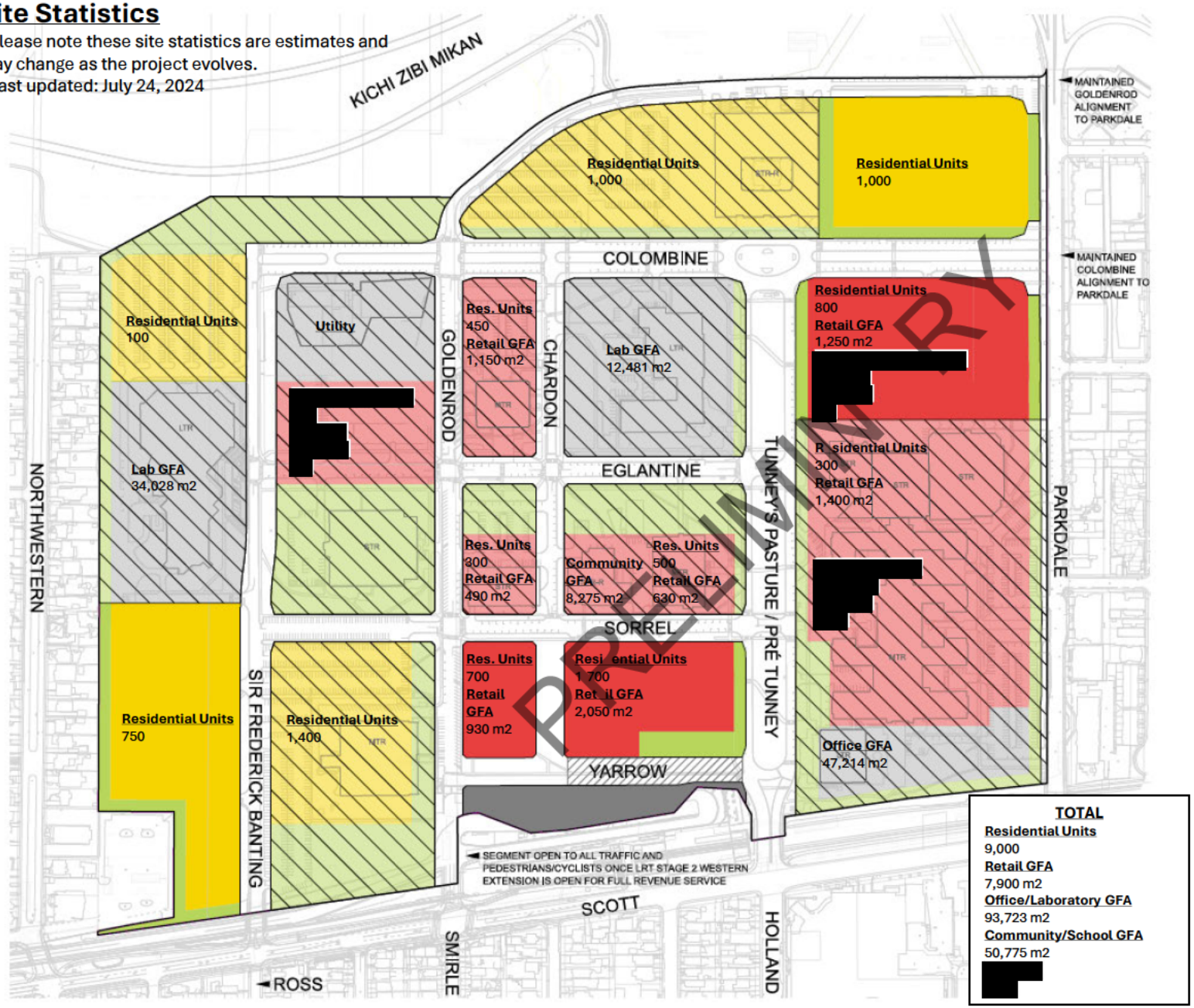
Land Use Classification	Mixed-Use (Residential, Employment & Commercial)
Development Size (units)	~9,000 dwelling units
Development Size (m^2)	Office: 93,723 m^2 GFA Ground-floor Commercial: ~7,900 m^2 GFA

Number of Accesses and Locations	1) Scott Street & Sir Frederick Banting Driveway/Ross Avenue (right-in/right-out) 2) Scott Street & Goldenrod Driveway/Smirle Avenue (mixed traffic to be permitted from Scott St to Tunney's Pasture following Stage 2 LRT and bus loop reconfiguration) 3) Scott Street & Tunney's Pasture Driveway/Holland Avenue (recently-implemented protected intersection) 4) Parkdale & Colombine Driveway 5) Kichi Zībī Mīkan & Goldenrod/Remic Rapids 6) Parkdale & Goldenrod (right-in/right-out)
Phase of Development	3-phase development: 2038, 2042, 2046
Buildout Year	~2046

If available, please attach a sketch of the development or site plan to this form.

Site Statistics

- Please note these site statistics are estimates and may change as the project evolves.
- Last updated: July 24, 2024



Proposed Land Use Designations	Area (ha)
Residential	10.057
Mixed-Use (Residential, Office, Retail, Community Use)	12.736
Open Space	7.951
Lab/Office/Utility	6.666
Transit Station	0.636
Public Right-of-Way	11.083
TOTAL:	49.129

TOTAL

Residential Units
9,000
Retail GFA
7,900 m2
Office/Laboratory GFA
93,723 m2
Community/School GFA
50,775 m2

2. Trip Gen Trigger

Considering the Development's Land Use Type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

Land Use Type*	Minimum Development Size (60 person trips)	
Single-Detached[1]	60 units	
Multi-Use Family (Low-Rise)[1]	90 units	
Multi-Use Family (High-Rise)[1]	150 Units	✓
Office[2]	1,400 m^2	✓
Industrial[2]	7,000 m^2	
Fast-food restaurant or coffee shop[2]	110 m^2	
Destination Retail[2]	1,800 m^2	✓
Gas Station or convenience market[2]	90 m^2	

**If the development has a land use type other than what is presented in the table above, estimates of person trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.*

[1] *Table 2, Table 3 & Table 4 TRANS Trip Generation Summary Report*

[2] *ITE Trip Generation Manual 11.1 Ed.*

Based on the above, the Trip Generation Trigger is satisfied.

3. Location Triggers

	Yes	No
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Cross-Town Bikeways?		✓
Is the development in a Design Priority Area (DPA), Transit-oriented Development (TOD) zone or Hub?*	✓	

**DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6) See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA.*
Hubs are identified as Protected Major Transit Station Areas (PTMSAs) and identified in Schedule C1-Protected Major Transit Station Areas (PMTSAs).

Based on the above, the Location Trigger is satisfied.

4. Safety Triggers

	Yes	No
Are posted speed limits on a boundary street 80km/hr or greater?		✓
Are there any horizontal/vertical curvatures on a boundary street that limit sight lines at a proposed driveway?		✓
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/suburban conditions?)		✓
Is the proposed driveway within auxiliary lanes of an intersection?		✓
Does the proposed driveway make use of an existing median break that serves an existing site?		✓
Is there a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	✓	
Does the development include a drive-thru facility?		✓

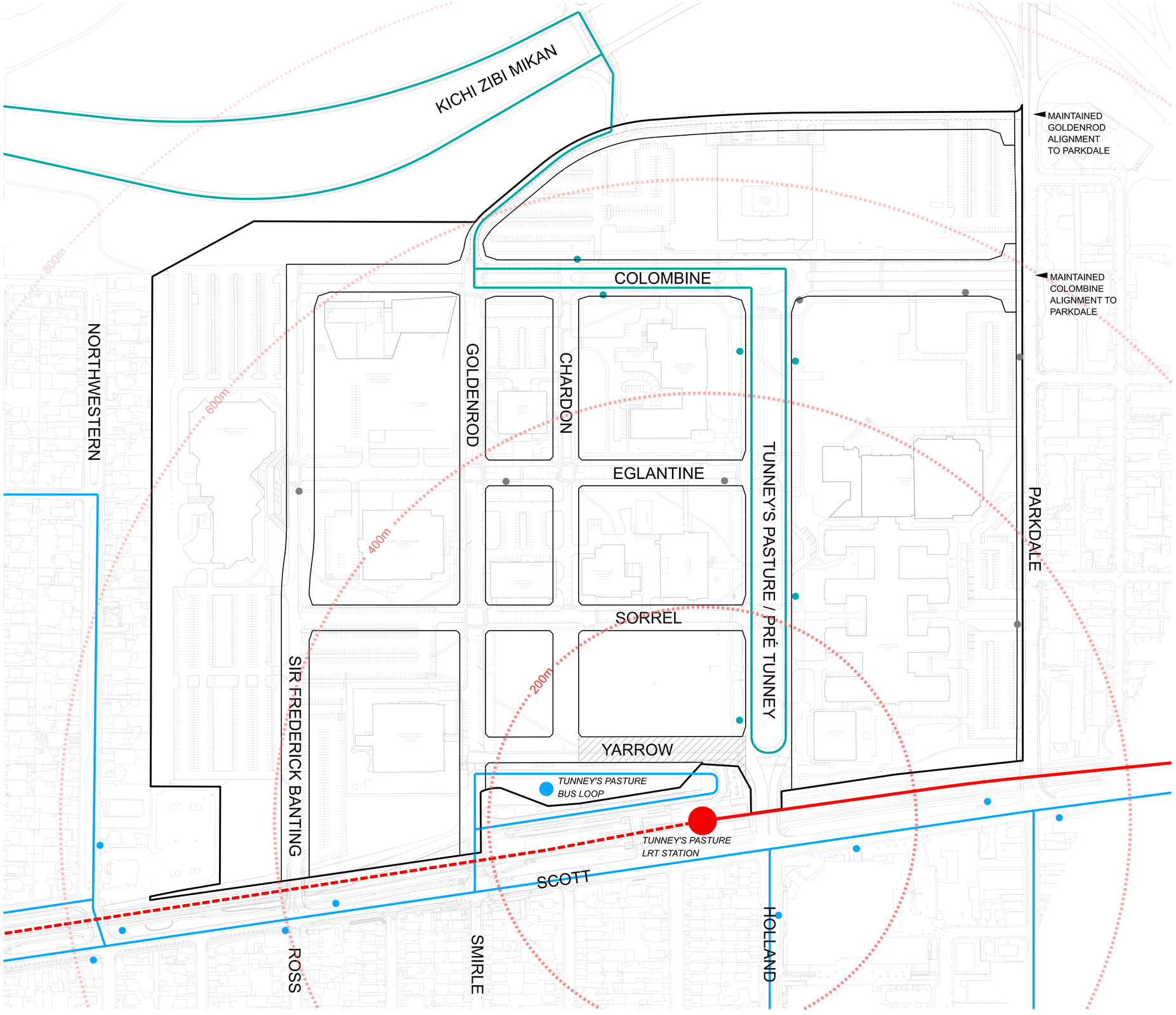
Based on the above, the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?	✓	
Does the development satisfy the Location Trigger?	✓	
Does the development satisfy the Safety Trigger?	✓	

Based on the results of the TIA Screening Form, the Trip Generation, Location and Safety Triggers are satisfied. As such, a TIA is required for the proposed development.

Appendix B – Transit Proximity Study Map



Transit Proximity Study Map

Site Boundary

Proposed Road Network

Right-of-Way

Woonerf Right-of-Way

OC Transpo

Existing Tunney's Pasture LRT Station

Radial Distance from Tunney's Pasture LRT Station (200m intervals)

Existing O-Train LRT Line - Stage 1 (complete)

Future O-Train LRT Line - Stage 2 (under construction)

Existing Tunney's Pasture Bus Loop

Existing Bus Route

Existing Bus Stop

Existing Bus Stop Location (no longer active)

STO

Existing Bus Route

Existing Bus Stop

Notes:
- Proposed road pattern by Arcadis IBI Group, July 2024.
- Future bus routes to be confirmed with OC Transpo/LRT and STO.

Location

TUNNEY'S PASTURE

Date: 2026-01-07

Drafted By: SD

Scale: 0 100m

North

ARCADIS

Appendix C – Traffic Count Data

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Remic Rapids/Tunney's Pasture & Sir John A. MacDonald Parkway E/B — **Ottawa, ON**

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 15

Remic Rapids
Sir John A. MacDonald Pkwy
Sir John A. MacDonald Pkwy
Tunney's Pasture

(A) 86 | 1044 | 958
86 | 0 | 0 | 85 | 1

0
4468
4468 (B)
0 | 79 | 3790 | 599

Total Volume
5650
Approaching Intersection
(A+B+C+D)

(D) 0
4093
4093
0 | 0 | 0 | 0 | 0

0 | 0 | 878 | 218 | 1096
599
1096 (C)
1695

All Pedestrian Crossings
0
1
115
Total
117
1

AM Peak Hour Flow Diagram

Remic Rapids
Sir John A. MacDonald Pkw
Sir John A. MacDonald Pkw
Tunney's Pasture

(A) 10 | 32 | 22
10 | 0 | 0 | 10 | 0

Pedestrian Crossings
During **AM** Peak Hour
0 | 0 | 6 | 1

0
(D) 0

1390 | 1390 | 1164 | 223 | 3 | 0
1431
(A+B+C+D)
0 | 0 | 0 | 0 | 0 | 1186

1390 (B)
1186

0 | 0 | 19 | 12 | 31
223
(C) 31
254

Summary - AM Peak Hr.

Peak Hr.	0745-0845
Volume	1431
PHF	0.87

PM Peak Hour Flow Diagram

Remic Rapids
Sir John A. MacDonald Pkw
Sir John A. MacDonald Pkw
Tunney's Pasture

(A) 6 | 263 | 257
6 | 0 | 0 | 6 | 0

Pedestrian Crossings
During **PM** Peak Hour
0 | 0 | 1 | 0

0
(D) 0

349 | 349 | 306 | 25 | 18 | 0
648
(A+B+C+D)
0 | 0 | 0 | 0 | 0 | 366

349 (B)
366

0 | 0 | 239 | 54 | 293
25
(C) 293
318

Summary - PM Peak Hr.

Peak Hr.	1500-1600
Volume	648
PHF	0.85

ACCURATE TRUSTED TRAFFIC DATA

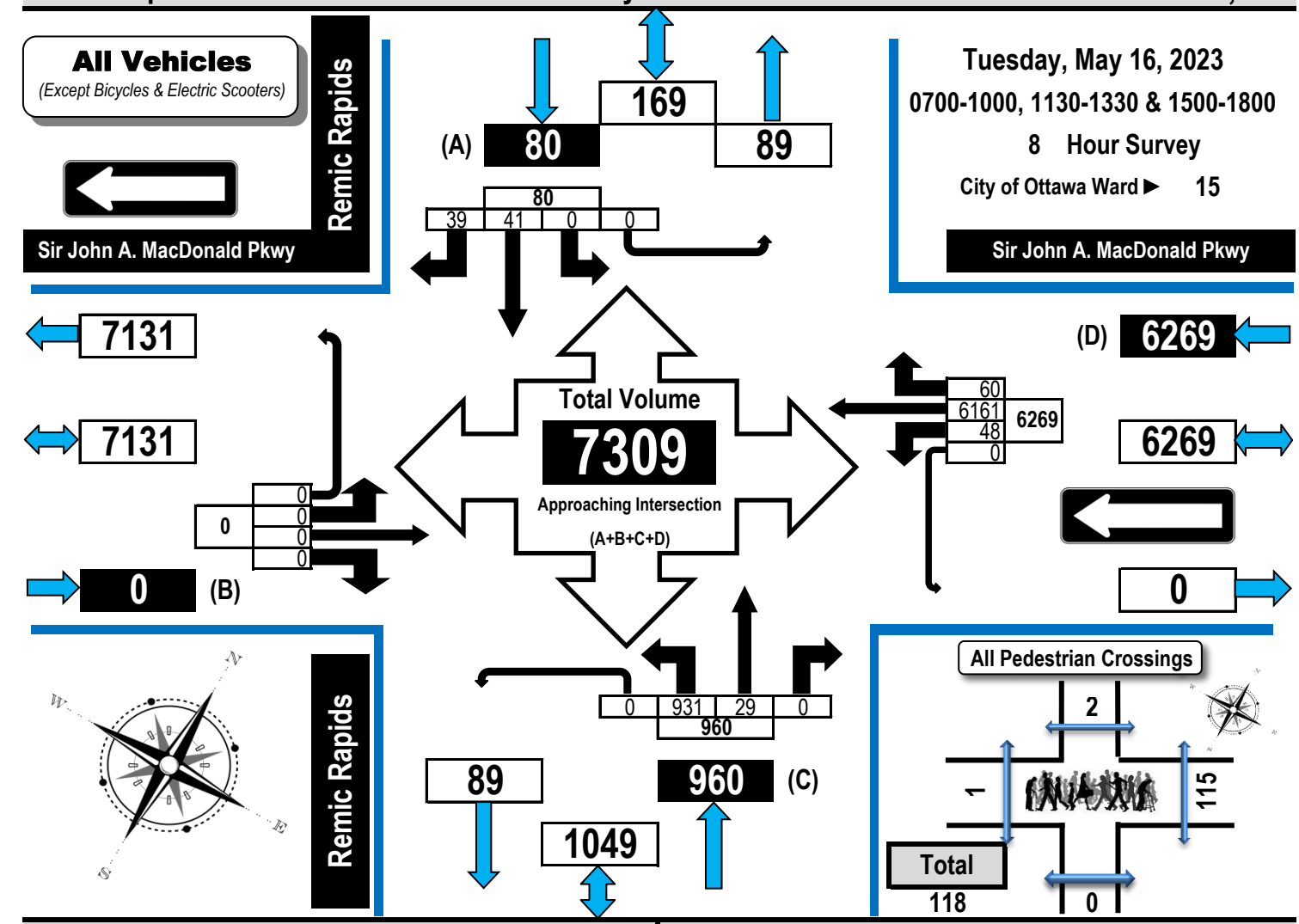
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Remic Rapids & Sir John A. MacDonald Parkway W/B — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

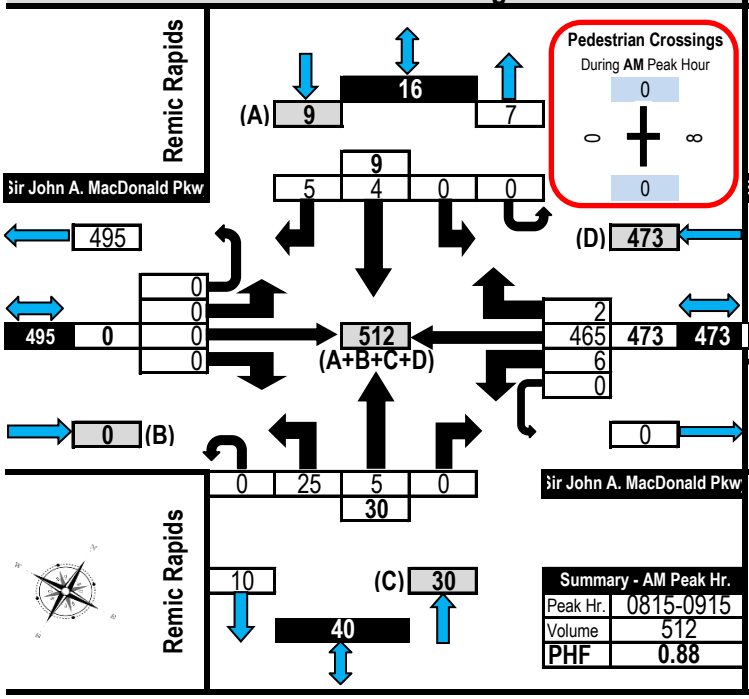
Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 15

Remic Rapids
Sir John A. MacDonald Pkwy



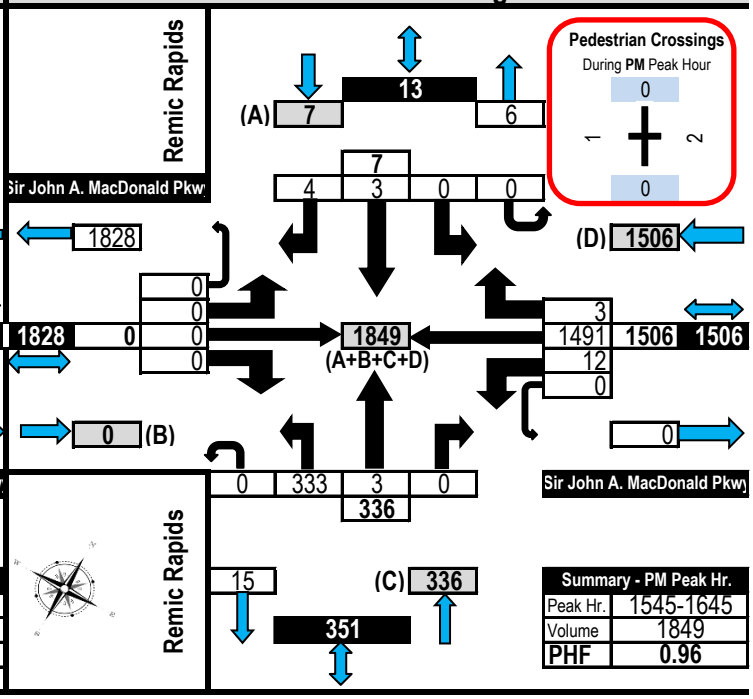
Remic Rapids
Sir John A. MacDonald Pkwy

AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0815-0915
Volume	512
PHF	0.88

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1545-1645
Volume	1849
PHF	0.96

ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Parkdale Avenue & Sir John A. MacDonald On/Off Ramps — **Ottawa, ON**

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 15

SJAM W/B On/Off Ramps

SJAM E/B Off Ramp

SJAM E/B On Ramp

Parkdale Ave.

Total Volume **5243**
Approaching Intersection (A+B+C+D)

(A) 1578 — 3317 — 1739
1578 | 0 | 1578 | 0 | 0

(B) 1058
0 | 1058 | 0 | 0 | 1058

(C) 2607
0 | 0 | 1739 | 868 | 2607

(D) 0
0 | 0 | 0 | 0 | 0

0 — 1058 — 1058 — 868 — 868 — 2636 — 5243

All Pedestrian Crossings
1 | 83 | 3 | Total 87 | 0

AM Peak Hour Flow Diagram

SJAM W/B On/Off Ramps
SJAM E/B Off Ramp
SJAM E/B On Ramp
Parkdale Ave.

(A) 312 — 372 — 60
312 | 0 | 312 | 0 | 0

Pedestrian Crossings During AM Peak Hour: 1 | 5 | 2 | 0

(D) 0
0 | 0 | 0 | 0 | 0

255 | 255 | 0 | 255 — 681 (A+B+C+D) — 0 | 0 | 0 | 54

(B) 255 — 54

0 | 0 | 60 | 54 | 114

(C) 114 — 567 — 681

Summary - AM Peak Hr.	
Peak Hr.	0745-0845
Volume	681
PHF	0.98

PM Peak Hour Flow Diagram

SJAM W/B On/Off Ramps
SJAM E/B Off Ramp
SJAM E/B On Ramp
Parkdale Ave.

(A) 192 — 677 — 485
192 | 0 | 192 | 0 | 0

Pedestrian Crossings During PM Peak Hour: 0 | 7 | 0 | 0

(D) 0
0 | 0 | 0 | 0 | 0

62 | 62 | 0 | 62 — 992 (A+B+C+D) — 0 | 0 | 0 | 253

(B) 62 — 253

0 | 0 | 485 | 253 | 738

(C) 738 — 254 — 992

Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	992
PHF	0.93

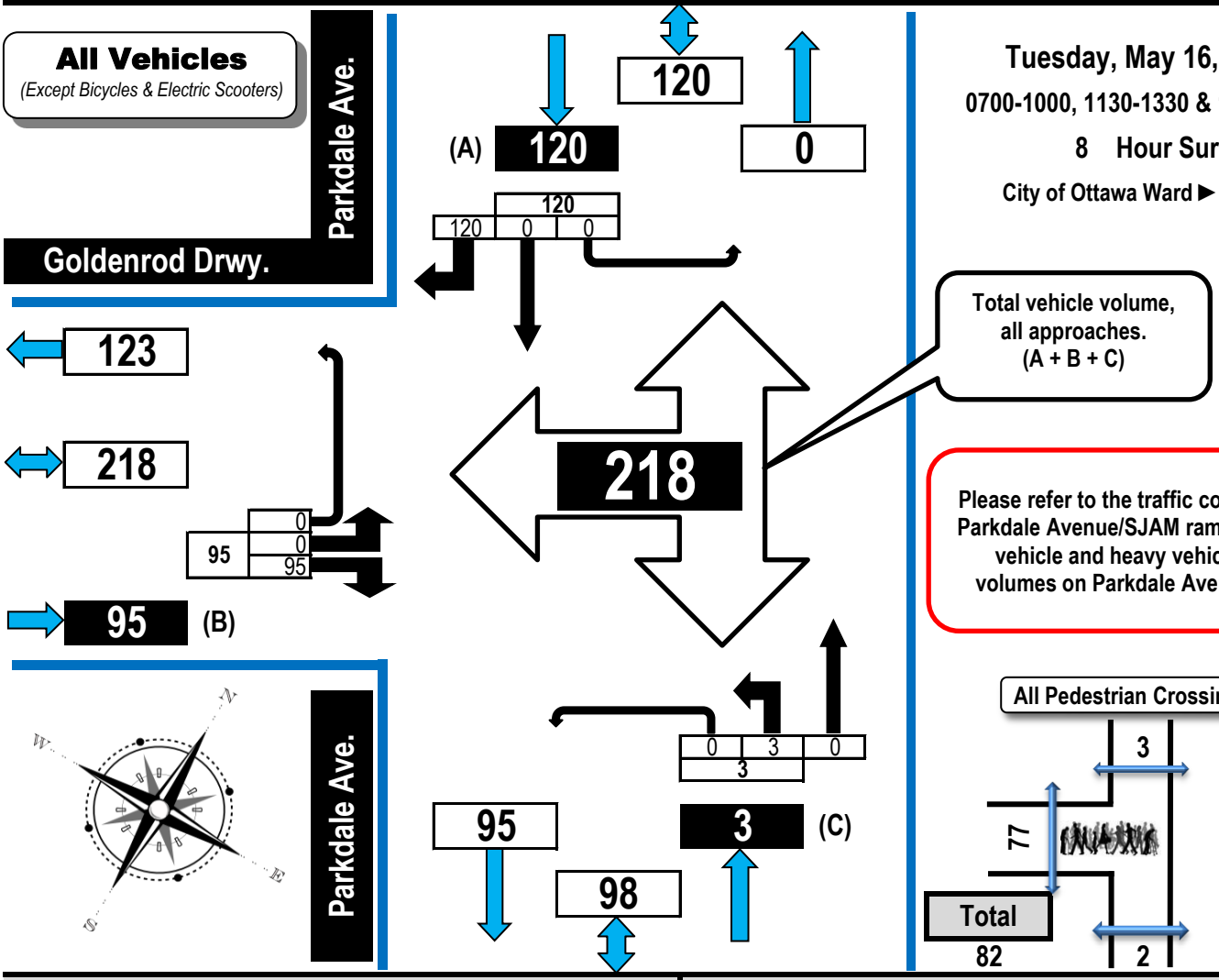
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

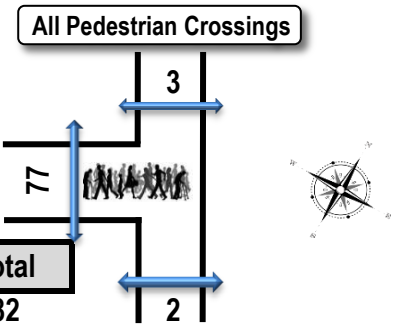
Goldenrod Driveway & Parkdale Avenue — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

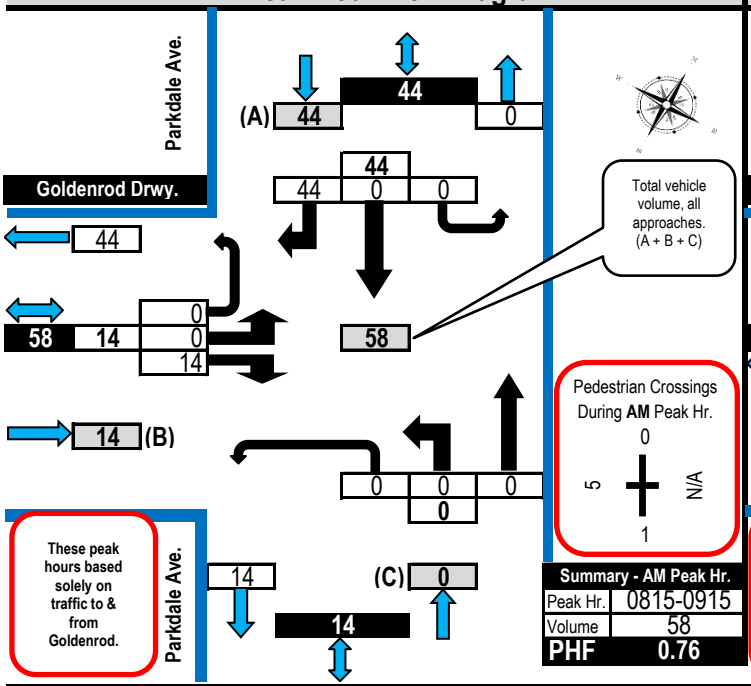
Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 15



Please refer to the traffic count at Parkdale Avenue/SJAM ramps for vehicle and heavy vehicle volumes on Parkdale Avenue.

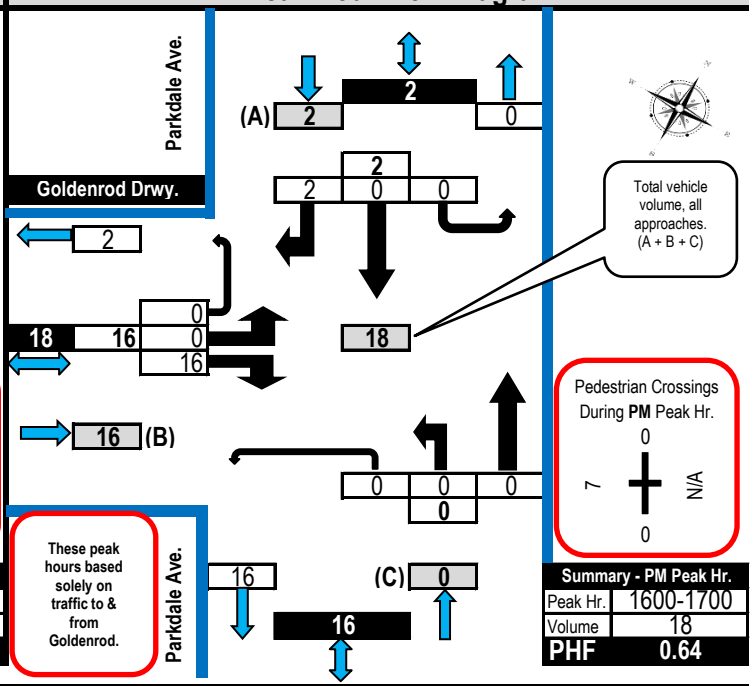


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0815-0915
Volume	58
PHF	0.76

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	18
PHF	0.64

ACCURATE TRUSTED TRAFFIC DATA

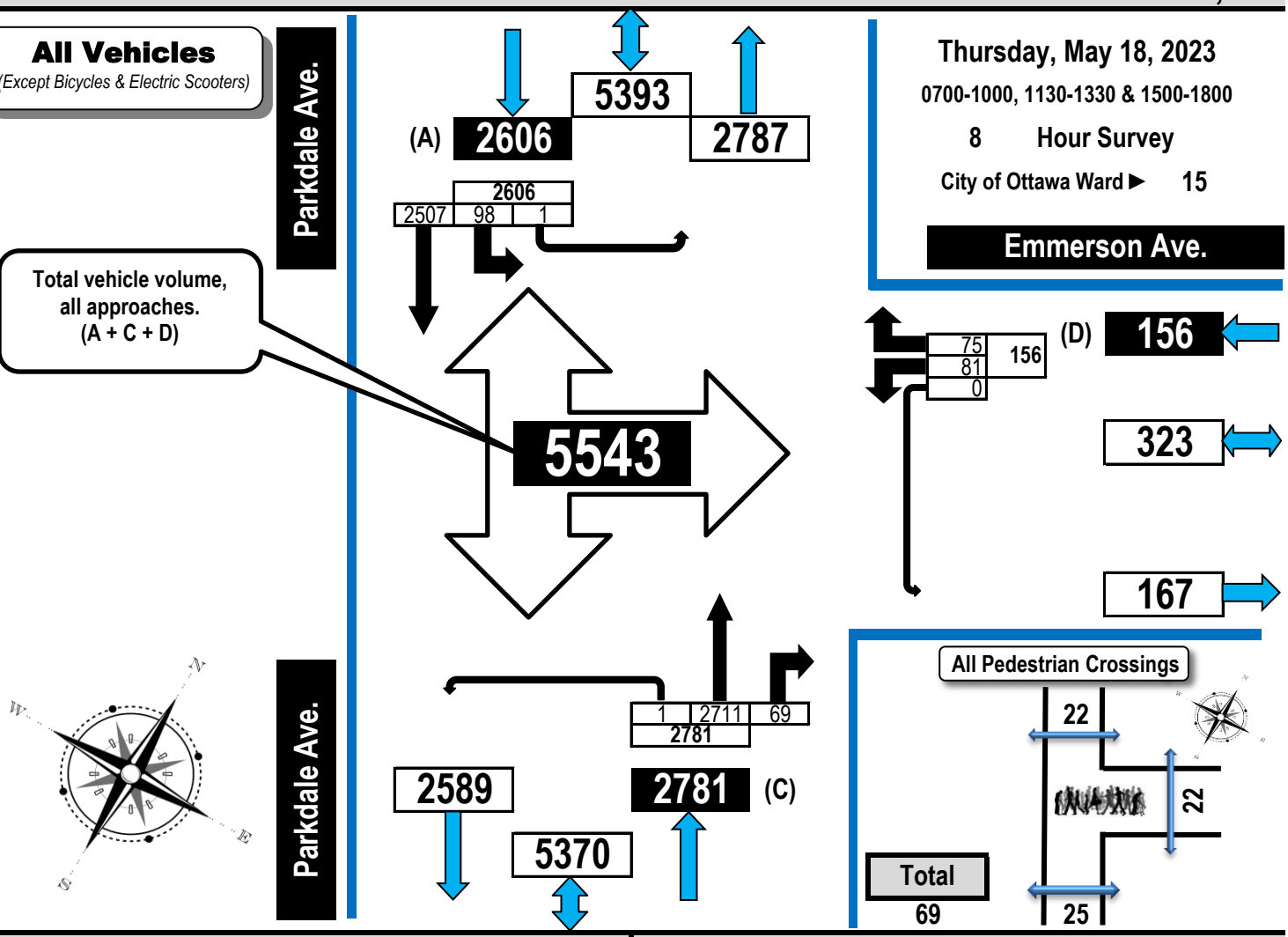
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Emmerson Avenue & Parkdale Avenue — Ottawa, ON

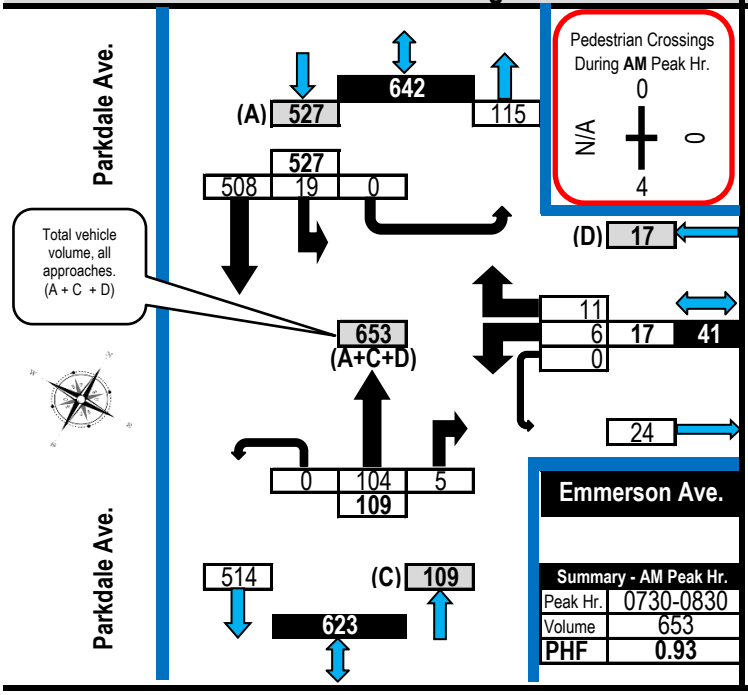
All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, May 18, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 15

Total vehicle volume, all approaches. (A + C + D)

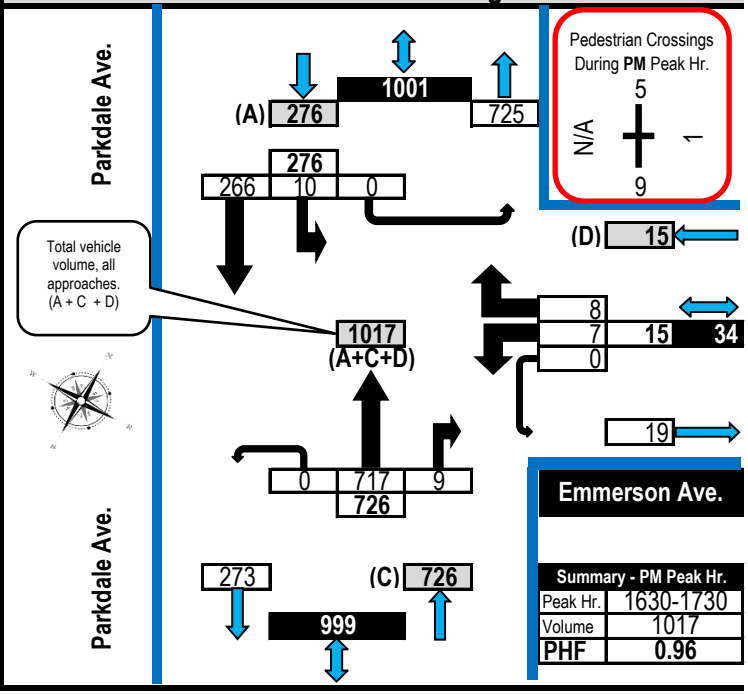


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0730-0830
Volume	653
PHF	0.93

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1630-1730
Volume	1017
PHF	0.96

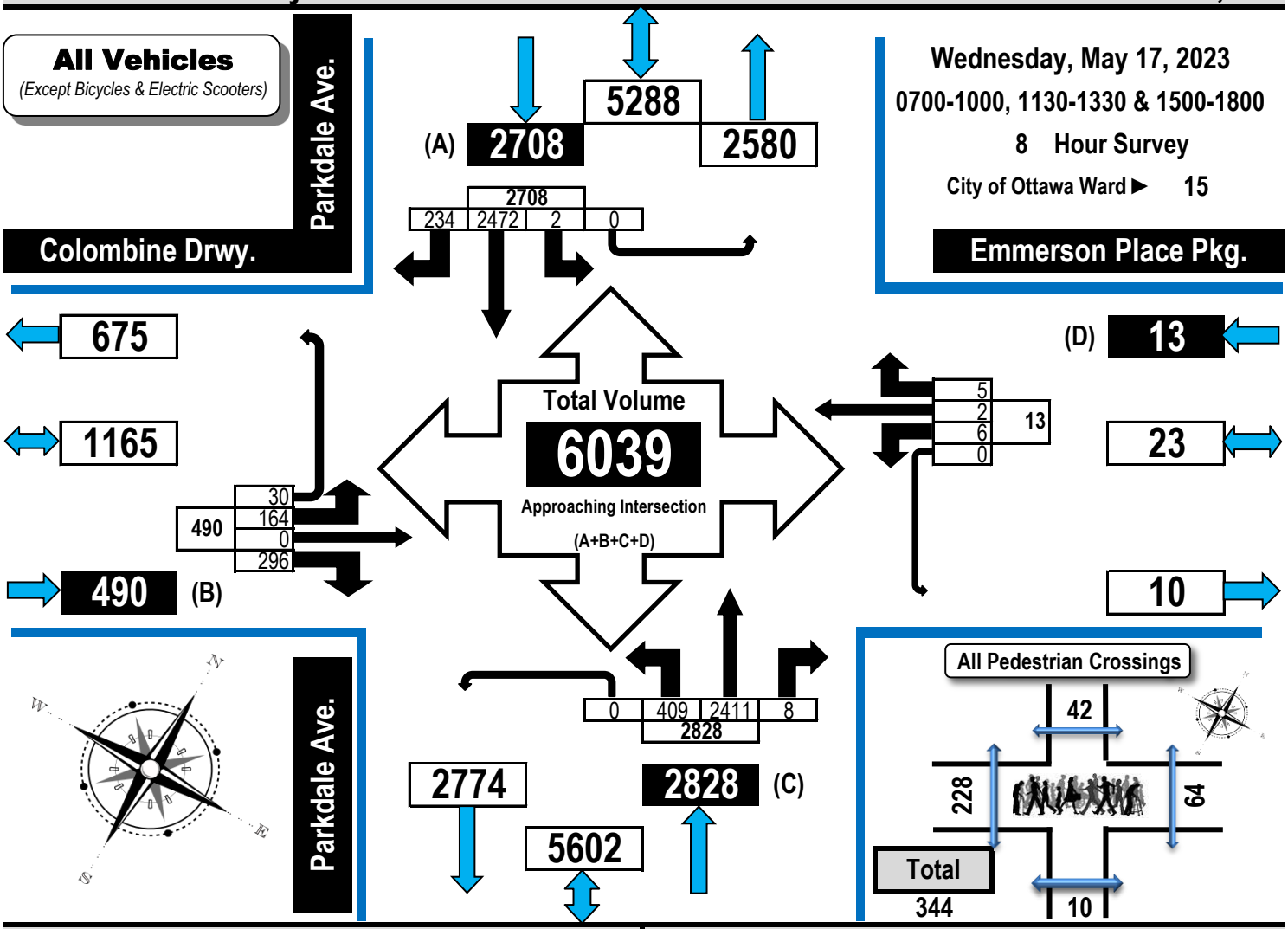
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

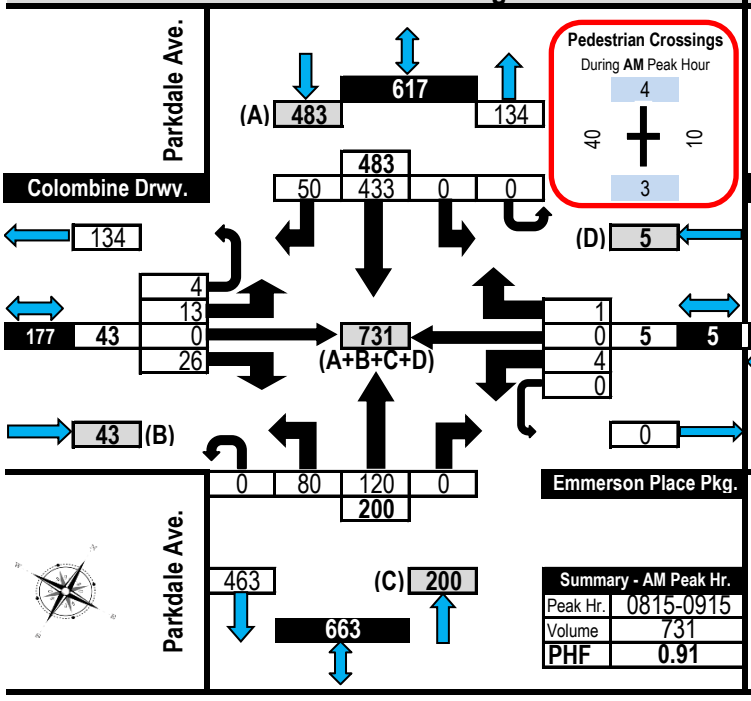
Colombine Driveway & Parkdale Avenue — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Wednesday, May 17, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 15

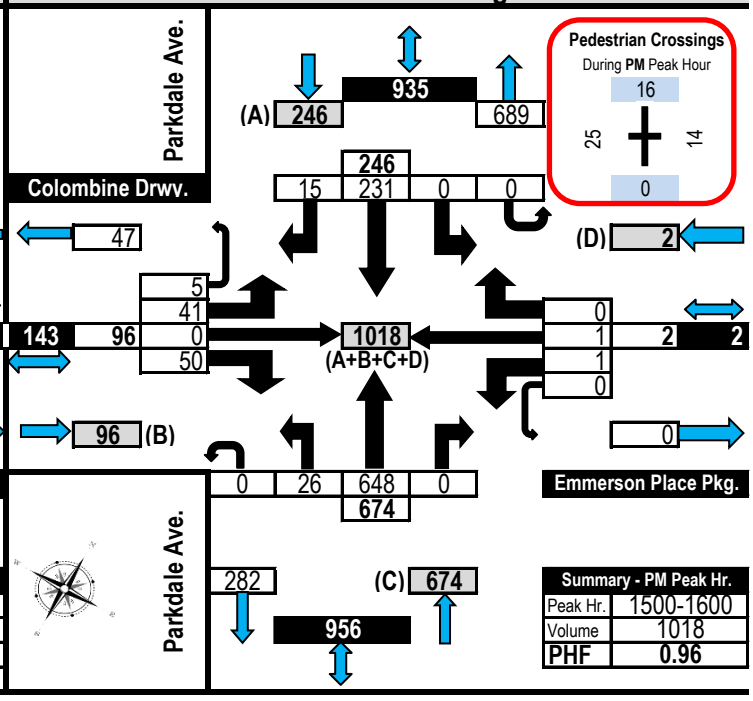


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0815-0915
Volume	731
PHF	0.91

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1500-1600
Volume	1018
PHF	0.96

ACCURATE TRUSTED TRAFFIC DATA

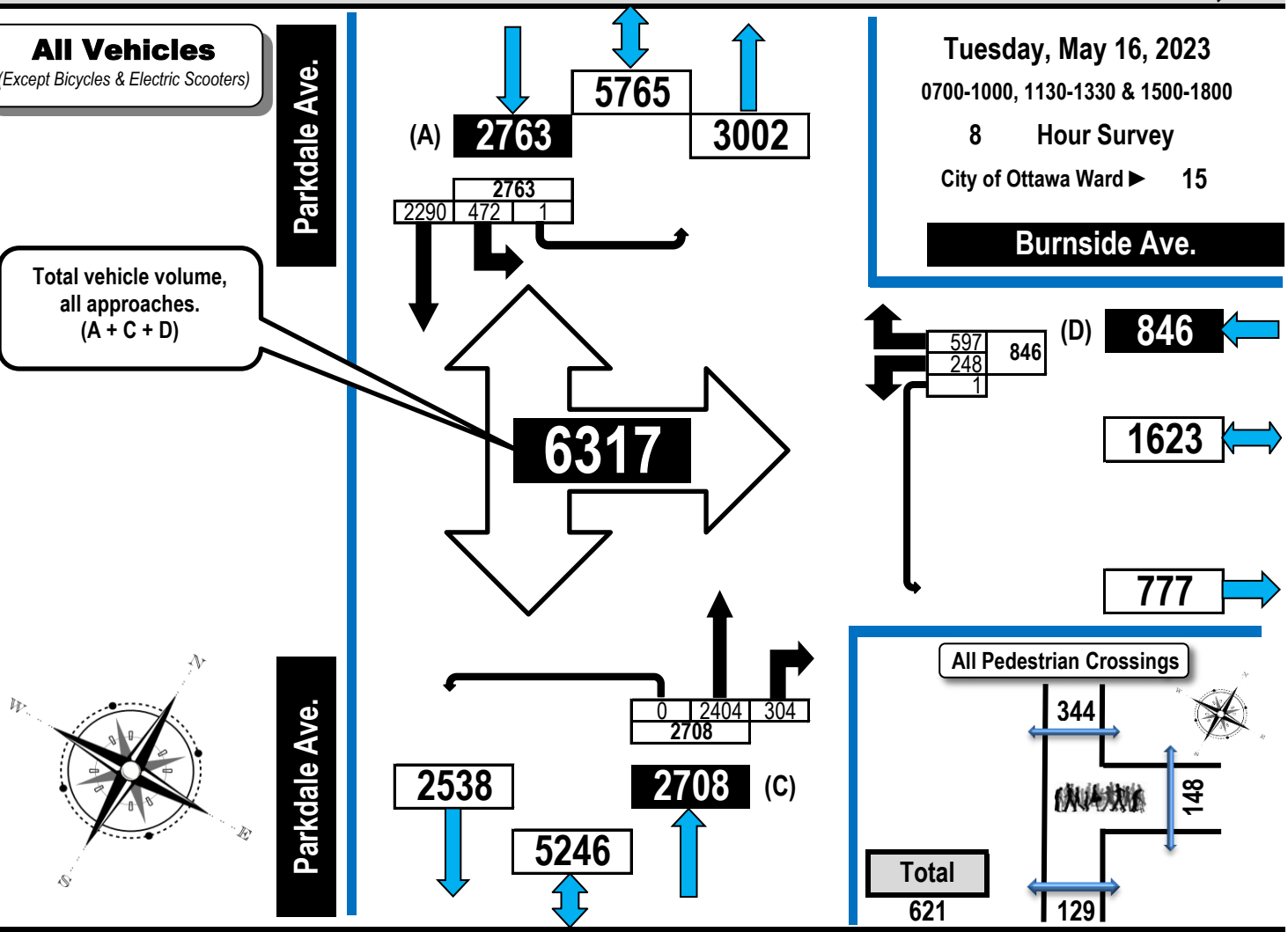
Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Burnside Avenue & Parkdale Avenue — Ottawa, ON

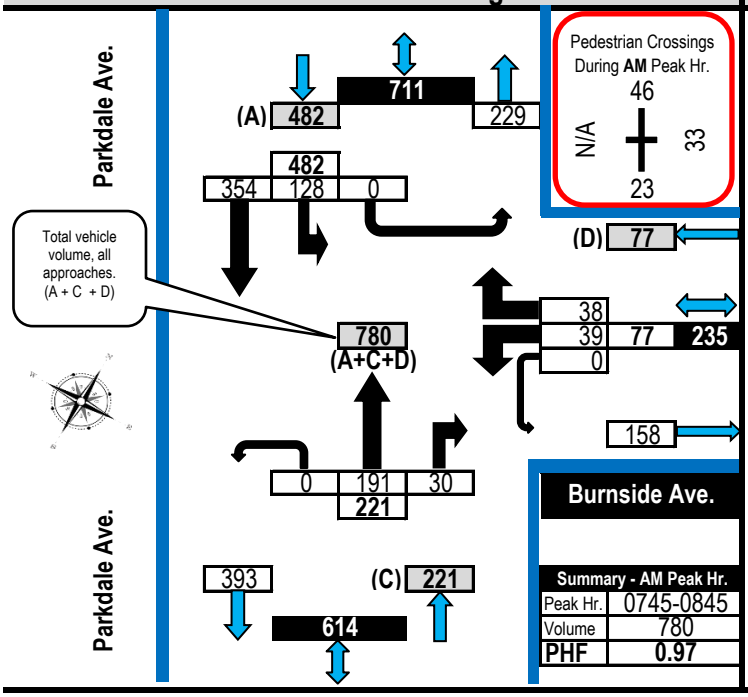
All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 15

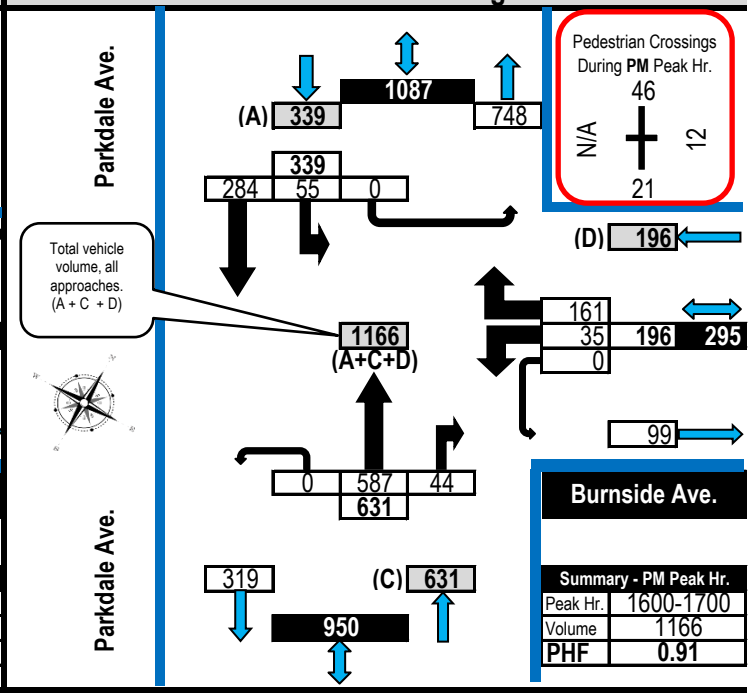
Total vehicle volume, all approaches. (A + C + D)



AM Peak Hour Flow Diagram



PM Peak Hour Flow Diagram



ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

Lyndale Avenue & Parkdale Avenue — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Thursday, May 11, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 15

Total vehicle volume, all approaches. (A + C + D)

Parkdale Ave.

(A) 2750 — 5624 — 2874

2750: 2722 | 28 | 0

5870

Lyndale Ave.

(D) 119 — 303 — 184

29 | 90 | 0 | 119

Parkdale Ave.

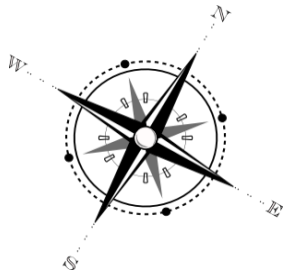
0 | 2845 | 156 | 3001

2812 — 3001 (C) — 5813

All Pedestrian Crossings

32 — 106 — 162

Total 300



AM Peak Hour Flow Diagram

Parkdale Ave.

(A) 369 — 629 — 260

369: 367 | 2 | 0

Pedestrian Crossings During AM Peak Hr.: 4 | N/A | 12 | 27

(D) 17

Total vehicle volume, all approaches. (A + C + D)

668 (A+C+D)

2 | 15 | 17 | 43 | 0

26

0 | 258 | 24 | 282

Lyndale Ave.

382 — (C) 282 — 664

Parkdale Ave.

Summary - AM Peak Hr.	
Peak Hr.	0815-0915
Volume	668
PHF	0.87

PM Peak Hour Flow Diagram

Parkdale Ave.

(A) 407 — 986 — 579

407: 402 | 5 | 0

Pedestrian Crossings During PM Peak Hr.: 4 | N/A | 22 | 20

(D) 14

Total vehicle volume, all approaches. (A + C + D)

1016 (A+C+D)

4 | 10 | 14 | 39 | 0

25

0 | 575 | 20 | 595

Lyndale Ave.

412 — (C) 595 — 1007

Parkdale Ave.

Summary - PM Peak Hr.	
Peak Hr.	1645-1745
Volume	1016
PHF	0.97

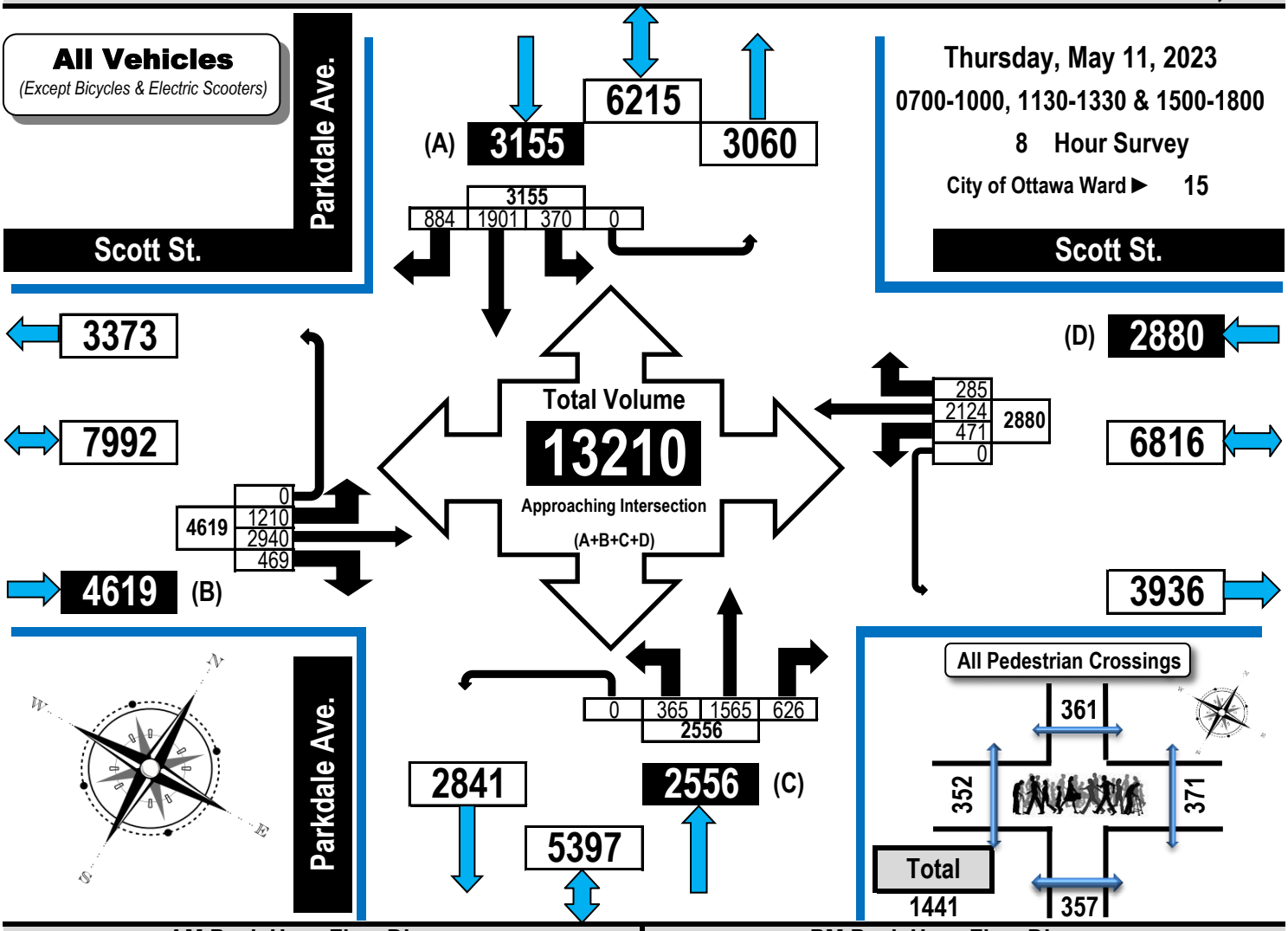
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

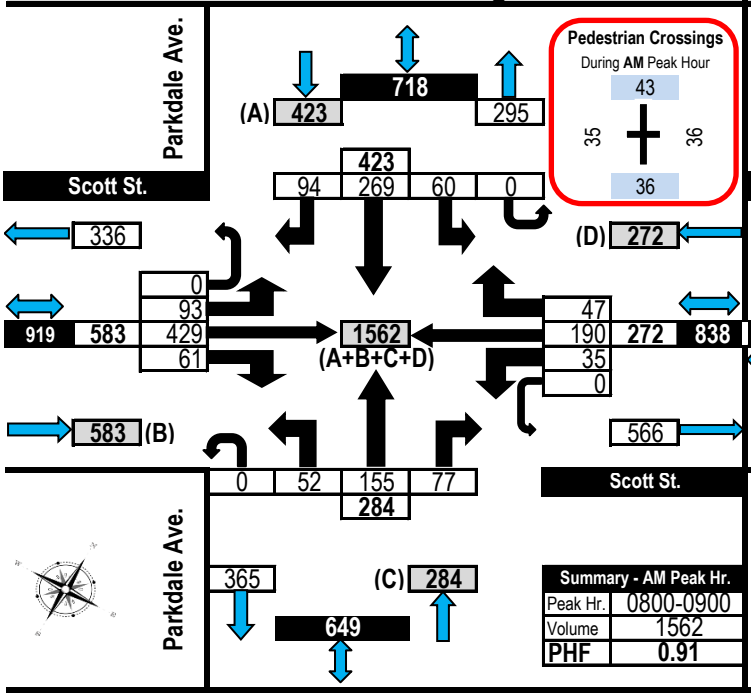
Parkdale Avenue & Scott Street — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

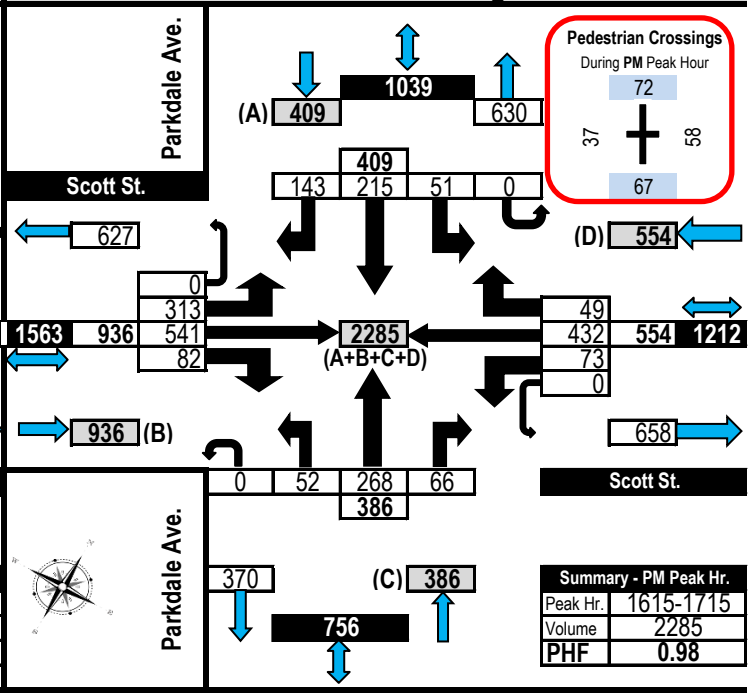
Thursday, May 11, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 15



AM Peak Hour Flow Diagram



PM Peak Hour Flow Diagram



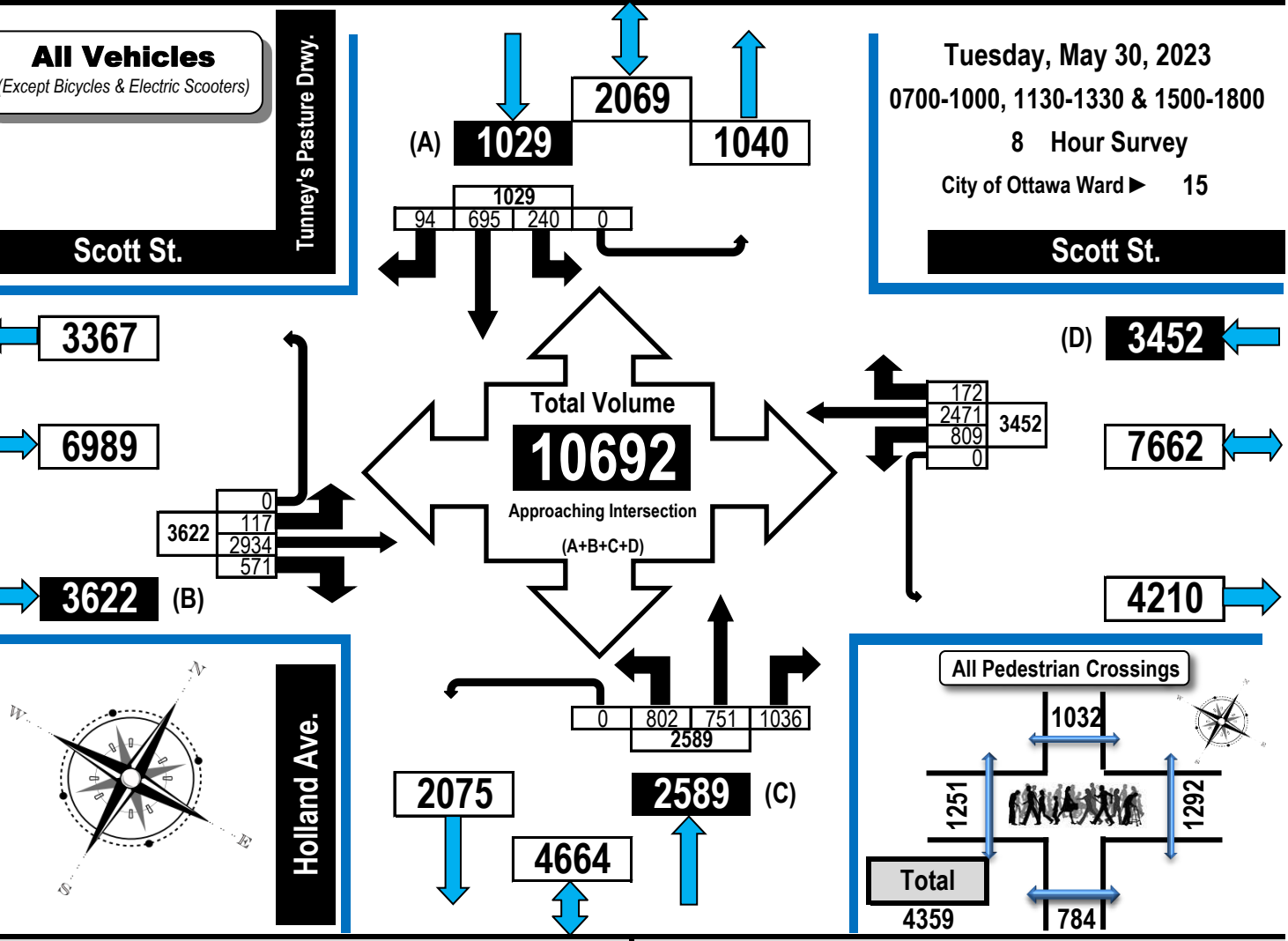
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

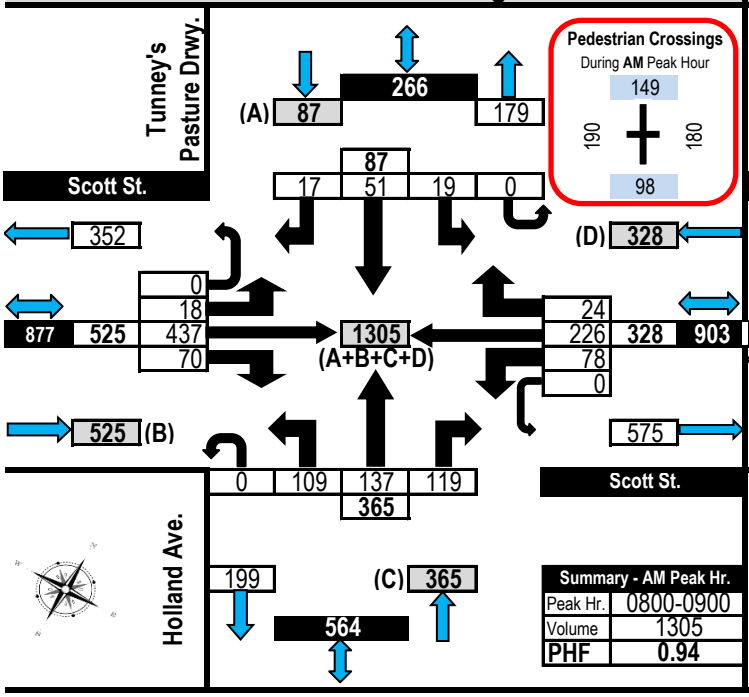
Holland Avenue/Tunney's Pasture Driveway & Scott Street — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 30, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ► 15

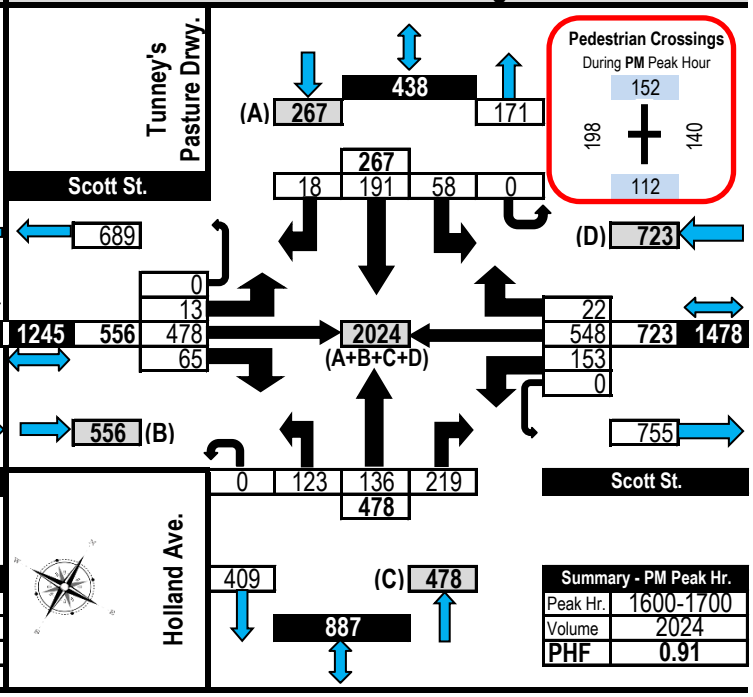


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0800-0900
Volume	1305
PHF	0.94

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	2024
PHF	0.91

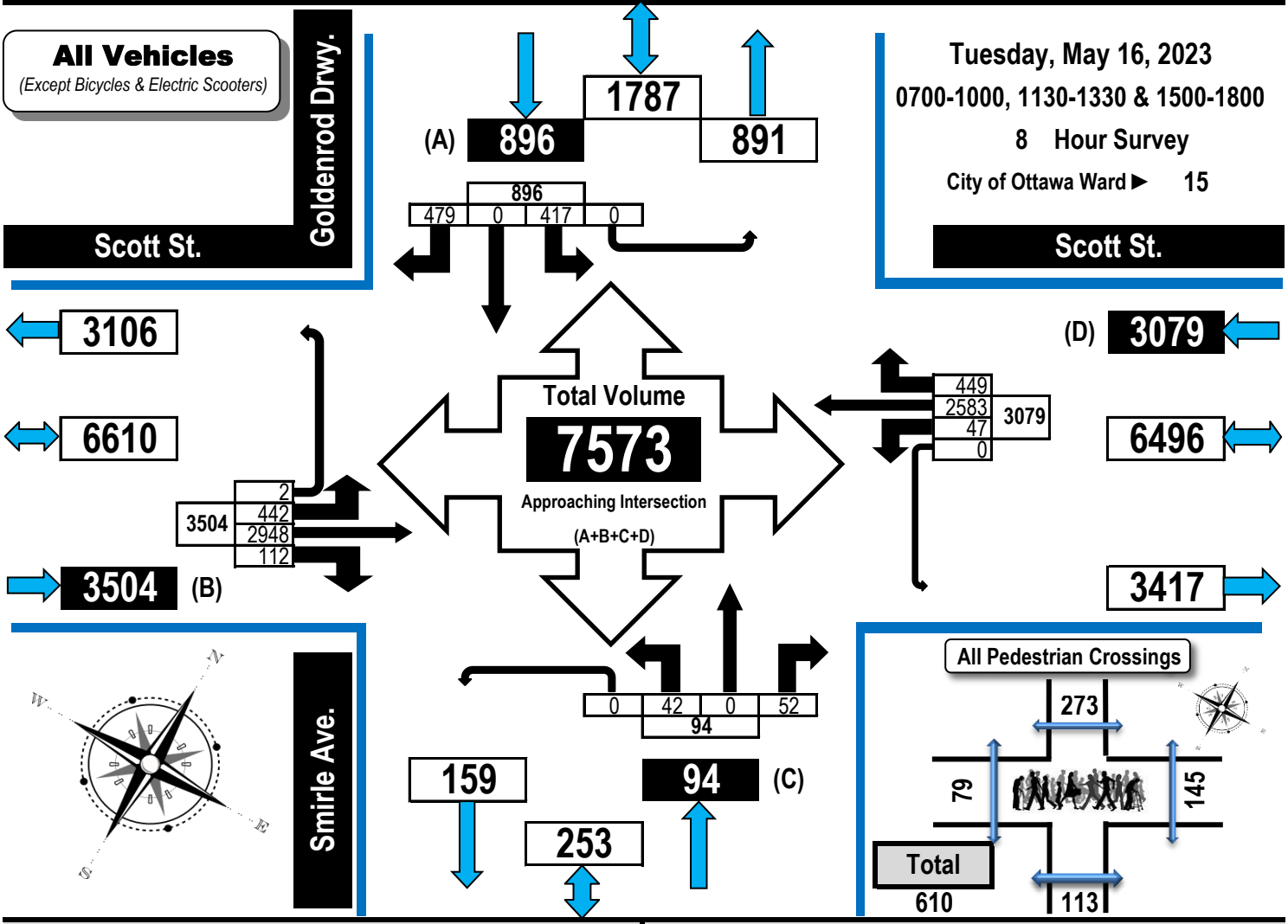
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

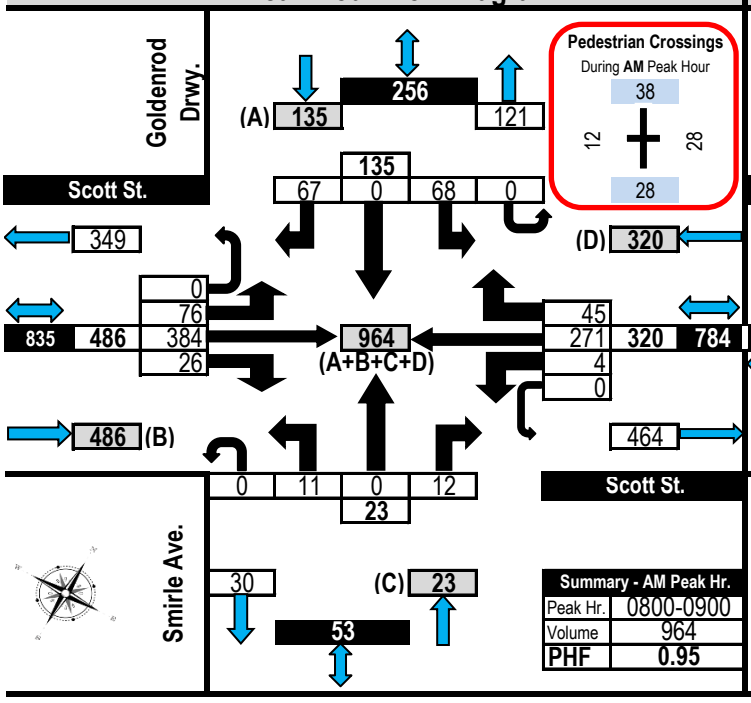
Goldenrod Driveway/Smirle Avenue & Scott Street — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 15

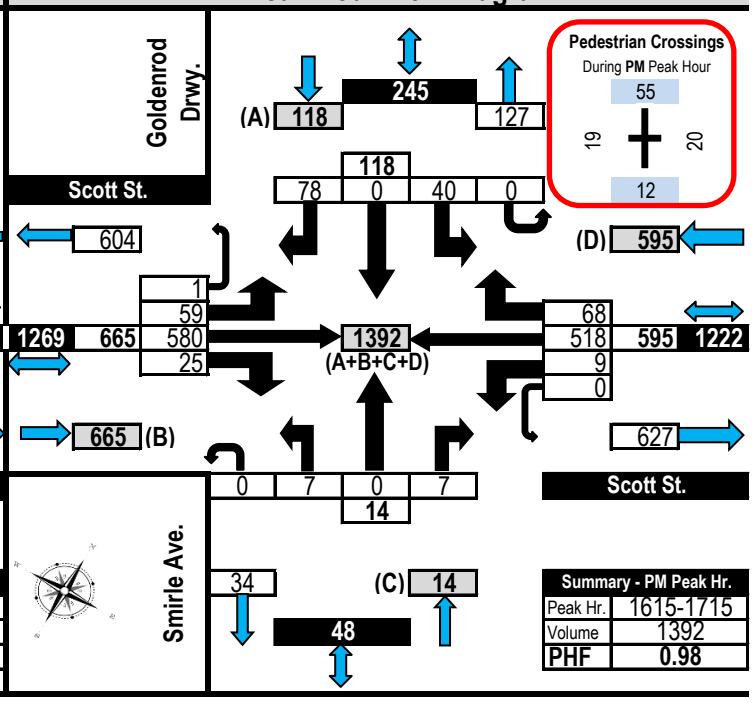


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0800-0900
Volume	964
PHF	0.95

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1615-1715
Volume	1392
PHF	0.98

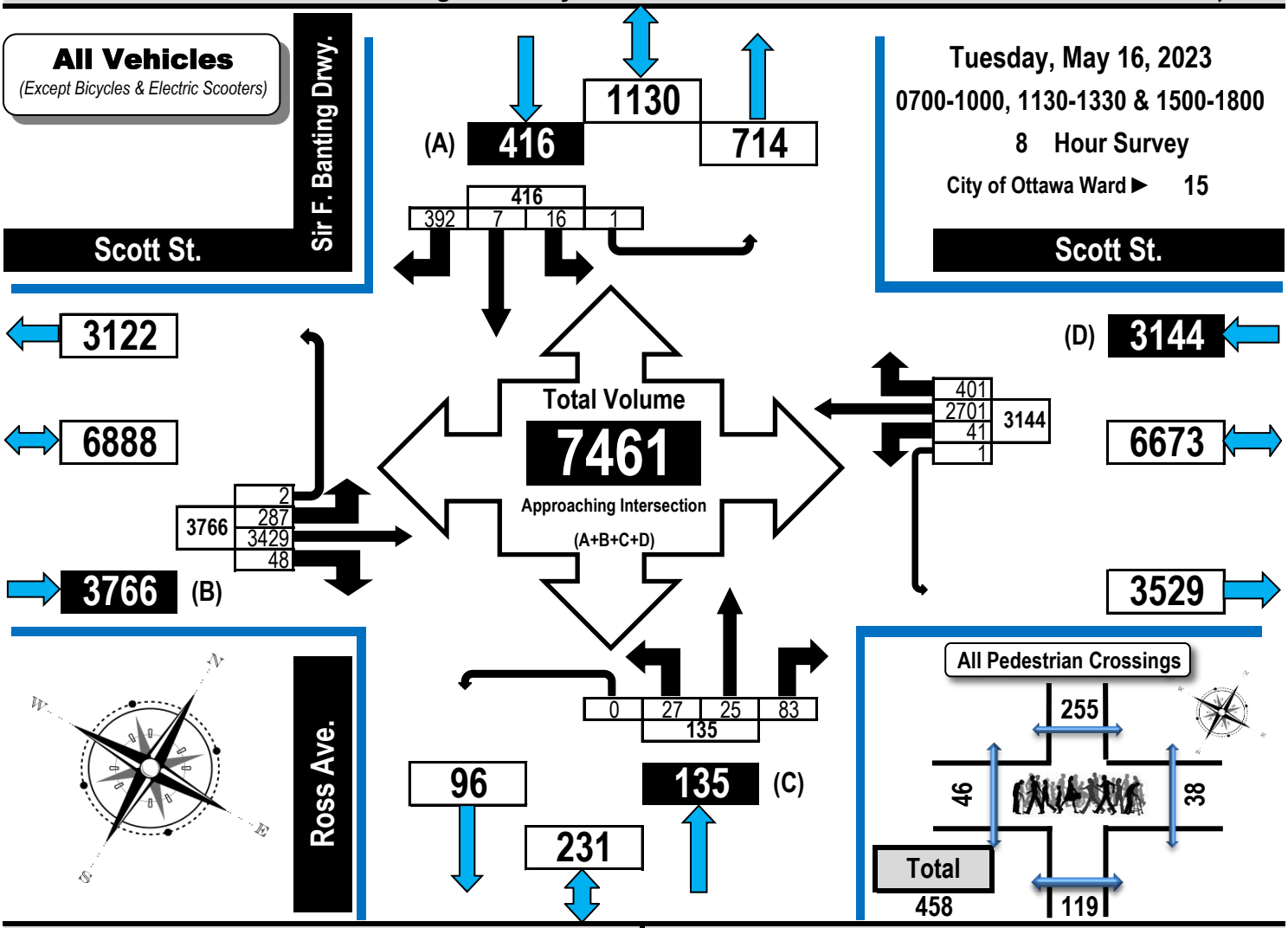
ACCURATE TRUSTED TRAFFIC DATA

Turning Movement Count
Summary, AM and PM Peak Hour Flow Diagrams
All Vehicles Except Bicycles

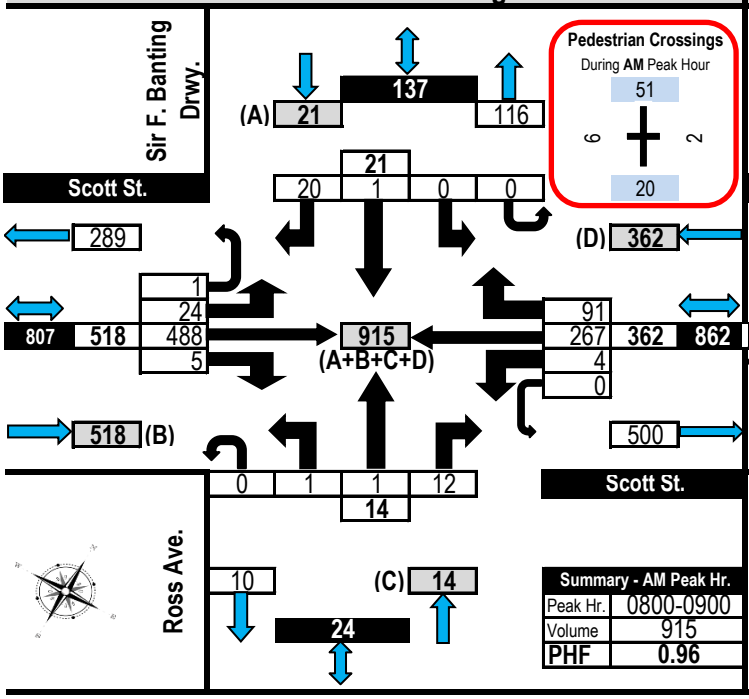
Ross Avenue/Sir Frederick Banting Driveway & Scott Street — Ottawa, ON

All Vehicles
(Except Bicycles & Electric Scooters)

Tuesday, May 16, 2023
0700-1000, 1130-1330 & 1500-1800
8 Hour Survey
City of Ottawa Ward ▶ 15

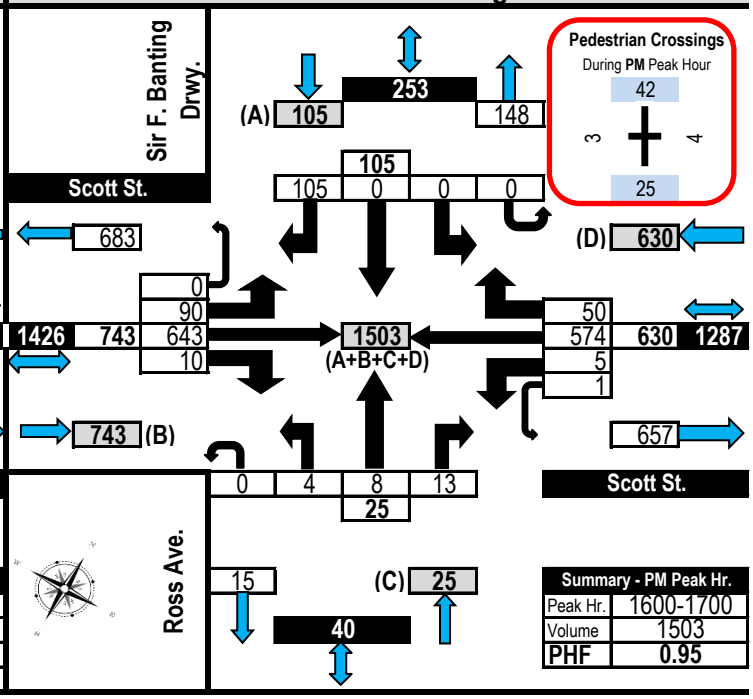


AM Peak Hour Flow Diagram



Summary - AM Peak Hr.	
Peak Hr.	0800-0900
Volume	915
PHF	0.96

PM Peak Hour Flow Diagram



Summary - PM Peak Hr.	
Peak Hr.	1600-1700
Volume	1503
PHF	0.95

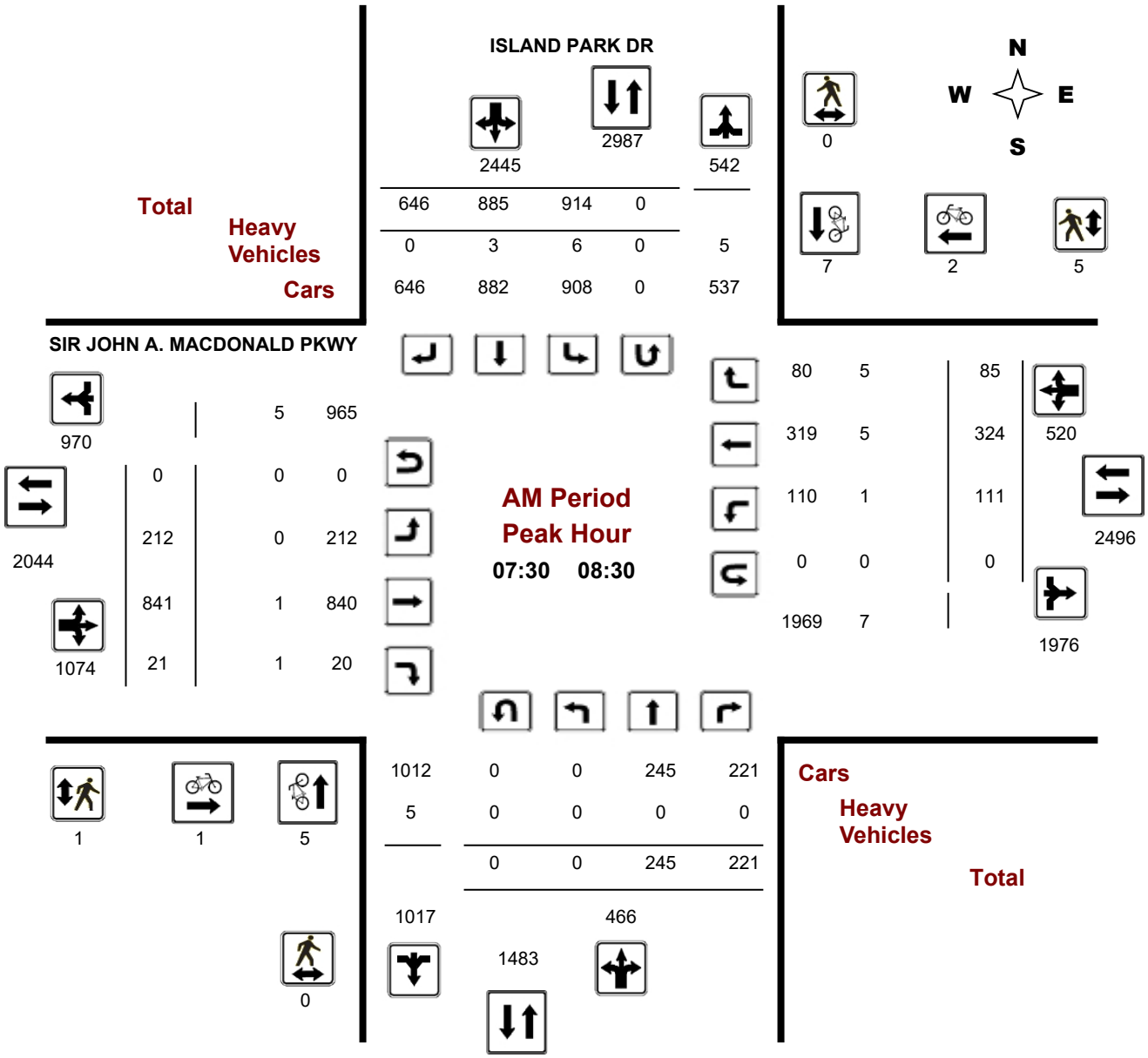
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

SIR JOHN A. MACDONALD PKWY @ ISLAND PARK DR

Survey Date: Tuesday, March 25, 2025 **WO No:** 42595

Start Time: 07:00 **Device:** Miovision



Comments:

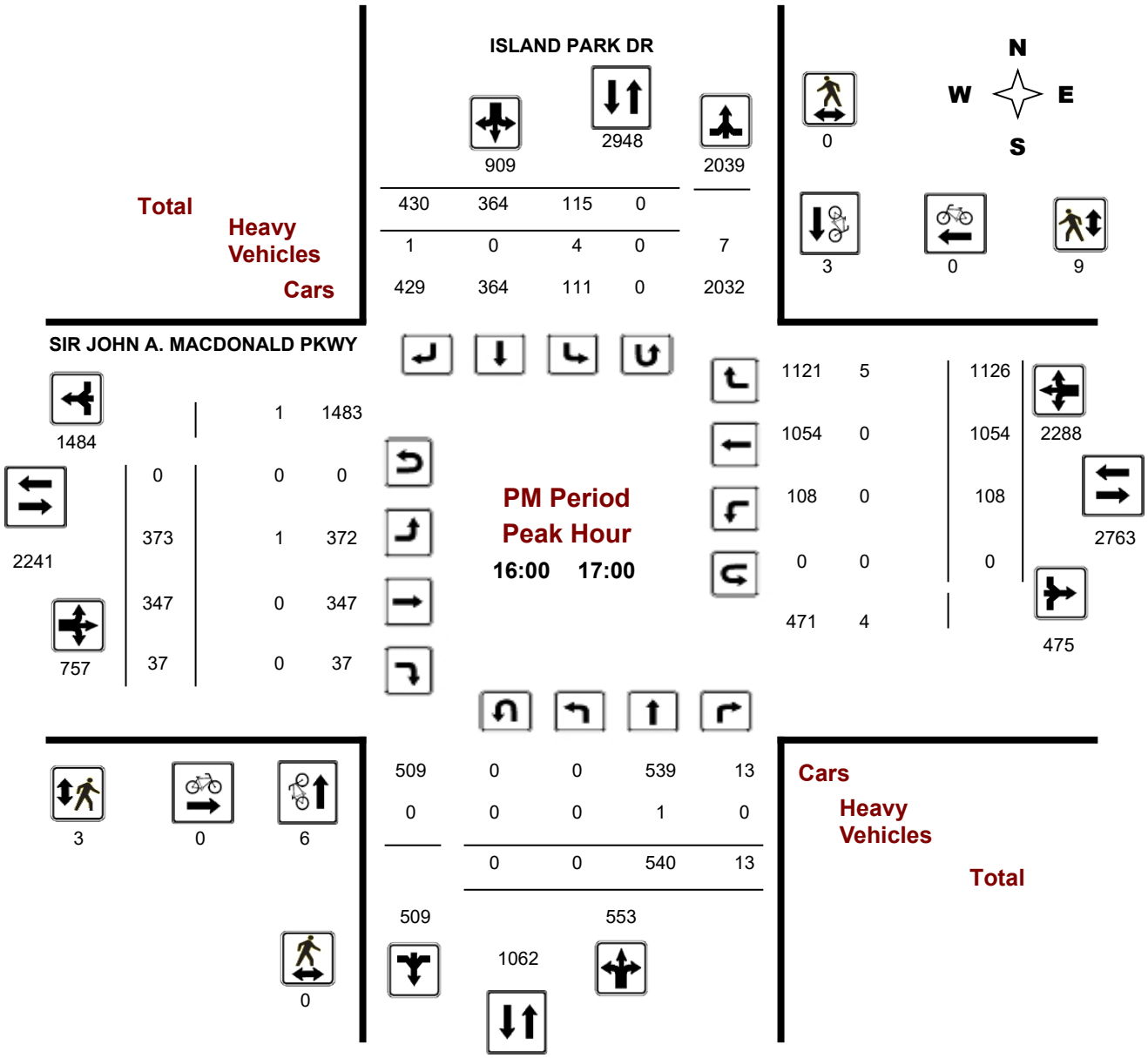
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

SIR JOHN A. MACDONALD PKWY @ ISLAND PARK DR

Survey Date: Tuesday, March 25, 2025
Start Time: 07:00

WO No: 42595
Device: Miovision



Comments:

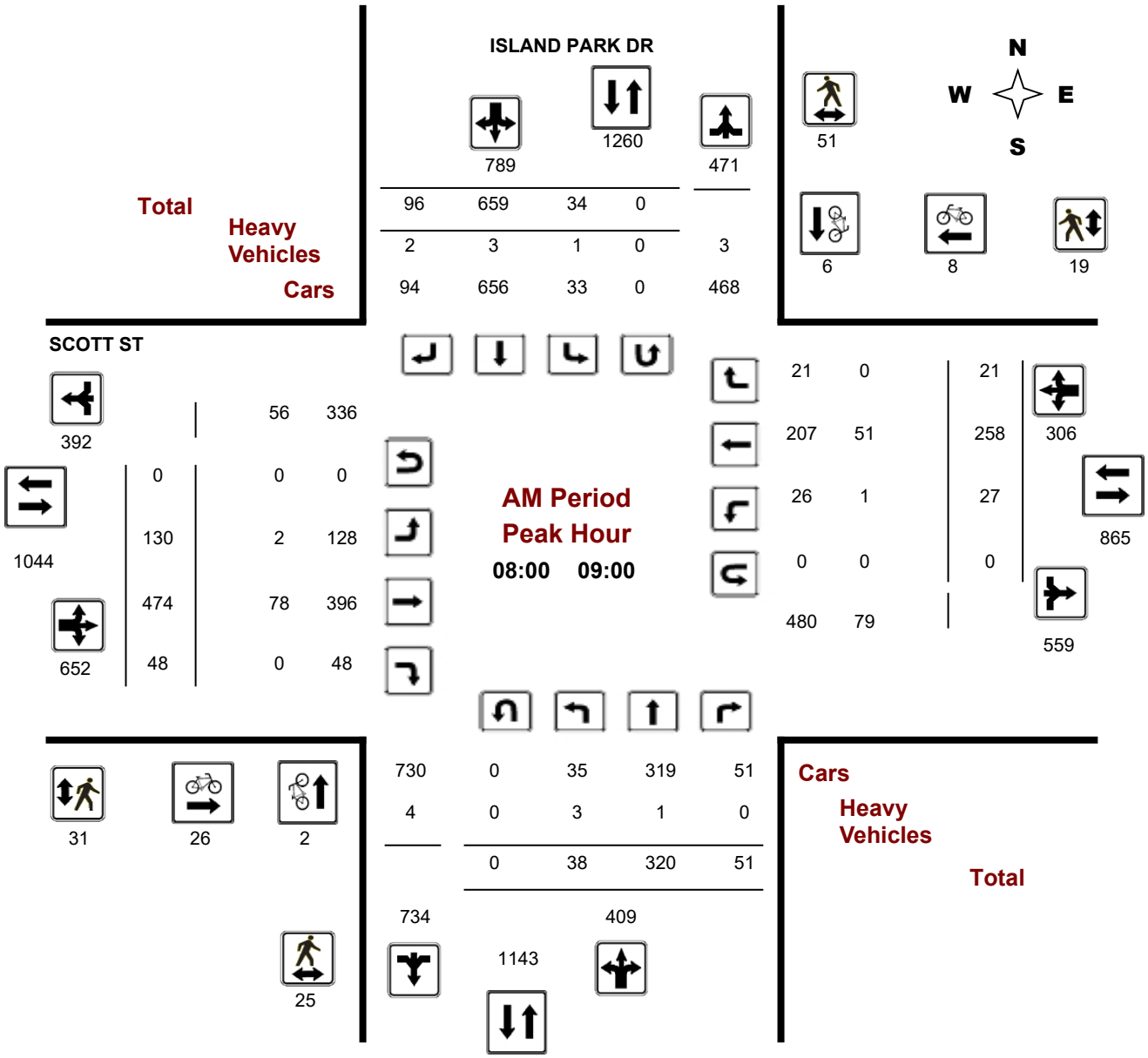
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ISLAND PARK DR @ SCOTT ST

Survey Date: Tuesday, April 01, 2025
Start Time: 07:00

WO No: 42604
Device: Miovision



Comments:

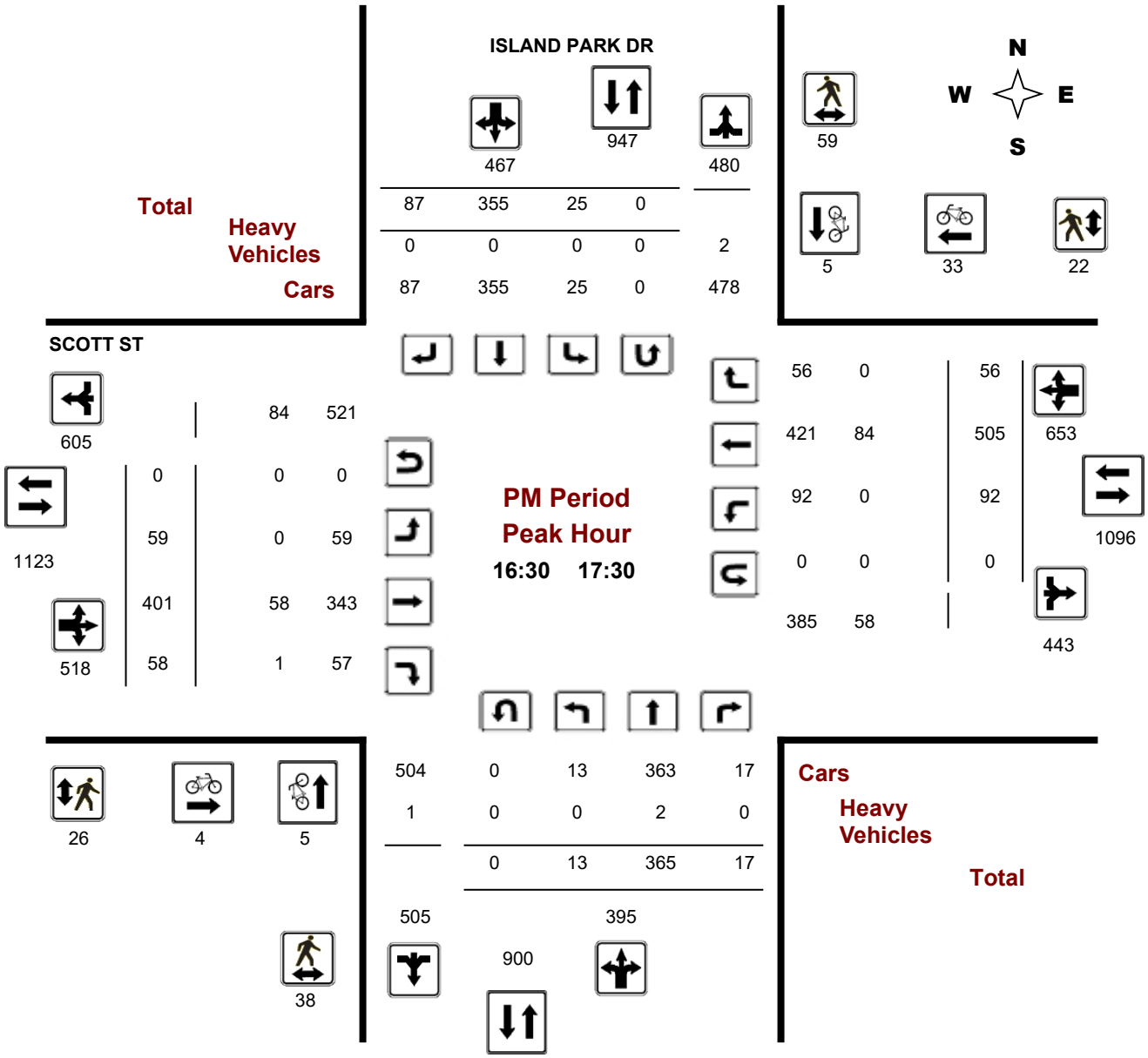
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

ISLAND PARK DR @ SCOTT ST

Survey Date: Tuesday, April 01, 2025
Start Time: 07:00

WO No: 42604
Device: Miovision



Comments:

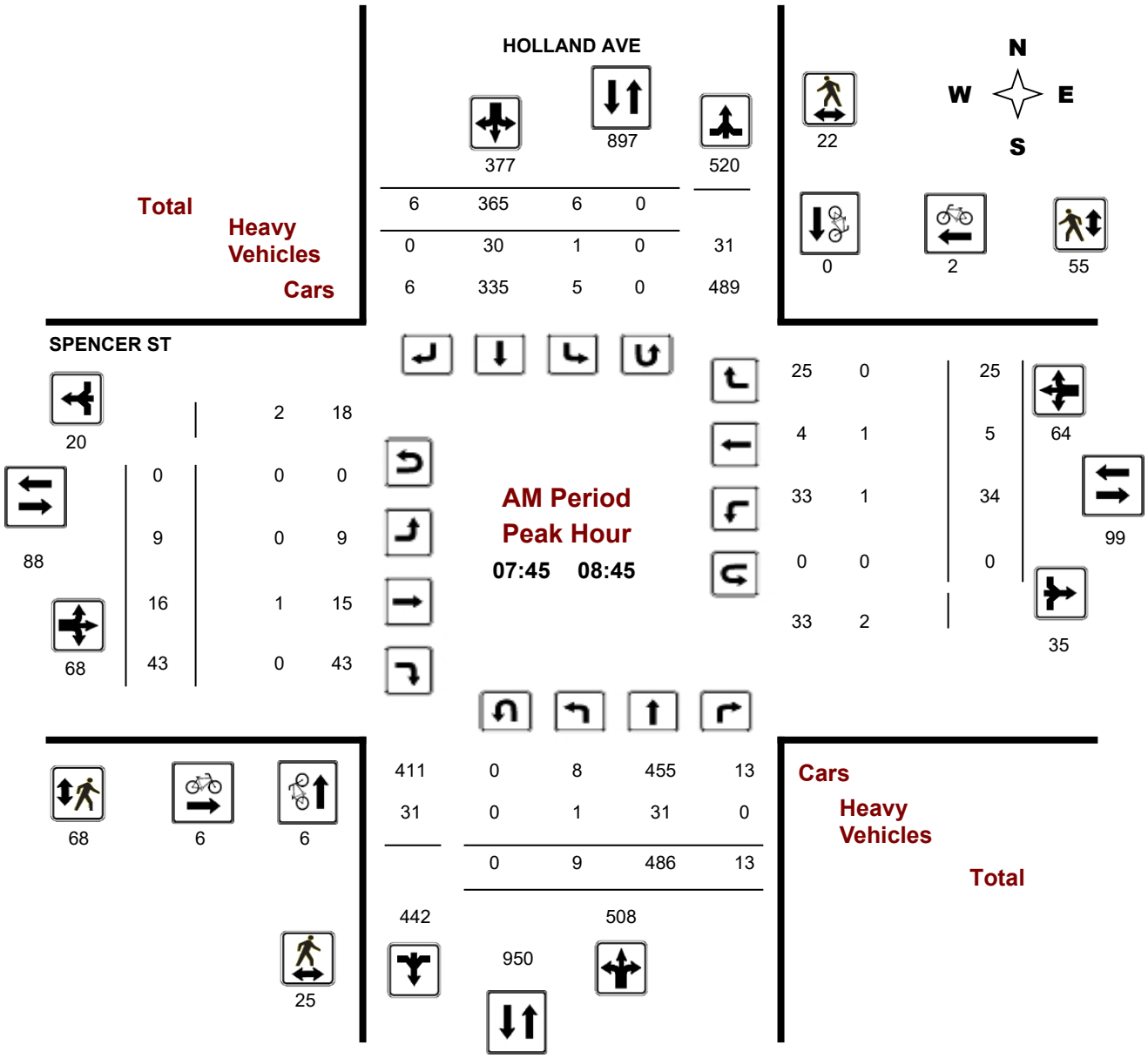
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HOLLAND AVE @ SPENCER ST

Survey Date: Tuesday, March 25, 2025 **WO No:** 42619

Start Time: 07:00 **Device:** Miovision



Comments:

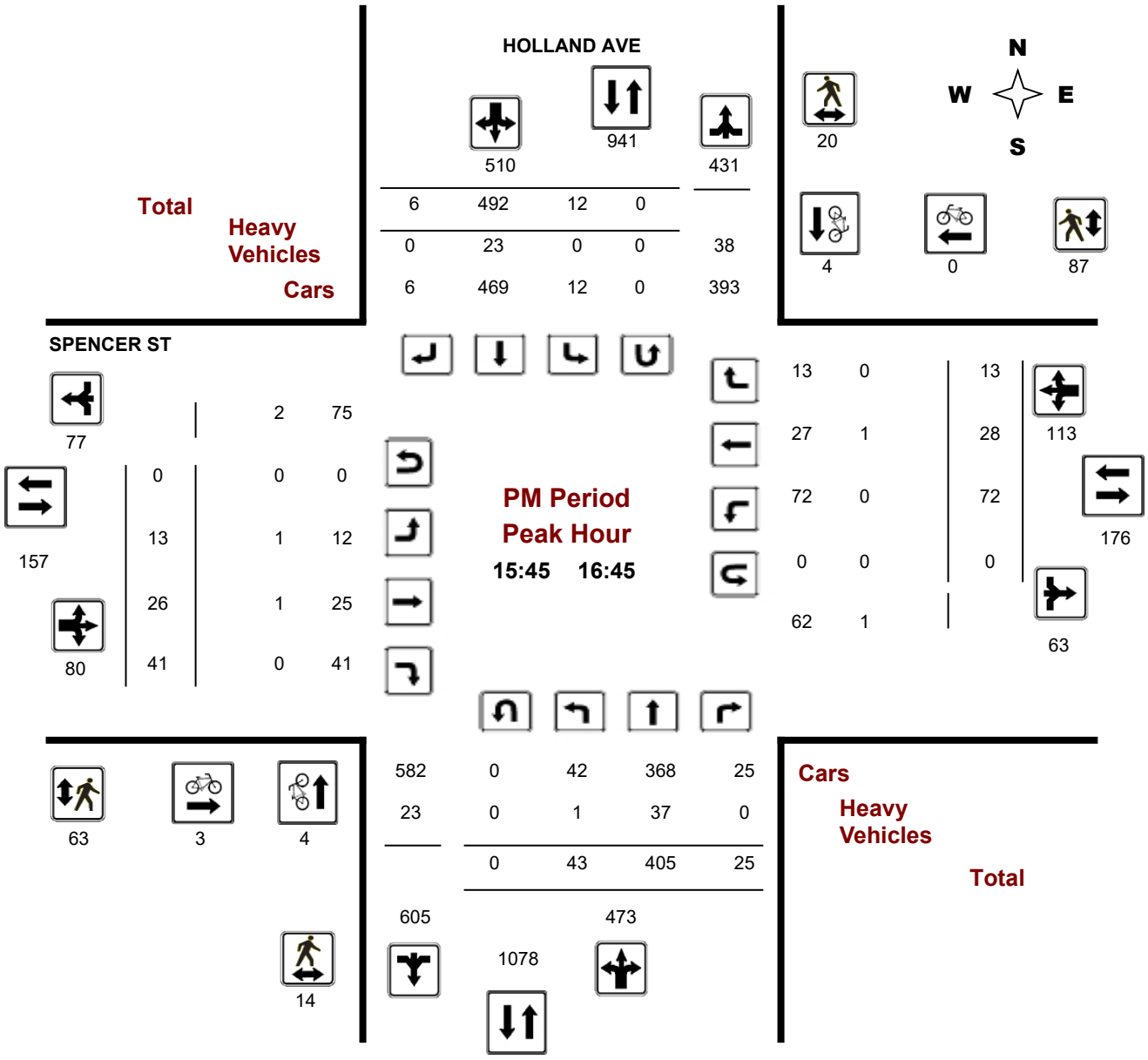
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HOLLAND AVE @ SPENCER ST

Survey Date: Tuesday, March 25, 2025 **WO No:** 42619

Start Time: 07:00 **Device:** Miovision



Comments:

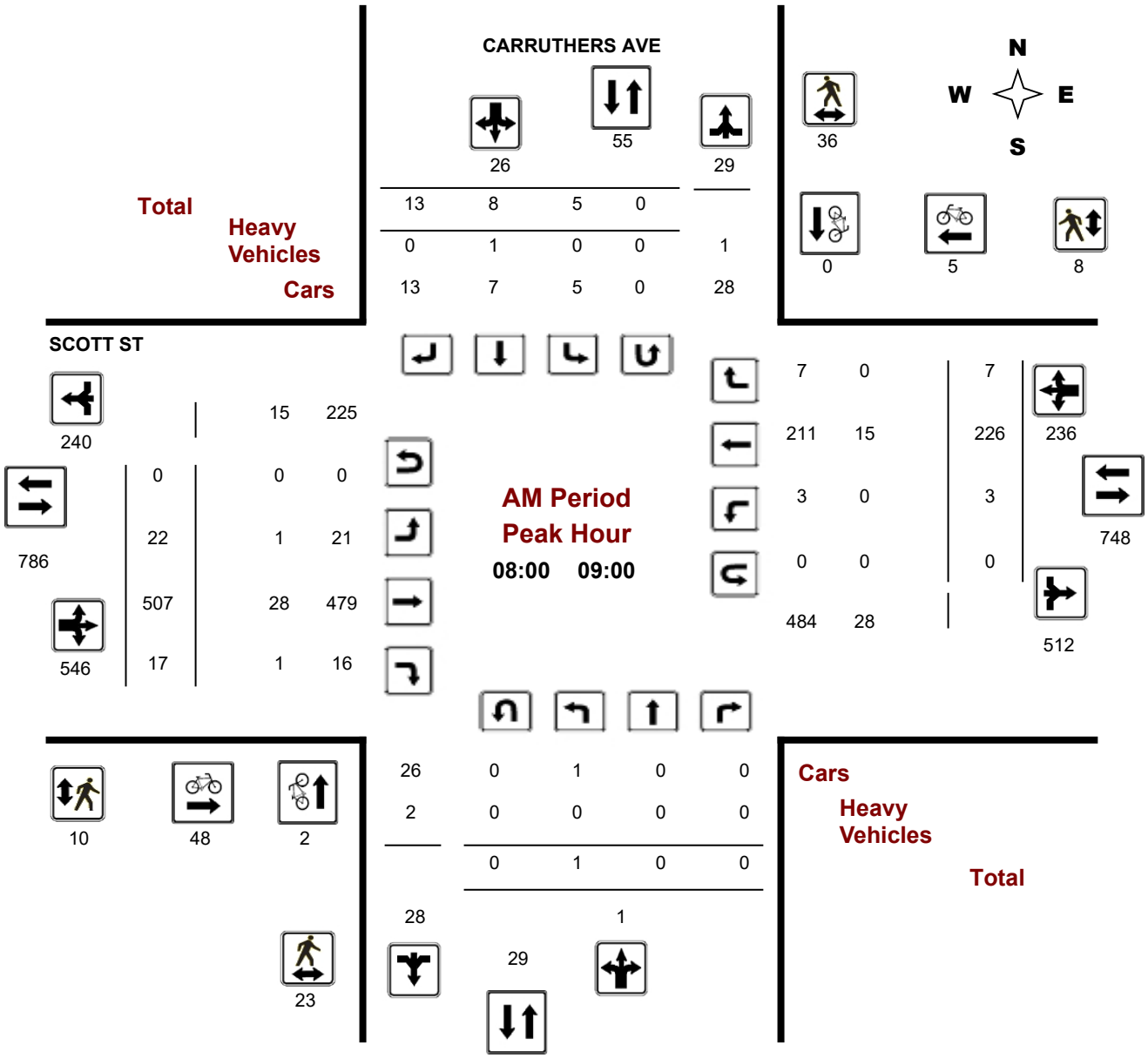
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

CARRUTHERS AVE @ SCOTT ST

Survey Date: Tuesday, March 25, 2025
Start Time: 07:00

WO No: 42592
Device: Miovision



Comments:

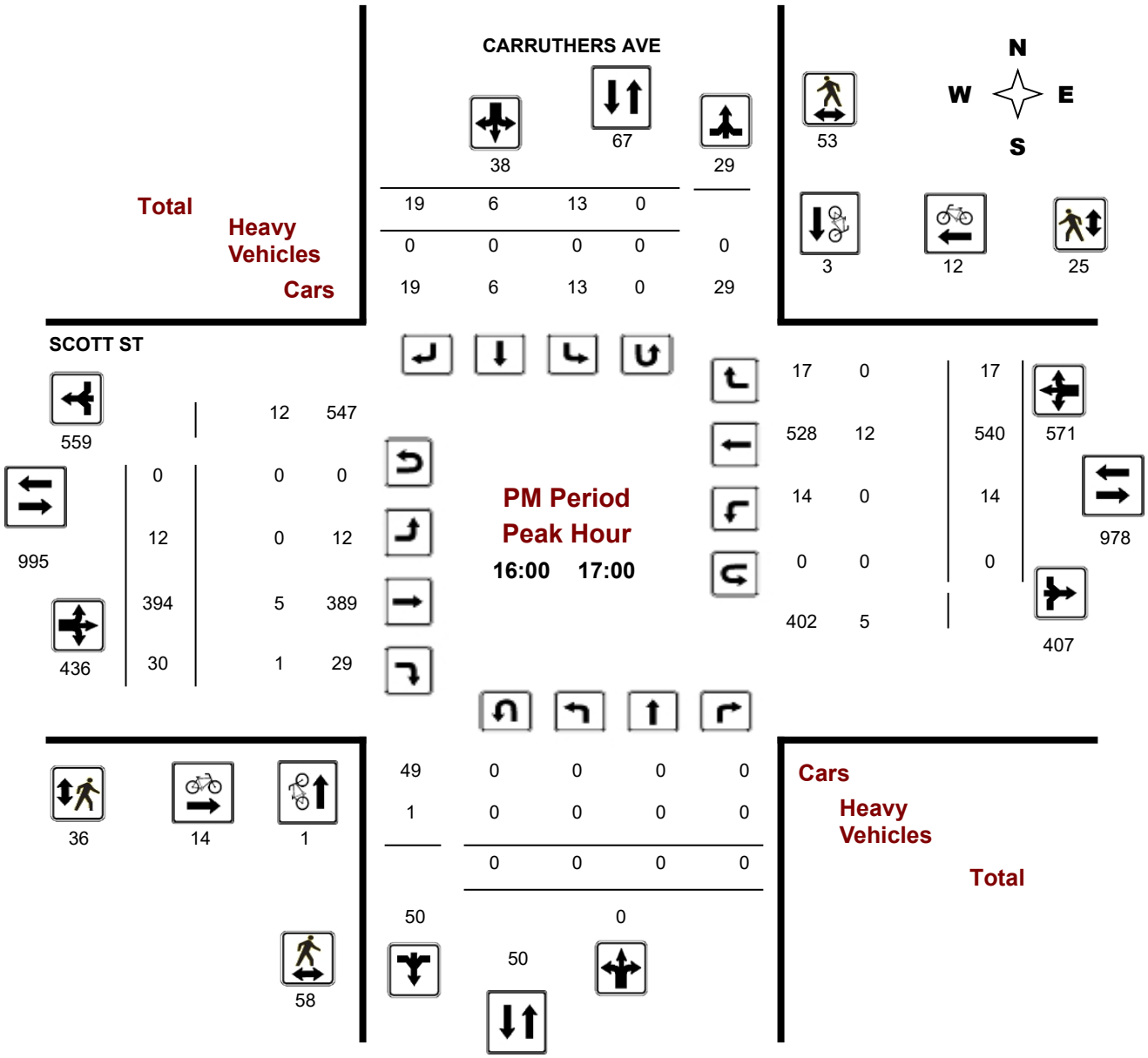
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

CARRUTHERS AVE @ SCOTT ST

Survey Date: Tuesday, March 25, 2025 **WO No:** 42592

Start Time: 07:00 **Device:** Miovision



Total	19	6	13	0
Heavy Vehicles	0	0	0	0
Cars	19	6	13	0

Total	49	0	0	0
Heavy Vehicles	1	0	0	0
Cars	0	0	0	0

559	12	547		
995	0	0	0	
436	12	0	12	
36	394	5	389	
14	30	1	29	
1				
58				

29	0			
53	17	0		
3	528	12		
12	14	0		
25	0	0		
	402	5		

50	0	0	0	0
50	0			

17	0			
571	540	14		
978	14	0		
407	0			

Comments:

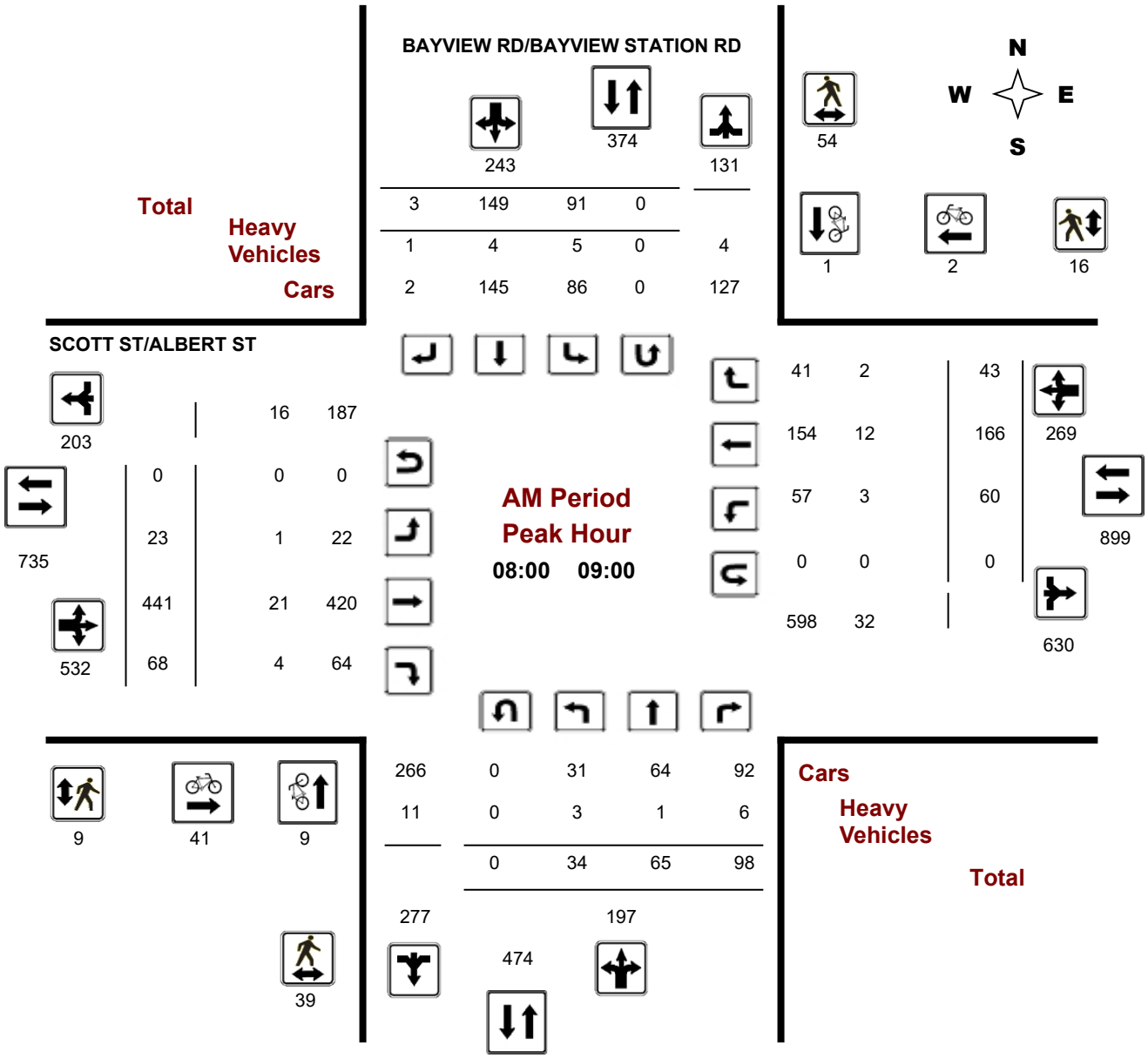
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, March 25, 2025 **WO No:** 42593

Start Time: 07:00 **Device:** Miovision



Comments:

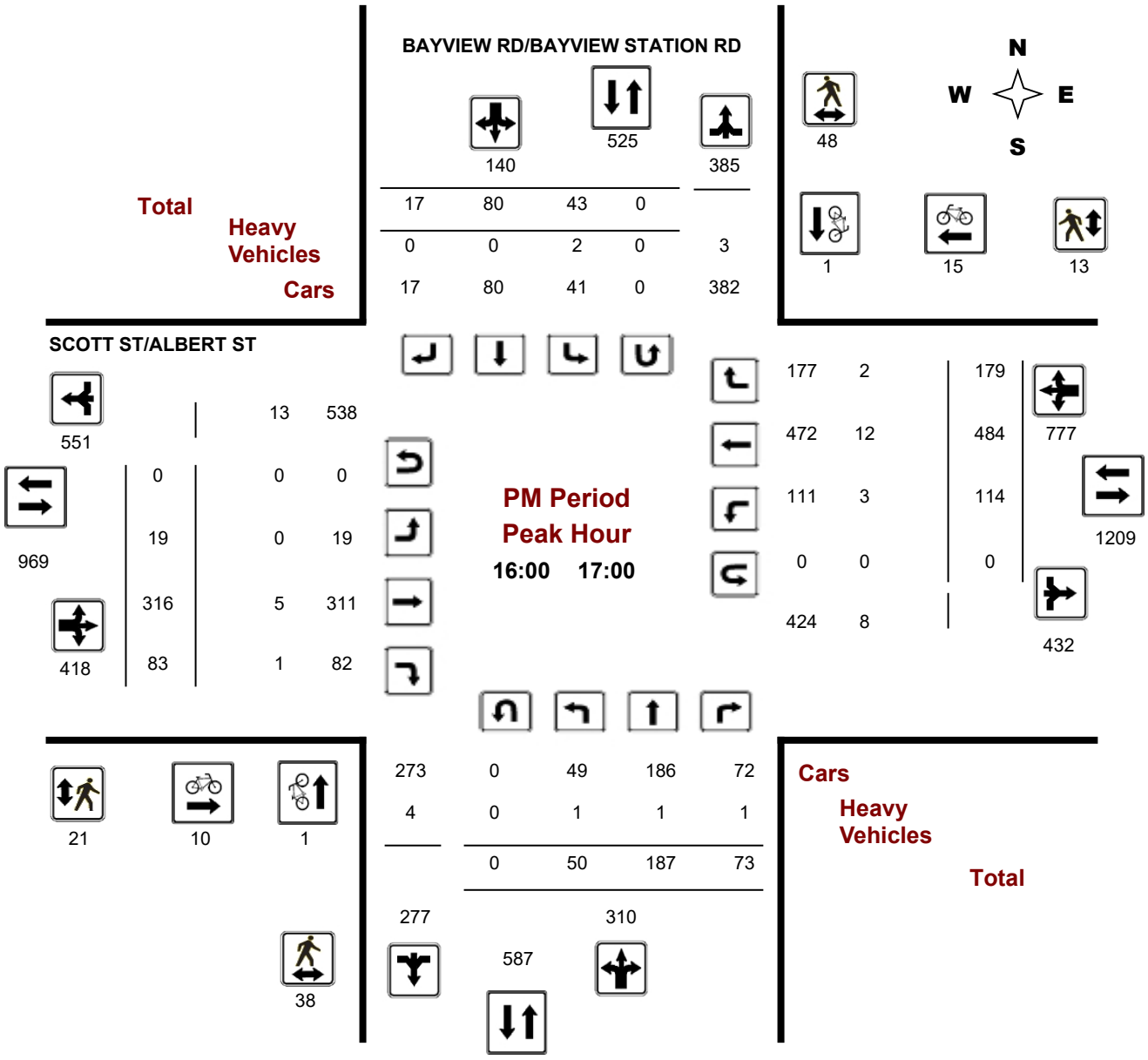
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

BAYVIEW RD/BAYVIEW STATION RD @ SCOTT ST/ALBERT ST

Survey Date: Tuesday, March 25, 2025 **WO No:** 42593

Start Time: 07:00 **Device:** Miovision



Comments:

5698147 - BAYVIEW STATION RD/BURNSIDE AVE @ ... - TMC

Tue Mar 25, 2025
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1281466, Location: 45.409556, -75.72883, Site Code: 42594103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

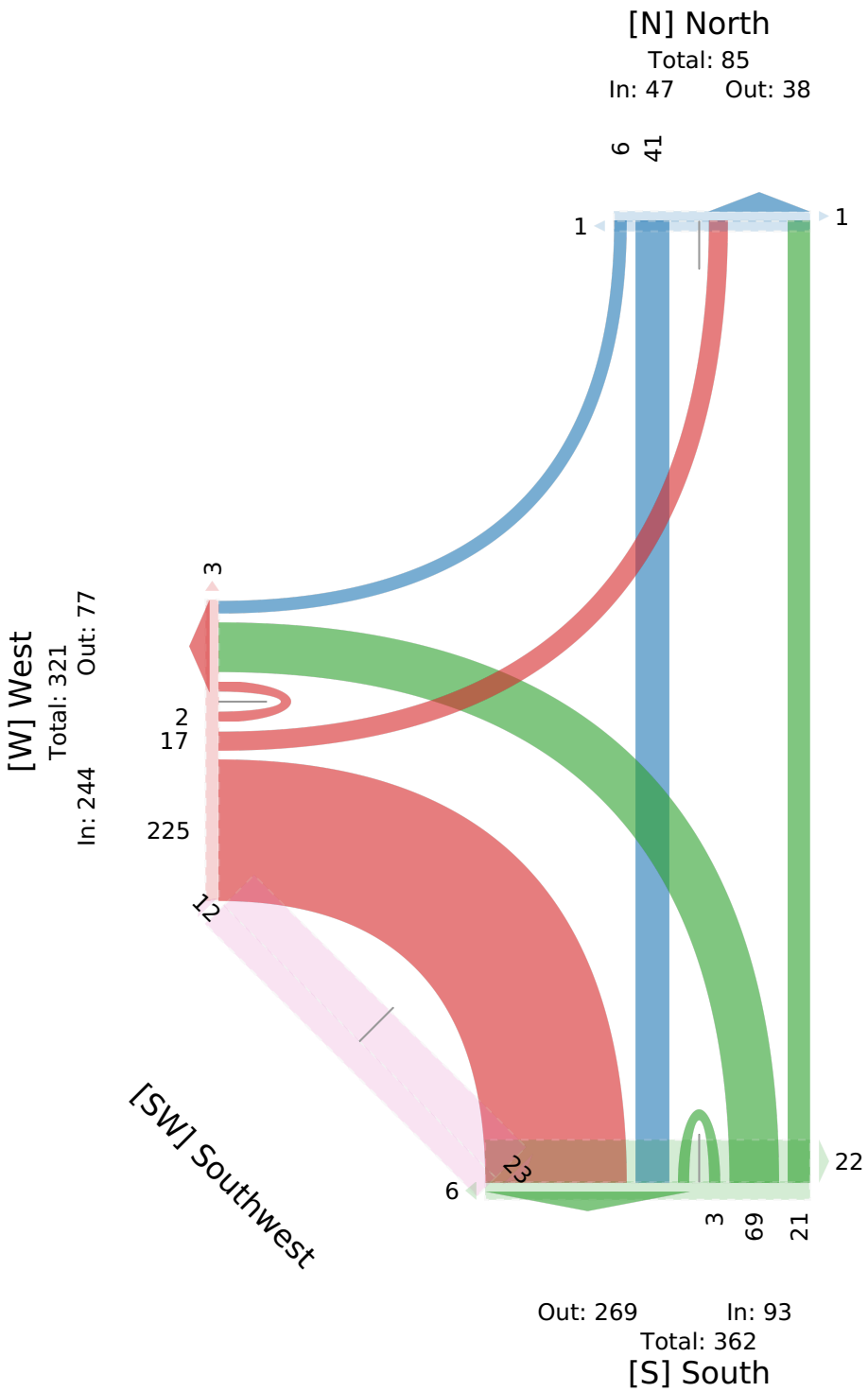
Leg Direction	North Southbound						South Northbound						Southwest Northeastbound						West Eastbound						
Time	R	BR	T	U	**App**	Ped*	T	L	HL	U	**App**	Ped*	HR	BL	HL	U	**App**	Ped*	HR	R	L	U	**App**	Ped*	**Int**
2025-03-25 7:45AM	0	0	5	0	**5**	0	7	16	0	1	**24**	6	0	0	0	0	**0**	10	0	58	5	0	**63**	0	**92**
8:00AM	2	0	8	0	**10**	1	9	19	0	1	**29**	5	0	0	0	0	**0**	5	0	54	5	1	**60**	1	**99**
8:15AM	3	0	15	0	**18**	0	3	9	0	0	**12**	7	0	0	0	0	**0**	8	0	50	4	1	**55**	1	**85**
8:30AM	1	0	13	0	**14**	1	2	25	0	1	**28**	10	0	0	0	0	**0**	12	0	63	3	0	**66**	1	**108**
Total	6	0	41	0	**47**	2	21	69	0	3	**93**	28	0	0	0	0	**0**	35	0	225	17	2	**244**	3	**384**
% Approach	12.8%	0%	87.2%	0%	**-**	-	22.6%	74.2%	0%	3.2%	**-**	-	0%	0%	0%	0%	**-**	-	0%	92.2%	7.0%	0.8%	**-**	-	-
% Total	1.6%	0%	10.7%	0%	**12.2%**	-	5.5%	18.0%	0%	0.8%	**24.2%**	-	0%	0%	0%	0%	**0%**	-	0%	58.6%	4.4%	0.5%	**63.5%**	-	-
PHF	0.500	-	0.650	-	**0.625**	-	0.583	0.708	-	0.750	**0.793**	-	-	-	-	-	**-**	-	-	0.893	0.850	0.500	**0.924**	-	0.899
Lights and Motorcycles	6	0	37	0	**43**	-	19	66	0	1	**86**	-	0	0	0	0	**0**	-	0	224	17	2	**243**	-	372
% Lights and Motorcycles	100%	0%	90.2%	0%	**91.5%**	-	90.5%	95.7%	0%	33.3%	**92.5%**	-	0%	0%	0%	0%	**-**	-	0%	99.6%	100%	100%	**99.6%**	-	96.9%
Heavy	0	0	2	0	**2**	-	2	2	0	2	**6**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	9
% Heavy	0%	0%	4.9%	0%	**4.3%**	-	9.5%	2.9%	0%	66.7%	**6.5%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	0%	0%	**0.4%**	-	2.3%
Bicycles on Road	0	0	2	0	**2**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	3
% Bicycles on Road	0%	0%	4.9%	0%	**4.3%**	-	0%	1.4%	0%	0%	**1.1%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0.8%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	28	-	-	-	-	-	35	-	-	-	-	-	3	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

5698147 - BAYVIEW STATION RD/BURNSIDE AVE @ ... - TMC

Tue Mar 25, 2025
AM Peak (7:45 AM - 8:45 AM)
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1281466, Location: 45.409556, -75.72883, Site Code: 42594103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



5698147 - BAYVIEW STATION RD/BURNSIDE AVE @ ... - TMC

Tue Mar 25, 2025
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour
All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)
All Movements
ID: 1281466, Location: 45.409556, -75.72883, Site Code: 42594103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA

Leg Direction	North Southbound						South Northbound						Southwest Northeastbound						West Eastbound						
Time	R	BR	T	U	**App**	Ped*	T	L	HL	U	**App**	Ped*	HR	BL	HL	U	**App**	Ped*	HR	R	L	U	**App**	Ped*	**Int**
2025-03-25 4:15PM	2	0	6	0	**8**	0	30	83	0	0	**113**	5	0	0	0	0	**0**	10	0	21	0	0	**21**	2	**142**
4:30PM	3	0	7	0	**10**	1	22	62	0	1	**85**	3	0	0	0	0	**0**	11	0	28	0	0	**28**	1	**123**
4:45PM	2	0	5	0	**7**	2	37	67	0	2	**106**	3	0	0	0	0	**0**	8	0	23	2	0	**25**	4	**138**
5:00PM	0	0	10	0	**10**	0	19	61	0	0	**80**	6	0	0	0	0	**0**	16	0	35	1	0	**36**	3	**126**
Total	7	0	28	0	**35**	3	108	273	0	3	**384**	17	0	0	0	0	**0**	45	0	107	3	0	**110**	10	**529**
% Approach	20.0%	0%	80.0%	0%	**-**	-	28.1%	71.1%	0%	0.8%	**-**	-	0%	0%	0%	0%	**-**	-	0%	97.3%	2.7%	0%	**-**	-	**-**
% Total	1.3%	0%	5.3%	0%	**6.6%**	-	20.4%	51.6%	0%	0.6%	**72.6%**	-	0%	0%	0%	0%	**0%**	-	0%	20.2%	0.6%	0%	**20.8%**	-	**-**
PHF	0.583	-	0.700	-	**0.875**	-	0.730	0.819	-	0.375	**0.847**	-	-	-	-	-	**-**	-	-	0.757	0.375	-	**0.757**	-	0.934
Lights and Motorcycles	7	0	27	0	**34**	-	108	271	0	3	**382**	-	0	0	0	0	**0**	-	0	105	3	0	**108**	-	524
% Lights and Motorcycles	100%	0%	96.4%	0%	**97.1%**	-	100%	99.3%	0%	100%	**99.5%**	-	0%	0%	0%	0%	**-**	-	0%	98.1%	100%	0%	**98.2%**	-	99.1%
Heavy	0	0	1	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	3
% Heavy	0%	0%	3.6%	0%	**2.9%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.9%	0%	0%	**0.9%**	-	0.6%
Bicycles on Road	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	2
% Bicycles on Road	0%	0%	0%	0%	**0%**	-	0%	0.4%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**-**	-	0%	0.9%	0%	0%	**0.9%**	-	0.4%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	17	-	-	-	-	-	45	-	-	-	-	-	10	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-
Bicycles on Crosswalk	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Bicycles on Crosswalk	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-	-	-	-	-	0%	-

*Pedestrians and Bicycles on Crosswalk. BL: Bear left, BR: Bear right, HL: Hard left, HR: Hard right, L: Left, R: Right, T: Thru, U: U-Turn

5698147 - BAYVIEW STATION RD/BURNSIDE AVE @ ... - TMC

Tue Mar 25, 2025

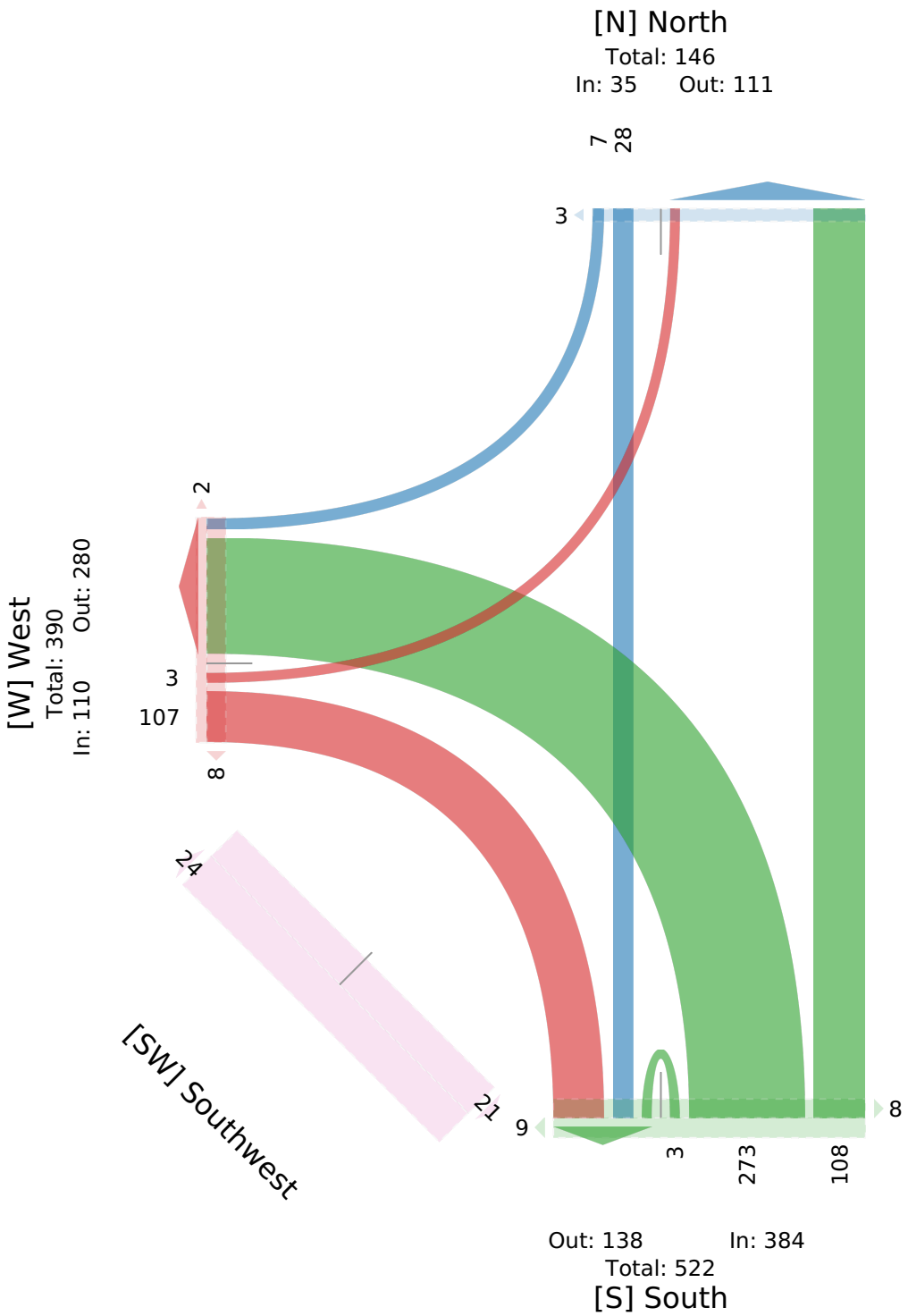
PM Peak (4:15 PM - 5:15 PM) - Overall Peak Hour

All Classes (Lights and Motorcycles, Heavy, Pedestrians, Bicycles on Road, Bicycles on Crosswalk)

All Movements

ID: 1281466, Location: 45.409556, -75.72883, Site Code: 42594103

Provided by: City of Ottawa
100 Constellation Dr,
Nepean, ON, K2G 5J9, CA



Leg	North							East							South							West							
Direction	Southbound							Westbound							Northbound							Eastbound							
Start Time	Right	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	Right	Thru	Left	U-Turn	**App Total**	Peds CW	Peds CCW	**Int Total**
2025-02-26 07:45:00	0	91	0	0	**91**	0	0	0	0	0	0	**0**	0	0	28	10	0	0	**38**	0	0	114	0	0	0	**114**	0	0	**243**
2025-02-26 08:00:00	0	93	0	0	**93**	0	0	0	0	0	0	**0**	0	0	47	14	0	0	**61**	0	0	135	0	0	0	**135**	0	0	**289**
2025-02-26 08:15:00	0	93	0	0	**93**	0	0	0	0	0	0	**0**	0	0	26	11	0	0	**37**	0	0	129	0	0	0	**129**	0	0	**259**
2025-02-26 08:30:00	0	97	0	0	**97**	0	0	0	0	0	0	**0**	0	0	33	19	0	0	**52**	0	0	110	0	0	0	**110**	0	0	**259**
Grand Total	0	374	0	0	**374**	0	0	0	0	0	0	**0**	0	0	134	54	0	0	**188**	0	0	488	0	0	0	**488**	0	0	**1050**
% Approach	0.0%	100.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%				71.3%	28.7%	0.0%	0.0%				100.0%	0.0%	0.0%	0.0%				
% Total	0.0%	35.6%	0.0%	0.0%	**35.6%**			0.0%	0.0%	0.0%	0.0%	**0.0%**			12.8%	5.1%	0.0%	0.0%	**17.9%**			46.5%	0.0%	0.0%	0.0%	**46.5%**			
PHF (7:45 AM - 8:45 AM)	0	0.964	0	0	**0.964**			0	0	0	0	**0**			0.713	0.711	0	0	**0.77**			0.904	0	0	0	**0.904**			**0.908**
Lights and Motorcycles	0	370	0	0	**370**			0	0	0	0	**0**			133	52	0	0	**185**			486	0	0	0	**486**			**1041**
% Lights and Motorcycles	0.0%	98.9%	0.0%	0.0%	**98.9%**			0.0%	0.0%	0.0%	0.0%				99.3%	96.3%	0.0%	0.0%	**98.4%**			99.6%	0.0%	0.0%	0.0%	**99.6%**			**99.1%**
Heavy	0	4	0	0	**4**			0	0	0	0	**0**			1	2	0	0	**3**			2	0	0	0	**2**			**9**
% Heavy	0.0%	1.1%	0.0%	0.0%	**1.1%**			0.0%	0.0%	0.0%	0.0%				0.7%	3.7%	0.0%	0.0%	**1.6%**			0.4%	0.0%	0.0%	0.0%	**0.4%**			**0.9%**
Bicycles on Road	0	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%	0.0%	0.0%	**0.0%**			0.0%	0.0%	0.0%	0.0%				0.0%	0.0%	0.0%	0.0%	**0.0%**			0.0%	0.0%	0.0%	0.0%	**0.0%**			**0.0%**
Pedestrians						0	0						0	0						0	0						0	0	
% Pedestrians						0.0%	0.0%						0.0%	0.0%						0.0%	0.0%						0.0%	0.0%	
Bicycles on Crosswalk						0	0						0	0						0	0						0	0	
% Bicycles on Crosswalk						0.0%	0.0%						0.0%	0.0%						0.0%	0.0%						0.0%	0.0%	

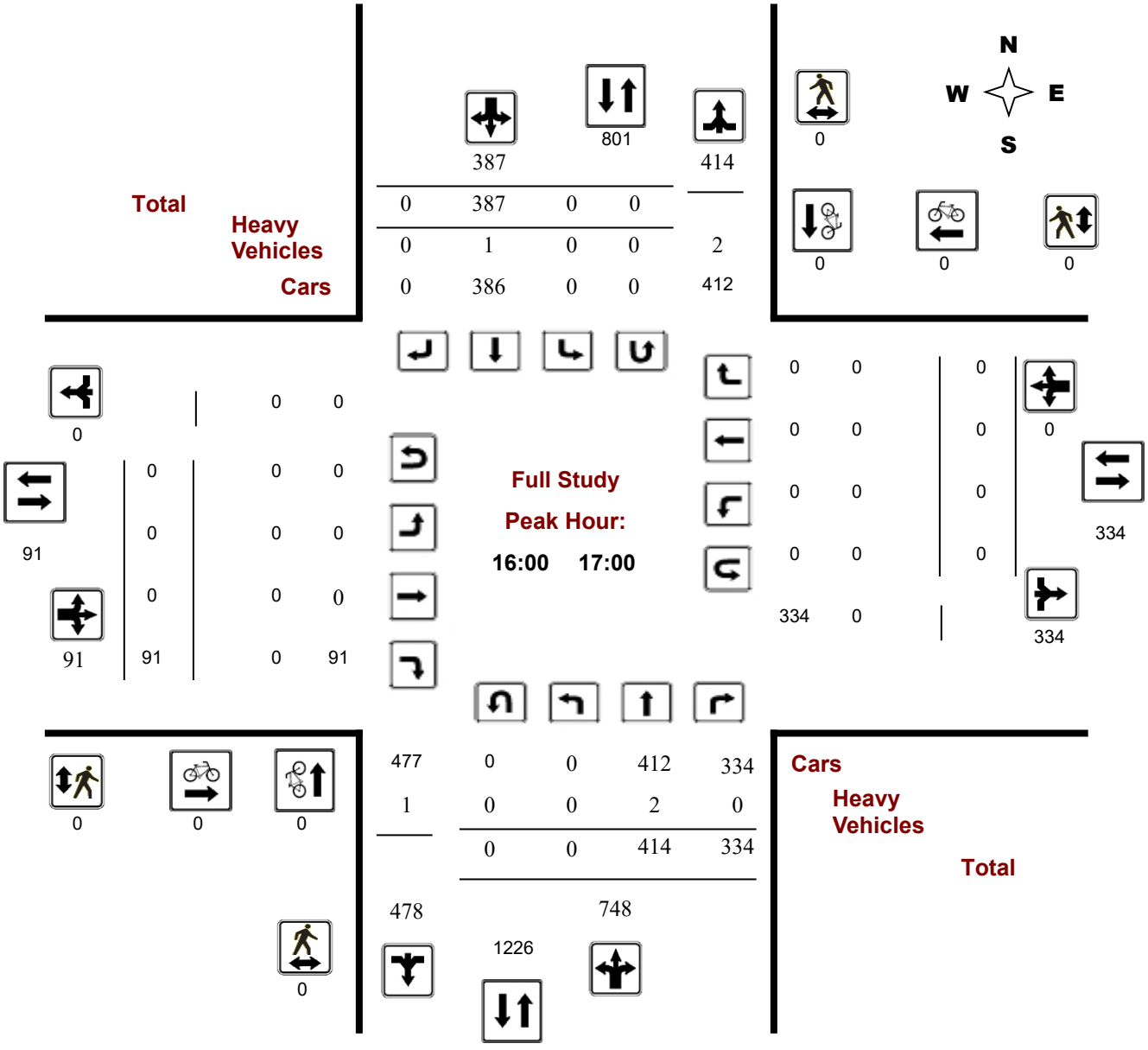
Transportation Services - Traffic Services

Turning Movement Count - Study Results

KICHI ZIBI MIKAN @ PARKDALE AVE

Survey Date: Wednesday, February 26, 2025
Start Time: 06:00
WO No: 42553
Device: Miovision

Full Study Peak Hour Diagram



Appendix D – Collision Data

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: BULLMAN ST @ PARKDALE AVE

Traffic Control: Stop sign **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-May-06, Sat,13:36	Rain	Angle	Non-fatal injury	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-14, Wed,12:37	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Turning left	Passenger van	Other motor vehicle	
2018-Oct-16, Tue,17:25	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-13, Thu,17:10	Clear	Angle	P.D. only	Wet	East	Turning left	Unknown	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: CARLETON AVE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Oct-24, Mon,06:56	Clear	SMV other	P.D. only	Dry	West	Going ahead	Pick-up truck	Pole (utility, power)	0
2017-May-15, Mon,16:51	Clear	Other	P.D. only	Dry	West	Reversing	Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Dec-17, Mon,17:13	Clear	SMV other	Non-fatal injury	Wet	North	Turning left	Automobile, station wagon	Pedestrian	1
2020-Apr-16, Thu,16:05	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Cyclist	0
					North	Going ahead	Bicycle	Other motor vehicle	

Location: COLOMBINE DRWY @ PARKDALE AVE

Traffic Control: Stop sign **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jul-27, Thu,12:45	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: COLOMBINE DRWY @ PARKDALE AVE

Traffic Control: Stop sign **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Nov-05, Mon,15:45	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Oct-29, Tue,17:30	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Automobile, station wagon	Other motor vehicle	0
					North	Unknown	Automobile, station wagon	Other motor vehicle	
2020-Mar-05, Thu,08:44	Clear	Angle	P.D. only	Wet	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: EMMERSON AVE @ PARKDALE AVE

Traffic Control: Stop sign **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jul-11, Tue,15:43	Rain	Rear end	P.D. only	Wet	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Location: HOLLAND AVE/TUNNEY'S PASTURE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 33

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-04, Mon,09:22	Clear	Turning movement	P.D. only	Wet	South	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Feb-17, Wed,09:17	Clear	Rear end	P.D. only	Packed snow	North	Stopped	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Mar-02, Wed,09:19	Snow	Rear end	P.D. only	Packed snow	South	Going ahead	Municipal transit bus	Other motor vehicle	0
					South	Changing lanes	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Mar-17, Thu,11:00	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Pedestrian	1

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: HOLLAND AVE/TUNNEY'S PASTURE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 33

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-May-18, Wed,08:04	Clear	SMV other	Non-fatal injury	Dry	North	Going ahead	Pick-up truck	Pedestrian	1
2016-Jun-09, Thu,15:33	Clear	Turning movement	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jun-16, Thu,14:20	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2016-Jun-27, Mon,15:13	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2016-Jul-31, Sun,14:41	Clear	Angle	Non-fatal injury	Dry	East	Turning right	Motorcycle	Other motor vehicle	0
					South	Going ahead	Municipal transit bus	Other motor vehicle	
2016-Oct-06, Thu,12:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jan-31, Tue,09:01	Clear	SMV other	P.D. only	Ice	West	Going ahead	Automobile, station wagon	Skidding/sliding	0
2017-Jan-31, Tue,16:27	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Feb-10, Fri,09:48	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Mar-15, Wed,06:20	Snow	Turning movement	P.D. only	Packed snow	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Apr-24, Mon,16:33	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2017-May-17, Wed,08:40	Clear	Sideswipe	P.D. only	Dry	North	Unknown	Bicycle	Other motor vehicle	0
					North	Stopped	Pick-up truck	Cyclist	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: HOLLAND AVE/TUNNEY'S PASTURE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 33

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Dec-11, Mon,08:45	Clear	Turning movement	P.D. only	Dry	South	Turning left	Unknown	Other motor vehicle	0
					North	Turning right	Municipal transit bus	Other motor vehicle	
2018-Nov-01, Thu,15:41	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-22, Thu,17:30	Clear	Sideswipe	P.D. only	Packed snow	West	Unknown	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-08, Sat,21:30	Snow	Rear end	Non-fatal injury	Loose snow	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Dec-10, Mon,14:45	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-10, Mon,18:00	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-12, Wed,16:10	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-25, Tue,18:30	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jul-11, Thu,16:01	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2019-Aug-29, Thu,16:58	Clear	Turning movement	P.D. only	Dry	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Sep-24, Tue,10:45	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: HOLLAND AVE/TUNNEY'S PASTURE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 33

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Nov-01, Fri,13:36	Clear	Sideswipe	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Municipal transit bus	Other motor vehicle	
2019-Nov-04, Mon,16:30	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Dec-01, Sun,13:32	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Feb-25, Tue,17:45	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jul-24, Fri,07:30	Clear	Turning movement	P.D. only	Dry	West	Turning left	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2020-Oct-14, Wed,08:05	Clear	Sideswipe	P.D. only	Dry	North	Turning right	Truck and trailer	Other motor vehicle	0
					North	Turning right	Pick-up truck	Other motor vehicle	

Location: LYNDALE AVE @ PARKDALE AVE

Traffic Control: Traffic signal **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Sep-07, Wed,14:13	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jan-10, Tue,17:58	Clear	SMV unattended vehicle	P.D. only	Dry	South	Unknown	Unknown	Unattended vehicle	0
2019-Apr-17, Wed,15:35	Clear	Rear end	P.D. only	Dry	North	Unknown	Unknown	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Aug-04, Tue,15:31	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: MERTON ST @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Feb-02, Tue,21:09	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Slowing or stopping	Unknown	Other motor vehicle	
2016-Oct-27, Thu,23:16	Rain	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-May-18, Thu,17:37	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Sep-21, Fri,19:20	Rain	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
2019-Jan-29, Tue,11:01	Clear	Other	P.D. only	Packed snow	West	Reversing	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	

Location: OTTAWA RIVER PKWY @ REMIC RAPIDS ENT/TUNNEY'S

Traffic Control: Traffic signal **Total Collisions:** 16

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-15, Fri,18:15	Snow	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Feb-03, Wed,15:35	Clear	Rear end	P.D. only	Wet	West	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
2016-Jul-09, Sat,20:28	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2016-Jul-19, Tue,18:50	Clear	Turning movement	P.D. only	Dry	South	Turning left	Pick-up truck	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY @ REMIC RAPIDS ENT/TUNNEY'S

Traffic Control: Traffic signal **Total Collisions:** 16

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Dec-28, Wed,16:20	Unknown	Rear end	P.D. only	Unknown	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2017-May-20, Sat,14:47	Clear	SMV other	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other	0
2017-Jul-05, Wed,13:22	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Oct-02, Mon,04:13	Clear	Angle	P.D. only	Dry	West	Overtaking	Motorcycle	Other motor vehicle	0
					South	Turning left	Truck - open	Other motor vehicle	
2017-Oct-09, Mon,09:14	Rain	SMV other	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Skidding/sliding	0
2017-Dec-23, Sat,17:00	Snow	Turning movement	P.D. only	Slush	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Mar-20, Tue,14:45	Clear	Angle	Non-fatal injury	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-19, Sat,15:36	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-12, Mon,12:30	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-22, Thu,16:00	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
2019-Oct-08, Tue,12:10	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-24, Fri,17:43	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY OFFR-EB @ PARKDALE AVE

Traffic Control: Yield sign **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Sep-03, Sun,14:30	Rain	SMV other	Non-fatal injury	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding	0
2017-Dec-11, Mon,07:58	Clear	Rear end	P.D. only	Dry	East	Stopped	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jun-11, Mon,12:48	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Oct-25, Thu,06:45	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Oct-18, Fri,11:53	Clear	Rear end	P.D. only	Dry	South	Merging	Automobile, station wagon	Other motor vehicle	0
					South	Merging	Automobile, station wagon	Other motor vehicle	
2020-Feb-16, Sun,12:20	Clear	Rear end	P.D. only	Wet	South	Merging	Automobile, station wagon	Other motor vehicle	0
					South	Merging	Automobile, station wagon	Other motor vehicle	

Location: OTTAWA RIVER PKWY ONR-EB @ PARKDALE AVE

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Mar-16, Thu,13:15	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: OTTAWA RIVER PKWY WB @ PARKDALE AVE WB ON RAMP

Traffic Control: Yield sign **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Apr-04, Tue,16:30	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-20, Thu,12:30	Rain	SMV other	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Ran off road	0

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: PARKDALE AVE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 32

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jul-06, Wed,16:03	Clear	SMV other	P.D. only	Dry	South	Turning right	Municipal transit bus	Pole (utility, power)	0
2016-Jul-23, Sat,10:33	Clear	Turning movement	P.D. only	Dry	West	Turning left	Passenger van	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2016-Nov-14, Mon,17:31	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Dec-06, Tue,18:22	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2017-Feb-24, Fri,09:50	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Mar-04, Sat,18:39	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Apr-30, Sun,12:51	Rain	Sideswipe	P.D. only	Wet	South	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-May-23, Tue,14:54	Clear	SMV other	P.D. only	Dry	East	Going ahead	Truck and trailer	Other	0
2017-Jun-30, Fri,02:03	Clear	Angle	P.D. only	Wet	North	Going ahead	Passenger van	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2017-Jul-05, Wed,08:56	Clear	Rear end	P.D. only	Dry	North	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Turning right	Automobile, station wagon	Other motor vehicle	
2017-Aug-03, Thu,16:02	Clear	Turning movement	P.D. only	Dry	West	Turning right	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2018-Mar-17, Sat,15:05	Clear	Sideswipe	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Changing lanes	Automobile, station wagon	Other motor vehicle	
2018-Mar-23, Fri,07:46	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	

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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: PARKDALE AVE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 32

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Apr-12, Thu,17:56	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2018-May-10, Thu,08:45	Clear	Sideswipe	P.D. only	Dry	North	Overtaking	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Truck - dump	Other motor vehicle	
2018-Aug-24, Fri,13:55	Clear	Turning movement	Non-fatal injury	Dry	East	Turning right	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2018-Oct-04, Thu,14:43	Clear	Turning movement	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					East	Turning right	Automobile, station wagon	Cyclist	
2018-Oct-23, Tue,17:07	Clear	Sideswipe	P.D. only	Dry	South	Turning right	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Nov-18, Sun,18:30	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Dec-03, Mon,18:35	Clear	Approaching	P.D. only	Wet	West	Unknown	Unknown	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Dec-10, Mon,16:05	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Passenger van	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Feb-06, Wed,08:39	Clear	Rear end	P.D. only	Loose snow	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
					South	Stopped	Unknown	Other motor vehicle	
2019-Feb-22, Fri,15:30	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-30, Sat,13:46	Rain	Turning movement	Non-fatal injury	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: PARKDALE AVE @ SCOTT ST

Traffic Control: Traffic signal **Total Collisions:** 32

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Apr-16, Tue,09:15	Clear	Rear end	P.D. only	Dry	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Jul-14, Sun,08:25	Clear	Angle	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2019-Oct-08, Tue,11:00	Clear	Rear end	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Oct-31, Thu,09:11	Rain	Angle	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Nov-22, Fri,15:16	Clear	Turning movement	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Turning right	Truck - closed	Other motor vehicle	
2020-Jun-10, Wed,16:16	Clear	Rear end	P.D. only	Dry	North	Overtaking	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Sep-21, Mon,20:10	Clear	Angle	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
2020-Nov-14, Sat,12:27	Clear	Angle	Non-fatal injury	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: ROSS AVE @ SCOTT ST

Traffic Control: Stop sign **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Oct-05, Thu,18:15	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: ROSS AVE @ SCOTT ST

Traffic Control: Stop sign **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jul-03, Tue,13:43	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Dec-06, Thu,18:06	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-15, Thu,08:47	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Bicycle	Other motor vehicle	0
					South	Turning right	Automobile, station wagon	Cyclist	
2019-Oct-15, Tue,08:24	Clear	Turning movement	Non-fatal injury	Dry	West	Turning left	Automobile, station wagon	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2020-Jan-16, Thu,08:00	Snow	Sideswipe	P.D. only	Packed snow	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	

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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY btwn ISLAND PARK DR & TURN LANE (1)

Traffic Control: No control **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Aug-13, Sat,08:05	Rain	Sideswipe	P.D. only	Wet	East	Unknown	Pick-up truck	Other motor vehicle	0
					East	Unknown	Pick-up truck	Other motor vehicle	
2018-Jun-08, Fri,14:40	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	

Location: OTTAWA RIVER PKWY EB btwn ISLAND PARK DR & PARKDALE AVE

Traffic Control: No control **Total Collisions:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Feb-13, Sat,07:54	Clear	SMV other	Non-fatal injury	Ice	East	Going ahead	Pick-up truck	Ran off road	0
2016-Feb-25, Thu,18:30	Snow	Other	P.D. only	Ice	East	Stopped	Automobile, station wagon	Skidding/sliding	0
					East	Slowing or stopping	Delivery van	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Jun-02, Thu,00:15	Clear	SMV other	Non-fatal injury	Wet	West	Going ahead	Automobile, station wagon	Skidding/sliding	0
2016-Sep-09, Fri,13:48	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-May-12, Fri,16:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2018-Aug-09, Thu,08:00	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Oct-09, Tue,16:30	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Passenger van	Other motor vehicle	0
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	
2018-Nov-06, Tue,07:14	Rain	SMV other	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Ran off road	0

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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY EB btwn ISLAND PARK DR & PARKDALE AVE

Traffic Control: No control

Total Collisions: 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Nov-15, Thu,06:17	Clear	Turning movement	P.D. only	Dry	West	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-19, Mon,18:38	Clear	Sideswipe	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Changing lanes	Unknown	Other motor vehicle	
2018-Nov-26, Mon,07:10	Clear	SMV other	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Animal - wild	0
2019-Mar-22, Fri,07:20	Rain	Rear end	P.D. only	Wet	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Aug-22, Thu,15:22	Clear	Rear end	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Changing lanes	Automobile, station wagon	Other motor vehicle	
2019-Dec-03, Tue,06:16	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Dec-15, Sun,01:30	Drifting Snow	SMV other	P.D. only	Ice	East	Going ahead	Automobile, station wagon	Ran off road	0
2020-Jan-24, Fri,09:00	Clear	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Jan-28, Tue,07:30	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2020-Jun-10, Wed,11:20	Rain	Rear end	P.D. only	Wet	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Pick-up truck	Other motor vehicle	
2020-Sep-19, Sat,19:25	Clear	Rear end	P.D. only	Dry	East	Overtaking	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	

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From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY EB btwn PARKDALE AVE SB OFF-RAMP & PARKDALE AVE NB ON-RAMP

Traffic Control: No control

Total Collisions: 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-May-22, Fri,18:15	Clear	Rear end	P.D. only	Dry	East	Going ahead	Police vehicle	Other motor vehicle	0
					East	Pulling onto shoulder or toward curb	Police vehicle	Other motor vehicle	

Location: OTTAWA RIVER PKWY WB btwn ISLAND PARK DR & PARKDALE AVE

Traffic Control: No control

Total Collisions: 39

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-13, Wed,16:45	Clear	Rear end	P.D. only	Slush	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	
					West	Unknown	Delivery van	Other motor vehicle	
					West	Unknown	Pick-up truck	Other motor vehicle	
2016-Feb-12, Fri,17:15	Snow	Rear end	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
2016-Feb-17, Wed,16:05	Snow	Rear end	P.D. only	Packed snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Pick-up truck	Other motor vehicle	
2016-Mar-01, Tue,23:30	Snow	SMV other	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Skidding/sliding	0
2016-Apr-11, Mon,16:00	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-May-26, Thu,09:00	Clear	Rear end	Non-fatal injury	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Jun-13, Mon,17:00	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	

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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY WB btwn ISLAND PARK DR & PARKDALE AVE

Traffic Control: No control

Total Collisions: 39

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Aug-26, Fri,15:20	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Changing lanes	Automobile, station wagon	Other motor vehicle	
2016-Nov-22, Tue,17:15	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2016-Dec-14, Wed,16:15	Clear	Rear end	P.D. only	Other	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jan-25, Wed,18:03	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jan-31, Tue,14:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Truck - tank	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Mar-09, Thu,15:39	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Apr-15, Sat,12:49	Clear	Sideswipe	P.D. only	Dry	West	Overtaking	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Delivery van	Other motor vehicle	
2017-Apr-26, Wed,15:50	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Apr-27, Thu,17:00	Clear	Sideswipe	P.D. only	Slush	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Jun-01, Thu,15:45	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Skidding/sliding	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	

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From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY WB btwn ISLAND PARK DR & PARKDALE AVE

Traffic Control: No control

Total Collisions: 39

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jun-20, Tue,15:45	Other	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Jul-10, Mon,13:08	Clear	Rear end	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2017-Dec-20, Wed,10:38	Clear	Sideswipe	P.D. only	Wet	West	Overtaking	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Bus (other)	Other motor vehicle	
2018-Jan-21, Sun,22:24	Freezing Rain	SMV other	P.D. only	Packed snow	West	Going ahead	Automobile, station wagon	Skidding/sliding	0
2018-Feb-13, Tue,17:15	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-21, Wed,16:14	Clear	Rear end	P.D. only	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-May-29, Tue,18:00	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
2018-May-30, Wed,09:00	Clear	Rear end	Non-fatal injury	Dry	West	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Passenger van	Other motor vehicle	
2019-Jan-29, Tue,18:30	Snow	Sideswipe	P.D. only	Loose snow	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-05, Tue,12:40	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Mar-08, Fri,18:44	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Pick-up truck	Other motor vehicle	

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Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY WB btwn ISLAND PARK DR & PARKDALE AVE

Traffic Control: No control

Total Collisions: 39

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Mar-16, Sat,19:45	Clear	SMV other	P.D. only	Ice	West	Going ahead	Pick-up truck	Curb	0
2019-Mar-31, Sun,09:31	Drifting Snow	SMV other	P.D. only	Slush	West	Going ahead	Passenger van	Skidding/sliding	0
2019-Apr-17, Wed,18:02	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Jun-17, Mon,15:25	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jul-07, Sun,17:00	Clear	Angle	P.D. only	Dry	South	Turning right	Unknown	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-02, Fri,15:36	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Pick-up truck	Other motor vehicle	0
					West	Changing lanes	Automobile, station wagon	Other motor vehicle	
2019-Aug-12, Mon,17:05	Clear	Rear end	P.D. only	Dry	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Dec-02, Mon,17:00	Clear	Sideswipe	P.D. only	Dry	West	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jan-15, Wed,00:00	Snow	Rear end	P.D. only	Loose snow	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Jun-10, Wed,18:51	Clear	Rear end	Fatal injury	Dry	West	Other	Automobile, station wagon	Cyclist	1
					West	Going ahead	Bicycle	Other motor vehicle	
2020-Jun-16, Tue,19:45	Clear	Sideswipe	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Merging	Pick-up truck	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: OTTAWA RIVER PKWY WB btwn PARKDALE AVE SB OFF-RAMP & PARKDALE AVE NB ON-RAMP

Traffic Control: No control

Total Collisions: 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Apr-06, Wed,19:00	Snow	Rear end	P.D. only	Packed snow	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Pick-up truck	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Feb-24, Fri,15:00	Unknown	Rear end	Non-fatal injury	Unknown	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: PARKDALE AVE btwn SPLIT & EMMERSON AVE

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jun-01, Wed,14:45	Clear	SMV unattended vehicle	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Unattended vehicle	0
2016-Jun-14, Tue,16:36	Clear	Rear end	P.D. only	Dry	North	Going ahead	Pick-up truck	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2017-Jul-01, Sat,15:06	Clear	Turning movement	Non-fatal injury	Dry	South	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Location: PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE

Traffic Control: No control

Total Collisions: 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Mar-16, Wed,10:00	Clear	Angle	P.D. only	Dry	South	Pulling away from shoulder or curb	Pick-up truck	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Feb-28, Wed,14:45	Clear	Angle	P.D. only	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: PARKDALE AVE btwn BURNSIDE AVE & LYNDALE AVE

Traffic Control: No control **Total Collisions:** 5

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Mar-20, Tue,16:15	Clear	Rear end	Non-fatal injury	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	
2019-Jan-16, Wed,00:00	Snow	SMV unattended vehicle	P.D. only	Slush	Unknown	Unknown	Unknown	Unattended vehicle	0
2019-Jan-24, Thu,22:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0

Location: PARKDALE AVE btwn COLOMBINE DRWY & EMMERSON AVE

Traffic Control: No control **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2018-Jan-17, Wed,12:00	Clear	SMV unattended vehicle	P.D. only	Loose snow	South	Turning right	Automobile, station wagon	Unattended vehicle	0
2018-Nov-07, Wed,07:50	Clear	Rear end	P.D. only	Dry	South	Unknown	Unknown	Other motor vehicle	0
					South	Stopped	Automobile, station wagon	Other motor vehicle	

Location: PARKDALE AVE btwn LYNDALE AVE & SCOTT ST

Traffic Control: No control **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Apr-14, Thu,08:34	Clear	Angle	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					South	Changing lanes	Pick-up truck	Other motor vehicle	
2016-Jun-22, Wed,18:37	Clear	Angle	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Pick-up truck	Other motor vehicle	
2016-Dec-06, Tue,08:19	Clear	Angle	P.D. only	Wet	East	Turning left	Pick-up truck	Other motor vehicle	0
					South	Going ahead	Passenger van	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: PARKDALE AVE btwn LYNDALE AVE & SCOTT ST

Traffic Control: No control **Total Collisions:** 6

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2019-Jul-18, Thu,12:57	Clear	Angle	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-06, Tue,10:25	Clear	SMV other	Non-fatal injury	Dry	North	Turning right	Automobile, station wagon	Pedestrian	1
2020-Jan-22, Wed,16:17	Clear	SMV other	Non-fatal injury	Dry	North	Going ahead	Pick-up truck	Pedestrian	1

Location: PARKDALE AVE EB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PARKDALE AVE

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jul-30, Sat,10:10	Clear	Rear end	P.D. only	Dry	East	Slowing or stopping	Pick-up truck	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: PARKDALE AVE WB OFF RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PARKDALE AVE

Traffic Control: No control **Total Collisions:** 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Jan-04, Mon,11:00	Clear	SMV other	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other	0
2016-Jun-06, Mon,07:20	Clear	Sideswipe	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2016-Dec-09, Fri,08:30	Clear	Rear end	P.D. only	Ice	West	Going ahead	Passenger van	Skidding/sliding	0
					West	Going ahead	Automobile, station wagon	Skidding/sliding	
2017-Mar-21, Tue,08:20	Snow	Rear end	P.D. only	Packed snow	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: PARKDALE AVE WB ON RAMP/OTTAWA RIVER PKWY btwn OTTAWA RIVER PKWY & PARKDALE AVE

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-May-05, Fri,16:21	Rain	Rear end	Non-fatal injury	Wet	West	Stopped	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	

Location: SCOTT ST btwn CARLETON AVE & ROCKHURST RD

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2020-Aug-07, Fri,06:55	Clear	Turning movement	Non-fatal injury	Dry	West	Turning right	Construction equipment	Cyclist	0
					West	Going ahead	Bicycle	Other motor vehicle	

Location: SCOTT ST btwn CARLETON AVE & WESTERN AVE

Traffic Control: No control **Total Collisions:** 1

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jun-21, Wed,16:35	Clear	Rear end	Non-fatal injury	Dry	West	Going ahead	Pick-up truck	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	

Location: SCOTT ST btwn CAROLINE AVE & HURON AVE N

Traffic Control: No control **Total Collisions:** 2

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Sep-15, Fri,08:08	Clear	Sideswipe	Non-fatal injury	Dry	West	Changing lanes	Truck - open	Other motor vehicle	0
					West	Going ahead	Municipal transit bus	Other motor vehicle	
2018-Oct-17, Wed,12:34	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2016 **To:** December 31, 2020

Location: SCOTT ST btwn PARKDALE AVE & TUNNEY'S PASTURE DRWY

Traffic Control: No control **Total Collisions:** 7

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2016-Mar-23, Wed,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0
2018-Jan-17, Wed,09:12	Clear	Turning movement	P.D. only	Slush	East	Making "U" turn	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Feb-05, Mon,16:24	Snow	Angle	P.D. only	Loose snow	North	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Passenger van	Other motor vehicle	
2018-Jul-16, Mon,07:06	Clear	Turning movement	Non-fatal injury	Dry	East	Turning right	Pick-up truck	Cyclist	0
					East	Going ahead	Bicycle	Other motor vehicle	
2018-Nov-21, Wed,11:11	Clear	SMV other	P.D. only	Dry	West	Reversing	Construction equipment	Pole (utility, power)	0
2019-Jan-23, Wed,17:54	Snow	Rear end	P.D. only	Loose snow	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Passenger van	Other motor vehicle	
2020-Nov-06, Fri,13:48	Clear	Turning movement	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

Appendix E – Multi-Modal Level of Service (MMLOS) Analyses

Multi-Modal Level of Service - Segments Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Existing

	Segment Name	Kichi Zibi Mikan (Subject Site Frontage)				Parkdale Ave (Goldenrod and Burnside)				Parkdale Ave (Burnside and Lyndale)				Parkdale Ave (Lyndale and Scott)	
	OP Transect / Policy Area	Downtown Core, Inner Urban,Hub and/or Special District				Within 600m of a rapid transit station				Within 600m of a rapid transit station				Within 600m of a ra	
	Segment Component	Majority (>50%)		Critical		Majority (>50%)		Critical		Majority (>50%)		Critical		Majority (>50%)	
	Side of Street	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S
Pedestrian	**PLOS Inputs**														
	Posted Speed (km/h)	60 km/h		60 km/h		40 km/h		40 km/h		40 km/h		40 km/h		40 km/h	
	Two-Way ADT	36,830		36,830		9,920		9,920		9,920		9,920		9,920	
	Pedestrian Facility	Multi-Use Pathway	None	Multi-Use Pathway	None	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, does the location have a low volume of peak daily users AND are pedestrian volumes likely less than 20% of total users?	Yes	No	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Facility Width (m)	3.00m	-	3.00m	-	1.80m	1.80m	1.80m	1.80m	2.00m	2.00m	1.80m	1.80m	2.00m	2.00m
	Offset from Motor Vehicle Travel Lanes (m)	≥ 3.0m	-	≥ 3.0m	-	1.5-2.99m	1.5-2.99m	< 0.5m	< 0.5m	< 0.5m	< 0.5m	< 0.5m	< 0.5m	< 0.5m	< 0.5m
	Presence of Adjacent Parking?	No	-	No	-	-	-	-	-	-	-	-	-	-	-
	General Purpose Curb Lane ADT	-	-	-	-	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000
	Max. Distance between Controlled Crossings (m)	> 400m	-	> 400m	-	201-230m	201-230m	201-230m	201-230m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m
	Score	**3.75**	**0.00**	**3.75**	**0.00**	**4.00**	**4.00**	**2.50**	**2.50**	**3.50**	**3.50**	**2.75**	**2.75**	**3.50**	**3.50**
	PLOS	**B**	**F**	**B**	**F**	**B**	**B**	**C**	**C**	**B**	**B**	**C**	**C**	**B**	**B**
	Target PLOS	**A**				**A**				**A**				**A**	
Bicycle	**BLOS Inputs**														
	Cycling Route Classification	**Elsewhere**				**Elsewhere**				**Elsewhere**				**Elsew**	
	Cycling Facility	Multi-Use Pathway	Shared Operating Space	Multi-Use Pathway	Shared Operating Space	Painted or Physically Separated Bike Lanes	Painted or Physically Separated Bike Lanes	Shared Operating Space	Shared Operating Space	Shared Operating Space	Shared Operating Space	Shared Operating Space	Shared Operating Space	Shared Operating Space	Shared Operating Space
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Facility Operation	-	-	-	-	Unidirectional	Unidirectional	-	-	-	-	-	-	-	-
	Pedestrian/Cyclist Volume	High-Volume MUP (> 100 users per hour)	-	High-Volume MUP (> 100 users per hour)	-	-	-	-	-	-	-	-	-	-	-
	Facility Width	3.0-3.49m	-	3.0-3.49m	-	1.5-1.79m or 1.8m contraflow bike lane	1.5-1.79m or 1.8m contraflow bike lane	-	-	-	-	-	-	-	-
	Boulevard/Buffer Width (excluding curb)	≥ 1.5m or any boulevard width with continuous traffic barrier	-	≥ 1.5m or any boulevard width with continuous traffic barrier	-	< 0.3m with one vehicle lane per direction	< 0.3m with one vehicle lane per direction	-	-	-	-	-	-	-	-
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	Cross-Street	None	Cross-Street	Cross-Street	None	None	None	None	None	None	None	None
	Number of Travel Lanes at Crossing	-	-	≤ 2	-	≤ 2	≤ 2	-	-	-	-	-	-	-	-
	Crossing includes Median Refuge (≥ 2.7m)	-	-	No	-	Yes	Yes	-	-	-	-	-	-	-	-
	Cross-street Posted Speed (km/h)	-	-	≤ 30 km/h	-	≤ 30 km/h	≤ 30 km/h	-	-	-	-	-	-	-	-
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	-	Rare	-	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Rare	Rare
	Score	**3.50**	**0.75**	**3.73**	**0.75**	**2.90**	**2.90**	**1.60**	**1.60**	**1.60**	**1.60**	**1.60**	**1.60**	**1.60**	**1.60**
	BLOS	**B**	**E**	**B**	**E**	**C**	**C**	**D**	**D**	**D**	**D**	**D**	**D**	**D**	**D**
	Target BLOS	**B**				**B**				**B**				**B**	
Transit	**TLOS Inputs**														
	Transit Facility	**Mixed Traffic**				**Select Transit Designation**				**Select Transit Designation**				**Select Transit Designation**	
	Facility Type	Mixed Traffic	Mixed Traffic												
	Expected Transit Running Time	Slightly Impeded	Slightly Impeded												
	Transit Travel Speed (if available)	25 km/h	46 km/h												
	TLOS	**E**	**D**			**-**	**-**			**-**	**-**			**-**	**-**
	Target TLOS	**E (D for frequent transit routes)**				**-**				**-**				**-**	
Public Realm	**PRLOS Inputs**														
	Context	Other Streets	Other Streets			Other Streets	Other Streets			Other Streets	Other Streets			Other Streets	Other Streets
	Inner Boulevard Width	≥ 4.0m	≥ 4.0m			≤ 0.6m	≤ 0.6m			≤ 0.6m	≤ 0.6m			≤ 0.6m	≤ 0.6m
	Middle Boulevard Width	≤ 0.5m	≤ 0.5m			≤ 0.5m	≤ 0.5m			≤ 0.5m	≤ 0.5m			≤ 0.5m	≤ 0.5m
	Outer Boulevard (Frontage) Width	≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m
	Transit Route on Segment?	No	No			No	No			No	No			No	No
	Bus Stop Elements	-	-			Curbside landing zone with shelter behind sidewalk	-			Curbside landing zone with shelter behind sidewalk	-			Curbside landing zone with shelter behind sidewalk	-
	Number of Midblock Traffic Lanes (both travel directions)	4				≤ 2				≤ 2				≤ 2	
	Score	**21.00**	**10.50**			**25.50**	**26.10**			**24.90**	**25.50**			**24.90**	**25.50**
	PRLOS	**B**	**D**			**A**	**A**			**B**	**A**			**B**	**A**
		C				**A**				**B**				**B**	

Multi-Modal Level of Service - Segments Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Existing

	Segment Name	**Parkdale Ave (Lyndale and Scott)**	
	OP Transect / Policy Area	**apid transit station**	
	Segment Component	**Critical**	
	Side of Street	**W or N**	**E or S**
Pedestrian	**PLOS Inputs**		
	Posted Speed (km/h)	40 km/h	
	Two-Way ADT	9,920	
	Pedestrian Facility	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, does the location have a low volume of peak daily users AND are pedestrian volumes likely less than 20% of total users?	Yes	Yes
	Facility Width (m)	1.80m	1.80m
	Offset from Motor Vehicle Travel Lanes (m)	< 0.5m	< 0.5m
	Presence of Adjacent Parking?	-	-
	General Purpose Curb Lane ADT	> 3000	> 3000
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m
	Score	**2.75**	**2.75**
	PLOS	**C**	**C**
	Target PLOS	****	
Bicycle	**BLOS Inputs**		
	Cycling Route Classification	**vhere**	
	Cycling Facility	Shared Operating Space	Shared Operating Space
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-
	Facility Operation	-	-
	Pedestrian/Cyclist Volume	-	-
	Facility Width	-	-
	Boulevard/Buffer Width (excluding curb)	-	-
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None
	Number of Travel Lanes at Crossing	-	-
	Crossing includes Median Refuge (≥ 2.7m)	-	-
	Cross-street Posted Speed (km/h)	-	-
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	Rare	Rare
	Score	**1.60**	**1.60**
	BLOS	**D**	**D**
	Target BLOS	**3**	
Transit	**TLOS Inputs**		
	Transit Facility		
	Facility Type		
	Expected Transit Running Time		
	Transit Travel Speed (if available)		
	TLOS		
	Target TLOS		
Public Realm	**PRLOS Inputs**		
	Context		
	Inner Boulevard Width		
	Middle Boulevard Width		
	Outer Boulevard (Frontage) Width		
	Transit Route on Segment?		
	Bus Stop Elements		
	Number of Midblock Traffic Lanes (both travel directions)		
	Score		
	PRLOS		

Multi-Modal Level of Service - Intersections Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Existing

	Intersection Name	**Kichi Zibi Mikan & Remic Rapids / Tunney's Pasture**				**Parkdale Ave & Burnside Ave**				**Parkdale Ave & Lyndale Ave**			
	OP Transect / Policy Area	**Downtown Core, Inner Urban,Hub and/or Special District**				**Within 600m of a rapid transit station**				**Within 600m of a rapid transit station**			
Pedestrian	**PLOS Inputs**												
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	1-3	1-3	4	No Crosswalk	1-3	1-3	4	No Crosswalk	1-3	1-3	1-3	No Crosswalk
	Median Refuge (≥2.7m)	No	Yes	Yes	-	No	No	No	-	No	No	No	-
	Crosswalk Treatment	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-
	Signal Cycle Length (sec)	145.0				70.0				70.0			
	Effective Walk Time (sec)	70.3	32.7	32.7		12.6	12.6	33.6	-	38.9	38.9	9.1	-
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**	**WBR**	**EBR**	**NBR**	**SBR**	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Right-Turn With No Channel	Conventional Right-Turn Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.
	Right-Turn Signal Phasing	Permissive	-	Permissive	Permissive	Permissive	-	Permissive	-	Permissive	-	Permissive	-
	Right-Turn Volume	≤ 150 veh/h	> 150 to 300 veh/h	≤ 150 veh/h	≤ 150 veh/h	> 150 to 300 veh/h	-	≤ 150 veh/h	-	≤ 150 veh/h	-	≤ 150 veh/h	-
	Right-Turn Effective Corner Radius	≤ 8m	-	≤ 8m	≤ 8m	≤ 8m	-	≤ 8m	-	≤ 8m	-	≤ 8m	-
	Cross-street Posted Speed (km/h)	60 km/h		30 km/h		40 km/h		40 km/h		40 km/h		40 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**	**EBL**	**WBL**	**SBL**	**NBL**	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	No Left-Turn / Prohib.	Perm or Prot+Perm	Perm or Prot+Perm	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Prot+Perm	Perm or Prot+Perm	No Left-Turn / Prohib.
	Left-Turn Volume	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h	> 100 veh/h	-	≤ 50 veh/h	≤ 50 veh/h	-	-	≤ 50 veh/h	≤ 50 veh/h	-
	Left-Turn Opposing Lanes	-	-	-	-	-	-	-	-	-	-	-	-
	Score	**4.60**	**3.70**	**4.15**	**-**	**4.30**	**4.60**	**4.15**	**-**	**4.75**	**4.90**	**4.45**	**-**
	PLOS	**A**	**B**	**B**	**-**	**B**	**A**	**B**	**-**	**A**	**A**	**B**	**-**
		B				**B**				**A**			
	Target PLOS	**A**				**A**				**A**			
Bicycle	**BLOS Inputs**												
	Cycling Route Classification	**Elsewhere**				**Elsewhere**				**Elsewhere**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic		Mixed Traffic	Mixed Traffic	Mixed Traffic	
	Two-Way ADT (in Cyclist Travel Direction)	3,970		21,770		3,700		2,350		10,020		390	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No	No	No	No		No	No	No	
	Crossride Operation	-	-	-	-	-	-	-	-	-	-	-	
	Target Crossride Setback Met?	-	-	-	-	-	-	-	-	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-	-	-	-	-	-	-	-	
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**	**WBL**	**EBL**	**NBL**	**SBL**	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	No Left-Turn	No Left-Turn	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	One Lane Crossed	One Lane Crossed	No Lane Crossed	No Lane Crossed	No Lane Crossed	-	-	No Lane Crossed	No Lane Crossed	-	-	No Lane Crossed
	Score	**50**	**20**	**80**	**40**	**95**	**125**	**140**	**-**	**80**	**80**	**140**	**-**
	BLOS	**D**	**E**	**C**	**D**	**B**	**A**	**A**	**-**	**C**	**C**	**A**	**-**
		D				**B**				**B**			
	Target BLOS	**B**				**B**				**B**			
Transit	**TLOS Inputs**												
	Transit Facility	**Mixed Traffic**				**Mixed Traffic**				**Mixed Traffic**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**	**Southbound**	**Northbound**	**Westbound**	**Eastbound**	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)		56-80 sec	21-35 sec	11-20 sec	≤ 10 sec	≤ 10 sec	11-20 sec		≤ 10 sec	≤ 10 sec	21-35 sec	
	Example Transit Priority Treatment		-	-	-	-	-	-		-	-	-	-
	TLOS	**-**	**E**	**C**	**B**	**A**	**A**	**B**	**-**	**A**	**A**	**C**	**-**
		C				**A**				**B**			
	Target TLOS	**E (D for frequent transit routes)**				**E (D for frequent transit routes)**				**E (D for frequent transit routes)**			
Auto	**AutoLOS Inputs**												
	Overall Intersection Volume to Capacity Ratio	0.71 to 0.80				0 to 0.60				0 to 0.60			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table				See Separate Traffic Operations Table				See Separate Traffic Operations Table			
	AutoLOS	**C**				**A**				**A**			
	Target AutoLOS	**E**				**E**				**E**			

Multi-Modal Level of Service - Intersections Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Existing

	Intersection Name	Parkdale Ave & Scott St				Scott St & Holland Ave./Tunney's Pasture Dr.			
	OP Transect / Policy Area	**Within 600m of a rapid transit station**				**Within 600m of a rapid transit station**			
Pedestrian	**PLOS Inputs**								
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	1-3	1-3	4	4	4	5	4	1-3
	Median Refuge (≥2.7m)	No	No	No	No	No	No	No	No
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	Signal Cycle Length (sec)	100.0				110.0			
	Effective Walk Time (sec)	9.0	9.0	22.9	22.9	28.8	24.8	6.8	6.8
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	> 8m	≤ 8m	≤ 8m	≤ 8m	> 8m	≤ 8m	≤ 8m	> 8m
	Cross-street Posted Speed (km/h)	40 km/h		50 km/h		40 km/h		50 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 100 veh/h	> 50 to 100 veh/h	> 50 to 100 veh/h	> 50 to 100 veh/h	≤ 50 veh/h	> 100 veh/h	> 50 to 100 veh/h	> 100 veh/h
	Left-Turn Opposing Lanes	-	≤ 1	≤ 1	≤ 1	-	-	≥ 2	-
	Score	**4.00**	**4.20**	**3.90**	**3.90**	**3.90**	**2.95**	**3.55**	**4.15**
	PLOS	**B**	**B**	**B**	**B**	**B**	**C**	**B**	**B**
		B				**B**			
	Target PLOS	**A**				**A**			
Bicycle	**BLOS Inputs**								
	Cycling Route Classification	**Cross-Town Bikeway**				**Cross-Town Bikeway**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Crossride	Crossride	Crossride	Crossride	Crossride	Crossride	Crossride	Crossride
	Two-Way ADT (in Cyclist Travel Direction)	7,350		14,900		7,480		12,790	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No	No	No	No	No
	Crossride Operation	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional
	Target Crossride Setback Met?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-	-	-	-	-
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Protected Corner
	Vehicle Lanes Crossed by Cyclists	-	-	-	-	-	-	-	-
	Score	**100**	**140**	**140**	**140**	**140**	**100**	**105**	**105**
	BLOS	**B**	**A**	**A**	**A**	**A**	**B**	**B**	**B**
		A				**B**			
	Target BLOS	**A**				**A**			
Transit	**TLOS Inputs**								
	Transit Facility	**TP - Continuous Lanes**				**TP - Continuous Lanes**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)	11-20 sec	36-55 sec	Unavailable	21-35 sec	21-35 sec	36-55 sec	Unavailable	36-55 sec
	Example Transit Priority Treatment	-	-	Continuous bus lanes, or transit queue jump lane with TSP	-	-	-	Continuous bus lanes, or transit queue jump lane with TSP	-
	TLOS	**B**	**D**	**B**	**C**	**C**	**D**	**B**	**D**
		C				**C**			
	Target TLOS	**B**				**B**			
Auto	**AutoLOS Inputs**								
	Overall Intersection Volume to Capacity Ratio	0.81 to 0.90				0.71 to 0.80			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table				See Separate Traffic Operations Table			
	AutoLOS	**D**				**C**			
	Target AutoLOS	**E**				**E**			

Multi-Modal Level of Service - Segments Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Future Conditions

	Segment Name	Kichi Zibi Mikan (Subject Site Frontage)				Parkdale Ave (Goldenrod and Burnside)				Parkdale Ave (Burnside and Lyndale)				Parkdale Ave (Lyndale and Scott)	
	OP Transect / Policy Area	Downtown Core, Inner Urban,Hub and/or Special District				Within 600m of a rapid transit station				Within 600m of a rapid transit station				Within 600m of a ra	
	Segment Component	Majority (>50%)		Critical		Majority (>50%)		Critical		Majority (>50%)		Critical		Majority (>50%)	
	Side of Street	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S	W or N	E or S
Pedestrian	PLOS Inputs														
	Posted Speed (km/h)	60 km/h		60 km/h		40 km/h		40 km/h		40 km/h		40 km/h		40 km/h	
	Two-Way ADT	25,900		25,900		15,910		15,910		12,770		12,770		12,930	
	Pedestrian Facility	Multi-Use Pathway	Multi-Use Pathway	Multi-Use Pathway	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, does the location have a low volume of peak daily users AND are pedestrian volumes likely less than 20% of total users?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Facility Width (m)	3.00m	2.00m	3.00m	2.00m	1.80m	1.80m	1.80m	1.80m	2.00m	2.00m	1.80m	1.80m	2.00m	2.00m
	Offset from Motor Vehicle Travel Lanes (m)	≥ 3.0m	≥ 3.0m	≥ 3.0m	≥ 3.0m	1.5-2.99m	1.5-2.99m	1.5-2.99m	1.5-2.99m	< 0.5m	< 0.5m	< 0.5m	< 0.5m	< 0.5m	< 0.5m
	Presence of Adjacent Parking?	No	No	No	No	-	-	-	-	-	-	-	-	-	-
	General Purpose Curb Lane ADT	-	-	-	-	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000	> 3000
	Max. Distance between Controlled Crossings (m)	> 400m	> 400m	> 400m	> 400m	201-230m	201-230m	201-230m	201-230m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m	≤ 200m
	Score	**3.75**	**3.75**	**3.75**	**3.75**	**4.00**	**4.00**	**4.00**	**4.00**	**3.50**	**3.50**	**2.75**	**2.75**	**3.50**	**3.50**
	PLOS	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**B**	**C**	**C**	**B**	**B**
	Target PLOS	**A**				**A**				**A**				**A**	
Bicycle	BLOS Inputs														
	Cycling Route Classification	**Elsewhere**				**Elsewhere**				**Elsewhere**				**Elsew**	
	Cycling Facility	Multi-Use Pathway	Multi-Use Pathway	Multi-Use Pathway	Shared Operating Space	Cycle Track	Shared Operating Space	Cycle Track	Shared Operating Space	Cycle Track	Shared Operating Space	Cycle Track	Shared Operating Space	Cycle Track	Shared Operating Space
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Facility Operation	-	-	-	-	Bidirectional	-	Bidirectional	-	Bidirectional	-	Bidirectional	-	Bidirectional	-
	Pedestrian/Cyclist Volume	High-Volume MUP (> 100 users per hour)	High-Volume MUP (> 100 users per hour)	High-Volume MUP (> 100 users per hour)	-	-	-	-	-	-	-	-	-	-	-
	Facility Width	3.0-3.49m	3.0-3.49m	3.0-3.49m	-	≥ 3.5m	-	≥ 3.5m	-	≥ 3.5m	-	≥ 3.5m	-	≥ 3.5m	-
	Boulevard/Buffer Width (excluding curb)	≥ 1.5m or any boulevard width with continuous traffic barrier	≥ 1.5m or any boulevard width with continuous traffic barrier	< 0.6m	-	0.6-0.99m and no adjacent parking	-	0.6-1.49m with adjacent parking	-	0.6-1.49m with adjacent parking	-	0.6-1.49m with adjacent parking	-	0.6-0.99m and no adjacent parking	-
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	None	None	None	None	Cross-Street	Cross-Street	Cross-Street	Cross-Street	Cross-Street	Cross-Street	Cross-Street	Cross-Street	Cross-Street	Cross-Street
	Number of Travel Lanes at Crossing	-	-	-	-	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2	≤ 2
	Crossing includes Median Refuge (≥ 2.7m)	-	-	-	-	No	No	No	No	No	No	No	No	No	No
	Cross-street Posted Speed (km/h)	-	-	-	-	40 km/h	40 km/h	40 km/h	40 km/h	40 km/h	40 km/h	40 km/h	40 km/h	40 km/h	40 km/h
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	-	-	-	Rare	-	Rare	-	Rare	-	Rare	-	Rare	-	Rare
	Score	**3.50**	**3.50**	**1.50**	**0.75**	**3.58**	**2.05**	**4.43**	**2.05**	**4.43**	**2.05**	**4.43**	**2.05**	**3.58**	**2.05**
	BLOS	**B**	**B**	**D**	**E**	**B**	**D**	**B**	**D**	**B**	**D**	**B**	**D**	**B**	**D**
	Target BLOS	**B**				**B**				**B**				**B**	
Transit	TLOS Inputs														
	Transit Facility	**Mixed Traffic**				**Select Transit Designation**				**Select Transit Designation**				**Select Transit Designation**	
	Facility Type	Mixed Traffic	Mixed Traffic												
	Expected Transit Running Time	Slightly Impeded	Slightly Impeded												
	Transit Travel Speed (if available)	25 km/h	46 km/h												
	TLOS	**E**	**D**			**-**	**-**			**-**	**-**			**-**	**-**
	Target TLOS	**E (D for frequent transit routes)**				**-**				**-**				**-**	
Public Realm	PRLOS Inputs														
	Context	Other Streets	Other Streets			Other Streets	Other Streets			Other Streets	Other Streets			Other Streets	Other Streets
	Inner Boulevard Width	≥ 4.0m	≥ 4.0m			≤ 0.6m	≤ 0.6m			≤ 0.6m	≤ 0.6m			≤ 0.6m	≤ 0.6m
	Middle Boulevard Width	≤ 0.5m	≤ 0.5m			≤ 0.5m	≤ 0.5m			≤ 0.5m	≤ 0.5m			≤ 0.5m	≤ 0.5m
	Outer Boulevard (Frontage) Width	≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m			≥ 3.0m	≥ 3.0m
	Transit Route on Segment?	No	No			Yes	No			Yes	No			Yes	No
	Bus Stop Elements	-	-			Curbside landing zone with shelter behind sidewalk	-			Curbside landing zone with shelter behind sidewalk	-			Curbside landing zone with shelter behind sidewalk	-
	Number of Midblock Traffic Lanes (both travel directions)	4				≤ 2				≤ 2				≤ 2	
	Score	**21.00**	**19.50**			**25.50**	**23.10**			**27.90**	**25.50**			**27.90**	**25.50**
	PRLOS	**B**	**C**			**A**	**B**			**A**	**A**			**A**	**A**
		C				**B**				**A**				**A**	

Multi-Modal Level of Service - Segments Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Future Conditions

	Segment Name	**Parkdale Ave (Lyndale and Scott)**	
	OP Transect / Policy Area	**apid transit station**	
	Segment Component	**Critical**	
	Side of Street	**W or N**	**E or S**
Pedestrian	**PLOS Inputs**		
	Posted Speed (km/h)	40 km/h	
	Two-Way ADT	12,930	
	Pedestrian Facility	Sidewalk	Sidewalk
	Does the facility meet the TMP Sidewalk or MUP Policy? If not, for MUPs, does the location have a low volume of peak daily users AND are pedestrian volumes likely less than 20% of total users?	Yes	Yes
	Facility Width (m)	1.80m	1.80m
	Offset from Motor Vehicle Travel Lanes (m)	< 0.5m	< 0.5m
	Presence of Adjacent Parking?	-	-
	General Purpose Curb Lane ADT	> 3000	> 3000
	Max. Distance between Controlled Crossings (m)	≤ 200m	≤ 200m
	Score	**2.75**	**2.75**
	PLOS	**C**	**C**
	Target PLOS	****	
Bicycle	**BLOS Inputs**		
	Cycling Route Classification	**vhere**	
	Cycling Facility	Cycle Track	Shared Operating Space
	Is the minimum level of separation provided according to OTM Book 18 Pre-Selection Nomograph - Rural Context (Figure 5.6)? (for paved shoulders)	-	-
	Facility Operation	Bidirectional	-
	Pedestrian/Cyclist Volume	-	-
	Facility Width	≥ 3.5m	-
	Boulevard/Buffer Width (excluding curb)	0.6-0.99m and no adjacent parking	-
	Unsignalized Roadway Crossing Type (where cyclists are required to yield)	Cross-Street	Cross-Street
	Number of Travel Lanes at Crossing	≤ 2	≤ 2
	Crossing includes Median Refuge (≥ 2.7m)	No	No
	Cross-street Posted Speed (km/h)	40 km/h	40 km/h
	Cycling Path Blockages (e.g. bus stops and/or loading zones)	-	Rare
	Score	**3.58**	**2.05**
	BLOS	**B**	**D**
	Target BLOS	**3**	
Transit	**TLOS Inputs**		
	Transit Facility		
	Facility Type		
	Expected Transit Running Time		
	Transit Travel Speed (if available)		
	TLOS		
	Target TLOS		
Public Realm	**PRLOS Inputs**		
	Context		
	Inner Boulevard Width		
	Middle Boulevard Width		
	Outer Boulevard (Frontage) Width		
	Transit Route on Segment?		
	Bus Stop Elements		
	Number of Midblock Traffic Lanes (both travel directions)		
	Score		
	PRLOS		

Multi-Modal Level of Service - Intersections Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Future (2038) Total Traffic

	Intersection Name	Parkdale Ave & Colombine Ave				Scott & Goldenrod/Smirle				Kichi Zibi Mikan & Remic Rapids / Tunney's Pasture			
	OP Transect / Policy Area	**Downtown Core, Inner Urban,Hub and/or Special District**				**Within 600m of a rapid transit station**				**Downtown Core, Inner Urban,Hub and/or Special District**			
Pedestrian	**PLOS Inputs**												
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	1-3	1-3	1-3	1-3	1-3	1-3	4	4	1-3	1-3	4	No Crosswalk
	Median Refuge (≥2.7m)	No	No	No	No	No	No	No	No	No	No	Yes	-
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Raised Crosswalk	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-
	Signal Cycle Length (sec)	80.0				130.0				115.0			
	Effective Walk Time (sec)	15.8	15.8	12.0	12.0	44.7	44.7	7.0	7.0	49.1	49.1	23.9	23.9
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Conventional Right-Turn Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive	Permissive	Permissive	Permissive	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	-	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	> 150 to 300 veh/h	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	> 8m	≤ 8m	≤ 8m	> 8m	> 8m	> 8m	≤ 8m	≤ 8m	-	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	40 km/h		40 km/h		30 km/h		50 km/h		60 km/h		30 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Fully Protected	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	> 100 veh/h	≤ 50 veh/h	≤ 50 veh/h	-	≤ 50 veh/h	≤ 50 veh/h	> 50 to 100 veh/h	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h	≤ 50 veh/h	> 100 veh/h
	Left-Turn Opposing Lanes	-	-	-	-	-	-	≤ 1	-	-	-	-	-
	Score	**4.30**	**4.50**	**4.55**	**4.50**	**4.65**	**4.65**	**3.75**	**3.75**	**4.75**	**4.15**	**4.45**	**-**
	PLOS	**B**	**A**	**A**	**A**	**A**	**A**	**B**	**B**	**A**	**B**	**B**	**-**
		B				**B**				**B**			
	Target PLOS	**A**				**A**				**A**			
Bicycle	**BLOS Inputs**												
	Cycling Route Classification	**Elsewhere**				**Elsewhere**				**Elsewhere**			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Crossride	Crossride	Crossride	Crossride	Crossride	Mixed Traffic	Mixed Traffic	Mixed Traffic	Mixed Traffic
	Two-Way ADT (in Cyclist Travel Direction)	16,310		3,580		1,290		13,640		3,670		20,790	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	Yes	No	No	No	No	No	No	No	No
	Crossride Operation	-	-	-	-	Unidirectional	Unidirectional	Unidirectional	Unidirectional	-	-	-	-
	Target Crossride Setback Met?	-	-	-	-	Yes	Yes	Yes	Yes	-	-	-	-
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-	-	-	-	-	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	Physically Separated	Physically Separated	Physically Separated	Protected Corner	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane	General Purpose Through-Left or Single Left-Turn Lane
	Vehicle Lanes Crossed by Cyclists	No Lane Crossed	One Lane Crossed	One Lane Crossed	No Lane Crossed	-	-	-	-	One Lane Crossed	One Lane Crossed	No Lane Crossed	No Lane Crossed
	Score	**40**	**65**	**90**	**90**	**125**	**125**	**125**	**145**	**55**	**20**	**85**	**45**
	BLOS	**D**	**C**	**C**	**C**	**A**	**A**	**A**	**A**	**D**	**E**	**C**	**D**
		C				**A**				**D**			
	Target BLOS	**B**				**B**				**B**			
Transit	**TLOS Inputs**												
	Transit Facility	**Mixed Traffic**				**Mixed Traffic**				**Mixed Traffic**			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay (if available)	36-55 sec	56-80 sec		21-35 sec	36-55 sec	≤ 10 sec	Unavailable	≤ 10 sec		36-55 sec	21-35 sec	11-20 sec
	Example Transit Priority Treatment	-	-	-	-	-	-	Continuous bus lanes, or transit queue jump lane with TSP	-		-	-	-
	TLOS	**D**	**E**	**-**	**C**	**D**	**A**	**B**	**A**	**-**	**D**	**C**	**B**
		D				**B**				**C**			
	Target TLOS	**E (D for frequent transit routes)**				**E (D for frequent transit routes)**				**E (D for frequent transit routes)**			
Auto	**AutoLOS Inputs**												
	Overall Intersection Volume to Capacity Ratio	0.71 to 0.80				0.71 to 0.80				0.91 to 1.00			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table				See Separate Traffic Operations Table				See Separate Traffic Operations Table			
	AutoLOS	**C**				**C**				**E**			
	Target AutoLOS	**E**				**E**				**E**			

Multi-Modal Level of Service - Intersections Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Future (2038) Total Traffic

	Intersection Name	Parkdale Ave & Burnside Ave				Parkdale Ave & Lyndale Ave				Parkdale Ave & Scott St			
	OP Transect / Policy Area	Within 600m of a rapid transit station				Within 600m of a rapid transit station				Within 600m of a rapid transit station			
Pedestrian	PLOS Inputs												
	Pedestrians Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg
	Number of Travel Lanes Crossed	1-3	1-3	1-3	No Crosswalk	1-3	1-3	1-3	No Crosswalk	1-3	1-3	4	4
	Median Refuge (≥2.7m)	No	No	No	-	No	No	No	-	No	No	No	No
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	-	Std Transverse Markings	Std Transverse Markings	Std Transverse Markings	-	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	Signal Cycle Length (sec)	80.0				80.0				130.0			
	Effective Walk Time (sec)	14.6	14.6	31.6	-	7.6	7.6	40.5	-	12.9	12.9	11.7	11.7
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR	WBR	EBR	NBR	SBR
	Right-Turn Geometry	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive (with LPI/LBI)	-	Permissive (with LPI/LBI)	-	Permissive (with LPI/LBI)	-	Permissive (with LPI/LBI)	-	Permissive	Permissive	Permissive	Permissive
	Right-Turn Volume	> 150 to 300 veh/h	-	≤ 150 veh/h	-	≤ 150 veh/h	-	≤ 150 veh/h	-	≤ 150 veh/h	≤ 150 veh/h	≤ 150 veh/h	> 150 to 300 veh/h
	Right-Turn Effective Corner Radius	≤ 8m	-	≤ 8m	-	≤ 8m	-	≤ 8m	-	> 8m	≤ 8m	≤ 8m	≤ 8m
	Cross-street Posted Speed (km/h)	40 km/h		40 km/h		40 km/h		40 km/h		40 km/h		40 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL	EBL	WBL	SBL	NBL
	Left-Turn Signal Phasing	No Left-Turn / Prohib.	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	No Left-Turn / Prohib.	No Left-Turn / Prohib.	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm	Perm or Prot+Perm
	Left-Turn Volume	-	≤ 50 veh/h	> 100 veh/h	-	-	≤ 50 veh/h	≤ 50 veh/h		> 100 veh/h	> 100 veh/h	> 50 to 100 veh/h	> 50 to 100 veh/h
	Left-Turn Opposing Lanes	-	-	-	-	-	-	-	-	-	-	≤ 1	≤ 1
	Score	4.50	4.65	4.65	-	4.45	4.45	4.90	-	4.00	4.00	3.60	3.45
	PLOS	A	A	A	-	B	B	A	-	B	B	B	C
		A				A				B			
	Target PLOS	A				A				A			
Bicycle	BLOS Inputs												
	Cycling Route Classification	Elsewhere				Elsewhere				Cross-Town Bikeway			
	Cyclists Crossing the	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg	North Leg	South Leg	East Leg	West Leg
	Type of Cycling Facility Across Leg	Mixed Traffic	Mixed Traffic	Mixed Traffic	Crossride	Crossride	Crossride	Crossride	Bike Lane Through Intersection	Crossride	Crossride	Crossride	Crossride
	Two-Way ADT (in Cyclist Travel Direction)	14,510		2,800		12,650		430		12,740		11,550	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No	No	No	No		No	No	No	No
	Crossride Operation	-	-	-	Bidirectional	Unidirectional	Unidirectional	Unidirectional	-	Unidirectional	Unidirectional	Unidirectional	Unidirectional
	Target Crossride Setback Met?	-	-	-	-	Yes	-	Yes	-	Yes	Yes	Yes	Yes
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-	-	-	-	-	-	-	-	-
	Cyclist Left-Turn Operation	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL	WBL	EBL	NBL	SBL
	Cyclist Left-Turn Treatment Type	One-Stage Bike Box	Physically Separated	Two-Stage Queue Box	Physically Separated	Physically Separated	No Left-Turn	No Left-Turn	Physically Separated	Protected Corner	Protected Corner	Protected Corner	Protected Corner
	Vehicle Lanes Crossed by Cyclists	-	-	-	-	-	-	-	-	-	-	-	-
	Score	90	80	115	130	125	130	145	-	100	100	140	130
	BLOS	C	C	B	A	A	A	A	-	B	B	A	A
		B				A				B			
	Target BLOS	B				B				A			
Transit	TLOS Inputs												
	Transit Facility	Mixed Traffic				Mixed Traffic				Mixed Traffic			
	Vehicles Travelling	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound	Southbound	Northbound	Westbound	Eastbound
	Average Transit Delay (if available)	≤ 10 sec	≤ 10 sec	56-80 sec		≤ 10 sec	≤ 10 sec	21-35 sec		36-55 sec	36-55 sec	Unavailable	21-35 sec
	Example Transit Priority Treatment	-	-	-		-	-	-		-	-	Continuous bus lanes, or transit queue jump lane with TSP	-
	TLOS	A	A	E	-	A	A	C	-	D	D	B	C
		B				B				C			
	Target TLOS	E (D for frequent transit routes)				E (D for frequent transit routes)				E (D for frequent transit routes)			
Auto	AutoLOS Inputs												
	Overall Intersection Volume to Capacity Ratio	0.61 to 0.70				0.61 to 0.70				0.71 to 0.80			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table				See Separate Traffic Operations Table				See Separate Traffic Operations Table			
	AutoLOS	B				B				C			
	Target AutoLOS	E				E				E			

Multi-Modal Level of Service - Intersections Form

Project: Tunney's Pasture
Consultant: Arcadis
Date: Feb 27, 2026
Scenario: Future (2038) Total Traffic

	Intersection Name	**Scott St & Holland Ave/Tunney's Pasture Dr.**				**Scott St & Sir Frederick Banting Dr. / Ross Ave.**			
	OP Transect / Policy Area	**Within 600m of a rapid transit station**				**Within 600m of a rapid transit station**			
Pedestrian	**PLOS Inputs**								
	Pedestrians Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Number of Travel Lanes Crossed	1-3	5	4	1-3	1-3	1-3	1-3	1-3
	Median Refuge (≥2.7m)	No	No	No	No	No	No	No	No
	Crosswalk Treatment	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings	Zebra Stripe Hi-Vis Markings
	Signal Cycle Length (sec)	130.0				130.0			
	Effective Walk Time (sec)	32.6	32.6	2.0	2.0	33.5	33.5	15.1	15.1
	Conflict with Right-Turn Vehicles (For PLOS & BLOS)	**WBR**	**EBR**	**NBR**	**SBR**	**WBR**	**EBR**	**NBR**	**SBR**
	Right-Turn Geometry	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	Right-Turn With No Channel	No Right-Turn / Prohib.	Right-Turn With No Channel	Right-Turn With No Channel
	Right-Turn Signal Phasing	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)	-	Permissive (with LPI/LBI)	Permissive (with LPI/LBI)
	Right-Turn Volume	≤ 150 veh/h	≤ 150 veh/h	> 150 to 300 veh/h	≤ 150 veh/h	> 150 to 300 veh/h	-	≤ 150 veh/h	≤ 150 veh/h
	Right-Turn Effective Corner Radius	> 8m	≤ 8m	≤ 8m	> 8m	> 8m	-	> 8m	≤ 8m
	Cross-street Posted Speed (km/h)	40 km/h		50 km/h		50 km/h		30 km/h	
	Conflict with Left-Turn Vehicles (For PLOS & BLOS)	**EBL**	**WBL**	**SBL**	**NBL**	**EBL**	**WBL**	**SBL**	**NBL**
	Left-Turn Signal Phasing	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Fully Protected	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)	Perm or Prot+Perm (with LPI)
	Left-Turn Volume	≤ 50 veh/h	> 100 veh/h	> 100 veh/h	> 100 veh/h	-	≤ 50 veh/h	> 100 veh/h	≤ 50 veh/h
	Left-Turn Opposing Lanes	-	-	-	-	-	-	-	-
	Score	**4.50**	**3.15**	**3.30**	**4.05**	**4.05**	**4.50**	**4.20**	**4.35**
	PLOS	**A**	**C**	**C**	**B**	**B**	**A**	**B**	**B**
		B				**B**			
	Target PLOS	**A**				**A**			
Bicycle	**BLOS Inputs**								
	Cycling Route Classification	**Cross-Town Bikeway**				**Cross-Town Bikeway**			
	Cyclists Crossing the	**North Leg**	**South Leg**	**East Leg**	**West Leg**	**North Leg**	**South Leg**	**East Leg**	**West Leg**
	Type of Cycling Facility Across Leg	Crossride	Crossride	Crossride	Crossride	Crossride	Crossride	Mixed Traffic	Crossride
	Two-Way ADT (in Cyclist Travel Direction)	8,990		17,150		2,040		14,900	
	Floating Bike Lane or Right-Turn Lane Crossover Approaching the Crossing?	No	No	No	No	No	No	No	No
	Crossride Operation	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	Unidirectional	-	Unidirectional
	Target Crossride Setback Met?	Yes	Yes	Yes	Yes	Yes	-	-	Yes
	Right-Turn Vehicle Volume from Adjacent Roadway > 100 veh/h?	-	-	-	-	-	-	-	-
	Cyclist Left-Turn Operation	**WBL**	**EBL**	**NBL**	**SBL**	**WBL**	**EBL**	**NBL**	**SBL**
	Cyclist Left-Turn Treatment Type	Protected Corner	Protected Corner	Protected Corner	Protected Corner	Two-Stage Queue Box	Physically Separated	Physically Separated	Physically Separated
	Vehicle Lanes Crossed by Cyclists	-	-	-	-	-	-	-	-
	Score	**145**	**115**	**110**	**115**	**120**	**130**	**45**	**125**
	BLOS	**A**	**B**	**B**	**B**	**B**	**A**	**D**	**A**
		A				**B**			
	Target BLOS	**A**				**A**			
Transit	**TLOS Inputs**								
	Transit Facility	**Mixed Traffic**				**Mixed Traffic**			
	Vehicles Travelling	**Southbound**	**Northbound**	**Westbound**	**Eastbound**	**Southbound**	**Northbound**	**Westbound**	**Eastbound**
	Average Transit Delay (if available)	36-55 sec	36-55 sec	21-35 sec	21-35 sec	56-80 sec	36-55 sec	36-55 sec	36-55 sec
	Example Transit Priority Treatment	-	-	-	-	-	-	-	-
	TLOS	**D**	**D**	**C**	**C**	**E**	**D**	**D**	**D**
		C				**D**			
	Target TLOS	**E (D for frequent transit routes)**				**E (D for frequent transit routes)**			
Auto	**AutoLOS Inputs**								
	Overall Intersection Volume to Capacity Ratio	0.81 to 0.90				0.81 to 0.90			
	Individual Movements V/C Ratios and Queue Lengths	See Separate Traffic Operations Table				See Separate Traffic Operations Table			
	AutoLOS	**D**				**D**			
	Target AutoLOS	**E**				**E**			

Appendix F – Intersection Capacity Analyses

Existing

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	465	2	25	5	0	0	4	5
Future Volume (vph)	0	0	0	6	465	2	25	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.919	
Flt Protected					0.999			0.960				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1639	0	0	1656	0
Flt Permitted					0.999			0.757				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1293	0	0	1656	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						6	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		298.2			148.1			68.2			52.4	
Travel Time (s)		17.9			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
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%	1%	0%	8%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	7	517	2	28	6	0	0	4	6
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	526	0	0	34	0	0	10	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				73.0	73.0		26.0	26.0			26.0	
Total Split (%)				63.5%	63.5%		22.6%	22.6%			22.6%	
Maximum Green (s)				67.3	67.3		15.7	15.7			15.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				15	15		15	15			15	
Act Effct Green (s)					67.3			15.7			15.7	
Actuated g/C Ratio					0.68			0.16			0.16	
v/c Ratio					0.23			0.17			0.04	
Control Delay					6.3			18.3			25.8	
Queue Delay					0.0			0.0			0.0	

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

Existing Conditions
Weekday AM Peak Hour

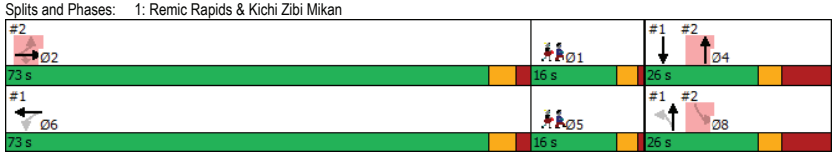
Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	73.0	16.0
Total Split (%)	14%	63%	14%
Maximum Green (s)	12.0	67.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	15	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.3			18.3			25.8	
LOS					A			B			C	
Approach Delay					6.3			18.3			25.8	
Approach LOS					A			B			C	
Queue Length 50th (m)					17.7			2.8			0.7	
Queue Length 95th (m)					24.1			m4.5			5.2	
Internal Link Dist (m)		274.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2323			205			267	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.23			0.17			0.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 35.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1491	3	333	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1491	3	333	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1701	0	0	1665	0
Flt Permitted								0.723				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1286	0	0	1665	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		298.2			148.1			68.2			52.4	
Travel Time (s)		17.9			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									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 (%)	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	13	1657	3	370	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1673	0	0	373	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				81.0	81.0		48.0	48.0			48.0	
Total Split (%)				55.9%	55.9%		33.1%	33.1%			33.1%	
Maximum Green (s)				75.3	75.3		37.7	37.7			37.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				15	15		15	15			15	
Act Effct Green (s)					75.3			37.7			37.7	
Actuated g/C Ratio					0.58			0.29			0.29	
v/c Ratio					0.83			0.99			0.01	
Control Delay					26.3			56.0			24.2	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	81.0	16.0
Total Split (%)	11%	56%	11%
Maximum Green (s)	12.0	75.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	15	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

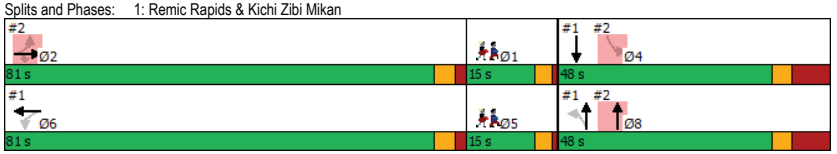
1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Existing Conditions
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					26.3			56.0			24.2	
LOS					C			E			C	
Approach Delay					26.3			56.0			24.2	
Approach LOS					C			E			C	
Queue Length 50th (m)					171.8			21.6			0.6	
Queue Length 95th (m)					204.8			m#139.2			4.2	
Internal Link Dist (m)		274.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2018			375			489	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.83			0.99			0.01	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 129
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 31.7 Intersection LOS: C
Intersection Capacity Utilization 83.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1164	223	0	0	0	0	27	12	10	0	0
Future Volume (vph)	3	1164	223	0	0	0	0	27	12	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.959				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1517	0	0	0	0	1614	0	1729	0	0
Flt Permitted										0.729		
Satd. Flow (perm)	0	3458	1482	0	0	0	0	1614	0	1327	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			248					13				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
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 (%)	0%	0%	2%	0%	0%	0%	0%	11%	0%	0%	0%	0%
Adj. Flow (vph)	3	1293	248	0	0	0	0	30	13	11	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1296	248	0	0	0	0	43	0	11	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	73.0	73.0	73.0					26.0		26.0		
Total Split (%)	63.5%	63.5%	63.5%					22.6%		22.6%		
Maximum Green (s)	67.3	67.3	67.3					15.7		15.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	15	15	15					15		15		
Act Effct Green (s)		67.3	67.3					15.7		15.7		
Actuated g/C Ratio		0.68	0.68					0.16		0.16		

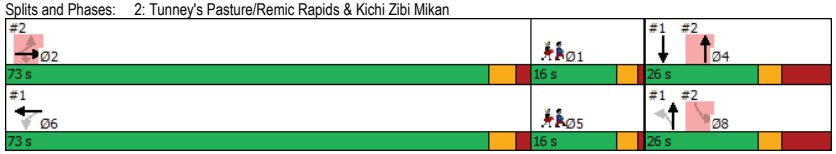
2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Existing Conditions
Weekday AM Peak Hour

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	73.0
Total Split (%)	14%	14%	63%
Maximum Green (s)	12.0	12.0	67.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	15
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.55	0.23					0.16		0.05		
Control Delay		9.2	1.3					29.2		34.1		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		9.2	1.3					29.2		34.1		
LOS		A	A					C		C		
Approach Delay		7.9						29.2			34.1	
Approach LOS		A						C			C	
Queue Length 50th (m)		59.4	0.0					5.0		1.9		
Queue Length 95th (m)		74.6	6.8					14.5		5.8		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2350	1086					266		210		
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		0.55	0.23					0.16		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 75			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	306	25	0	0	0	0	318	54	15	0	0
Future Volume (vph)	18	306	25	0	0	0	0	318	54	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt			0.850					0.980				
Flt Protected		0.997								0.950		
Satd. Flow (prot)	0	3384	1381	0	0	0	0	1749	0	1729	0	0
Flt Permitted		0.997								0.287		
Satd. Flow (perm)	0	3384	1381	0	0	0	0	1749	0	522	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					6				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									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 (%)	0%	2%	12%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	20	340	28	0	0	0	0	353	60	17	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	360	28	0	0	0	0	413	0	17	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	81.0	81.0	81.0					48.0		48.0		
Total Split (%)	55.9%	55.9%	55.9%					33.1%		33.1%		
Maximum Green (s)	75.3	75.3	75.3					37.7		37.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	15	15	15					15		15		
Act Effct Green (s)		75.3	75.3					37.7		37.7		
Actuated g/C Ratio		0.58	0.58					0.29		0.29		

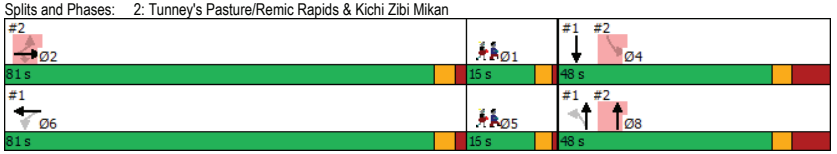
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	81.0
Total Split (%)	11%	11%	56%
Maximum Green (s)	12.0	12.0	75.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	15
Act Effct Green (s)			
Actuated g/C Ratio			

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Existing Conditions
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.18	0.03					0.80		0.11		
Control Delay		12.8	0.1					54.7		39.9		
Queue Delay		0.0	0.0					1.3		0.0		
Total Delay		12.8	0.1					56.0		39.9		
LOS		B	A					E		D		
Approach Delay		11.9						56.0			39.9	
Approach LOS		B						E			D	
Queue Length 50th (m)		21.3	0.0					95.9		4.1		
Queue Length 95th (m)		29.1	0.0					#143.3		m6.3		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1975	841					515		152		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		0	0					23		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.18	0.03					0.84		0.11		

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 129			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.99			
Intersection Signal Delay: 34.7		Intersection LOS: C	
Intersection Capacity Utilization 44.0%		ICU Level of Service A	
Analysis Period (min) 15			
# 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: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	14	0	114	523	44
Future Volume (vph)	0	14	0	114	523	44
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865			0.989	
Flt Protected						
Satd. Flow (prot)	0	1471	0	1820	1800	0
Flt Permitted						
Satd. Flow (perm)	0	1471	0	1820	1800	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	138.1			63.3	246.5	
Travel Time (s)	16.6			5.7	22.2	
Confl. Peds. (#/hr)			7			7
Confl. Bikes (#/hr)						4
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	7%	0%	0%	0%	0%
Adj. Flow (vph)	0	16	0	127	581	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	16	0	127	630	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	14	0	114	523	44
Future Vol, veh/h	0	14	0	114	523	44
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	7	0	0	0	0
Mvmt Flow	0	16	0	127	581	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	613	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.27	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.363	-	-	-	-
Pot Cap-1 Maneuver	0	483	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	480	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	480	-	-
HCM Lane V/C Ratio	-	0.032	-	-
HCM Control Delay (s)	-	12.8	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	0	738	252	2
Future Vol, veh/h	0	16	0	738	252	2
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	18	0	820	280	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	288	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	756	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	-	751	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	751	-	-
HCM Lane V/C Ratio	-	0.024	-	-
HCM Control Delay (s)	-	9.9	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	11	104	5	19	508
Future Vol, veh/h	6	11	104	5	19	508
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	9	0	0	2
Mvmt Flow	7	12	116	6	21	564

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	729	119	0	0	122	0
Stage 1	119	-	-	-	-	-
Stage 2	610	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	393	938	-	-	1478	-
Stage 1	911	-	-	-	-	-
Stage 2	546	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	383	938	-	-	1478	-
Mov Cap-2 Maneuver	383	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	532	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11	0	0.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	621	1478	-
HCM Lane V/C Ratio	-	-	0.03	0.014	-
HCM Control Delay (s)	-	-	11	7.5	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	16	0	738	252	2
Future Vol, veh/h	0	16	0	738	252	2
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	18	0	820	280	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	288	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	756	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	751	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	751	-	-
HCM Lane V/C Ratio	-	0.024	-	-
HCM Control Delay (s)	-	9.9	-	-
HCM Lane LOS	-	A	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	26	80	120	433	50
Future Vol, veh/h	13	26	80	120	433	50
Conflicting Peds, #/hr	4	3	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	15	31	4	3	1	4
Mvmt Flow	14	29	89	133	481	56

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	864	552	577	0	-	0
Stage 1	549	-	-	-	-	-
Stage 2	315	-	-	-	-	-
Critical Hdwy	6.55	6.51	4.14	-	-	-
Critical Hdwy Stg 1	5.55	-	-	-	-	-
Critical Hdwy Stg 2	5.55	-	-	-	-	-
Follow-up Hdwy	3.635	3.579	2.236	-	-	-
Pot Cap-1 Maneuver	308	482	987	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	711	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	257	463	951	-	-	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	685	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.2	3.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	951	-	365	-	-
HCM Lane V/C Ratio	0.093	-	0.119	-	-
HCM Control Delay (s)	9.2	0	16.2	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.3	-	0.4	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	50	26	648	231	15
Future Vol, veh/h	41	50	26	648	231	15
Conflicting Peds, #/hr	16	0	25	0	0	25
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	8	8	0	1	0
Mvmt Flow	46	56	29	720	257	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1085	291	299	0	-	0
Stage 1	291	-	-	-	-	-
Stage 2	794	-	-	-	-	-
Critical Hdwy	6.4	6.28	4.18	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.372	2.272	-	-	-
Pot Cap-1 Maneuver	242	734	1229	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	449	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	222	717	1201	-	-	-
Mov Cap-2 Maneuver	222	-	-	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	439	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0.3	0
HCM LOS	C		

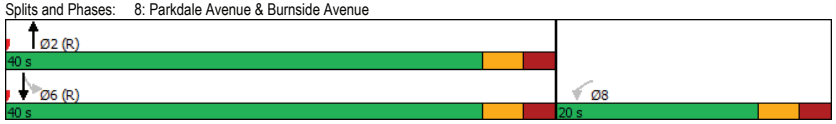
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1201	-	358	-	-
HCM Lane V/C Ratio	0.024	-	0.282	-	-
HCM Control Delay (s)	8.1	0	19	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	39	38	191	30	128	354
Future Volume (vph)	39	38	191	30	128	354
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.99			0.99
Frt	0.933		0.982			
Flt Protected	0.975					0.987
Satd. Flow (prot)	1560	0	1661	0	0	1753
Flt Permitted	0.975					0.846
Satd. Flow (perm)	1521	0	1661	0	0	1489
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	42		22			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	23	46		33	33	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	5%	17%	1%	3%
Adj. Flow (vph)	43	42	212	33	142	393
Shared Lane Traffic (%)						
Lane Group Flow (vph)	85	0	245	0	0	535
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	20.0		40.0		40.0	40.0
Total Split (%)	33.3%		66.7%		66.7%	66.7%
Maximum Green (s)	14.6		34.6		34.6	34.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	15		15			
Act Effct Green (s)	8.2		44.3			44.3
Actuated g/C Ratio	0.14		0.74			0.74
v/c Ratio	0.35		0.20			0.49
Control Delay	17.0		4.2			7.2
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	17.0		4.2			7.2
LOS	B		A			A
Approach Delay	17.0		4.2			7.2
Approach LOS	B		A			A
Queue Length 50th (m)	4.4		6.5			21.1
Queue Length 95th (m)	13.1		19.4			59.5
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	401		1231			1098
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.21		0.20			0.49

Intersection Summary			
Area Type:	Other		
Cycle Length: 60			
Actuated Cycle Length: 60			
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

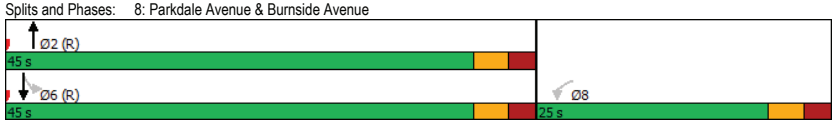


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	35	161	587	44	55	284
Future Volume (vph)	35	161	587	44	55	284
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88		1.00			1.00
Frt	0.889		0.991			
Flt Protected	0.991					0.992
Satd. Flow (prot)	1414	0	1796	0	0	1761
Flt Permitted	0.991					0.837
Satd. Flow (perm)	1400	0	1796	0	0	1485
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	179		9			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	21	46		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	0%	0%	2%	0%	3%
Adj. Flow (vph)	39	179	652	49	61	316
Shared Lane Traffic (%)						
Lane Group Flow (vph)	218	0	701	0	0	377
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	19.6		39.6		39.6	39.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	15		15			
Act Effct Green (s)	8.9		50.3			50.3
Actuated g/C Ratio	0.13		0.72			0.72
v/c Ratio	0.65		0.54			0.35
Control Delay	17.0		7.3			5.6
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	17.0		7.3			5.6
LOS	B		A			A
Approach Delay	17.0		7.3			5.6
Approach LOS	B		A			A
Queue Length 50th (m)	4.8		29.6			13.3
Queue Length 95th (m)	21.0		77.4			36.4
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	520		1293			1067
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.42		0.54			0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 23 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 83.6%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	2	258	24	2	367
Future Volume (vph)	15	2	258	24	2	367
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		1.00			1.00
Frt	0.986		0.988			
Flt Protected	0.957					
Satd. Flow (prot)	1534	0	1723	0	0	1750
Flt Permitted	0.957					0.999
Satd. Flow (perm)	1454	0	1723	0	0	1748
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	2		14			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	27	4		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	0%	4%	4%	0%	4%
Adj. Flow (vph)	17	2	287	27	2	408
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	314	0	0	410
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		41.0		41.0	41.0
Total Split (%)	31.9%		68.1%		68.1%	68.1%
Maximum Green (s)	14.0		35.9		35.9	35.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	15		15			
Act Effct Green (s)	7.6		51.9			51.9
Actuated g/C Ratio	0.13		0.86			0.86
v/c Ratio	0.10		0.21			0.27
Control Delay	21.1		3.1			3.5
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	21.1		3.1			3.5
LOS	C		A			A
Approach Delay	21.1		3.1			3.5
Approach LOS	C		A			A
Queue Length 50th (m)	1.8		0.0			0.0
Queue Length 95th (m)	5.8		25.1			35.5
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	339		1488			1507
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.06		0.21			0.27

Intersection Summary			
Area Type:	Other		
Cycle Length: 60.2			
Actuated Cycle Length: 60.2			
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.27			
Intersection Signal Delay: 3.8		Intersection LOS: A	
Intersection Capacity Utilization 35.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	4	575	20	5	402
Future Volume (vph)	10	4	575	20	5	402
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		1.00			1.00
Frt	0.964		0.996			
Flt Protected	0.965					0.999
Satd. Flow (prot)	1680	0	1809	0	0	1766
Flt Permitted	0.965					0.994
Satd. Flow (perm)	1618	0	1809	0	0	1757
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	4		5			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	20	4		22	22	
Confl. Bikes (#/hr)				10		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	0%	0%	0%	0%	0%	3%
Adj. Flow (vph)	11	4	639	22	6	447
Shared Lane Traffic (%)						
Lane Group Flow (vph)	15	0	661	0	0	453
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		51.0		51.0	51.0
Total Split (%)	27.4%		72.6%		72.6%	72.6%
Maximum Green (s)	14.0		45.9		45.9	45.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	15		15			
Act Effct Green (s)	7.5		62.0			62.0
Actuated g/C Ratio	0.11		0.88			0.88
v/c Ratio	0.09		0.41			0.29
Control Delay	23.6		3.8			3.1
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	23.6		3.8			3.1
LOS	C		A			A
Approach Delay	23.6		3.8			3.1
Approach LOS	C		A			A
Queue Length 50th (m)	1.4		0.0			0.0
Queue Length 95th (m)	5.6		64.0			38.4
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	325		1598			1551
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.05		0.41			0.29

Intersection Summary			
Area Type:	Other		
Cycle Length: 70.2			
Actuated Cycle Length: 70.2			
Offset: 18 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.41			
Intersection Signal Delay: 3.8		Intersection LOS: A	
Intersection Capacity Utilization 47.0%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	105	342	44	32	192	29	51	208	48	68	265	192
Future Volume (vph)	105	342	44	32	192	29	51	208	48	68	265	192
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.91	0.97		0.87		0.98		0.96		0.94
Frt			0.850			0.850		0.979				0.850
Flt Protected	0.950			0.950				0.992		0.950		
Satd. Flow (prot)	1679	1685	985	1729	1733	1406	0	1672	0	1712	1784	1517
Flt Permitted	0.618			0.454				0.893		0.488		
Satd. Flow (perm)	1001	1685	900	802	1733	1220	0	1498	0	841	1784	1421
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107			107		11				213
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			233.9			267.4			221.0	
Travel Time (s)		17.9			16.8			24.1			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
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 (%)	3%	8%	57%	0%	5%	10%	10%	3%	2%	1%	2%	2%
Adj. Flow (vph)	117	380	49	36	213	32	57	231	53	76	294	213
Shared Lane Traffic (%)												
Lane Group Flow (vph)	117	380	49	36	213	32	0	341	0	76	294	213
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	45.3%	45.3%		45.3%	45.3%	45.3%
Maximum Green (s)	37.9	37.9	37.9	37.9	37.9	37.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	15	15	15	15	15	15	15	15		15	15	15
Act Effct Green (s)	45.9	45.9	45.9	45.9	45.9	45.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.48	0.48	0.48	0.48	0.48	0.48		0.39		0.39	0.39	0.39

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

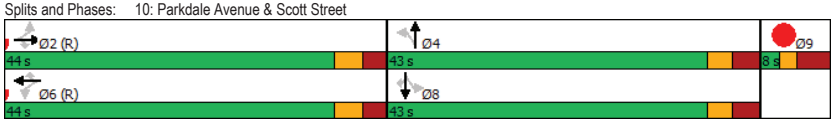
Existing Conditions
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.24	0.47	0.10	0.09	0.25	0.05		0.58		0.23	0.43	0.31
Control Delay	13.4	15.6	0.6	14.2	15.5	0.1		27.2		22.2	23.8	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	13.4	15.6	0.6	14.2	15.5	0.1		27.2		22.2	23.8	4.2
LOS	B	B	A	B	B	A		C		C	C	A
Approach Delay		13.8			13.6			27.2			16.4	
Approach LOS		B			B			C			B	
Queue Length 50th (m)	7.9	32.1	0.1	3.4	22.1	0.0		47.1		9.2	38.9	0.0
Queue Length 95th (m)	m16.8	44.6	m0.3	8.9	36.4	0.0		74.8		19.8	60.9	13.4
Internal Link Dist (m)		225.1			209.9			243.4			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	483	814	490	387	837	644		585		324	689	679
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.24	0.47	0.10	0.09	0.25	0.05		0.58		0.23	0.43	0.31

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 91 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 17.2 Intersection LOS: B
Intersection Capacity Utilization 90.1% ICU Level of Service E
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	276	301	54	54	350	40	43	302	37	45	225	148
Future Volume (vph)	276	301	54	54	350	40	43	302	37	45	225	148
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		0.83	0.90		0.85		0.98		0.96		0.91
Frt			0.850			0.850		0.987				0.850
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1729	1784	1394	1695	1733	1547	0	1680	0	1729	1784	1532
Flt Permitted	0.210			0.559				0.934		0.405		
Satd. Flow (perm)	366	1784	1154	902	1733	1320	0	1570	0	705	1784	1392
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			163		6				164
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			233.9			267.4			221.0	
Travel Time (s)		17.9			16.8			24.1			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
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%	2%	11%	2%	5%	0%	35%	1%	3%	0%	2%	1%
Adj. Flow (vph)	307	334	60	60	389	44	48	336	41	50	250	164
Shared Lane Traffic (%)												
Lane Group Flow (vph)	307	334	60	60	389	44	0	425	0	50	250	164
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.6	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	15.0	48.0	48.0	33.0	33.0	33.0	44.0	44.0		44.0	44.0	44.0
Total Split (%)	15.0%	48.0%	48.0%	33.0%	33.0%	33.0%	44.0%	44.0%		44.0%	44.0%	44.0%
Maximum Green (s)	9.4	41.9	41.9	26.9	26.9	26.9	37.7	37.7		37.7	37.7	37.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	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		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		15	15	15	15	15	15	15		15	15	15
Act Effct Green (s)	50.4	49.9	49.9	26.9	26.9	26.9		37.7		37.7	37.7	37.7
Actuated g/C Ratio	0.50	0.50	0.50	0.27	0.27	0.27		0.38		0.38	0.38	0.38

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Existing Conditions
Weekday PM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings

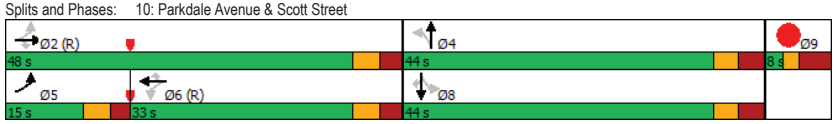
Synchro 11 Report
June 2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.73	0.38	0.10	0.25	0.83	0.09		0.71		0.19	0.37	0.26
Control Delay	27.4	17.0	1.1	28.6	47.1	0.4		34.2		23.3	24.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	27.4	17.0	1.1	28.6	47.1	0.4		34.2		23.3	24.6	4.5
LOS	C	B	A	C	D	A		C		C	C	A
Approach Delay		20.2			40.7			34.2			17.4	
Approach LOS		C			D			C			B	
Queue Length 50th (m)	34.4	38.3	0.0	8.7	71.5	0.0		68.2		6.4	34.6	0.0
Queue Length 95th (m)	#64.3	58.2	2.0	13.0	#114.9	0.2		103.8		15.2	54.6	12.4
Internal Link Dist (m)		225.1			209.9			243.4			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	421	890	626	242	466	474		595		265	672	626
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.73	0.38	0.10	0.25	0.83	0.09		0.71		0.19	0.37	0.26

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 27.3 Intersection LOS: C
Intersection Capacity Utilization 100.9% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Parkdale Avenue & Scott Street



10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Existing Conditions
Weekday PM Peak Hour

Lane Group	Ø9
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (m)	
Queue Length 95th (m)	
Internal Link Dist (m)	
Turn Bay Length (m)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Lanes, Volumes, Timings
Synchro 11 Report
June 2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	437	70	78	226	24	109	137	119	19	51	17
Future Volume (vph)	18	437	70	78	226	24	109	137	119	19	51	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.78	0.95		0.95		0.64	0.65		0.63	0.71		0.61
Frt		0.979				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1631	1479	0	1662	1655	1238	1361	1802	1502	1262	1685	1381
Flt Permitted	0.603			0.377			0.720			0.648		
Satd. Flow (perm)	807	1479	0	625	1655	793	673	1802	940	613	1685	841
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			244.8			108.7	
Travel Time (s)		20.2			17.9			22.0			13.0	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
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 (%)	6%	11%	40%	4%	10%	25%	27%	1%	3%	37%	8%	12%
Adj. Flow (vph)	20	486	78	87	251	27	121	152	132	21	57	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	564	0	87	251	27	121	152	132	21	57	19
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	44.0	44.0		44.0	44.0	44.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%	46.3%	43.2%	43.2%	43.2%	43.2%	43.2%	43.2%
Maximum Green (s)	37.8	37.8		37.8	37.8	37.8	34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							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	C-Max	C-Max		C-Max	C-Max	C-Max	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	59.6	59.6		59.6	59.6	59.6	23.0	23.0	23.0	23.0	23.0	23.0
Actuated g/C Ratio	0.63	0.63		0.63	0.63	0.63	0.24	0.24	0.24	0.24	0.24	0.24

11: Holland Avenue/Tunney's Pasture Driveway & Scott Street Existing Conditions
Tunney's Pasture TIA Weekday AM Peak Hour

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?		Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

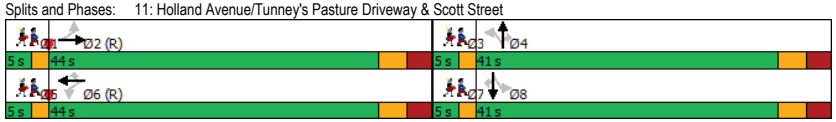
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.61		0.22	0.24	0.05	0.74	0.35	0.58	0.14	0.14	0.09
Control Delay	10.4	16.9		9.7	8.1	8.2	57.0	29.5	39.7	25.7	24.9	24.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.4	16.9		9.7	8.1	8.2	57.0	29.5	39.7	25.7	24.9	24.0
LOS	B	B		A	A	A	E	C	D	C	C	C
Approach Delay		16.7			8.5			41.0			24.9	
Approach LOS		B			A			D			C	
Queue Length 50th (m)	1.3	58.7		4.8	14.2	1.3	20.3	22.8	21.1	3.0	8.1	2.7
Queue Length 95th (m)	5.6	124.7		m14.6	32.5	m5.4	34.5	32.8	33.2	7.6	14.7	7.0
Internal Link Dist (m)		256.5			225.1			220.8			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	505	927		391	1037	497	247	661	345	225	618	309
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	0.04	0.61		0.22	0.24	0.05	0.49	0.23	0.38	0.09	0.09	0.06

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 85 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 22.0 Intersection LOS: C
Intersection Capacity Utilization 69.6% ICU Level of Service C
Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	478	65	153	548	22	123	136	219	58	191	18
Future Volume (vph)	13	478	65	153	548	22	123	136	219	58	191	18
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.55	0.69		0.66	0.75		0.53
Frt		0.982				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1601	1573	0	1679	1701	1172	1361	1802	1547	1679	1802	1459
Flt Permitted	0.084			0.208			0.553			0.646		
Satd. Flow (perm)	142	1573	0	368	1701	644	551	1802	1025	852	1802	772
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			244.8			108.7	
Travel Time (s)		20.2			17.9			22.0			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
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 (%)	8%	5%	40%	3%	7%	32%	27%	1%	0%	3%	1%	6%
Adj. Flow (vph)	14	531	72	170	609	24	137	151	243	64	212	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	603	0	170	609	24	137	151	243	64	212	20
Turn Type	Perm	NA		custom	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		15	6 15			4			8	
Permitted Phases	2			6		6 15	4		4	8		8
Detector Phase	2	2		15	6 15	6 15	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0			5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		11.2			30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	50.0	50.0		15.0			35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	45.5%	45.5%		13.6%			31.8%	31.8%	31.8%	31.8%	31.8%	31.8%
Maximum Green (s)	43.8	43.8		8.8			28.8	28.8	28.8	28.8	28.8	28.8
Yellow Time (s)	3.3	3.3		3.3			3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9			2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2			6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min		None			Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0					2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0					22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30					30	30	30	30	30	30
Act Effct Green (s)	47.9	47.9		57.4	63.6	63.6	34.0	34.0	34.0	34.0	34.0	34.0
Actuated g/C Ratio	0.44	0.44		0.52	0.58	0.58	0.31	0.31	0.31	0.31	0.31	0.31

Lane Group	Ø1	Ø3	Ø5	Ø6	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	5	6	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	1.0	5.0	1.0
Minimum Split (s)	3.0	3.0	3.0	27.2	3.0
Total Split (s)	5.0	5.0	5.0	50.0	5.0
Total Split (%)	5%	5%	5%	45%	5%
Maximum Green (s)	3.0	3.0	3.0	43.8	3.0
Yellow Time (s)	2.0	2.0	2.0	3.3	2.0
All-Red Time (s)	0.0	0.0	0.0	2.9	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead			Lead
Lead-Lag Optimize?		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	None
Walk Time (s)	0.0	0.0	0.0	2.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	19.0	0.0
Pedestrian Calls (#/hr)	0	0	0	30	0
Act Effct Green (s)					
Actuated g/C Ratio					

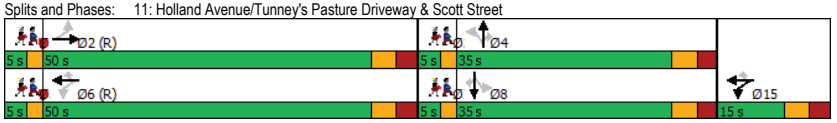
11: Holland Avenue/Tunney's Pasture Driveway & Scott Street
Tunney's Pasture TIA
Existing Conditions
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.23	0.88		0.56	0.62	0.06	0.81	0.27	0.77	0.24	0.38	0.08
Control Delay	30.4	44.5		18.6	18.7	10.7	70.0	30.4	52.5	31.7	32.4	28.5
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	30.4	44.5		18.6	18.7	10.7	70.0	30.4	52.5	31.7	32.4	28.5
LOS	C	D		B	B	B	E	C	D	C	C	C
Approach Delay		44.2			18.4			50.7			32.0	
Approach LOS		D			B			D			C	
Queue Length 50th (m)	1.8	114.0		16.1	80.6	2.1	27.0	24.4	47.2	10.3	35.6	3.0
Queue Length 95th (m)	7.4	#180.0		26.6	115.8	5.9	#61.5	41.1	#86.7	21.7	56.4	8.9
Internal Link Dist (m)		256.5			225.1			220.8			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	61	684		305	983	372	170	556	316	262	556	238
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	0.23	0.88		0.56	0.62	0.06	0.81	0.27	0.77	0.24	0.38	0.08

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 10 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 34.9 Intersection LOS: C
Intersection Capacity Utilization 88.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	488	5	4	267	91	1	1	12	0	1	20
Future Vol, veh/h	24	488	5	4	267	91	1	1	12	0	1	20
Conflicting Peds, #/hr	51	0	20	20	0	51	6	0	2	2	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	18	0	0	27	4	0	0	0	0	0	15
Mvmt Flow	27	542	6	4	297	101	1	1	13	0	1	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	449	0	0	568	0	0	992	1076	567	-	1029	405
Stage 1	-	-	-	-	-	-	619	619	-	-	407	-
Stage 2	-	-	-	-	-	-	373	457	-	-	622	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	-	6.5	6.35
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	-	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	-	4	3.435
Pot Cap-1 Maneuver	1122	-	-	1014	-	-	227	221	527	0	236	619
Stage 1	-	-	-	-	-	-	480	483	-	0	601	-
Stage 2	-	-	-	-	-	-	652	571	-	0	482	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1069	-	-	995	-	-	206	199	516	-	212	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	206	199	-	-	212	-
Stage 1	-	-	-	-	-	-	454	457	-	-	570	-
Stage 2	-	-	-	-	-	-	620	542	-	-	456	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	13.8	11.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	1069	-	-	995	-	-	587
HCM Lane V/C Ratio	0.037	0.025	-	-	0.004	-	-	0.038
HCM Control Delay (s)	13.8	8.5	-	-	8.6	-	-	11.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	643	10	5	574	50	4	8	13	0	0	105
Future Vol, veh/h	90	643	10	5	574	50	4	8	13	0	0	105
Conflicting Peds, #/hr	42	0	25	25	0	42	3	0	4	4	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	10	10	0	15	4	0	0	0	0	0	2
Mvmt Flow	100	714	11	6	638	56	4	9	14	0	0	117

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	736	0	0	750	0	0	1685	1693	749	-	-	711
Stage 1	-	-	-	-	-	-	945	945	-	-	-	-
Stage 2	-	-	-	-	-	-	740	748	-	-	-	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	-	-	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	-	-	3.318
Pot Cap-1 Maneuver	879	-	-	868	-	-	75	94	415	0	0	433
Stage 1	-	-	-	-	-	-	317	343	-	0	0	-
Stage 2	-	-	-	-	-	-	412	423	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	845	-	-	848	-	-	44	70	404	-	-	415
Mov Cap-2 Maneuver	-	-	-	-	-	-	44	70	-	-	-	-
Stage 1	-	-	-	-	-	-	248	269	-	-	-	-
Stage 2	-	-	-	-	-	-	293	404	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0.1	51.2	17
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	105	845	-	-	848	-	-	415
HCM Lane V/C Ratio	0.265	0.118	-	-	0.007	-	-	0.281
HCM Control Delay (s)	51.2	9.8	-	-	9.3	-	-	17
HCM Lane LOS	F	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	1	0.4	-	-	0	-	-	1.1

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	130	474	48	27	258	21	38	320	51	34	659	96
Future Volume (vph)	130	474	48	27	258	21	38	320	51	34	659	96
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		75.0	240.0		40.0	0.0		0.0	30.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94		0.89	0.99		0.86		0.99		0.98	0.99	
Frt			0.850			0.850		0.983			0.981	
Flt Protected	0.950			0.950				0.995		0.950		
Satd. Flow (prot)	1695	1569	1547	1662	1517	1547	0	1755	0	1679	1763	0
Flt Permitted	0.487			0.174				0.554		0.468		
Satd. Flow (perm)	814	1569	1381	301	1517	1334	0	977	0	814	1763	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			92			92		11			12	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		163.9			607.5			150.4			212.0	
Travel Time (s)		11.8			43.7			13.5			19.1	
Confl. Peds. (#/hr)	51		25	25		51	31		19	19		31
Confl. Bikes (#/hr)			26			8			2			6
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 (%)	2%	16%	0%	4%	20%	0%	8%	0%	0%	3%	0%	2%
Adj. Flow (vph)	144	527	53	30	287	23	42	356	57	38	732	107
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	527	53	30	287	23	0	455	0	38	839	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	2	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	34.0	34.0		34.0	34.0	
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	57.0	57.0		57.0	57.0	
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%	33.7%	60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	50.0	50.0		50.0	50.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	12.0	12.0		12.0	12.0	
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	15	15	15	15	15	15	15	15		15	15	
Act Effct Green (s)	31.0	31.0	31.0	31.0	31.0	31.0		50.0		50.0	50.0	
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.33		0.53		0.53	0.53	

14: Island Park Drive & Scott Street
Tunney's Pasture TIA

Existing Conditions
Weekday AM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	5.0
Total Split (s)	6.0
Total Split (%)	6%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings

Synchro 11 Report
April 2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.54	1.03	0.10	0.31	0.58	0.05		0.88		0.09	0.90	
Control Delay	35.4	81.4	1.9	34.2	32.2	0.2		39.9		12.0	34.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	35.4	81.4	1.9	34.2	32.2	0.2		39.9		12.0	34.6	
LOS	D	F	A	C	C	A		D		B	C	
Approach Delay		66.4			30.3			39.9			33.6	
Approach LOS		E			C			D			C	
Queue Length 50th (m)	21.4	~104.2	0.0	4.1	43.4	0.0		68.2		3.3	129.7	
Queue Length 95th (m)	41.5	#164.2	2.8	12.7	69.5	0.0		#132.0		8.3	#211.9	
Internal Link Dist (m)		139.9			583.5			126.4			188.0	
Turn Bay Length (m)	40.0		75.0	240.0		40.0				30.0		
Base Capacity (vph)	265	511	512	98	495	497		519		428	933	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.54	1.03	0.10	0.31	0.58	0.05		0.88		0.09	0.90	

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 38 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.03
Intersection Signal Delay: 44.2 Intersection LOS: D
Intersection Capacity Utilization 103.3% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Island Park Drive & Scott Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	401	58	92	505	56	13	365	17	25	355	87
Future Volume (vph)	59	401	58	92	505	56	13	365	17	25	355	87
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		75.0	240.0		40.0	0.0		0.0	30.0		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97		0.89	0.97		0.82		1.00		0.98	0.99	
Frt			0.850			0.850		0.994			0.970	
Flt Protected	0.950			0.950				0.998		0.950		
Satd. Flow (prot)	1729	1596	1517	1729	1556	1547	0	1784	0	1729	1741	0
Flt Permitted	0.246			0.359				0.979		0.430		
Satd. Flow (perm)	434	1596	1352	633	1556	1267	0	1749	0	769	1741	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			87			87		3			16	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		163.9			607.5			150.4			212.0	
Travel Time (s)		11.8			43.7			13.5			19.1	
Confl. Peds. (#/hr)	59		38	38		59	26		22	22		26
Confl. Bikes (#/hr)			4			33			5			5
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%	14%	2%	0%	17%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	66	446	64	102	561	62	14	406	19	28	394	97
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	446	64	102	561	62	0	439	0	28	491	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		
Detector Phase	2	2	2	6	6	6	4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	34.0	34.0		34.0	34.0	
Total Split (s)	43.0	43.0	43.0	43.0	43.0	43.0	51.0	51.0		51.0	51.0	
Total Split (%)	43.0%	43.0%	43.0%	43.0%	43.0%	43.0%	51.0%	51.0%		51.0%	51.0%	
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	44.0	44.0		44.0	44.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	12.0	12.0		12.0	12.0	
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	15	15	15	15	15	15	15	15		15	15	
Act Effct Green (s)	42.0	42.0	42.0	42.0	42.0	42.0		44.0		44.0	44.0	
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.42	0.42		0.44		0.44	0.44	

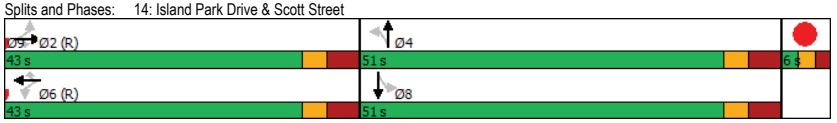
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	5.0
Total Split (s)	6.0
Total Split (%)	6%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	2.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.36	0.67	0.10	0.38	0.86	0.11		0.57		0.08	0.63	
Control Delay	27.1	29.3	2.6	25.5	41.4	2.4		24.4		17.2	25.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	27.1	29.3	2.6	25.5	41.4	2.4		24.4		17.2	25.5	
LOS	C	C	A	C	D	A		C		B	C	
Approach Delay		26.1			35.8			24.4			25.1	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	8.6	68.0	0.0	13.4	96.5	0.0		61.4		3.1	69.6	
Queue Length 95th (m)	20.6	102.5	4.8	28.1	#157.9	4.4		91.5		8.4	103.7	
Internal Link Dist (m)		139.9			583.5			126.4			188.0	
Turn Bay Length (m)	40.0		75.0	240.0		40.0				30.0		
Base Capacity (vph)	182	670	618	265	653	582		771		338	775	
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	
Reduced v/c Ratio	0.36	0.67	0.10	0.38	0.86	0.11		0.57		0.08	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 2 (2%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 28.6 Intersection LOS: C
Intersection Capacity Utilization 82.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 14: Island Park Drive & Scott Street



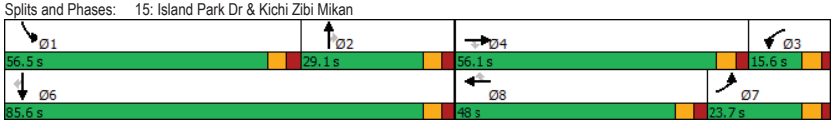
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	841	21	111	324	85	0	245	221	914	885	646
Future Volume (vph)	212	841	21	111	324	85	0	245	221	914	885	646
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0		100.0	100.0		280.0	0.0		100.0	65.0		100.0
Storage Lanes	1		1	1		1	0		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor			0.98			0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1729	3458	1473	1712	3390	1459	0	1820	1547	3321	1820	1547
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1729	3458	1442	1712	3390	1426	0	1820	1501	3282	1820	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			148			148			387
Link Speed (k/h)		60			60			40			60	
Link Distance (m)		287.3			493.5			253.4			345.2	
Travel Time (s)		17.2			29.6			22.8			20.7	
Confl. Peds. (#/hr)							1		5	5		1
Confl. Bikes (#/hr)			1			2			5			7
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%	5%	1%	2%	6%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	236	934	23	123	360	94	0	272	246	1016	983	718
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	934	23	123	360	94	0	272	246	1016	983	718
Turn Type	Prot	NA	Perm	Prot	NA	Perm		NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8		2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.6	30.1	30.1	10.6	30.1	30.1		29.1	29.1	11.5	29.1	29.1
Total Split (s)	23.7	56.1	56.1	15.6	48.0	48.0		29.1	29.1	56.5	85.6	85.6
Total Split (%)	15.1%	35.7%	35.7%	9.9%	30.5%	30.5%		18.5%	18.5%	35.9%	54.4%	54.4%
Maximum Green (s)	18.1	50.0	50.0	10.0	41.9	41.9		23.0	23.0	50.0	79.5	79.5
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.9	2.4	2.4	1.9	2.4	2.4		2.4	2.4	2.8	2.4	2.4
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)	5.6	6.1	6.1	5.6	6.1	6.1		6.1	6.1	6.5	6.1	6.1
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead		Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max		Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		17.0	17.0		17.0	17.0		16.0	16.0		16.0	16.0
Pedestrian Calls (#/hr)		15	15		15	15		15	15		15	15
Act Effct Green (s)	18.1	50.0	50.0	10.0	41.9	41.9		23.3	23.3	49.7	79.5	79.5
Actuated g/C Ratio	0.12	0.32	0.32	0.06	0.27	0.27		0.15	0.15	0.32	0.51	0.51

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.19	0.85	0.04	1.14	0.40	0.19		1.01	0.71	0.97	1.07	0.75
Control Delay	181.7	58.8	0.1	190.4	49.0	1.3		121.7	37.0	74.0	87.5	18.7
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	181.7	58.8	0.1	190.4	49.0	1.3		121.7	37.0	74.0	87.5	18.7
LOS	F	E	A	F	D	A		F	D	E	F	B
Approach Delay		82.0			71.4			81.5			64.3	
Approach LOS		F			E			F			E	
Queue Length 50th (m)	~88.4	144.1	0.0	~44.4	49.0	0.0		~90.0	29.5	161.3	~338.7	85.8
Queue Length 95th (m)	#143.4	171.6	0.0	#87.1	64.4	1.2		#148.3	61.6	#204.3	#419.0	140.4
Internal Link Dist (m)		263.3			469.5			229.4			321.2	
Turn Bay Length (m)	90.0		100.0	100.0		280.0			100.0	65.0		100.0
Base Capacity (vph)	198	1099	529	108	902	488		270	348	1055	919	960
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	1.19	0.85	0.04	1.14	0.40	0.19		1.01	0.71	0.96	1.07	0.75

Intersection Summary

Area Type: Other
Cycle Length: 157.3
Actuated Cycle Length: 157.3
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 71.1 Intersection LOS: E
Intersection Capacity Utilization 98.0% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 15: Island Park Dr & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	212	841	21	111	324	85	0	245	221	914	885	646
Future Volume (vph)	212	841	21	111	324	85	0	245	221	914	885	646
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0		100.0	100.0		280.0	0.0		100.0	65.0		100.0
Storage Lanes	1		1	1		1	0		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor			0.98			0.98			0.97	0.99		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1729	3458	1473	1712	3390	1459	0	1820	1547	3321	1820	1547
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1729	3458	1442	1712	3390	1426	0	1820	1501	3282	1820	1521
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105			148			148			387
Link Speed (k/h)		60			60			40			60	
Link Distance (m)		287.3			493.5			253.4			345.2	
Travel Time (s)		17.2			29.6			22.8			20.7	
Confl. Peds. (#/hr)							1		5	5		1
Confl. Bikes (#/hr)			1			2			5			7
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%	5%	1%	2%	6%	0%	0%	0%	1%	0%	0%
Adj. Flow (vph)	236	934	23	123	360	94	0	272	246	1016	983	718
Shared Lane Traffic (%)												
Lane Group Flow (vph)	236	934	23	123	360	94	0	272	246	1016	983	718
Turn Type	Prot	NA	Perm	Prot	NA	Perm		NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			8			2			6
Detector Phase	7	4	4	3	8	8		2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0		5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.6	30.1	30.1	10.6	30.1	30.1		29.1	29.1	11.5	29.1	29.1
Total Split (s)	23.7	56.1	56.1	15.6	48.0	48.0		29.1	29.1	56.5	85.6	85.6
Total Split (%)	15.1%	35.7%	35.7%	9.9%	30.5%	30.5%		18.5%	18.5%	35.9%	54.4%	54.4%
Maximum Green (s)	18.1	50.0	50.0	10.0	41.9	41.9		23.0	23.0	50.0	79.5	79.5
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7		3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.9	2.4	2.4	1.9	2.4	2.4		2.4	2.4	2.8	2.4	2.4
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)	5.6	6.1	6.1	5.6	6.1	6.1		6.1	6.1	6.5	6.1	6.1
Lead/Lag	Lag	Lead	Lead	Lag	Lead	Lead		Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None	Max	Max	None	Max	Max		Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		17.0	17.0		17.0	17.0		16.0	16.0		16.0	16.0
Pedestrian Calls (#/hr)		15	15		15	15		15	15		15	15
Act Effct Green (s)	18.1	50.0	50.0	10.0	41.9	41.9		23.3	23.3	49.7	79.5	79.5
Actuated g/C Ratio	0.12	0.32	0.32	0.06	0.27	0.27		0.15	0.15	0.32	0.51	0.51

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.19	0.85	0.04	1.14	0.40	0.19		1.01	0.71	0.97	1.07	0.75
Control Delay	181.7	58.8	0.1	190.4	49.0	1.3		121.7	37.0	74.0	87.5	18.7
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	181.7	58.8	0.1	190.4	49.0	1.3		121.7	37.0	74.0	87.5	18.7
LOS	F	E	A	F	D	A		F	D	E	F	B
Approach Delay		82.0			71.4			81.5			64.3	
Approach LOS		F			E			F			E	
Queue Length 50th (m)	~88.4	144.1	0.0	~44.4	49.0	0.0		~90.0	29.5	161.3	~338.7	85.8
Queue Length 95th (m)	#143.4	171.6	0.0	#87.1	64.4	1.2		#148.3	61.6	#204.3	#419.0	140.4
Internal Link Dist (m)		263.3			469.5			229.4			321.2	
Turn Bay Length (m)	90.0		100.0	100.0		280.0			100.0	65.0		100.0
Base Capacity (vph)	198	1099	529	108	902	488		270	348	1055	919	960
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	1.19	0.85	0.04	1.14	0.40	0.19		1.01	0.71	0.96	1.07	0.75

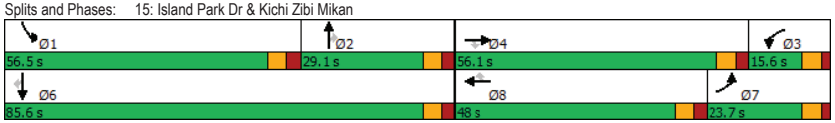
Intersection Summary

Area Type: Other
Cycle Length: 157.3
Actuated Cycle Length: 157.3
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.19
Intersection Signal Delay: 71.1 Intersection LOS: E
Intersection Capacity Utilization 98.0% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 15: Island Park Dr & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	347	37	108	1054	1126	0	540	13	115	364	430
Future Volume (vph)	373	347	37	108	1054	1126	0	540	13	115	364	430
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0		100.0	100.0		280.0	0.0		100.0	65.0		100.0
Storage Lanes	1		1	1		1	0		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.96	0.98		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1729	3458	1547	1729	3458	1547	0	1820	1547	3257	1820	1547
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1729	3458	1547	1729	3458	1547	0	1820	1488	3204	1820	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			504			88			406
Link Speed (k/h)		60			60			40			60	
Link Distance (m)		287.3			493.5			253.4			345.2	
Travel Time (s)		17.2			29.6			22.8			20.7	
Confl. Peds. (#/hr)							3		9	9		3
Confl. Bikes (#/hr)									6			3
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)	414	386	41	120	1171	1251	0	600	14	128	404	478
Shared Lane Traffic (%)												
Lane Group Flow (vph)	414	386	41	120	1171	1251	0	600	14	128	404	478
Turn Type	Prot	NA	Perm	Prot	NA	Free		NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			Free			2			6
Detector Phase	7	4	4	3	8			2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.6	30.1	30.1	10.6	30.1			29.1	29.1	11.5	29.1	29.1
Total Split (s)	40.6	66.1	66.1	40.6	66.0			66.1	66.1	16.5	82.6	82.6
Total Split (%)	21.4%	34.9%	34.9%	21.4%	34.9%			34.9%	34.9%	8.7%	43.6%	43.6%
Maximum Green (s)	35.0	60.0	60.0	35.0	59.9			60.0	60.0	10.0	76.5	76.5
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7			3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.9	2.4	2.4	1.9	2.4			2.4	2.4	2.8	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	5.6	6.1			6.1	6.1	6.5	6.1	6.1
Lead/Lag	Lag	Lead	Lead	Lag	Lead			Lag	Lag	Lead		
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	3.0	3.0
Recall Mode	None	Max	Max	None	Max			Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		17.0	17.0		17.0			16.0	16.0		16.0	16.0
Pedestrian Calls (#/hr)		15	15		15			15	15		15	15
Act Effct Green (s)	35.0	60.0	60.0	34.9	59.9	189.2		60.1	60.1	9.9	76.5	76.5
Actuated g/C Ratio	0.18	0.32	0.32	0.18	0.32	1.00		0.32	0.32	0.05	0.40	0.40

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.30	0.35	0.07	0.38	1.07	0.81		1.04	0.03	0.75	0.55	0.56
Control Delay	211.3	50.8	0.3	71.6	107.7	4.7		108.3	0.1	114.0	46.6	9.3
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	211.3	50.8	0.3	71.6	107.7	4.7		108.3	0.1	114.0	46.6	9.3
LOS	F	D	A	E	F	A		F	A	F	D	A
Approach Delay		127.4			55.3			105.8			37.5	
Approach LOS		F			E			F			D	
Queue Length 50th (m)	~198.7	59.4	0.0	40.4	~256.7	0.0		~243.6	0.0	25.1	117.0	17.0
Queue Length 95th (m)	#269.1	75.2	0.0	62.5	#299.5	0.0		#320.2	0.0	#41.0	152.3	51.9
Internal Link Dist (m)		263.3			469.5			229.4			321.2	
Turn Bay Length (m)	90.0		100.0	100.0		280.0			100.0	65.0		100.0
Base Capacity (vph)	320	1096	550	319	1094	1547		578	532	172	735	854
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	1.29	0.35	0.07	0.38	1.07	0.81		1.04	0.03	0.74	0.55	0.56

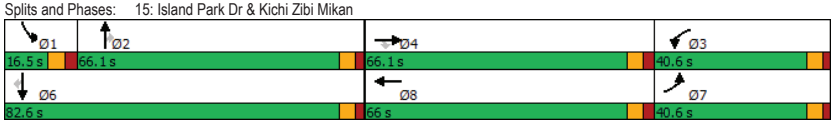
Intersection Summary

Area Type: Other
Cycle Length: 189.3
Actuated Cycle Length: 189.2
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 70.0 Intersection LOS: E
Intersection Capacity Utilization 107.0% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 15: Island Park Dr & Kichi Zibi Mikan



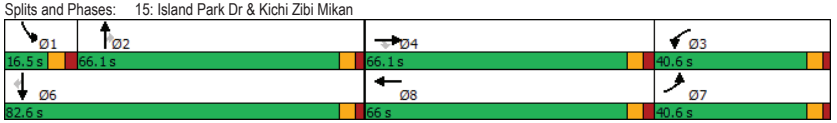
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	373	347	37	108	1054	1126	0	540	13	115	364	430
Future Volume (vph)	373	347	37	108	1054	1126	0	540	13	115	364	430
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	90.0		100.0	100.0		280.0	0.0		100.0	65.0		100.0
Storage Lanes	1		1	1		1	0		1	2		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.97	1.00	1.00
Ped Bike Factor									0.96	0.98		0.98
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950						0.950		
Satd. Flow (prot)	1729	3458	1547	1729	3458	1547	0	1820	1547	3257	1820	1547
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1729	3458	1547	1729	3458	1547	0	1820	1488	3204	1820	1515
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			88			504			88			406
Link Speed (k/h)		60			60			40			60	
Link Distance (m)		287.3			493.5			253.4			345.2	
Travel Time (s)		17.2			29.6			22.8			20.7	
Confl. Peds. (#/hr)							3		9	9		3
Confl. Bikes (#/hr)									6			3
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)	414	386	41	120	1171	1251	0	600	14	128	404	478
Shared Lane Traffic (%)												
Lane Group Flow (vph)	414	386	41	120	1171	1251	0	600	14	128	404	478
Turn Type	Prot	NA	Perm	Prot	NA	Free		NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8			2		1	6	
Permitted Phases			4			Free			2			6
Detector Phase	7	4	4	3	8			2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.6	30.1	30.1	10.6	30.1			29.1	29.1	11.5	29.1	29.1
Total Split (s)	40.6	66.1	66.1	40.6	66.0			66.1	66.1	16.5	82.6	82.6
Total Split (%)	21.4%	34.9%	34.9%	21.4%	34.9%			34.9%	34.9%	8.7%	43.6%	43.6%
Maximum Green (s)	35.0	60.0	60.0	35.0	59.9			60.0	60.0	10.0	76.5	76.5
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7			3.7	3.7	3.7	3.7	3.7
All-Red Time (s)	1.9	2.4	2.4	1.9	2.4			2.4	2.4	2.8	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	5.6	6.1			6.1	6.1	6.5	6.1	6.1
Lead/Lag	Lag	Lead	Lead	Lag	Lead			Lag	Lag	Lead		
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	3.0	3.0
Recall Mode	None	Max	Max	None	Max			Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0		7.0			7.0	7.0		7.0	7.0
Flash Dont Walk (s)		17.0	17.0		17.0			16.0	16.0		16.0	16.0
Pedestrian Calls (#/hr)		15	15		15			15	15		15	15
Act Effct Green (s)	35.0	60.0	60.0	34.9	59.9	189.2		60.1	60.1	9.9	76.5	76.5
Actuated g/C Ratio	0.18	0.32	0.32	0.18	0.32	1.00		0.32	0.32	0.05	0.40	0.40

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.30	0.35	0.07	0.38	1.07	0.81		1.04	0.03	0.75	0.55	0.56
Control Delay	211.3	50.8	0.3	71.6	107.7	4.7		108.3	0.1	114.0	46.6	9.3
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	211.3	50.8	0.3	71.6	107.7	4.7		108.3	0.1	114.0	46.6	9.3
LOS	F	D	A	E	F	A		F	A	F	D	A
Approach Delay		127.4			55.3			105.8			37.5	
Approach LOS		F			E			F			D	
Queue Length 50th (m)	~198.7	59.4	0.0	40.4	~256.7	0.0		~243.6	0.0	25.1	117.0	17.0
Queue Length 95th (m)	#269.1	75.2	0.0	62.5	#299.5	0.0		#320.2	0.0	#41.0	152.3	51.9
Internal Link Dist (m)		263.3			469.5			229.4			321.2	
Turn Bay Length (m)	90.0		100.0	100.0		280.0			100.0	65.0		100.0
Base Capacity (vph)	320	1096	550	319	1094	1547		578	532	172	735	854
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	1.29	0.35	0.07	0.38	1.07	0.81		1.04	0.03	0.74	0.55	0.56

Intersection Summary

Area Type: Other
Cycle Length: 189.3
Actuated Cycle Length: 189.2
Natural Cycle: 145
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.30
Intersection Signal Delay: 70.0 Intersection LOS: E
Intersection Capacity Utilization 107.0% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 15: Island Park Dr & Kichi Zibi Mikan

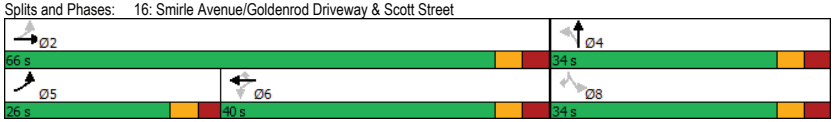


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	384	26	4	271	45	11	0	12	68	0	67
Future Volume (vph)	76	384	26	4	271	45	11	0	12	68	0	67
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.99		0.96		0.85		0.94		0.94		0.95
Frt		0.990				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	864	1732	0	1729	1767	802	0	1580	0	869	0	774
Flt Permitted	0.498			0.500				0.977		0.741		
Satd. Flow (perm)	432	1732	0	870	1767	681	0	1559	0	634	0	736
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
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 (%)	100%	3%	4%	0%	3%	93%	0%	0%	0%	99%	0%	100%
Adj. Flow (vph)	84	427	29	4	301	50	12	0	13	76	0	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	84	456	0	4	301	50	0	25	0	76	0	74
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	26.0	66.0		40.0	40.0	40.0	34.0	34.0		34.0		34.0
Total Split (%)	26.0%	66.0%		40.0%	40.0%	40.0%	34.0%	34.0%		34.0%		34.0%
Maximum Green (s)	20.0	59.4		33.4	33.4	33.4	27.4	27.4		27.4		27.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	Max		Max	Max	Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		15		15	15	15	15	15		15		15
Act Effct Green (s)	63.6	64.5		52.0	52.0	52.0		15.6		15.8		15.8
Actuated g/C Ratio	0.71	0.72		0.58	0.58	0.58		0.17		0.18		0.18

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.24	0.36		0.01	0.29	0.11		0.07		0.68		0.34
Control Delay	8.6	8.3		16.2	16.1	0.5		0.4		62.5		7.0
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	8.6	8.3		16.2	16.1	0.5		0.4		62.5		7.0
LOS	A	A		B	B	A		A		E		A
Approach Delay		8.3			13.9			0.4			35.1	
Approach LOS		A			B			A			D	
Queue Length 50th (m)	4.4	29.4		0.3	28.7	0.0		0.0		12.1		0.0
Queue Length 95th (m)	13.9	66.2		2.6	64.5	0.4		0.0		26.7		5.6
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	405	1253		507	1030	440		553		195		299
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	0.21	0.36		0.01	0.29	0.11		0.05		0.39		0.25

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 89.2			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.68			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 58.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



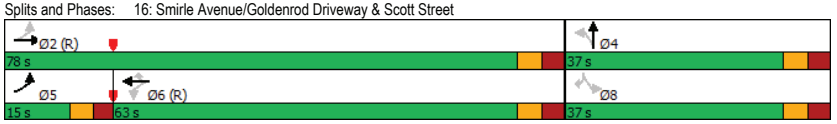
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	580	25	9	518	68	7	0	7	40	0	78
Future Volume (vph)	59	580	25	9	518	68	7	0	7	40	0	78
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99		0.76		0.94		0.95		0.93
Frt		0.994				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	873	1770	0	1729	1784	774	0	1595	0	873	0	789
Flt Permitted	0.350			0.409				0.976		0.747		
Satd. Flow (perm)	322	1770	0	734	1784	588	0	1553	0	650	0	733
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				91		91				91
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
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 (%)	98%	2%	0%	0%	2%	100%	0%	0%	0%	98%	0%	96%
Adj. Flow (vph)	66	644	28	10	576	76	8	0	8	44	0	87
Shared Lane Traffic (%)												
Lane Group Flow (vph)	66	672	0	10	576	76	0	16	0	44	0	87
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	15.0	78.0		63.0	63.0	63.0	37.0	37.0		37.0		37.0
Total Split (%)	13.0%	67.8%		54.8%	54.8%	54.8%	32.2%	32.2%		32.2%		32.2%
Maximum Green (s)	9.0	71.4		56.4	56.4	56.4	30.4	30.4		30.4		30.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		15		15	15	15	15	15		15		15
Act Effct Green (s)	90.7	91.4		79.7	79.7	79.7		14.2		14.2		14.2
Actuated g/C Ratio	0.79	0.79		0.69	0.69	0.69		0.12		0.12		0.12

16: Smirle Avenue/Goldenrod Driveway & Scott Street
Tunney's Pasture TIA
Existing Conditions
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.23	0.48		0.02	0.47	0.17		0.06		0.55		0.51
Control Delay	6.4	7.2		10.9	13.6	2.8		0.4		70.2		18.9
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	6.4	7.2		10.9	13.6	2.8		0.4		70.2		18.9
LOS	A	A		B	B	A		A		E		B
Approach Delay		7.2			12.3			0.4			36.1	
Approach LOS		A			B			A			D	
Queue Length 50th (m)	3.0	46.3		0.7	61.0	0.0		0.0		9.6		0.0
Queue Length 95th (m)	8.8	91.9		3.6	115.7	5.2		0.0		20.6		13.8
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	299	1407		508	1235	435		477		171		260
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	0.22	0.48		0.02	0.47	0.17		0.03		0.26		0.33

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 115			
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 11.7		Intersection LOS: B	
Intersection Capacity Utilization 67.8%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	16	43	34	5	25	9	486	13	6	365	6
Future Volume (vph)	9	16	43	34	5	25	9	486	13	6	365	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.96			0.95			1.00			1.00	
Frt		0.915			0.947			0.997			0.997	
Flt Protected		0.993			0.974			0.999			0.999	
Satd. Flow (prot)	0	1572	0	0	1575	0	0	1706	0	0	3181	0
Flt Permitted		0.950			0.838			0.992			0.948	
Satd. Flow (perm)	0	1494	0	0	1331	0	0	1691	0	0	3016	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		48			28			3			4	
Link Speed (k/h)		30			40			50			50	
Link Distance (m)		271.8			209.9			251.8			244.8	
Travel Time (s)		32.6			18.9			18.1			17.6	
Confl. Peds. (#/hr)	22		25	25		22	68		55	55		68
Confl. Bikes (#/hr)			6			2			6			
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%	6%	0%	3%	20%	0%	11%	6%	0%	17%	8%	0%
Adj. Flow (vph)	10	18	48	38	6	28	10	540	14	7	406	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	0	72	0	0	564	0	0	420	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		29.3	29.3		29.3	29.3	
Total Split (s)	24.0	24.0		24.0	24.0		70.0	70.0		70.0	70.0	
Total Split (%)	25.5%	25.5%		25.5%	25.5%		74.5%	74.5%		74.5%	74.5%	
Maximum Green (s)	18.5	18.5		18.5	18.5		64.7	64.7		64.7	64.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			5.3			5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		9.0	9.0		9.0	9.0	
Pedestrian Calls (#/hr)	15	15		15	15		15	15		15	15	
Act Effct Green (s)		11.3			11.3			75.1			75.1	
Actuated g/C Ratio		0.12			0.12			0.80			0.80	
v/c Ratio		0.34			0.39			0.42			0.17	
Control Delay		20.2			29.7			5.6			3.6	
Queue Delay		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		20.2			29.7			5.6			3.6	
LOS		C			C			A			A	
Approach Delay		20.2			29.7			5.6			3.6	
Approach LOS		C			C			A			A	
Queue Length 50th (m)		4.8			7.6			23.9			7.2	
Queue Length 95th (m)		16.0			18.5			60.8			17.5	
Internal Link Dist (m)		247.8			185.9			227.8			220.8	
Turn Bay Length (m)												
Base Capacity (vph)		332			284			1351			2411	
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			0.25			0.42			0.17	

Intersection Summary

Area Type: Other
Cycle Length: 94
Actuated Cycle Length: 94
Offset: 40 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.42
Intersection Signal Delay: 7.4 Intersection LOS: A
Intersection Capacity Utilization 57.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 25: Holland Avenue & Spencer St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	26	41	72	28	13	43	405	25	12	492	6
Future Volume (vph)	13	26	41	72	28	13	43	405	25	12	492	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Ped Bike Factor		0.97			0.98			0.98			1.00	
Frt		0.930			0.985			0.993			0.998	
Flt Protected		0.992			0.969			0.995			0.999	
Satd. Flow (prot)	0	1605	0	0	1706	0	0	1649	0	0	3283	0
Flt Permitted		0.948			0.762			0.913			0.941	
Satd. Flow (perm)	0	1524	0	0	1324	0	0	1505	0	0	3087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			6			6			2	
Link Speed (k/h)		30			40			50			50	
Link Distance (m)		271.8			209.9			251.8			244.8	
Travel Time (s)		32.6			18.9			18.1			17.6	
Confl. Peds. (#/hr)	20		14	14		20	63		87	87		63
Confl. Bikes (#/hr)			3						4			4
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 (%)	8%	4%	0%	0%	4%	0%	2%	9%	0%	0%	5%	0%
Adj. Flow (vph)	14	29	46	80	31	14	48	450	28	13	547	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	89	0	0	125	0	0	526	0	0	567	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	23.5	23.5		23.5	23.5		29.3	29.3		29.3	29.3	
Total Split (s)	31.0	31.0		31.0	31.0		69.0	69.0		69.0	69.0	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		69.0%	69.0%		69.0%	69.0%	
Maximum Green (s)	25.5	25.5		25.5	25.5		63.7	63.7		63.7	63.7	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.5			5.5			5.3			5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		15.0	15.0		15.0	15.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		9.0	9.0		9.0	9.0	
Pedestrian Calls (#/hr)	15	15		15	15		15	15		15	15	
Act Effct Green (s)		14.0			14.0			75.2			75.2	
Actuated g/C Ratio		0.14			0.14			0.75			0.75	
v/c Ratio		0.35			0.66			0.46			0.24	
Control Delay		23.6			54.1			7.0			4.5	
Queue Delay		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		23.6			54.1			7.0			4.5	
LOS		C			D			A			A	
Approach Delay		23.6			54.1			7.0			4.5	
Approach LOS		C			D			A			A	
Queue Length 50th (m)		7.5			22.1			31.6			14.4	
Queue Length 95th (m)		20.0			38.1			64.4			26.1	
Internal Link Dist (m)		247.8			185.9			227.8			220.8	
Turn Bay Length (m)												
Base Capacity (vph)		422			342			1133			2321	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.21			0.37			0.46			0.24	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 38 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 11.5 Intersection LOS: B
Intersection Capacity Utilization 74.5% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 25: Holland Avenue & Spencer St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	507	17	3	226	7	0	0	0	5	8	13
Future Volume (vph)	22	507	17	3	226	7	0	0	0	5	8	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00						0.98	
Frt		0.996			0.996						0.935	
Flt Protected		0.998			0.999						0.990	
Satd. Flow (prot)	0	1702	0	0	1692	0	0	0	0	0	1593	0
Flt Permitted		0.983			0.996						0.990	
Satd. Flow (perm)	0	1673	0	0	1687	0	0	0	0	0	1588	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			3						14	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		233.9			420.1			161.5			166.1	
Travel Time (s)		16.8			30.2			14.5			14.9	
Confl. Peds. (#/hr)	36		23	23		36	10		8	8		10
Confl. Bikes (#/hr)			48			5			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 (%)	5%	6%	6%	0%	7%	0%	0%	0%	0%	0%	12%	0%
Adj. Flow (vph)	24	563	19	3	251	8	0	0	0	6	9	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	606	0	0	262	0	0	0	0	0	29	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		2			6						8	
Permitted Phases	2			6						8		
Detector Phase	2	2		6	6					8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)	23.8	23.8		30.8	30.8					30.8	30.8	
Total Split (s)	69.0	69.0		69.0	69.0					31.0	31.0	
Total Split (%)	69.0%	69.0%		69.0%	69.0%					31.0%	31.0%	
Maximum Green (s)	63.3	63.3		63.3	63.3					25.2	25.2	
Yellow Time (s)	3.3	3.3		3.3	3.3					3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4					2.5	2.5	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.7			5.7						5.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None	
Walk Time (s)	7.0	7.0		9.0	9.0					9.0	9.0	
Flash Dont Walk (s)	11.0	11.0		16.0	16.0					16.0	16.0	
Pedestrian Calls (#/hr)	15	15		15	15					15	15	
Act Effct Green (s)		81.8			81.8						13.5	
Actuated g/C Ratio		0.82			0.82						0.14	
v/c Ratio		0.44			0.19						0.13	
Control Delay		7.4			5.1						21.7	
Queue Delay		0.0			0.0						0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		7.4			5.1						21.7	
LOS		A			A						C	
Approach Delay		7.4			5.1						21.7	
Approach LOS		A			A						C	
Queue Length 50th (m)		23.8			7.7						2.8	
Queue Length 95th (m)		90.2			31.4						9.1	
Internal Link Dist (m)		209.9			396.1			137.5			142.1	
Turn Bay Length (m)												
Base Capacity (vph)		1369			1381						410	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.44			0.19						0.07	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 78 (78%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.44
Intersection Signal Delay: 7.2 Intersection LOS: A
Intersection Capacity Utilization 63.5% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 26: Carruthers Avenue & Scott Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	394	30	14	540	17	0	0	0	13	6	19
Future Volume (vph)	12	394	30	14	540	17	0	0	0	13	6	19
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00						0.92	
Frt		0.991			0.996						0.932	
Flt Protected		0.999			0.999						0.984	
Satd. Flow (prot)	0	1767	0	0	1771	0	0	0	0	0	1572	0
Flt Permitted		0.982			0.985						0.984	
Satd. Flow (perm)	0	1735	0	0	1744	0	0	0	0	0	1537	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			3						21	
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		233.9			420.1			161.5			166.1	
Travel Time (s)		16.8			30.2			14.5			14.9	
Confl. Peds. (#/hr)	53		58	58		53	36		25	25		36
Confl. Bikes (#/hr)			14			12			1			3
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%	1%	3%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	13	438	33	16	600	19	0	0	0	14	7	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	484	0	0	635	0	0	0	0	0	42	0
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		2			6						8	
Permitted Phases	2			6						8		
Detector Phase	2	2		6	6					8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)	35.7	35.7		35.7	35.7					25.8	25.8	
Total Split (s)	69.0	69.0		69.0	69.0					31.0	31.0	
Total Split (%)	69.0%	69.0%		69.0%	69.0%					31.0%	31.0%	
Maximum Green (s)	63.3	63.3		63.3	63.3					25.2	25.2	
Yellow Time (s)	3.3	3.3		3.3	3.3					3.3	3.3	
All-Red Time (s)	2.4	2.4		2.4	2.4					2.5	2.5	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.7			5.7						5.8	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0					3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max					None	None	
Walk Time (s)	19.0	19.0		19.0	19.0					9.0	9.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0					10.0	10.0	
Pedestrian Calls (#/hr)	15	15		15	15					15	15	
Act Effct Green (s)		84.1			84.1						11.2	
Actuated g/C Ratio		0.84			0.84						0.11	
v/c Ratio		0.33			0.43						0.22	
Control Delay		1.9			5.5						24.7	
Queue Delay		0.0			0.0						0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay		1.9			5.5						24.7	
LOS		A			A						C	
Approach Delay		1.9			5.5						24.7	
Approach LOS		A			A						C	
Queue Length 50th (m)		5.9			25.8						3.9	
Queue Length 95th (m)		16.3			75.5						12.3	
Internal Link Dist (m)		209.9			396.1			137.5			142.1	
Turn Bay Length (m)												
Base Capacity (vph)		1460			1467						403	
Starvation Cap Reductn		0			0						0	
Spillback Cap Reductn		0			0						0	
Storage Cap Reductn		0			0						0	
Reduced v/c Ratio		0.33			0.43						0.10	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.43
Intersection Signal Delay: 4.7 Intersection LOS: A
Intersection Capacity Utilization 61.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 26: Carruthers Avenue & Scott Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	441	68	60	166	43	34	65	98	91	149	3
Future Volume (vph)	23	441	68	60	166	43	34	65	98	91	149	3
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	50.0		0.0	45.0		7.0	40.0		0.0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.97	0.97		0.99		0.94	0.97	1.00	
Frt		0.983			0.969				0.850		0.997	
Flt Protected		0.998		0.950			0.950			0.950		
Satd. Flow (prot)	0	1674	0	1647	1612	0	1586	1784	1459	1647	1751	0
Flt Permitted		0.981		0.437			0.571			0.710		
Satd. Flow (perm)	0	1640	0	737	1612	0	941	1784	1368	1196	1751	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			24				109		1	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		420.1			215.8			163.2			157.2	
Travel Time (s)		30.2			15.5			11.8			11.3	
Confl. Peds. (#/hr)	54		39	39		54	9		16	16		9
Confl. Bikes (#/hr)			41			2			9			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 (%)	4%	5%	6%	5%	7%	5%	9%	2%	6%	5%	3%	33%
Adj. Flow (vph)	26	490	76	67	184	48	38	72	109	101	166	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	592	0	67	232	0	38	72	109	101	169	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	2	2		6	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	32.5	32.5		32.5	32.5		32.4	32.4	32.4	32.4	32.4	
Total Split (s)	68.0	68.0		68.0	68.0		32.4	32.4	32.4	32.4	32.4	
Total Split (%)	67.7%	67.7%		67.7%	67.7%		32.3%	32.3%	32.3%	32.3%	32.3%	
Maximum Green (s)	61.5	61.5		61.5	61.5		26.0	26.0	26.0	26.0	26.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.5		6.5	6.5		6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	15	15		15	15		15	15	15	15	15	
Act Effct Green (s)		69.7		69.7	69.7		17.8	17.8	17.8	17.8	17.8	
Actuated g/C Ratio		0.69		0.69	0.69		0.18	0.18	0.18	0.18	0.18	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.52		0.13	0.21		0.23	0.23	0.33	0.48	0.55	
Control Delay		10.5		7.8	6.5		35.5	34.4	8.7	42.7	42.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		10.5		7.8	6.5		35.5	34.4	8.7	42.7	42.5	
LOS		B		A	A		D	C	A	D	D	
Approach Delay		10.5			6.8			21.8			42.5	
Approach LOS		B			A			C			D	
Queue Length 50th (m)		41.5		3.4	11.0		6.7	12.6	0.0	18.5	31.2	
Queue Length 95th (m)		93.6		11.3	27.9		14.2	22.0	12.6	30.6	45.3	
Internal Link Dist (m)		396.1			191.8			139.2			133.2	
Turn Bay Length (m)				50.0			45.0		7.0	40.0		
Base Capacity (vph)		1143		511	1126		243	461	435	309	454	
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		0.52		0.13	0.21		0.16	0.16	0.25	0.33	0.37	

Intersection Summary

Area Type: Other
Cycle Length: 100.4
Actuated Cycle Length: 100.4
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 17.8 Intersection LOS: B
Intersection Capacity Utilization 82.2% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 27: Bayview Station Rd. & Scott Street/Albert Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	311	82	111	484	179	50	187	73	43	80	17
Future Volume (vph)	19	311	82	111	484	179	50	187	73	43	80	17
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		0.0	50.0		0.0	45.0		7.0	40.0		0.0
Storage Lanes	0		0	1		0	1		1	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98		0.97	0.97		0.97		0.95	0.98	0.99	
Frt		0.973			0.959				0.850		0.974	
Flt Protected		0.998		0.950			0.950			0.950		
Satd. Flow (prot)	0	1704	0	1679	1661	0	1695	1802	1532	1647	1754	0
Flt Permitted		0.956		0.502			0.687			0.485		
Satd. Flow (perm)	0	1631	0	857	1661	0	1183	1802	1461	826	1754	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23			34				38		10	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		420.1			215.8			163.2			157.2	
Travel Time (s)		30.2			15.5			11.8			11.3	
Confl. Peds. (#/hr)	48		38	38		48	21		13	13		21
Confl. Bikes (#/hr)			10			15			1			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%	2%	1%	3%	2%	1%	2%	1%	1%	5%	0%	0%
Adj. Flow (vph)	21	346	91	123	538	199	56	208	81	48	89	19
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	458	0	123	737	0	56	208	81	48	108	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	2	2		6	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	32.5	32.5		32.5	32.5		32.4	32.4	32.4	32.4	32.4	
Total Split (s)	68.0	68.0		68.0	68.0		32.4	32.4	32.4	32.4	32.4	
Total Split (%)	67.7%	67.7%		67.7%	67.7%		32.3%	32.3%	32.3%	32.3%	32.3%	
Maximum Green (s)	61.5	61.5		61.5	61.5		26.0	26.0	26.0	26.0	26.0	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3	3.3	3.3	3.3	
All-Red Time (s)	3.2	3.2		3.2	3.2		3.1	3.1	3.1	3.1	3.1	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		6.5		6.5	6.5		6.4	6.4	6.4	6.4	6.4	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None	None	None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		19.0	19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)	15	15		15	15		15	15	15	15	15	
Act Effct Green (s)		68.7		68.7	68.7		18.8	18.8	18.8	18.8	18.8	
Actuated g/C Ratio		0.68		0.68	0.68		0.19	0.19	0.19	0.19	0.19	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.41		0.21	0.64		0.25	0.62	0.27	0.31	0.32	
Control Delay		9.0		8.3	13.1		35.0	44.4	20.7	38.0	32.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay		9.0		8.3	13.1		35.0	44.4	20.7	38.0	32.5	
LOS		A		A	B		C	D	C	D	C	
Approach Delay		9.0			12.5			37.3			34.2	
Approach LOS		A			B			D			C	
Queue Length 50th (m)		30.0		7.2	62.8		9.6	38.5	7.3	8.3	17.0	
Queue Length 95th (m)		63.3		19.2	131.9		18.8	55.1	18.0	17.2	28.9	
Internal Link Dist (m)		396.1			191.8			139.2			133.2	
Turn Bay Length (m)				50.0			45.0		7.0	40.0		
Base Capacity (vph)		1123		586	1147		306	466	406	213	461	
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		0.41		0.21	0.64		0.18	0.45	0.20	0.23	0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100.4			
Actuated Cycle Length: 100.4			
Offset: 65 (65%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 27: Bayview Station Rd. & Scott Street/Albert Street

SITE LAYOUT

Site: 101 [Existing AM (Site Folder: General)]

Burnside & Slidell/Bayview
Site Category: (None)
Roundabout

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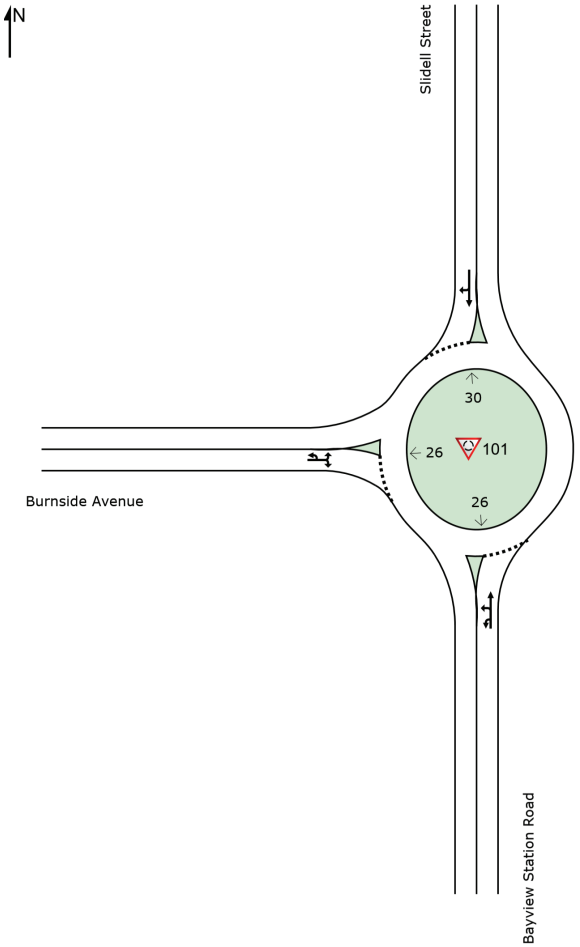

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MOVEMENT SUMMARY

Site: 101 [Existing AM (Site Folder: General)]

Burnside & Slidell/Bayview
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bayview Station Road														
3u	U	3	2	3	66.7	0.100	6.3	LOS A	0.3	2.8	0.09	0.02	0.09	51.5
3	L2	69	2	77	2.9	0.100	4.2	LOS A	0.3	2.8	0.09	0.02	0.09	53.7
8	T1	21	2	23	9.5	0.100	4.5	LOS A	0.3	2.8	0.09	0.02	0.09	53.4
Approach		93	6	103	6.5	0.100	4.4	LOS A	0.3	2.8	0.09	0.02	0.09	53.6
North: Slidell Street														
4	T1	41	2	46	4.9	0.053	4.1	LOS A	0.2	1.4	0.19	0.09	0.19	56.6
14	R2	6	0	7	0.0	0.053	3.9	LOS A	0.2	1.4	0.19	0.09	0.19	55.8
Approach		47	2	52	4.3	0.053	4.1	LOS A	0.2	1.4	0.19	0.09	0.19	56.5
West: Burnside Avenue														
5u	U	2	0	2	0.0	0.255	5.8	LOS A	1.1	8.5	0.18	0.08	0.18	56.9
5	L2	17	0	19	0.0	0.255	5.8	LOS A	1.1	8.5	0.18	0.08	0.18	55.5
12	R2	225	1	250	0.4	0.255	5.8	LOS A	1.1	8.5	0.18	0.08	0.18	54.1
Approach		244	1	271	0.4	0.255	5.8	LOS A	1.1	8.5	0.18	0.08	0.18	54.2
All Vehicles		384	9	427	2.3	0.255	5.3	LOS A	1.1	8.5	0.16	0.07	0.16	54.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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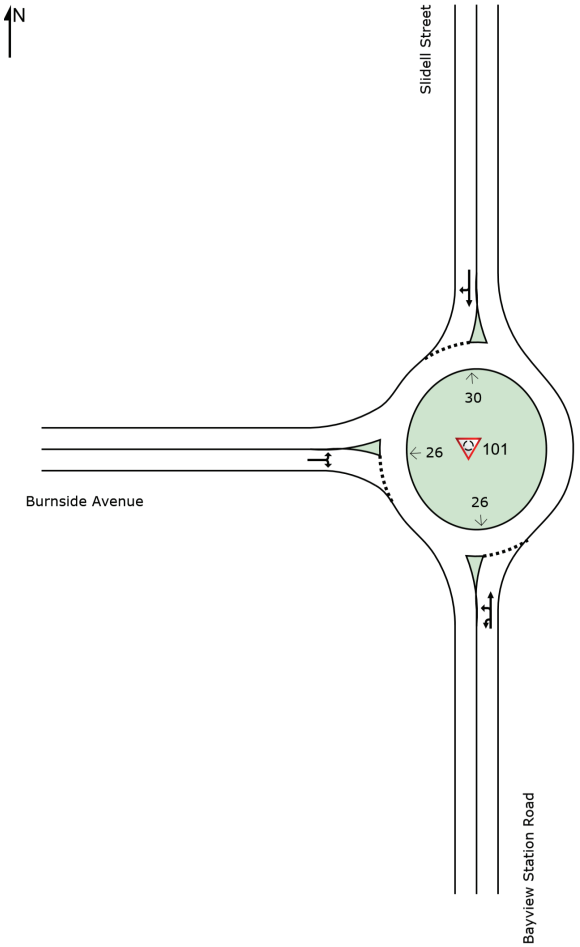
SITE LAYOUT

Site: 101 [Existing PM (Site Folder: General)]

Burnside & Slidell/Bayview
Site Category: (None)
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 101 [Existing PM (Site Folder: General)]

Burnside & Slidell/Bayview
Site Category: (None)
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] veh/h	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] m	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed km/h
South: Bayview Station Road														
3u	U	3	0	3	0.0	0.381	7.1	LOS A	2.1	15.6	0.04	0.01	0.04	53.2
3	L2	273	1	303	0.4	0.381	7.1	LOS A	2.1	15.6	0.04	0.01	0.04	52.2
8	T1	108	0	120	0.0	0.381	7.1	LOS A	2.1	15.6	0.04	0.01	0.04	52.1
Approach		384	1	427	0.3	0.381	7.1	LOS A	2.1	15.6	0.04	0.01	0.04	52.2
North: Slidell Street														
4	T1	28	1	31	3.6	0.048	5.0	LOS A	0.2	1.2	0.38	0.27	0.38	56.9
14	R2	7	0	8	0.0	0.048	4.8	LOS A	0.2	1.2	0.38	0.27	0.38	55.6
Approach		35	1	39	2.9	0.048	4.9	LOS A	0.2	1.2	0.38	0.27	0.38	56.6
West: Burnside Avenue														
5	L2	3	0	3	0.0	0.114	4.3	LOS A	0.4	3.2	0.12	0.04	0.12	57.0
12	R2	107	1	119	0.9	0.114	4.4	LOS A	0.4	3.2	0.12	0.04	0.12	55.3
Approach		110	1	122	0.9	0.114	4.4	LOS A	0.4	3.2	0.12	0.04	0.12	55.3
All Vehicles		529	3	588	0.6	0.381	6.4	LOS A	2.1	15.6	0.08	0.03	0.08	53.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 2010). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).
Roundabout Capacity Model: US HCM 2010.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Future Background Traffic

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	511	2	38	5	0	0	4	5
Future Volume (vph)	0	0	0	6	511	2	38	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.958				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1713	0	0	1668	0
Flt Permitted					0.999			0.744				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1331	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			97.8	
Travel Time (s)		8.6			8.9			8.2			11.7	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	511	2	38	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	519	0	0	43	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				73.0	73.0		26.0	26.0			26.0	
Total Split (%)				63.5%	63.5%		22.6%	22.6%			22.6%	
Maximum Green (s)				67.3	67.3		15.7	15.7			15.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					67.7			15.8			15.8	
Actuated g/C Ratio					0.62			0.15			0.15	
v/c Ratio					0.24			0.22			0.04	
Control Delay					10.3			19.8			32.4	
Queue Delay					0.0			0.0			0.0	

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Background Conditions
Weekday AM Peak Hour

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	73.0	16.0
Total Split (%)	14%	63%	14%
Maximum Green (s)	12.0	67.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	30	30	30
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

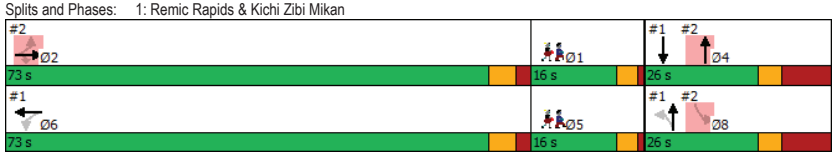
Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					10.3			19.8			32.4	
LOS					B			B			C	
Approach Delay					10.3			19.8			32.4	
Approach LOS					B			B			C	
Queue Length 50th (m)					28.3			3.5			0.8	
Queue Length 95th (m)					37.5			m5.2			5.6	
Internal Link Dist (m)		119.2			124.1			44.2			73.8	
Turn Bay Length (m)												
Base Capacity (vph)					2129			193			246	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.24			0.22			0.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 11.4		Intersection LOS: B	
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	511	2	38	5	0	0	4	5
Future Volume (vph)	0	0	0	6	511	2	38	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.958				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1699	0	0	1668	0
Flt Permitted					0.999			0.744				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1319	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	511	2	38	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	519	0	0	43	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				73.0	73.0		26.0	26.0			26.0	
Total Split (%)				63.5%	63.5%		22.6%	22.6%			22.6%	
Maximum Green (s)				67.3	67.3		15.7	15.7			15.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					67.3			15.7			15.7	
Actuated g/C Ratio					0.68			0.16			0.16	
v/c Ratio					0.22			0.21			0.03	
Control Delay					6.3			16.8			26.7	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	73.0	16.0
Total Split (%)	14%	63%	14%
Maximum Green (s)	12.0	67.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	Lag
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

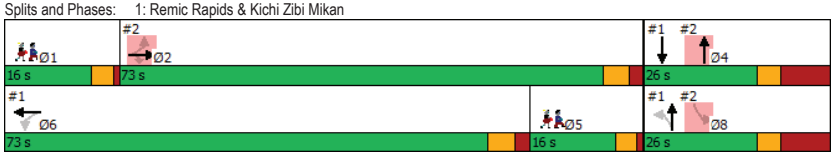
Future Background OPT
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.3			16.8			26.7	
LOS					A			B			C	
Approach Delay					6.3			16.8			26.7	
Approach LOS					A			B			C	
Queue Length 50th (m)					17.4			3.0			0.7	
Queue Length 95th (m)					23.8			m4.6			5.0	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2323			209			268	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.22			0.21			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 37.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1552	3	492	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1552	3	492	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1701	0	0	1665	0
Flt Permitted								0.723				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1286	0	0	1665	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			97.8	
Travel Time (s)		8.6			8.9			8.2			7.0	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1552	3	492	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1567	0	0	495	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				81.0	81.0		48.0	48.0			48.0	
Total Split (%)				55.9%	55.9%		33.1%	33.1%			33.1%	
Maximum Green (s)				75.3	75.3		37.7	37.7			37.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					75.3			37.7			37.7	
Actuated g/C Ratio					0.58			0.29			0.29	
v/c Ratio					0.78			1.32			0.01	
Control Delay					23.9			168.3			24.1	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	81.0	16.0
Total Split (%)	11%	56%	11%
Maximum Green (s)	12.0	75.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

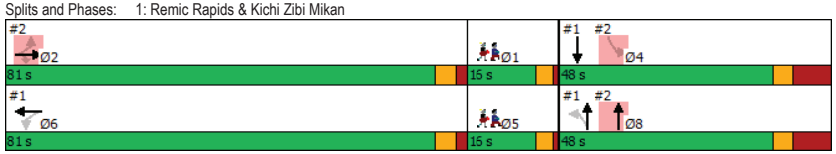
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					23.9			168.3			24.1	
LOS					C			F			C	
Approach Delay					23.9			168.3			24.1	
Approach LOS					C			F			C	
Queue Length 50th (m)					151.8			~154.1			0.6	
Queue Length 95th (m)					181.4			m#137.3			4.2	
Internal Link Dist (m)		119.2			124.1			44.2			73.8	
Turn Bay Length (m)												
Base Capacity (vph)					2018			375			489	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.78			1.32			0.01	

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 129
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.32
Intersection Signal Delay: 58.4 Intersection LOS: E
Intersection Capacity Utilization 94.7% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Future Volume (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		30.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96		0.93		0.55	0.74		0.66	0.77		0.53
Frt		0.982				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1613	0	1695	1701	1419	1429	1802	1547	1695	1802	1517
Flt Permitted	0.199			0.220			0.415			0.548		
Satd. Flow (perm)	355	1613	0	366	1701	779	465	1802	1026	758	1802	804
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	26%	2%	7%	9%	21%	1%	0%	2%	1%	2%
Adj. Flow (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	569	0	163	591	33	126	204	223	87	286	27
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	58.0	58.0		58.0	58.0	58.0	42.0	42.0	42.0	42.0	42.0	42.0
Total Split (%)	52.7%	52.7%		52.7%	52.7%	52.7%	38.2%	38.2%	38.2%	38.2%	38.2%	38.2%
Maximum Green (s)	51.8	51.8		51.8	51.8	51.8	35.8	35.8	35.8	35.8	35.8	35.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Min	C-Min		C-Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	45.8	45.8		45.8	45.8	45.8	30.4	30.4	30.4	30.4	30.4	30.4
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.28	0.28	0.28	0.28	0.28	0.28

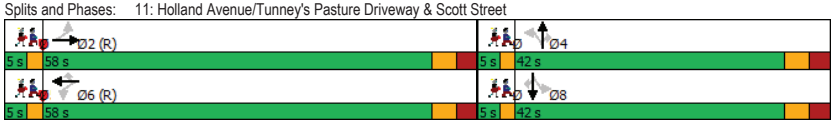
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.14	0.85		1.07	0.84	0.10	0.98	0.41	0.79	0.42	0.58	0.12
Control Delay	16.9	34.2		108.3	23.8	10.2	115.1	33.7	55.7	37.0	38.0	28.2
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	16.9	34.2		108.3	23.8	10.2	115.1	33.7	55.7	37.0	38.0	28.2
LOS	B	C		F	C	B	F	C	E	D	D	C
Approach Delay		33.7			40.7			61.1			37.1	
Approach LOS		C			D			E			D	
Queue Length 50th (m)	1.9	53.8		15.3	49.5	2.2	25.1	33.4	41.4	14.3	49.4	4.1
Queue Length 95th (m)	m3.9	64.5		m#59.2	m64.8	m4.1	#59.7	52.7	69.4	28.7	74.3	10.7
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		30.0	65.0		30.0
Base Capacity (vph)	167	759		172	801	366	151	586	333	246	586	261
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	0.12	0.75		0.95	0.74	0.09	0.83	0.35	0.67	0.35	0.49	0.10

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 104 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 43.2 Intersection LOS: D
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1832	334	0	0	0	0	40	18	10	0	0
Future Volume (vph)	3	1832	334	0	0	0	0	40	18	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.958				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1517	0	0	0	0	1713	0	1729	0	0
Flt Permitted										0.719		
Satd. Flow (perm)	0	3458	1482	0	0	0	0	1713	0	1309	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			334					16				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	3	1832	334	0	0	0	0	40	18	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1835	334	0	0	0	0	58	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	73.0	73.0	73.0					26.0		26.0		
Total Split (%)	63.5%	63.5%	63.5%					22.6%		22.6%		
Maximum Green (s)	67.3	67.3	67.3					15.7		15.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		67.7	67.7					15.8		15.8		
Actuated g/C Ratio		0.62	0.62					0.15		0.15		

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Background Conditions
Weekday AM Peak Hour

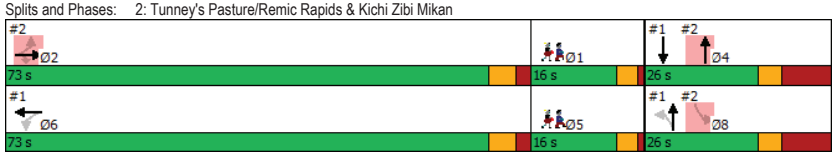
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	73.0
Total Split (%)	14%	14%	63%
Maximum Green (s)	12.0	12.0	67.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	30	30	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.85	0.32					0.22		0.05		
Control Delay		23.0	2.0					36.1		44.8		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		23.0	2.0					36.1		44.8		
LOS		C	A					D		D		
Approach Delay		19.8						36.1			44.8	
Approach LOS		B						D			D	
Queue Length 50th (m)		181.3	0.0					8.5		2.1		
Queue Length 95th (m)		221.6	11.3					20.7		5.7		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2154	1049					262		190		
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		0.85	0.32					0.22		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 20.3		Intersection LOS: C	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1832	334	0	0	0	0	40	18	10	0	0
Future Volume (vph)	3	1832	334	0	0	0	0	40	18	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.958				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1517	0	0	0	0	1701	0	1729	0	0
Flt Permitted										0.719		
Satd. Flow (perm)	0	3458	1482	0	0	0	0	1701	0	1309	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			334					16				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			135.4			68.2	
Travel Time (s)		8.6			9.9			16.2			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	3	1832	334	0	0	0	0	40	18	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1835	334	0	0	0	0	58	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	73.0	73.0	73.0					26.0		26.0		
Total Split (%)	63.5%	63.5%	63.5%					22.6%		22.6%		
Maximum Green (s)	67.3	67.3	67.3					15.7		15.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lag	Lag	Lag									
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		67.3	67.3					15.7		15.7		
Actuated g/C Ratio		0.68	0.68					0.16		0.16		

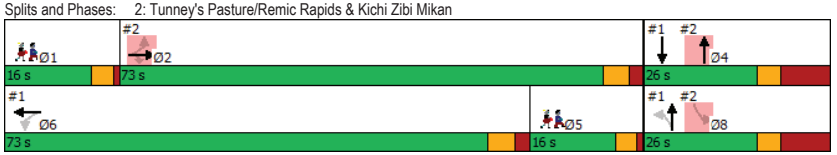
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	73.0
Total Split (%)	14%	14%	63%
Maximum Green (s)	12.0	12.0	67.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	Lead
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Background OPT
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.78	0.30					0.20		0.05		
Control Delay		13.9	1.4					30.2		32.9		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		13.9	1.4					30.2		32.9		
LOS		B	A					C		C		
Approach Delay		11.9						30.2			32.9	
Approach LOS		B						C			C	
Queue Length 50th (m)		111.8	0.0					7.0		1.7		
Queue Length 95th (m)		141.3	7.8					18.3		4.9		
Internal Link Dist (m)		118.7			140.5			111.4			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2350	1114					283		207		
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		0.78	0.30					0.20		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 12.5		Intersection LOS: B	
Intersection Capacity Utilization 71.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	471	38	0	0	0	0	477	81	15	0	0
Future Volume (vph)	18	471	38	0	0	0	0	477	81	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt			0.850					0.980				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1517	0	0	0	0	1749	0	1729	0	0
Flt Permitted		0.998								0.106		
Satd. Flow (perm)	0	3418	1517	0	0	0	0	1749	0	193	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					6				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	18	471	38	0	0	0	0	477	81	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	489	38	0	0	0	0	558	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	81.0	81.0	81.0					48.0		48.0		
Total Split (%)	55.9%	55.9%	55.9%					33.1%		33.1%		
Maximum Green (s)	75.3	75.3	75.3					37.7		37.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		75.3	75.3					37.7		37.7		
Actuated g/C Ratio		0.58	0.58					0.29		0.29		

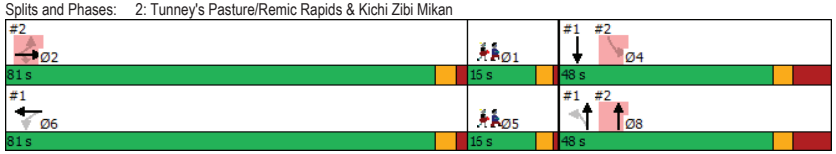
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	81.0
Total Split (%)	11%	11%	56%
Maximum Green (s)	12.0	12.0	75.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.25	0.04					1.08		0.27		
Control Delay		13.4	0.1					106.8		54.3		
Queue Delay		0.0	0.0					7.5		0.0		
Total Delay		13.5	0.1					114.4		54.3		
LOS		B	A					F		D		
Approach Delay		12.5						114.4			54.3	
Approach LOS		B						F			D	
Queue Length 50th (m)		30.2	0.0					~157.8		3.7		
Queue Length 95th (m)		39.6	0.0					#226.9		m6.2		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1995	920					515		56		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		309	0					68		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.29	0.04					1.25		0.27		

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 129
Natural Cycle: 150
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 1.32
Intersection Signal Delay: 64.8 Intersection LOS: E
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



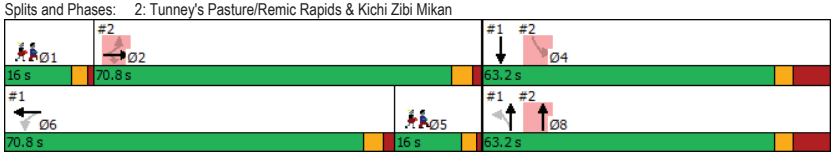
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	471	38	0	0	0	0	477	81	15	0	0
Future Volume (vph)	18	471	38	0	0	0	0	477	81	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt			0.850					0.980				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3386	1517	0	0	0	0	1749	0	1729	0	0
Flt Permitted		0.998								0.230		
Satd. Flow (perm)	0	3386	1517	0	0	0	0	1749	0	419	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82					6				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			135.4			68.2	
Travel Time (s)		8.6			9.9			16.2			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	18	471	38	0	0	0	0	477	81	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	489	38	0	0	0	0	558	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	70.8	70.8	70.8					63.2		63.2		
Total Split (%)	47.2%	47.2%	47.2%					42.1%		42.1%		
Maximum Green (s)	65.1	65.1	65.1					52.9		52.9		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lag	Lag	Lag									
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		65.1	65.1					52.9		52.9		
Actuated g/C Ratio		0.49	0.49					0.39		0.39		

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	70.8
Total Split (%)	11%	11%	47%
Maximum Green (s)	12.0	12.0	65.1
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	Lead
Lead-Lag Optimize?		Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.30	0.05					0.80		0.09		
Control Delay		21.3	0.1					46.0		33.1		
Queue Delay		0.0	0.0					0.6		0.0		
Total Delay		21.3	0.1					46.6		33.1		
LOS		C	A					D		C		
Approach Delay		19.8						46.6			33.1	
Approach LOS		B						D			C	
Queue Length 50th (m)		39.9	0.0					128.4		3.8		
Queue Length 95th (m)		52.0	0.0					176.1		m5.1		
Internal Link Dist (m)		118.7			140.5			111.4			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1644	779					694		165		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		0	0					20		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.30	0.05					0.83		0.09		

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 134			
Natural Cycle: 150			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 33.6		Intersection LOS: C	
Intersection Capacity Utilization 59.3%		ICU Level of Service B	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	21	0	355	1006	66
Future Vol, veh/h	0	21	0	355	1006	66
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	4	0	0	0	0
Mvmt Flow	0	21	0	355	1006	66

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	1046	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.24	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.336	-	-	-	-
Pot Cap-1 Maneuver	0	275	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	273	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.3	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	273	-	-
HCM Lane V/C Ratio	-	0.077	-	-
HCM Control Delay (s)	-	19.3	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.2	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	24	0	872	574	3
Future Vol, veh/h	0	24	0	872	574	3
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	24	0	872	574	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	583	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	516	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	513	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	513	-	-
HCM Lane V/C Ratio	-	0.047	-	-
HCM Control Delay (s)	-	12.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	13	342	5	26	1001
Future Vol, veh/h	6	13	342	5	26	1001
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	6	13	342	5	26	1001

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1402	345	0	0	347	0
Stage 1	345	-	-	-	-	-
Stage 2	1057	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	156	702	-	-	1223	-
Stage 1	722	-	-	-	-	-
Stage 2	337	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	148	702	-	-	1223	-
Mov Cap-2 Maneuver	148	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	319	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.9	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	322	1223	-
HCM Lane V/C Ratio	-	-	0.059	0.021	-
HCM Control Delay (s)	-	-	16.9	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	9	877	9	15	583
Future Vol, veh/h	7	9	877	9	15	583
Conflicting Peds, #/hr	9	5	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	7	9	877	9	15	583

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1505	888	0	0	887	0
Stage 1	883	-	-	-	-	-
Stage 2	622	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	135	345	-	-	772	-
Stage 1	408	-	-	-	-	-
Stage 2	539	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	130	343	-	-	771	-
Mov Cap-2 Maneuver	130	-	-	-	-	-
Stage 1	408	-	-	-	-	-
Stage 2	519	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.6	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	200	771	-
HCM Lane V/C Ratio	-	-	0.08	0.019	-
HCM Control Delay (s)	-	-	24.6	9.8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	39	120	335	924	75
Future Vol, veh/h	20	39	120	335	924	75
Conflicting Peds, #/hr	4	3	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	11	2	2	1	2
Mvmt Flow	20	39	120	335	924	75

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1581	1005	1039	0	-	0
Stage 1	1002	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Critical Hdwy	6.43	6.31	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.399	2.218	-	-	-
Pot Cap-1 Maneuver	119	282	669	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	85	271	644	-	-	-
Mov Cap-2 Maneuver	85	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	41.5	3.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	644	-	156	-	-
HCM Lane V/C Ratio	0.186	-	0.378	-	-
HCM Control Delay (s)	11.9	0	41.5	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.6	-	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	39	120	335	924	75
Future Vol, veh/h	20	39	120	335	924	75
Conflicting Peds, #/hr	4	3	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	11	2	2	1	2
Mvmt Flow	20	39	120	335	924	75

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1581	1005	1039	0	-	0
Stage 1	1002	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Critical Hdwy	6.43	6.31	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.399	2.218	-	-	-
Pot Cap-1 Maneuver	119	282	669	-	-	-
Stage 1	354	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	85	271	644	-	-	-
Mov Cap-2 Maneuver	85	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	41.5	3.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	644	-	156	-	-
HCM Lane V/C Ratio	0.186	-	0.378	-	-
HCM Control Delay (s)	11.9	0	41.5	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.7	-	1.6	-	-

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	75	39	833	559	22
Future Vol, veh/h	62	75	39	833	559	22
Conflicting Peds, #/hr	16	0	25	0	0	25
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	2	1	0	1	0
Mvmt Flow	62	75	39	833	559	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1522	595	606	0	-	0
Stage 1	595	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Critical Hdwy	6.4	6.22	4.11	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	2.209	-	-	-
Pot Cap-1 Maneuver	132	504	977	-	-	-
Stage 1	555	-	-	-	-	-
Stage 2	389	-	-	-	-	-
Platoon blocked, %					-	-
Mov Cap-1 Maneuver	116	492	954	-	-	-
Mov Cap-2 Maneuver	116	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	55.6	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	954	-	199	-	-
HCM Lane V/C Ratio	0.041	-	0.688	-	-
HCM Control Delay (s)	8.9	0	55.6	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.1	-	4.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	62	75	39	833	559	22
Future Volume (vph)	62	75	39	833	559	22
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.926				0.995	
Flt Protected	0.978			0.998		
Satd. Flow (prot)	1630	0	0	1816	1794	0
Flt Permitted	0.978			0.998		
Satd. Flow (perm)	1630	0	0	1816	1794	0
Link Speed (k/h)	30			40	40	
Link Distance (m)	174.2			99.7	87.5	
Travel Time (s)	20.9			9.0	7.9	
Confl. Peds. (#/hr)	16		25			25
Confl. Bikes (#/hr)						1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	1%	0%	1%	0%
Adj. Flow (vph)	62	75	39	833	559	22
Shared Lane Traffic (%)						
Lane Group Flow (vph)	137	0	0	872	581	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	94.9%	ICU Level of Service	F
Analysis Period (min)	15		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	96	367	53	249	712
Future Volume (vph)	52	96	367	53	249	712
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.99			0.99
Frt	0.912		0.983			
Flt Protected	0.983					0.987
Satd. Flow (prot)	1508	0	1710	0	0	1770
Flt Permitted	0.983					0.759
Satd. Flow (perm)	1482	0	1710	0	0	1352
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	96		20			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	23	46		33	33	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	9%	0%	2%
Adj. Flow (vph)	52	96	367	53	249	712
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	420	0	0	961
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	20.0		40.0		40.0	40.0
Total Split (%)	33.3%		66.7%		66.7%	66.7%
Maximum Green (s)	14.6		34.6		34.6	34.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		41.8			41.8
Actuated g/C Ratio	0.18		0.70			0.70
v/c Ratio	0.43		0.35			1.02
Control Delay	12.7		6.4			52.8
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	12.7		6.4			52.8
LOS	B		A			D
Approach Delay	12.7		6.4			52.8
Approach LOS	B		A			D
Queue Length 50th (m)	4.6		20.7			~133.6
Queue Length 95th (m)	17.0		36.4			#194.9
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	433		1198			943
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.34		0.35			1.02

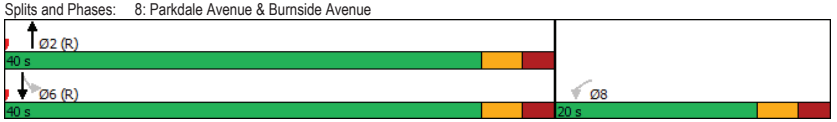
Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 36.2 Intersection LOS: D
Intersection Capacity Utilization 103.4% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

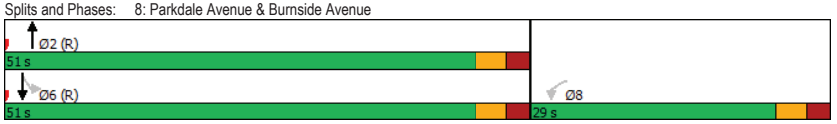


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	96	367	53	249	712
Future Volume (vph)	52	96	367	53	249	712
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0		0.0	30.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88		0.99		0.97	
Frt	0.912		0.983			
Flt Protected	0.983				0.950	
Satd. Flow (prot)	1474	0	1692	0	1729	1767
Flt Permitted	0.983				0.507	
Satd. Flow (perm)	1440	0	1692	0	894	1767
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	96		15			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	23	46		33	33	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	4%	9%	0%	3%
Adj. Flow (vph)	52	96	367	53	249	712
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	420	0	249	712
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	29.0		51.0		51.0	51.0
Total Split (%)	36.3%		63.8%		63.8%	63.8%
Maximum Green (s)	23.6		45.6		45.6	45.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4		5.4	5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.8		58.4		58.4	58.4
Actuated g/C Ratio	0.14		0.73		0.73	0.73

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.53		0.34		0.38	0.55
Control Delay	19.8		11.3		6.9	7.6
Queue Delay	0.1		0.0		0.0	0.0
Total Delay	19.9		11.3		6.9	7.7
LOS	B		B		A	A
Approach Delay	19.9		11.3			7.5
Approach LOS	B		B			A
Queue Length 50th (m)	6.9		45.9		13.7	47.4
Queue Length 95th (m)	22.6		74.0		27.1	75.8
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)					30.0	
Base Capacity (vph)	492		1239		652	1289
Starvation Cap Reductn	0		0		0	0
Spillback Cap Reductn	34		0		0	23
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.32		0.34		0.38	0.56

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 48 (60%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 9.7		Intersection LOS: A	
Intersection Capacity Utilization 63.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



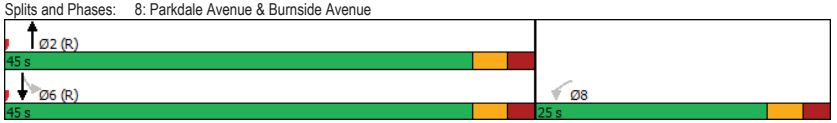
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	232	647	57	78	563
Future Volume (vph)	49	232	647	57	78	563
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88		1.00			1.00
Frt	0.889		0.989			
Flt Protected	0.991					0.994
Satd. Flow (prot)	1418	0	1791	0	0	1778
Flt Permitted	0.991					0.858
Satd. Flow (perm)	1405	0	1791	0	0	1534
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	232		10			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	21	46		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	0%	0%	2%	0%	2%
Adj. Flow (vph)	49	232	647	57	78	563
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	704	0	0	641
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	19.6		39.6		39.6	39.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	11.2		48.0			48.0
Actuated g/C Ratio	0.16		0.69			0.69
v/c Ratio	0.67		0.57			0.61
Control Delay	14.5		9.1			10.5
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	14.5		9.1			10.5
LOS	B		A			B
Approach Delay	14.5		9.1			10.5
Approach LOS	B		A			B
Queue Length 50th (m)	5.4		45.3			43.8
Queue Length 95th (m)	24.1		85.7			87.8
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	560		1230			1050
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.50		0.57			0.61

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 23 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 110.1% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

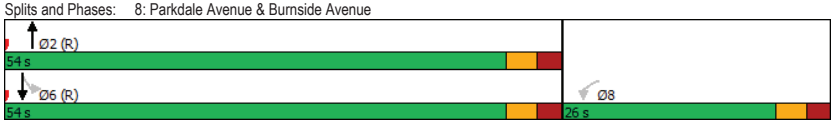


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	232	647	57	78	563
Future Volume (vph)	49	232	647	57	78	563
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0	0.0		0.0	30.0	
Storage Lanes	1	0		0	1	
Taper Length (m)	2.5				2.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.87		1.00		0.99	
Frt	0.889		0.989			
Flt Protected	0.991				0.950	
Satd. Flow (prot)	1397	0	1791	0	1729	1784
Flt Permitted	0.991				0.336	
Satd. Flow (perm)	1382	0	1791	0	608	1784
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	232		10			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	21	46		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	0%	0%	2%	0%	2%
Adj. Flow (vph)	49	232	647	57	78	563
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	704	0	78	563
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	26.0		54.0		54.0	54.0
Total Split (%)	32.5%		67.5%		67.5%	67.5%
Maximum Green (s)	20.6		48.6		48.6	48.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0		0.0	0.0
Total Lost Time (s)	5.4		5.4		5.4	5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	11.5		57.7		57.7	57.7
Actuated g/C Ratio	0.14		0.72		0.72	0.72

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.71		0.54		0.18	0.44
Control Delay	17.4		3.8		6.1	6.8
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	17.4		3.8		6.1	6.8
LOS	B		A		A	A
Approach Delay	17.4		3.8			6.7
Approach LOS	B		A			A
Queue Length 50th (m)	6.5		7.7		3.6	32.8
Queue Length 95th (m)	27.2		10.2		10.5	62.7
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)					30.0	
Base Capacity (vph)	528		1294		438	1286
Starvation Cap Reductn	0		6		0	0
Spillback Cap Reductn	0		0		0	0
Storage Cap Reductn	0		0		0	0
Reduced v/c Ratio	0.53		0.55		0.18	0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 18 (23%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 7.3		Intersection LOS: A	
Intersection Capacity Utilization 78.8%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

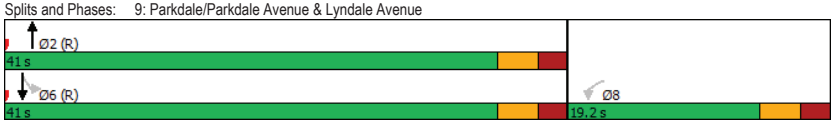


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	10	424	29	3	748
Future Volume (vph)	31	10	424	29	3	748
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		1.00			1.00
Frt	0.967		0.991			
Flt Protected	0.964					
Satd. Flow (prot)	1612	0	1747	0	0	1767
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1541	0	1747	0	0	1765
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	10		10			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	27	4		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	0%	3%	3%	0%	3%
Adj. Flow (vph)	31	10	424	29	3	748
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	453	0	0	751
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		41.0		41.0	41.0
Total Split (%)	31.9%		68.1%		68.1%	68.1%
Maximum Green (s)	14.0		35.9		35.9	35.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		45.6			45.6
Actuated g/C Ratio	0.18		0.76			0.76
v/c Ratio	0.15		0.34			0.56
Control Delay	16.6		5.9			8.8
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	16.6		5.9			8.8
LOS	B		A			A
Approach Delay	16.6		5.9			8.8
Approach LOS	B		A			A
Queue Length 50th (m)	2.7		23.0			50.7
Queue Length 95th (m)	9.1		39.5			87.3
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	366		1326			1337
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.11		0.34			0.56

Intersection Summary			
Area Type:	Other		
Cycle Length: 60.2			
Actuated Cycle Length: 60.2			
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 8.0		Intersection LOS: A	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale/Parkdale Avenue & Lyndale Avenue



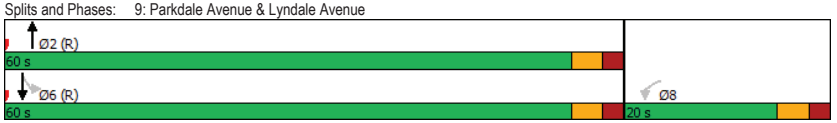
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	10	424	29	3	748
Future Volume (vph)	31	10	424	29	3	748
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93		1.00			1.00
Frt	0.967		0.991			
Flt Protected	0.964					
Satd. Flow (prot)	1611	0	1746	0	0	1750
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1517	0	1746	0	0	1748
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	10		10			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	27	4		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	0%	3%	3%	0%	4%
Adj. Flow (vph)	31	10	424	29	3	748
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	453	0	0	751
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	20.0		60.0		60.0	60.0
Total Split (%)	25.0%		75.0%		75.0%	75.0%
Maximum Green (s)	14.8		54.9		54.9	54.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.7		62.2			62.2
Actuated g/C Ratio	0.13		0.78			0.78
v/c Ratio	0.19		0.33			0.55
Control Delay	25.5		4.8			15.5
Queue Delay	0.0		0.0			0.6

9: Parkdale Avenue & Lyndale Avenue
Tunney's Pasture TIA
Future Background OPT MOD
Weekday AM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	25.5		4.8			16.1
LOS	C		A			B
Approach Delay	25.5		4.8			16.1
Approach LOS	C		A			B
Queue Length 50th (m)	4.0		23.0			110.9
Queue Length 95th (m)	12.3		36.3			152.5
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	288		1359			1359
Starvation Cap Reductn	0		0			264
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.14		0.33			0.69

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 12.3		Intersection LOS: B	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

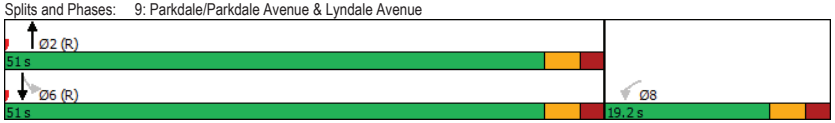
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	6	671	34	9	610
Future Volume (vph)	18	6	671	34	9	610
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		1.00			1.00
Frt	0.966		0.993			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1682	0	1802	0	0	1783
Flt Permitted	0.964					0.991
Satd. Flow (perm)	1619	0	1802	0	0	1768
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6		8			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	20	4		22	22	
Confl. Bikes (#/hr)				10		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	18	6	671	34	9	610
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	705	0	0	619
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		51.0		51.0	51.0
Total Split (%)	27.4%		72.6%		72.6%	72.6%
Maximum Green (s)	14.0		45.9		45.9	45.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		55.6			55.6
Actuated g/C Ratio	0.15		0.79			0.79
v/c Ratio	0.10		0.49			0.44
Control Delay	20.0		6.6			6.1
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	20.0		6.6			6.1
LOS	B		A			A
Approach Delay	20.0		6.6			6.1
Approach LOS	B		A			A
Queue Length 50th (m)	1.9		44.2			36.8
Queue Length 95th (m)	7.5		71.4			59.4
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	327		1429			1401
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.07		0.49			0.44

Intersection Summary

Area Type: Other
Cycle Length: 70.2
Actuated Cycle Length: 70.2
Offset: 18 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.49
Intersection Signal Delay: 6.6 Intersection LOS: A
Intersection Capacity Utilization 55.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Parkdale/Parkdale Avenue & Lyndale Avenue

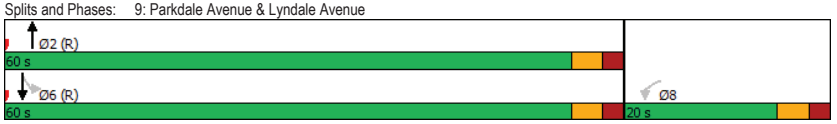


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	6	671	34	9	610
Future Volume (vph)	18	6	671	34	9	610
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		1.00			1.00
Frt	0.966		0.993			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1682	0	1801	0	0	1783
Flt Permitted	0.964					0.991
Satd. Flow (perm)	1610	0	1801	0	0	1768
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6		7			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	20	4		22	22	
Confl. Bikes (#/hr)				10		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	18	6	671	34	9	610
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	705	0	0	619
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	20.0		60.0		60.0	60.0
Total Split (%)	25.0%		75.0%		75.0%	75.0%
Maximum Green (s)	14.8		54.9		54.9	54.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		65.4			65.4
Actuated g/C Ratio	0.13		0.82			0.82
v/c Ratio	0.11		0.48			0.43
Control Delay	24.2		5.8			4.8
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	24.2		5.8			4.8
LOS	C		A			A
Approach Delay	24.2		5.8			4.8
Approach LOS	C		A			A
Queue Length 50th (m)	2.3		44.2			36.1
Queue Length 95th (m)	8.5		68.6			46.1
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	302		1474			1445
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.08		0.48			0.43

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay: 5.7		Intersection LOS: A	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	357	50	39	236	45	72	291	70	77	479	209
Future Volume (vph)	121	357	50	39	236	45	72	291	70	77	479	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	50.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.91	0.97		0.86	0.98	0.98		0.95		0.93
Frt			0.850			0.850		0.971				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1717	1146	1729	1767	1311	1601	1699	0	1695	1802	1517
Flt Permitted	0.602			0.493			0.234			0.380		
Satd. Flow (perm)	987	1717	1042	869	1767	1129	388	1699	0	647	1802	1418
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			101		15				136
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			225.5			221.0	
Travel Time (s)		17.9			21.6			20.3			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	6%	35%	0%	3%	18%	8%	2%	1%	2%	1%	2%
Adj. Flow (vph)	121	357	50	39	236	45	72	291	70	77	479	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	357	50	39	236	45	72	361	0	77	479	209
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	43.0	43.0	43.0	43.0	43.0	43.0	49.0	49.0		49.0	49.0	49.0
Total Split (%)	43.0%	43.0%	43.0%	43.0%	43.0%	43.0%	49.0%	49.0%		49.0%	49.0%	49.0%
Maximum Green (s)	36.9	36.9	36.9	36.9	36.9	36.9	42.7	42.7		42.7	42.7	42.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	53.7	53.7	53.7	53.7	53.7	53.7	33.9	33.9		33.9	33.9	33.9
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54	0.54	0.34	0.34		0.34	0.34	0.34

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Future Background OPT MOD
Weekday AM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

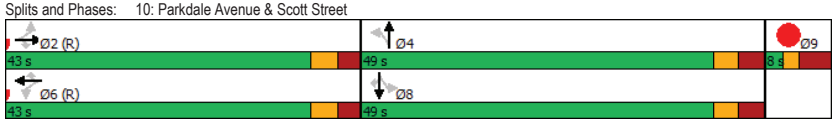
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.23	0.39	0.08	0.08	0.25	0.07	0.55	0.62		0.35	0.79	0.37
Control Delay	9.3	9.7	0.5	14.7	14.9	0.2	41.4	30.2		27.4	38.7	9.8
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	9.3	9.7	0.5	14.7	14.9	0.2	41.4	30.2		27.4	38.7	9.8
LOS	A	A	A	B	B	A	D	C		C	D	A
Approach Delay		8.7			12.8			32.1			29.7	
Approach LOS		A			B			C			C	
Queue Length 50th (m)	7.2	21.1	0.0	3.5	23.7	0.0	11.1	54.8		11.0	81.7	9.6
Queue Length 95th (m)	m10.7	35.3	m0.0	10.5	45.1	0.0	23.8	72.9		20.8	104.0	23.1
Internal Link Dist (m)		225.1			275.4			201.5			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	50.0			65.0		30.0
Base Capacity (vph)	530	922	606	466	949	653	165	734		276	769	683
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	0.23	0.39	0.08	0.08	0.25	0.07	0.44	0.49		0.28	0.62	0.31

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 22 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 22.1 Intersection LOS: C
Intersection Capacity Utilization 80.2% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	121	357	50	39	236	45	72	361	77	479	209
v/c Ratio	0.23	0.39	0.08	0.08	0.25	0.07	0.55	0.62	0.35	0.79	0.37
Control Delay	9.3	9.7	0.5	14.7	14.9	0.2	41.4	30.2	27.4	38.7	9.8
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	9.3	9.7	0.5	14.7	14.9	0.2	41.4	30.2	27.4	38.7	9.8
Queue Length 50th (m)	7.2	21.1	0.0	3.5	23.7	0.0	11.1	54.8	11.0	81.7	9.6
Queue Length 95th (m)	m10.7	35.3	m0.0	10.5	45.1	0.0	23.8	72.9	20.8	104.0	23.1
Internal Link Dist (m)		225.1			275.4			201.5		197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	50.0		65.0		30.0
Base Capacity (vph)	530	922	606	466	949	653	165	734	276	769	683
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	0.23	0.39	0.08	0.08	0.25	0.07	0.44	0.49	0.28	0.62	0.31

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	357	50	39	236	45	72	291	70	77	479	209
Future Volume (vph)	121	357	50	39	236	45	72	291	70	77	479	209
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.91	0.97		0.87		0.98		0.96		0.94
Frt			0.850			0.850		0.978				0.850
Flt Protected	0.950			0.950				0.992		0.950		
Satd. Flow (prot)	1662	1733	1146	1662	1733	1381	0	1675	0	1695	1802	1446
Flt Permitted	0.571			0.432				0.597		0.420		
Satd. Flow (perm)	920	1733	1046	733	1733	1198	0	1005	0	723	1802	1355
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107			107		12				133
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			203.5			221.0	
Travel Time (s)		17.9			21.6			18.3			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	5%	35%	4%	5%	12%	13%	1%	5%	2%	1%	7%
Adj. Flow (vph)	121	357	50	39	236	45	72	291	70	77	479	209
Shared Lane Traffic (%)												
Lane Group Flow (vph)	121	357	50	39	236	45	0	433	0	77	479	209
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	45.3%	45.3%		45.3%	45.3%	45.3%
Maximum Green (s)	37.9	37.9	37.9	37.9	37.9	37.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	37.9	37.9	37.9	37.9	37.9	37.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40		0.39		0.39	0.39	0.39

10: Parkdale & Scott
Tunney's Pasture TIA

Future Background Conditions
Weekday AM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.33	0.52	0.10	0.13	0.34	0.08		1.10		0.28	0.69	0.35
Control Delay	19.5	19.7	1.1	19.7	21.6	0.3		103.3		23.5	30.6	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	19.5	19.7	1.1	19.7	21.6	0.3		103.3		23.5	30.6	9.6
LOS	B	B	A	B	C	A		F		C	C	A
Approach Delay		17.9			18.4			103.3			24.2	
Approach LOS		B			B			F			C	
Queue Length 50th (m)	9.8	28.9	0.2	4.5	29.5	0.0		~89.3		9.5	72.1	8.9
Queue Length 95th (m)	m15.2	m41.9	m0.3	11.3	47.9	0.0		#147.0		20.8	107.3	24.9
Internal Link Dist (m)		225.1			275.4			179.5			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	367	691	481	292	691	542		395		279	696	605
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.33	0.52	0.10	0.13	0.34	0.08		1.10		0.28	0.69	0.35

Intersection Summary

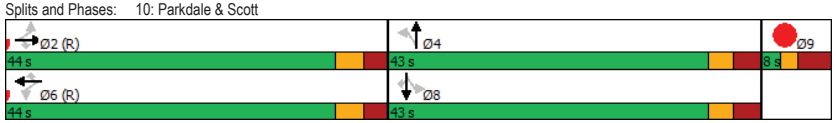
Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 91 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 38.4 Intersection LOS: D
Intersection Capacity Utilization 101.5% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale & Scott



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	334	68	74	381	53	56	355	53	54	414	168
Future Volume (vph)	290	334	68	74	381	53	56	355	53	54	414	168
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	50.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		0.83	0.91		0.85	0.97	0.98		0.96		0.91
Frt			0.850			0.850		0.981				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1784	1473	1712	1750	1547	1417	1737	0	1729	1802	1532
Flt Permitted	0.346			0.456			0.276			0.284		
Satd. Flow (perm)	597	1784	1221	752	1750	1322	401	1737	0	495	1802	1390
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			168		8				166
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			225.5			221.0	
Travel Time (s)		17.9			21.6			20.3			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	5%	1%	4%	0%	22%	1%	2%	0%	1%	1%
Adj. Flow (vph)	290	334	68	74	381	53	56	355	53	54	414	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	290	334	68	74	381	53	56	408	0	54	414	168
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.6	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	19.0	55.0	55.0	36.0	36.0	36.0	37.0	37.0		37.0	37.0	37.0
Total Split (%)	19.0%	55.0%	55.0%	36.0%	36.0%	36.0%	37.0%	37.0%		37.0%	37.0%	37.0%
Maximum Green (s)	13.4	48.9	48.9	29.9	29.9	29.9	30.7	30.7		30.7	30.7	30.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	5.6	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lag			Lead	Lead	Lead						
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		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	49.4	48.9	48.9	29.9	29.9	29.9	30.7	30.7		30.7	30.7	30.7
Actuated g/C Ratio	0.49	0.49	0.49	0.30	0.30	0.30	0.31	0.31		0.31	0.31	0.31

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

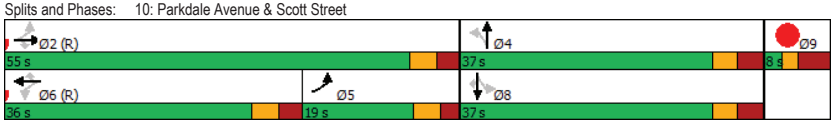
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Background OPT MOD
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.65	0.38	0.10	0.33	0.73	0.10	0.46	0.76		0.36	0.75	0.31
Control Delay	26.6	17.0	3.1	32.4	40.9	0.4	42.2	41.2		35.3	41.0	6.0
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	26.6	17.0	3.1	32.4	40.9	0.4	42.2	41.2		35.3	41.0	6.0
LOS	C	B	A	C	D	A	D	D		D	D	A
Approach Delay		19.7			35.4			41.3			31.3	
Approach LOS		B			D			D			C	
Queue Length 50th (m)	31.7	37.2	0.4	11.1	65.9	0.0	8.7	69.8		8.1	71.8	0.3
Queue Length 95th (m)	m44.6	m51.9	m1.8	23.9	99.3	0.0	22.1	#107.0		19.8	#107.2	14.4
Internal Link Dist (m)		225.1			275.4			201.5			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	50.0			65.0		30.0
Base Capacity (vph)	446	872	648	224	523	513	123	538		151	553	541
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	0.65	0.38	0.10	0.33	0.73	0.10	0.46	0.76		0.36	0.75	0.31

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 92 (92%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 30.7 Intersection LOS: C
Intersection Capacity Utilization 86.7% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	290	334	68	74	381	53	56	355	53	54	414	168
Future Volume (vph)	290	334	68	74	381	53	56	355	53	54	414	168
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		0.83	0.90		0.85		0.98		0.96		0.91
Frt			0.850			0.850		0.985				0.850
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1729	1784	1473	1729	1750	1473	0	1705	0	1695	1802	1502
Flt Permitted	0.234			0.559				0.728		0.373		
Satd. Flow (perm)	407	1784	1220	920	1750	1258	0	1244	0	640	1802	1365
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			163		7				160
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			203.5			221.0	
Travel Time (s)		17.9			21.6			18.3			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	5%	0%	4%	5%	18%	1%	1%	2%	1%	3%
Adj. Flow (vph)	290	334	68	74	381	53	56	355	53	54	414	168
Shared Lane Traffic (%)												
Lane Group Flow (vph)	290	334	68	74	381	53	0	464	0	54	414	168
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.6	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	15.0	49.0	49.0	34.0	34.0	34.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	15.0%	49.0%	49.0%	34.0%	34.0%	34.0%	43.0%	43.0%		43.0%	43.0%	43.0%
Maximum Green (s)	9.4	42.9	42.9	27.9	27.9	27.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	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		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	43.4	42.9	42.9	27.9	27.9	27.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.43	0.43	0.43	0.28	0.28	0.28		0.37		0.37	0.37	0.37

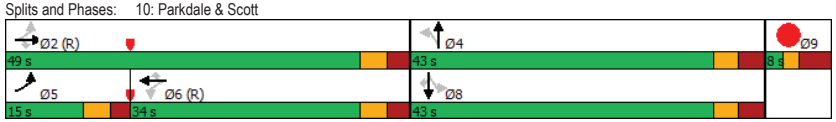
Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.97	0.44	0.12	0.29	0.78	0.11		1.01		0.23	0.63	0.28
Control Delay	68.8	22.3	1.9	32.1	46.0	0.5		76.9		25.3	31.1	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	68.8	22.3	1.9	32.1	46.0	0.5		76.9		25.3	31.1	5.4
LOS	E	C	A	C	D	A		E		C	C	A
Approach Delay		39.8			39.2			76.9			23.8	
Approach LOS		D			D			E			C	
Queue Length 50th (m)	37.3	44.3	0.0	11.3	67.9	0.0		~89.1		7.2	65.0	1.0
Queue Length 95th (m)	#85.4	67.5	3.7	23.6	#110.7	0.0		#153.8		16.8	96.8	13.9
Internal Link Dist (m)		225.1			275.4			179.5			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	300	765	581	256	488	468		460		234	661	602
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.97	0.44	0.12	0.29	0.78	0.11		1.01		0.23	0.63	0.28

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 42.7 Intersection LOS: D
Intersection Capacity Utilization 108.7% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Parkdale & Scott



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	458	71	84	293	36	114	206	122	28	76	26
Future Volume (vph)	27	458	71	84	293	36	114	206	122	28	76	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		30.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.78	0.96		0.93		0.63	0.64		0.61	0.74		0.59
Frt		0.980				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1504	0	1679	1655	1459	1465	1802	1517	1530	1767	1419
Flt Permitted	0.539			0.330			0.708			0.511		
Satd. Flow (perm)	754	1504	0	541	1655	912	703	1802	919	606	1767	836
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	10%	36%	3%	10%	6%	18%	1%	2%	13%	3%	9%
Adj. Flow (vph)	27	458	71	84	293	36	114	206	122	28	76	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	529	0	84	293	36	114	206	122	28	76	26
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	56.0	56.0		56.0	56.0	56.0	34.0	34.0	34.0	34.0	34.0	34.0
Total Split (%)	56.0%	56.0%		56.0%	56.0%	56.0%	34.0%	34.0%	34.0%	34.0%	34.0%	34.0%
Maximum Green (s)	49.8	49.8		49.8	49.8	49.8	27.8	27.8	27.8	27.8	27.8	27.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max		C-Max	C-Max	C-Max	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	49.8	49.8		49.8	49.8	49.8	21.2	21.2	21.2	21.2	21.2	21.2
Actuated g/C Ratio	0.50	0.50		0.50	0.50	0.50	0.21	0.21	0.21	0.21	0.21	0.21

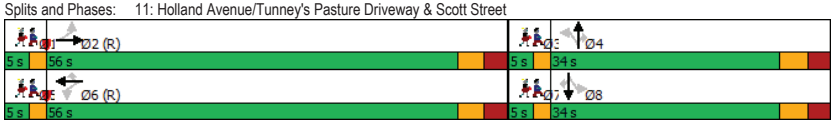
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.71		0.31	0.36	0.08	0.77	0.54	0.63	0.22	0.20	0.15
Control Delay	11.6	21.1		15.2	13.4	10.6	66.8	39.1	48.7	33.7	31.2	30.7
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	11.6	21.1		15.2	13.4	10.6	66.8	39.1	48.7	33.7	31.2	30.7
LOS	B	C		B	B	B	E	D	D	C	C	C
Approach Delay		20.6			13.6			48.9			31.6	
Approach LOS		C			B			D			C	
Queue Length 50th (m)	2.1	53.9		9.0	31.6	3.4	20.1	34.4	20.8	4.3	11.7	4.0
Queue Length 95th (m)	5.6	71.2		17.1	43.7	m7.8	#38.7	53.0	37.6	11.4	22.3	10.4
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		30.0	65.0		30.0
Base Capacity (vph)	375	748		269	824	454	195	500	255	168	491	232
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	0.07	0.71		0.31	0.36	0.08	0.58	0.41	0.48	0.17	0.15	0.11

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 96 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 27.8 Intersection LOS: C
Intersection Capacity Utilization 75.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	27	529	84	293	36	114	206	122	28	76	26
v/c Ratio	0.07	0.71	0.31	0.36	0.08	0.77	0.54	0.63	0.22	0.20	0.15
Control Delay	11.6	21.1	15.2	13.4	10.6	66.8	39.1	48.7	33.7	31.2	30.7
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	11.6	21.1	15.2	13.4	10.6	66.8	39.1	48.7	33.7	31.2	30.7
Queue Length 50th (m)	2.1	53.9	9.0	31.6	3.4	20.1	34.4	20.8	4.3	11.7	4.0
Queue Length 95th (m)	5.6	71.2	17.1	43.7	m7.8	#38.7	53.0	37.6	11.4	22.3	10.4
Internal Link Dist (m)		256.5		225.1			200.2			84.7	
Turn Bay Length (m)	50.0		135.0		65.0	70.0		30.0	65.0		30.0
Base Capacity (vph)	375	748	269	824	454	195	500	255	168	491	232
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	0.07	0.71	0.31	0.36	0.08	0.58	0.41	0.48	0.17	0.15	0.11

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.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	458	71	84	293	36	114	206	122	28	76	26
Future Volume (vph)	27	458	71	84	293	36	114	206	122	28	76	26
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.80	0.96		0.94		0.64	0.66		0.63	0.74		0.61
Frt		0.980				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1532	0	1679	1670	1459	1465	1802	1517	1530	1767	1446
Flt Permitted	0.505			0.250			0.708			0.535		
Satd. Flow (perm)	723	1532	0	414	1670	935	722	1802	949	639	1767	880
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	8%	33%	3%	9%	6%	18%	1%	2%	13%	3%	7%
Adj. Flow (vph)	27	458	71	84	293	36	114	206	122	28	76	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	529	0	84	293	36	114	206	122	28	76	26
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	44.0	44.0		44.0	44.0	44.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%	46.3%	43.2%	43.2%	43.2%	43.2%	43.2%	43.2%
Maximum Green (s)	37.8	37.8		37.8	37.8	37.8	34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							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	C-Max	C-Max		C-Max	C-Max	C-Max	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	37.8	37.8		37.8	37.8	37.8	21.8	21.8	21.8	21.8	21.8	21.8
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.23	0.23	0.23	0.23	0.23	0.23

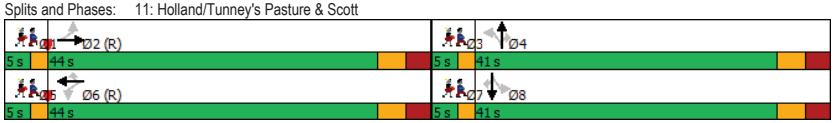
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?		Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.09	0.87		0.51	0.44	0.10	0.69	0.50	0.56	0.19	0.19	0.13
Control Delay	19.1	43.2		28.7	19.0	15.8	52.5	34.2	40.3	28.5	27.3	26.3
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	19.1	43.2		28.7	19.0	15.8	52.5	34.2	40.3	28.5	27.3	26.3
LOS	B	D		C	B	B	D	C	D	C	C	C
Approach Delay		42.1			20.7			40.6			27.3	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	3.0	87.4		9.1	31.0	3.4	18.6	31.9	19.2	4.0	10.9	3.7
Queue Length 95th (m)	8.7	#146.6		m18.9	m48.8	m8.5	32.6	45.1	32.0	9.9	19.1	9.0
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	287	609		164	664	372	264	660	347	234	647	322
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	0.09	0.87		0.51	0.44	0.10	0.43	0.31	0.35	0.12	0.12	0.08

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 85 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 34.7 Intersection LOS: C
Intersection Capacity Utilization 75.8% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland/Tunney's Pasture & Scott



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Future Volume (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		30.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96		0.94		0.58	0.77		0.69	0.79		0.57
Frt		0.982				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1617	0	1695	1701	1419	1429	1802	1547	1695	1802	1517
Flt Permitted	0.213			0.233			0.371			0.569		
Satd. Flow (perm)	380	1617	0	390	1701	819	430	1802	1069	802	1802	862
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	26%	2%	7%	9%	21%	1%	0%	2%	1%	2%
Adj. Flow (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	569	0	163	591	33	126	204	223	87	286	27
Turn Type	Perm	NA		Perm	NA	Perm	custom	NA	custom	Perm	NA	Perm
Protected Phases		2			6		15	4 15			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	15	4 15	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	11.2		30.2	30.2	30.2	30.2
Total Split (s)	48.6	48.6		48.6	48.6	48.6	11.2		30.2	30.2	30.2	30.2
Total Split (%)	48.6%	48.6%		48.6%	48.6%	48.6%	11.2%		30.2%	30.2%	30.2%	30.2%
Maximum Green (s)	42.4	42.4		42.4	42.4	42.4	5.0		24.0	24.0	24.0	24.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3		3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9		2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.2		6.2	6.2	6.2	6.2
Lead/Lag									Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min		C-Min	C-Min	C-Min	None		Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0			2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0			22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30			30	30	30	30
Act Effct Green (s)	42.4	42.4		42.4	42.4	42.4	28.1	34.3	22.9	22.9	22.9	22.9
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.28	0.34	0.23	0.23	0.23	0.23

11: Holland Avenue/Tunney's Pasture Driveway & Scott Street Future Background OPT MOD
Tunney's Pasture TIA Weekday PM Peak Hour

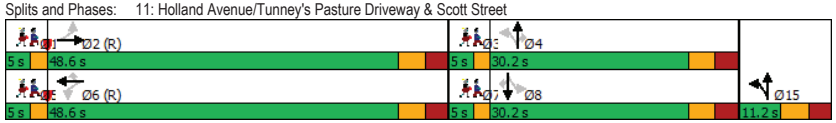
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.12	0.83		0.99	0.82	0.10	0.73	0.33	0.91	0.48	0.70	0.14
Control Delay	16.8	30.7		85.1	22.9	11.0	57.3	25.8	78.1	42.6	44.9	32.1
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	16.8	30.7		85.1	22.9	11.0	57.3	25.8	78.1	42.6	44.9	32.1
LOS	B	C		F	C	B	E	C	E	D	D	C
Approach Delay		30.2			35.3			54.1			43.6	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	1.7	48.8		13.2	45.8	2.2	17.2	28.6	41.6	14.4	50.3	4.1
Queue Length 95th (m)	m3.7	#149.1		m#63.5	#96.2	m4.9	#39.8	46.7	#83.0	29.8	78.0	11.3
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		30.0	65.0		30.0
Base Capacity (vph)	161	685		165	721	347	173	616	256	192	432	206
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	0.12	0.83		0.99	0.82	0.10	0.73	0.33	0.87	0.45	0.66	0.13

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 96 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 39.9 Intersection LOS: D
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Future Volume (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96				0.55	0.75		0.66	0.78		0.53
Frt		0.982				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1625	0	1695	1717	1419	1429	1802	1547	1695	1802	1517
Flt Permitted	0.197			0.174			0.399			0.538		
Satd. Flow (perm)	352	1625	0	310	1717	780	452	1802	1025	748	1802	803
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	19%	2%	6%	9%	21%	1%	0%	2%	1%	2%
Adj. Flow (vph)	20	502	67	163	591	33	126	204	223	87	286	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	569	0	163	591	33	126	204	223	87	286	27
Turn Type	Perm	NA		custom	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		15	6 15			4			8	
Permitted Phases	2			6		6 15	4		4	8		8
Detector Phase	2	2		15	6 15	6 15	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0			5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		11.2			30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	50.0	50.0		15.0			35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	45.5%	45.5%		13.6%			31.8%	31.8%	31.8%	31.8%	31.8%	31.8%
Maximum Green (s)	43.8	43.8		8.8			28.8	28.8	28.8	28.8	28.8	28.8
Yellow Time (s)	3.3	3.3		3.3			3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9			2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2			6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min		None			Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0					2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0					22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30					30	30	30	30	30	30
Act Effct Green (s)	41.5	41.5		50.3	50.3	50.3	28.8	28.8	28.8	28.8	28.8	28.8
Actuated g/C Ratio	0.38	0.38		0.46	0.46	0.46	0.26	0.26	0.26	0.26	0.26	0.26

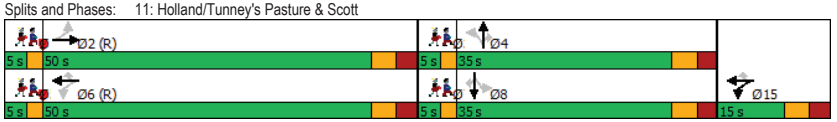
Lane Group	Ø1	Ø3	Ø5	Ø6	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	5	6	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	1.0	5.0	1.0
Minimum Split (s)	3.0	3.0	3.0	27.2	3.0
Total Split (s)	5.0	5.0	5.0	50.0	5.0
Total Split (%)	5%	5%	5%	45%	5%
Maximum Green (s)	3.0	3.0	3.0	43.8	3.0
Yellow Time (s)	2.0	2.0	2.0	3.3	2.0
All-Red Time (s)	0.0	0.0	0.0	2.9	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead			Lead
Lead-Lag Optimize?		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	C-Min	Max
Walk Time (s)	0.0	0.0	0.0	2.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	19.0	0.0
Pedestrian Calls (#/hr)	0	0	0	30	0
Act Effct Green (s)					
Actuated g/C Ratio					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.15	0.93		0.65	0.75	0.09	1.07	0.43	0.83	0.45	0.61	0.13
Control Delay	24.9	55.7		25.8	28.9	11.7	143.3	37.3	64.9	42.6	42.0	33.1
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	24.9	55.7		25.8	28.9	11.7	143.3	37.3	64.9	42.6	42.0	33.1
LOS	C	E		C	C	B	F	D	E	D	D	C
Approach Delay		54.7			27.5			72.6			41.6	
Approach LOS		D			C			E			D	
Queue Length 50th (m)	2.7	111.3		15.3	76.6	2.9	~29.9	36.5	45.2	15.6	54.0	4.4
Queue Length 95th (m)	8.5	#174.9		26.4	109.9	7.4	#67.1	58.1	#86.8	31.8	81.9	11.8
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	140	647		252	821	372	118	471	268	195	471	210
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	0.14	0.88		0.65	0.72	0.09	1.07	0.43	0.83	0.45	0.61	0.13

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 10 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 47.5 Intersection LOS: D
Intersection Capacity Utilization 90.5% ICU Level of Service E
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Holland/Tunney's Pasture & Scott



Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↰	↱			↕			↕	
Traffic Vol, veh/h	36	475	5	4	266	136	1	2	12	0	2	30
Future Vol, veh/h	36	475	5	4	266	136	1	2	12	0	2	30
Conflicting Peds, #/hr	51	0	20	20	0	51	6	0	2	2	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	8	0	0	12	5	0	0	0	0	0	8
Mvmt Flow	36	475	5	4	266	136	1	2	12	0	2	30

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	453	0	0	500	0	0	934	1031	500	952	965	391
Stage 1	-	-	-	-	-	-	570	570	-	393	393	-
Stage 2	-	-	-	-	-	-	364	461	-	559	572	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.372
Pot Cap-1 Maneuver	1118	-	-	1075	-	-	248	235	575	241	257	645
Stage 1	-	-	-	-	-	-	510	509	-	636	609	-
Stage 2	-	-	-	-	-	-	659	569	-	517	508	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1065	-	-	1055	-	-	220	209	563	214	228	611
Mov Cap-2 Maneuver	-	-	-	-	-	-	220	209	-	214	228	-
Stage 1	-	-	-	-	-	-	477	477	-	578	578	-
Stage 2	-	-	-	-	-	-	619	540	-	480	476	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	0.1	13.8	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	423	1065	-	-	1055	-	-	553
HCM Lane V/C Ratio	0.035	0.034	-	-	0.004	-	-	0.058
HCM Control Delay (s)	13.8	8.5	0	-	8.4	-	-	11.9
HCM Lane LOS	B	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↰	↱			↕			↕	
Traffic Vol, veh/h	135	646	10	5	559	75	4	12	13	0	0	158
Future Vol, veh/h	135	646	10	5	559	75	4	12	13	0	0	158
Conflicting Peds, #/hr	42	0	25	25	0	42	3	0	4	4	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	5	10	0	6	3	0	0	0	0	0	2
Mvmt Flow	135	646	10	5	559	75	4	12	13	0	0	158

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	676	0	0	681	0	0	1635	1632	680	1587	1600	642
Stage 1	-	-	-	-	-	-	946	946	-	649	649	-
Stage 2	-	-	-	-	-	-	689	686	-	938	951	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	925	-	-	921	-	-	82	102	454	88	107	474
Stage 1	-	-	-	-	-	-	317	343	-	462	469	-
Stage 2	-	-	-	-	-	-	439	451	-	320	341	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	889	-	-	900	-	-	42	72	442	58	76	454
Mov Cap-2 Maneuver	-	-	-	-	-	-	42	72	-	58	76	-
Stage 1	-	-	-	-	-	-	236	255	-	338	448	-
Stage 2	-	-	-	-	-	-	284	431	-	224	253	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.1	55.1	17.1
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	100	889	-	-	900	-	-	454
HCM Lane V/C Ratio	0.29	0.152	-	-	0.006	-	-	0.348
HCM Control Delay (s)	55.1	9.8	0	-	9	-	-	17.1
HCM Lane LOS	F	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	1.1	0.5	-	-	0	-	-	1.5

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	415	26	4	352	45	11	0	12	68	0	31
Future Volume (vph)	35	415	26	4	352	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		0.96		0.85		0.94		0.94		0.95
Frt		0.991				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	1160	1751	0	1729	1767	1113	0	1580	0	1054	0	967
Flt Permitted	0.480			0.507				0.977		0.742		
Satd. Flow (perm)	565	1751	0	882	1767	946	0	1558	0	770	0	920
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	49%	2%	4%	0%	3%	39%	0%	0%	0%	64%	0%	60%
Adj. Flow (vph)	35	415	26	4	352	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	441	0	4	352	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	26.0	66.0		40.0	40.0	40.0	34.0	34.0		34.0		34.0
Total Split (%)	26.0%	66.0%		40.0%	40.0%	40.0%	34.0%	34.0%		34.0%		34.0%
Maximum Green (s)	20.0	59.4		33.4	33.4	33.4	27.4	27.4		27.4		27.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	Max		Max	Max	Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	66.4	67.2		59.4	59.4	59.4		14.0		14.1		14.1
Actuated g/C Ratio	0.74	0.74		0.66	0.66	0.66		0.16		0.16		0.16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.08	0.34		0.01	0.30	0.07		0.07		0.57		0.13
Control Delay	5.9	7.0		12.0	12.0	0.2		0.4		52.5		1.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	5.9	7.0		12.0	12.0	0.2		0.4		52.5		1.2
LOS	A	A		B	B	A		A		D		A
Approach Delay		6.9			10.7			0.4			36.4	
Approach LOS		A			B			A			D	
Queue Length 50th (m)	1.5	24.4		0.3	29.8	0.0		0.0		10.5		0.0
Queue Length 95th (m)	5.4	52.4		2.0	60.2	0.0		0.0		23.4		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	547	1305		580	1163	658		547		234		353
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	0.06	0.34		0.01	0.30	0.07		0.04		0.29		0.09

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 90.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.57
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Smirle/Goldenrod & Scott

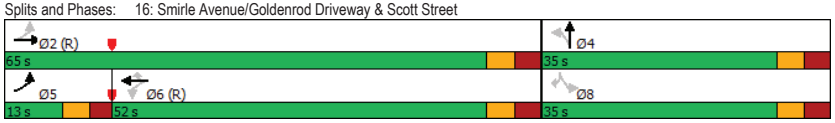
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	415	26	4	352	45	11	0	12	68	0	31
Future Volume (vph)	35	415	26	4	352	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		0.96		0.86		0.94		0.94		0.95
Frt		0.991				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	1168	1735	0	1729	1767	1121	0	1580	0	1048	0	961
Flt Permitted	0.479			0.507				0.977		0.742		
Satd. Flow (perm)	564	1735	0	882	1767	959	0	1558	0	766	0	915
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	48%	3%	4%	0%	3%	38%	0%	0%	0%	65%	0%	61%
Adj. Flow (vph)	35	415	26	4	352	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	441	0	4	352	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	13.0	65.0		52.0	52.0	52.0	35.0	35.0		35.0		35.0
Total Split (%)	13.0%	65.0%		52.0%	52.0%	52.0%	35.0%	35.0%		35.0%		35.0%
Maximum Green (s)	7.0	58.4		45.4	45.4	45.4	28.4	28.4		28.4		28.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	73.7	74.4		66.5	66.5	66.5		16.1		16.2		16.2
Actuated g/C Ratio	0.74	0.74		0.66	0.66	0.66		0.16		0.16		0.16

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.08	0.34		0.01	0.30	0.07		0.07		0.55		0.13
Control Delay	6.2	7.4		10.0	9.2	0.6		0.4		53.0		1.2
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	6.2	7.4		10.0	9.2	0.6		0.4		53.0		1.2
LOS	A	A		A	A	A		A		D		A
Approach Delay		7.3			8.3			0.4			36.8	
Approach LOS		A			A			A			D	
Queue Length 50th (m)	2.1	34.8		0.3	25.3	0.0		0.0		11.5		0.0
Queue Length 95th (m)	5.5	54.2		m0.8	45.9	m0.0		0.0		24.6		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	459	1292		586	1174	673		517		217		335
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	0.08	0.34		0.01	0.30	0.07		0.04		0.31		0.09

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 18 (18%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 10.4 Intersection LOS: B
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBT	SBL	SBR
Lane Group Flow (vph)	35	441	4	352	45	23	68	31
v/c Ratio	0.08	0.34	0.01	0.30	0.07	0.07	0.55	0.13
Control Delay	6.2	7.4	10.0	9.2	0.6	0.4	53.0	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.2	7.4	10.0	9.2	0.6	0.4	53.0	1.2
Queue Length 50th (m)	2.1	34.8	0.3	25.3	0.0	0.0	11.5	0.0
Queue Length 95th (m)	5.5	54.2	m0.8	45.9	m0.0	0.0	24.6	0.0
Internal Link Dist (m)		144.9		256.5		81.3		
Turn Bay Length (m)	80.0		35.0		100.0			
Base Capacity (vph)	459	1292	586	1174	673	517	217	335
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	0.08	0.34	0.01	0.30	0.07	0.04	0.31	0.09

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	613	25	9	573	68	7	0	7	40	0	37
Future Volume (vph)	27	613	25	9	573	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.98		0.76		0.94		0.95		0.93
Frt		0.994				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	1130	1787	0	1729	1802	943	0	1595	0	1310	0	1097
Flt Permitted	0.358			0.423				0.976		0.748		
Satd. Flow (perm)	426	1787	0	758	1802	717	0	1553	0	976	0	1019
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				91		91				91
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	53%	1%	0%	0%	1%	64%	0%	0%	0%	32%	0%	41%
Adj. Flow (vph)	27	613	25	9	573	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	638	0	9	573	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	15.0	78.0		63.0	63.0	63.0	37.0	37.0		37.0		37.0
Total Split (%)	13.0%	67.8%		54.8%	54.8%	54.8%	32.2%	32.2%		32.2%		32.2%
Maximum Green (s)	9.0	71.4		56.4	56.4	56.4	30.4	30.4		30.4		30.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	89.5	90.3		82.6	82.6	82.6		15.3		15.3		15.3
Actuated g/C Ratio	0.78	0.79		0.72	0.72	0.72		0.13		0.13		0.13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.07	0.45		0.02	0.44	0.13		0.05		0.31		0.17
Control Delay	5.3	7.4		10.1	12.0	1.6		0.4		48.4		1.8
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	5.3	7.4		10.1	12.0	1.6		0.4		48.4		1.8
LOS	A	A		B	B	A		A		D		A
Approach Delay		7.3			10.9			0.4			26.0	
Approach LOS		A			B			A			C	
Queue Length 50th (m)	1.6	58.8		0.8	71.8	0.0		0.0		7.7		0.0
Queue Length 95th (m)	4.2	82.7		3.0	104.2	3.6		0.0		18.0		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	386	1403		544	1293	540		477		258		336
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	0.07	0.45		0.02	0.44	0.13		0.03		0.16		0.11

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.45
Intersection Signal Delay: 9.9 Intersection LOS: A
Intersection Capacity Utilization 69.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 16: Smirle/Goldenrod & Scott

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	613	25	9	573	68	7	0	7	40	0	37
Future Volume (vph)	27	613	25	9	573	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99		0.79		0.94		0.95		0.94
Frt		0.994				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	1145	1787	0	1729	1784	955	0	1600	0	1310	0	1105
Flt Permitted	0.343			0.423				0.976		0.748		
Satd. Flow (perm)	413	1787	0	759	1784	751	0	1564	0	983	0	1034
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	51%	1%	0%	0%	2%	62%	0%	0%	0%	32%	0%	40%
Adj. Flow (vph)	27	613	25	9	573	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	638	0	9	573	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	11.0	72.0		61.0	61.0	61.0	28.0	28.0		28.0		28.0
Total Split (%)	11.0%	72.0%		61.0%	61.0%	61.0%	28.0%	28.0%		28.0%		28.0%
Maximum Green (s)	5.0	65.4		54.4	54.4	54.4	21.4	21.4		21.4		21.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	74.6	75.4		68.5	68.5	68.5		15.2		15.2		15.2
Actuated g/C Ratio	0.75	0.75		0.68	0.68	0.68		0.15		0.15		0.15

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.08	0.47		0.02	0.47	0.12		0.04		0.27		0.15
Control Delay	6.0	8.5		5.7	5.3	0.4		0.2		38.9		1.3
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	6.0	8.5		5.7	5.3	0.4		0.2		38.9		1.3
LOS	A	A		A	A	A		A		D		A
Approach Delay		8.4			4.8			0.2			20.8	
Approach LOS		A			A			A			C	
Queue Length 50th (m)	1.6	58.6		0.4	28.0	0.1		0.0		6.4		0.0
Queue Length 95th (m)	4.3	85.4		m0.5	m42.5	m0.0		0.0		15.6		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	348	1347		519	1222	547		417		210		303
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	0.08	0.47		0.02	0.47	0.12		0.03		0.19		0.12

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.47
Intersection Signal Delay: 7.3 Intersection LOS: A
Intersection Capacity Utilization 69.5% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street

Future (2038) Total

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	524	2	97	5	0	0	4	5
Future Volume (vph)	0	0	0	6	524	2	97	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.955				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1706	0	0	1668	0
Flt Permitted					0.999			0.730				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1304	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	524	2	97	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	532	0	0	102	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				73.0	73.0		26.0	26.0			26.0	
Total Split (%)				63.5%	63.5%		22.6%	22.6%			22.6%	
Maximum Green (s)				67.3	67.3		15.7	15.7			15.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					67.7			15.8			15.8	
Actuated g/C Ratio					0.62			0.15			0.15	
v/c Ratio					0.25			0.54			0.04	
Control Delay					10.4			39.4			32.4	
Queue Delay					0.0			0.0			0.0	

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2038 Conditions
Weekday AM Peak Hour

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	73.0	16.0
Total Split (%)	14%	63%	14%
Maximum Green (s)	12.0	67.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	30	30	30
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

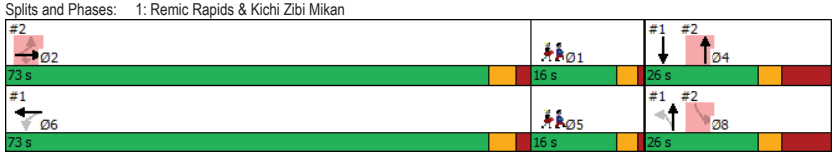
Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					10.4			39.4			32.4	
LOS					B			D			C	
Approach Delay					10.4			39.4			32.4	
Approach LOS					B			D			C	
Queue Length 50th (m)					29.1			4.2			0.8	
Queue Length 95th (m)					38.6			m21.6			5.6	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2129			189			246	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.25			0.54			0.04	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 15.3		Intersection LOS: B	
Intersection Capacity Utilization 41.5%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	524	2	97	5	0	0	4	5
Future Volume (vph)	0	0	0	6	524	2	97	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.955				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1706	0	0	1668	0
Flt Permitted					0.999			0.730				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1304	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	524	2	97	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	532	0	0	102	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				51.7	51.7		22.3	22.3			22.3	
Total Split (%)				57.4%	57.4%		24.8%	24.8%			24.8%	
Maximum Green (s)				46.0	46.0		12.0	12.0			12.0	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					46.0			12.0			12.0	
Actuated g/C Ratio					0.62			0.16			0.16	
v/c Ratio					0.25			0.48			0.03	
Control Delay					6.6			35.0			20.4	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	51.7	16.0
Total Split (%)	18%	57%	18%
Maximum Green (s)	12.0	46.0	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

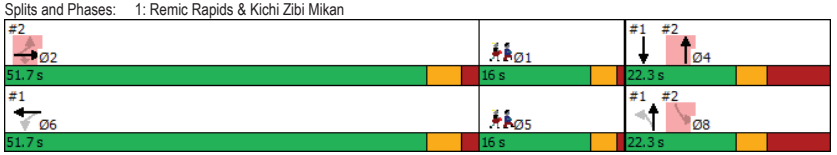
Future Total 2038 OPT
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.6			35.0			20.4	
LOS					A			C			C	
Approach Delay					6.6			35.0			20.4	
Approach LOS					A			C			C	
Queue Length 50th (m)					15.3			5.2			0.5	
Queue Length 95th (m)					22.1			m19.8			4.1	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2124			211			274	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.25			0.48			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 11.3		Intersection LOS: B	
Intersection Capacity Utilization 41.5%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



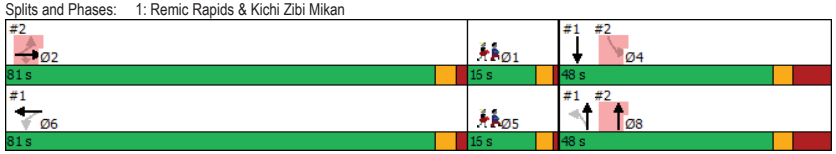
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1580	3	368	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1580	3	368	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1717	0	0	1665	0
Flt Permitted								0.723				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1298	0	0	1665	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1580	3	368	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1595	0	0	371	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				81.0	81.0		48.0	48.0			48.0	
Total Split (%)				55.9%	55.9%		33.1%	33.1%			33.1%	
Maximum Green (s)				75.3	75.3		37.7	37.7			37.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					75.3			37.7			37.7	
Actuated g/C Ratio					0.58			0.29			0.29	
v/c Ratio					0.79			0.98			0.01	
Control Delay					24.4			55.0			24.1	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	81.0	16.0
Total Split (%)	11%	56%	11%
Maximum Green (s)	12.0	75.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					24.4			55.0			24.1	
LOS					C			E			C	
Approach Delay					24.4			55.0			24.1	
Approach LOS					C			E			C	
Queue Length 50th (m)					156.9			23.0			0.6	
Queue Length 95th (m)					187.3			#146.1			4.2	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2018			379			489	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.79			0.98			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 129			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 30.2		Intersection LOS: C	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1580	3	368	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1580	3	368	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1717	0	0	1666	0
Flt Permitted								0.723				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1299	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1580	3	368	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1595	0	0	371	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				56.2	56.2		37.8	37.8			37.8	
Total Split (%)				51.1%	51.1%		34.4%	34.4%			34.4%	
Maximum Green (s)				50.5	50.5		27.5	27.5			27.5	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					50.5			27.5			27.5	
Actuated g/C Ratio					0.54			0.29			0.29	
v/c Ratio					0.86			0.98			0.01	
Control Delay					24.7			55.2			18.3	
Queue Delay					0.0			0.0			0.0	

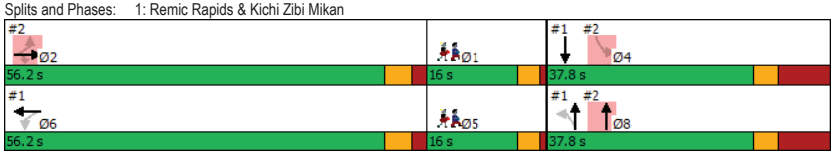
Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	56.2	16.0
Total Split (%)	15%	51%	15%
Maximum Green (s)	12.0	50.5	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2038 OPT
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					24.7			55.2			18.3	
LOS					C			E			B	
Approach Delay					24.7			55.2			18.3	
Approach LOS					C			E			B	
Queue Length 50th (m)					123.4			20.6			0.4	
Queue Length 95th (m)					156.8			#113.2			3.5	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					1857			380			490	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.86			0.98			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 30.4		Intersection LOS: C	
Intersection Capacity Utilization 88.3%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1837	253	0	0	0	0	99	22	10	0	0
Future Volume (vph)	3	1837	253	0	0	0	0	99	22	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.975				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1517	0	0	0	0	1742	0	1729	0	0
Flt Permitted										0.679		
Satd. Flow (perm)	0	3458	1482	0	0	0	0	1742	0	1236	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253					8				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	3	1837	253	0	0	0	0	99	22	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1840	253	0	0	0	0	121	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	73.0	73.0	73.0					26.0		26.0		
Total Split (%)	63.5%	63.5%	63.5%					22.6%		22.6%		
Maximum Green (s)	67.3	67.3	67.3					15.7		15.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		67.7	67.7					15.8		15.8		
Actuated g/C Ratio		0.62	0.62					0.15		0.15		

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2038 Conditions
Weekday AM Peak Hour

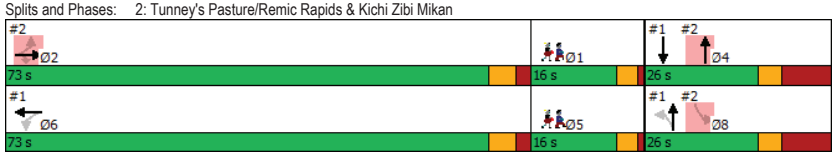
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	73.0
Total Split (%)	14%	14%	63%
Maximum Green (s)	12.0	12.0	67.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	30	30	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.85	0.25					0.47		0.06		
Control Delay		23.2	2.0					48.0		44.9		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		23.2	2.0					48.0		44.9		
LOS		C	A					D		D		
Approach Delay		20.6						48.0			44.9	
Approach LOS		C						D			D	
Queue Length 50th (m)		182.2	0.0					23.8		2.1		
Queue Length 95th (m)		223.0	10.1					42.6		5.7		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2154	1018					259		179		
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		0.85	0.25					0.47		0.06		

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 108.6			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 22.2		Intersection LOS: C	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



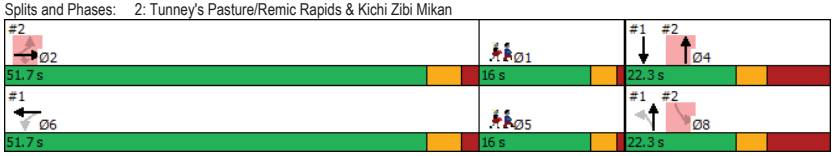
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1837	253	0	0	0	0	99	22	10	0	0
Future Volume (vph)	3	1837	253	0	0	0	0	99	22	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.975				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1517	0	0	0	0	1742	0	1729	0	0
Flt Permitted										0.679		
Satd. Flow (perm)	0	3458	1483	0	0	0	0	1742	0	1236	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			253					10				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	2%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	3	1837	253	0	0	0	0	99	22	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1840	253	0	0	0	0	121	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	51.7	51.7	51.7					22.3		22.3		
Total Split (%)	57.4%	57.4%	57.4%					24.8%		24.8%		
Maximum Green (s)	46.0	46.0	46.0					12.0		12.0		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		46.0	46.0					12.0		12.0		
Actuated g/C Ratio		0.62	0.62					0.16		0.16		

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	51.7
Total Split (%)	18%	18%	57%
Maximum Green (s)	12.0	12.0	46.0
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.86	0.25					0.42		0.05		
Control Delay		16.7	1.5					30.5		23.5		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		16.7	1.5					30.5		23.5		
LOS		B	A					C		C		
Approach Delay		14.9						30.5			23.5	
Approach LOS		B						C			C	
Queue Length 50th (m)		96.2	0.0					14.0		1.2		
Queue Length 95th (m)		130.9	7.2					28.6		m3.9		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2149	1017					290		200		
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		0.86	0.25					0.42		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay: 15.8		Intersection LOS: B	
Intersection Capacity Utilization 73.9%		ICU Level of Service D	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	458	163	0	0	0	0	352	14	15	0	0
Future Volume (vph)	18	458	163	0	0	0	0	352	14	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00				
Frt			0.850					0.995				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1517	0	0	0	0	1792	0	1729	0	0
Flt Permitted		0.998								0.356		
Satd. Flow (perm)	0	3418	1517	0	0	0	0	1792	0	648	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163					1				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	18	458	163	0	0	0	0	352	14	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	476	163	0	0	0	0	366	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	81.0	81.0	81.0					48.0		48.0		
Total Split (%)	55.9%	55.9%	55.9%					33.1%		33.1%		
Maximum Green (s)	75.3	75.3	75.3					37.7		37.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		75.3	75.3					37.7		37.7		
Actuated g/C Ratio		0.58	0.58					0.29		0.29		

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2038 Conditions
Weekday PM Peak Hour

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	81.0
Total Split (%)	11%	11%	56%
Maximum Green (s)	12.0	12.0	75.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

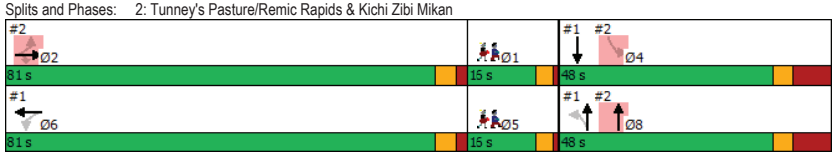
Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.24	0.17					0.70		0.08		
Control Delay		13.4	2.1					48.8		38.7		
Queue Delay		0.0	0.0					0.3		0.0		
Total Delay		13.4	2.1					49.1		38.7		
LOS		B	A					D		D		
Approach Delay		10.5						49.1			38.7	
Approach LOS		B						D			D	
Queue Length 50th (m)		29.2	0.0					82.6		3.6		
Queue Length 95th (m)		38.5	9.0					117.5		m5.4		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1995	953					524		189		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		0	0					15		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.24	0.17					0.72		0.08		

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 129
Natural Cycle: 130
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 24.8 Intersection LOS: C
Intersection Capacity Utilization 47.7% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	458	163	0	0	0	0	352	14	15	0	0
Future Volume (vph)	18	458	163	0	0	0	0	352	14	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850					0.995				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1517	0	0	0	0	1793	0	1729	0	0
Flt Permitted		0.998								0.411		
Satd. Flow (perm)	0	3418	1517	0	0	0	0	1793	0	747	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			163					2				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	2%	0%	0%	0%	0%	1%	0%	0%	0%	0%
Adj. Flow (vph)	18	458	163	0	0	0	0	352	14	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	476	163	0	0	0	0	366	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	56.2	56.2	56.2					37.8		37.8		
Total Split (%)	51.1%	51.1%	51.1%					34.4%		34.4%		
Maximum Green (s)	50.5	50.5	50.5					27.5		27.5		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		50.5	50.5					27.5		27.5		
Actuated g/C Ratio		0.54	0.54					0.29		0.29		

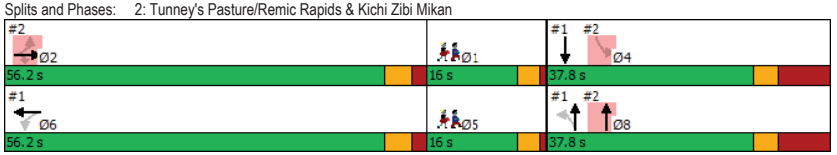
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	56.2
Total Split (%)	15%	15%	51%
Maximum Green (s)	12.0	12.0	50.5
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2038 OPT
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.26	0.18					0.70		0.07		
Control Delay		12.2	2.3					37.6		25.1		
Queue Delay		0.0	0.0					0.6		0.0		
Total Delay		12.2	2.3					38.2		25.1		
LOS		B	A					D		C		
Approach Delay		9.6						38.2			25.1	
Approach LOS		A						D			C	
Queue Length 50th (m)		23.0	0.0					58.4		2.6		
Queue Length 95th (m)		32.0	8.6					89.4		m3.7		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1836	890					525		218		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		0	0					28		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.26	0.18					0.74		0.07		

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94			
Natural Cycle: 130			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay: 20.1		Intersection LOS: C	
Intersection Capacity Utilization 47.7%		ICU Level of Service A	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



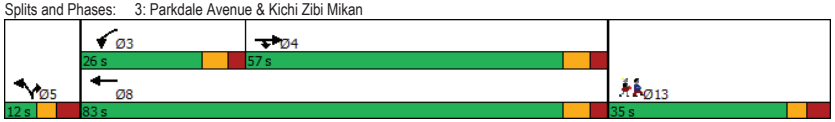
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
Lane Configurations							
Traffic Volume (vph)	1297	572	458	420	112	198	
Future Volume (vph)	1297	572	458	420	112	198	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		0.0	0.0		80.0	0.0	
Storage Lanes		1	2		2	1	
Taper Length (m)			2.5		2.5		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00	
Ped Bike Factor					0.94		
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3458	1547	3354	3458	3288	1532	
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	3458	1547	3354	3458	3075	1532	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		414				198	
Link Speed (k/h)	60			60	40		
Link Distance (m)	190.6			177.2	173.2		
Travel Time (s)	11.4			10.6	15.6		
Confl. Peds. (#/hr)					5	2	
Confl. Bikes (#/hr)						5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	
Adj. Flow (vph)	1297	572	458	420	112	198	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1297	572	458	420	112	198	
Turn Type	NA	Prot	Prot	NA	Prot	Prot	
Protected Phases	4	4	3	8	5	5	13
Permitted Phases							
Detector Phase	4	4	3	8	5	5	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.1	28.1	12.1	28.1	12.0	12.0	35.0
Total Split (s)	57.0	57.0	26.0	83.0	12.0	12.0	35.0
Total Split (%)	43.8%	43.8%	20.0%	63.8%	9.2%	9.2%	27%
Maximum Green (s)	49.9	49.9	18.9	75.9	5.0	5.0	28.0
Yellow Time (s)	4.1	4.1	4.1	4.1	3.2	3.2	3.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.0	7.0	
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0
Flash Dont Walk (s)	14.0	14.0		14.0			21.0
Pedestrian Calls (#/hr)	30	30		30			30
Act Effct Green (s)	49.9	49.9	18.9	75.9	5.0	5.0	
Actuated g/C Ratio	0.38	0.38	0.15	0.58	0.04	0.04	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
v/c Ratio	0.98	0.67	0.94	0.21	0.89	0.80	
Control Delay	59.5	13.0	83.3	13.1	116.5	30.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	59.5	13.0	83.3	13.1	116.5	30.9	
LOS	E	B	F	B	F	C	
Approach Delay	45.2			49.8	61.8		
Approach LOS	D			D	E		
Queue Length 50th (m)	170.8	30.9	60.6	25.5	15.0	0.0	
Queue Length 95th (m)	#219.6	72.6	#91.9	34.0	#33.1	#35.0	
Internal Link Dist (m)	166.6			153.2	149.2		
Turn Bay Length (m)					80.0		
Base Capacity (vph)	1327	848	487	2018	126	249	
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	0.98	0.67	0.94	0.21	0.89	0.80	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 48.2 Intersection LOS: D
Intersection Capacity Utilization 73.5% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Parkdale Avenue & Kichi Zibi Mikan



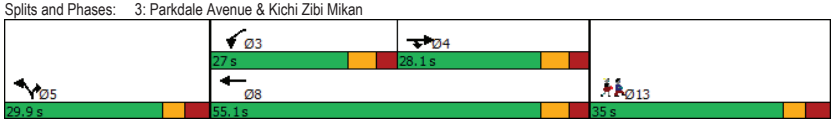
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
Lane Configurations							
Traffic Volume (vph)	387	101	456	1095	500	471	
Future Volume (vph)	387	101	456	1095	500	471	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		0.0	0.0		80.0	0.0	
Storage Lanes		1	2		2	1	
Taper Length (m)			2.5		2.5		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00	
Ped Bike Factor					0.98		
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3458	1532	3321	3458	3354	1547	
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	3458	1532	3321	3458	3293	1547	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		101				471	
Link Speed (k/h)	60			60	40		
Link Distance (m)	190.6			177.2	173.2		
Travel Time (s)	11.4			10.6	15.6		
Confl. Peds. (#/hr)					7		
Confl. Bikes (#/hr)						10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Adj. Flow (vph)	387	101	456	1095	500	471	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	387	101	456	1095	500	471	
Turn Type	NA	Prot	Prot	NA	Prot	Prot	
Protected Phases	4	4	3	8	5	5	13
Permitted Phases							
Detector Phase	4	4	3	8	5	5	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.1	28.1	12.1	28.1	12.0	12.0	35.0
Total Split (s)	28.1	28.1	27.0	55.1	29.9	29.9	35.0
Total Split (%)	23.4%	23.4%	22.5%	45.9%	24.9%	24.9%	29%
Maximum Green (s)	21.0	21.0	19.9	48.0	22.9	22.9	28.0
Yellow Time (s)	4.1	4.1	4.1	4.1	3.2	3.2	3.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.0	7.0	
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0
Flash Dont Walk (s)	14.0	14.0		14.0			21.0
Pedestrian Calls (#/hr)	30	30		30			30
Act Effct Green (s)	21.6	21.6	19.3	48.0	22.9	22.9	
Actuated g/C Ratio	0.18	0.18	0.16	0.40	0.19	0.19	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
v/c Ratio	0.62	0.28	0.86	0.79	0.78	0.70	
Control Delay	50.6	10.4	65.3	36.8	55.8	9.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.6	10.4	65.3	36.8	55.8	9.9	
LOS	D	B	E	D	E	A	
Approach Delay	42.3			45.1	33.5		
Approach LOS	D			D	C		
Queue Length 50th (m)	45.0	0.0	54.1	117.5	58.2	0.0	
Queue Length 95th (m)	61.5	14.9	#77.6	144.2	77.0	30.9	
Internal Link Dist (m)	166.6			153.2	149.2		
Turn Bay Length (m)					80.0		
Base Capacity (vph)	623	358	550	1383	640	676	
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	0.62	0.28	0.83	0.79	0.78	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 40.9 Intersection LOS: D
Intersection Capacity Utilization 58.8% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Parkdale Avenue & Kichi Zibi Mikan



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	39	0	380	941	88
Future Vol, veh/h	0	39	0	380	941	88
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	39	0	380	941	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	992	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-	-
Pot Cap-1 Maneuver	0	297	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	295	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.1	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	295	-	-
HCM Lane V/C Ratio	-	0.132	-	-
HCM Control Delay (s)	-	19.1	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	112	0	970	495	62
Future Vol, veh/h	0	112	0	970	495	62
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	112	0	970	495	62

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	533	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	551	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	547	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.3	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	547	-	-
HCM Lane V/C Ratio	-	0.205	-	-
HCM Control Delay (s)	-	13.3	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	13	367	5	26	954
Future Vol, veh/h	6	13	367	5	26	954
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	2	0	0	1
Mvmt Flow	6	13	367	5	26	954

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1380	370	0	0	372	0
Stage 1	370	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	161	680	-	-	1198	-
Stage 1	703	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	153	680	-	-	1198	-
Mov Cap-2 Maneuver	153	-	-	-	-	-
Stage 1	703	-	-	-	-	-
Stage 2	337	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.7	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	326	1198	-
HCM Lane V/C Ratio	-	-	0.058	0.022	-
HCM Control Delay (s)	-	-	16.7	8.1	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	9	975	9	15	592
Future Vol, veh/h	7	9	975	9	15	592
Conflicting Peds, #/hr	9	5	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	7	9	975	9	15	592

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1612	986	0	0	985	0
Stage 1	981	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	116	303	-	-	709	-
Stage 1	366	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	111	301	-	-	708	-
Mov Cap-2 Maneuver	111	-	-	-	-	-
Stage 1	366	-	-	-	-	-
Stage 2	513	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	28.1	0	0.3
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	172	708	-
HCM Lane V/C Ratio	-	-	0.093	0.021	-
HCM Control Delay (s)	-	-	28.1	10.2	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	10.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	62	62	130	294	878	99
Future Vol, veh/h	62	62	130	294	878	99
Conflicting Peds, #/hr	4	3	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	3	13	2	1	1	2
Mvmt Flow	62	62	130	294	878	99

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1526	971	1017	0	-	0
Stage 1	968	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Critical Hdwy	6.43	6.33	4.12	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.417	2.218	-	-	-
Pot Cap-1 Maneuver	129	292	682	-	-	-
Stage 1	367	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	91	280	657	-	-	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	270	-	-	-	-	-
Stage 2	550	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	115.6	3.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	657	-	137	-	-
HCM Lane V/C Ratio	0.198	-	0.905	-	-
HCM Control Delay (s)	11.8	0	115.6	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.7	-	6.1	-	-

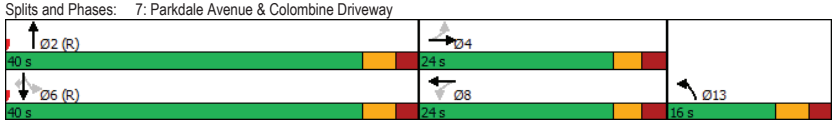
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	5	62	5	5	5	130	294	5	5	878	99
Future Volume (vph)	62	5	62	5	5	5	130	294	5	5	878	99
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	0.0		0.0	45.0		0.0	0.0		20.0
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99		0.98					0.91
Frt		0.861			0.955			0.997				0.850
Flt Protected	0.950				0.984		0.950					
Satd. Flow (prot)	1679	1378	0	0	1694	0	1695	1797	0	0	1802	1517
Flt Permitted	0.748				0.906		0.950				0.998	
Satd. Flow (perm)	1310	1378	0	0	1558	0	1659	1797	0	0	1798	1376
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		30			30			40			40	
Link Distance (m)		174.2			161.4			99.7			87.5	
Travel Time (s)		20.9			19.4			9.0			7.9	
Confl. Peds. (#/hr)	4		3	3		4	40					40
Confl. Bikes (#/hr)												2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	0%	13%	0%	0%	0%	2%	1%	0%	0%	1%	2%
Adj. Flow (vph)	62	5	62	5	5	5	130	294	5	5	878	99
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	67	0	0	15	0	130	299	0	0	883	99
Turn Type	Perm	NA		Perm	NA		Prot	NA		Perm	NA	Perm
Protected Phases		4			8		13	2			6	
Permitted Phases	4			8						6		6
Detector Phase	4	4		8	8		13	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	23.2	23.2		23.2	23.2		10.5	27.5		27.5	27.5	27.5
Total Split (s)	24.0	24.0		24.0	24.0		16.0	40.0		40.0	40.0	40.0
Total Split (%)	30.0%	30.0%		30.0%	30.0%		20.0%	50.0%		50.0%	50.0%	50.0%
Maximum Green (s)	18.8	18.8		18.8	18.8		10.5	34.5		34.5	34.5	34.5
Yellow Time (s)	2.7	2.7		2.7	2.7		3.2	3.2		3.2	3.2	3.2
All-Red Time (s)	2.5	2.5		2.5	2.5		2.3	2.3		2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.2	5.2			5.2		5.5	5.5			5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30		30	30			30		30	30	30
Act Effct Green (s)	11.7	11.7			11.7		10.1	47.8			47.8	47.8
Actuated g/C Ratio	0.15	0.15			0.15		0.13	0.60			0.60	0.60

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.33	0.34			0.07		0.61	0.28			0.82	0.12
Control Delay	32.9	32.9			26.4		42.3	16.4			28.5	12.5
Queue Delay	0.0	0.0			0.0		0.0	0.2			0.0	0.0
Total Delay	32.9	32.9			26.4		42.3	16.6			28.5	12.5
LOS	C	C			C		D	B			C	B
Approach Delay		32.9			26.4			24.4			26.9	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	8.9	9.7			2.1		20.8	33.3			113.1	7.0
Queue Length 95th (m)	17.6	18.6			6.4		33.7	47.1			#225.5	18.2
Internal Link Dist (m)		150.2			137.4			75.7			63.5	
Turn Bay Length (m)	55.0						45.0					20.0
Base Capacity (vph)	307	323			366		233	1072			1073	821
Starvation Cap Reductn	0	0			0		0	275			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	0.20	0.21			0.04		0.56	0.38			0.82	0.12

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 26.7 Intersection LOS: C
Intersection Capacity Utilization 88.9% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: Parkdale Avenue & Colombine Driveway



Intersection

Int Delay, s/veh 155.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	223	135	102	745	529	88
Future Vol, veh/h	223	135	102	745	529	88
Conflicting Peds, #/hr	16	0	25	0	0	25
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	3	2	0	1	0
Mvmt Flow	223	135	102	745	529	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1563	598	642	0	-	0
Stage 1	598	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Critical Hdwy	6.4	6.23	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.327	2.218	-	-	-
Pot Cap-1 Maneuver	~ 124	500	943	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 96	488	921	-	-	-
Mov Cap-2 Maneuver	~ 96	-	-	-	-	-
Stage 1	438	-	-	-	-	-
Stage 2	364	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 788.7	1.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	921	-	138	-	-
HCM Lane V/C Ratio	0.111	-	2.594	-	-
HCM Control Delay (s)	9.4	0	$ 788.7	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.4	-	31.7	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

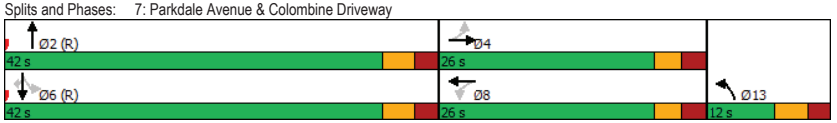
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	223	5	135	5	5	5	102	745	5	5	529	88
Future Volume (vph)	223	5	135	5	5	5	102	745	5	5	529	88
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	0.0		0.0	45.0		0.0	0.0		20.0
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97				0.98		0.98	1.00				0.93
Frt		0.855			0.955			0.999				0.850
Flt Protected	0.950				0.984		0.950					
Satd. Flow (prot)	1729	1512	0	0	1679	0	1695	1818	0	0	1802	1547
Flt Permitted	0.748				0.919		0.950				0.994	
Satd. Flow (perm)	1314	1512	0	0	1568	0	1658	1818	0	0	1791	1446
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		30			30			40			40	
Link Distance (m)		174.2			161.4			99.7			87.5	
Travel Time (s)		20.9			19.4			9.0			7.9	
Confl. Peds. (#/hr)	16					16	25					25
Confl. Bikes (#/hr)									4			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	2%	0%	0%	0%	1%	0%
Adj. Flow (vph)	223	5	135	5	5	5	102	745	5	5	529	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	140	0	0	15	0	102	750	0	0	534	88
Turn Type	Perm	NA		Perm	NA		Prot	NA		Perm	NA	Perm
Protected Phases		4			8		13	2			6	
Permitted Phases	4			8						6		6
Detector Phase	4	4		8	8		13	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	23.2	23.2		23.2	23.2		10.5	27.5		27.5	27.5	27.5
Total Split (s)	26.0	26.0		26.0	26.0		12.0	42.0		42.0	42.0	42.0
Total Split (%)	32.5%	32.5%		32.5%	32.5%		15.0%	52.5%		52.5%	52.5%	52.5%
Maximum Green (s)	20.8	20.8		20.8	20.8		6.5	36.5		36.5	36.5	36.5
Yellow Time (s)	2.7	2.7		2.7	2.7		3.2	3.2		3.2	3.2	3.2
All-Red Time (s)	2.5	2.5		2.5	2.5		2.3	2.3		2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.2	5.2			5.2		5.5	5.5			5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30		30	30			30		30	30	30
Act Effct Green (s)	17.5	17.5			17.5		7.6	38.8			38.8	38.8
Actuated g/C Ratio	0.22	0.22			0.22		0.10	0.48			0.48	0.48

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.78	0.42			0.04		0.64	0.85			0.62	0.13
Control Delay	48.0	30.1			22.9		48.4	22.5			19.8	13.1
Queue Delay	0.0	0.0			0.0		0.0	5.0			0.0	0.0
Total Delay	48.0	30.1			22.9		48.4	27.5			19.8	13.1
LOS	D	C			C		D	C			B	B
Approach Delay		41.1			22.9			30.0			18.9	
Approach LOS		D			C			C			B	
Queue Length 50th (m)	31.3	18.0			1.8		14.2	55.3			60.3	7.4
Queue Length 95th (m)	#55.0	32.7			6.1		m20.7	#167.9			93.2	15.6
Internal Link Dist (m)		150.2			137.4			75.7			63.5	
Turn Bay Length (m)	55.0						45.0					20.0
Base Capacity (vph)	341	393			407		160	881			868	700
Starvation Cap Reductn	0	0			0		0	85			0	0
Spillback Cap Reductn	0	0			0		0	0			1	0
Storage Cap Reductn	0	0			0		0	0			0	0
Reduced v/c Ratio	0.65	0.36			0.04		0.64	0.94			0.62	0.13

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 6 (8%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 28.4 Intersection LOS: C
Intersection Capacity Utilization 104.6% ICU Level of Service G
Analysis Period (min) 15
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: 7: Parkdale Avenue & Colombine Driveway



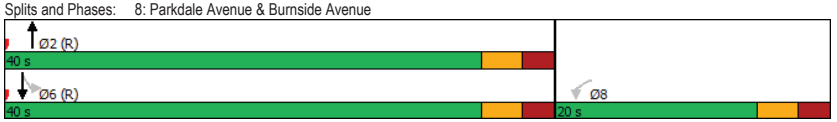
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	96	314	53	249	696
Future Volume (vph)	52	96	314	53	249	696
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.99			0.99
Frt	0.912		0.981			
Flt Protected	0.983					0.987
Satd. Flow (prot)	1508	0	1702	0	0	1783
Flt Permitted	0.983					0.789
Satd. Flow (perm)	1482	0	1702	0	0	1415
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	96		24			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	23	46		33	33	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	9%	0%	1%
Adj. Flow (vph)	52	96	314	53	249	696
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	367	0	0	945
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	20.0		40.0		40.0	40.0
Total Split (%)	33.3%		66.7%		66.7%	66.7%
Maximum Green (s)	14.6		34.6		34.6	34.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		41.8			41.8
Actuated g/C Ratio	0.18		0.70			0.70
v/c Ratio	0.43		0.31			0.96
Control Delay	12.7		6.0			37.4
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	12.7		6.0			37.4
LOS	B		A			D
Approach Delay	12.7		6.0			37.4
Approach LOS	B		A			D
Queue Length 50th (m)	4.6		17.1			~125.4
Queue Length 95th (m)	17.0		30.5			#186.5
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	433		1194			987
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.34		0.31			0.96

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.96
Intersection Signal Delay: 27.0 Intersection LOS: C
Intersection Capacity Utilization 99.7% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



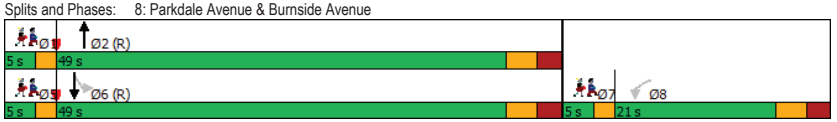
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	52	96	314	53	249	696			
Future Volume (vph)	52	96	314	53	249	696			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)	0.0	0.0		0.0	15.0				
Storage Lanes	1	0		0	0				
Taper Length (m)	2.5				2.5				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.88		0.99		0.97				
Frt	0.912		0.981						
Flt Protected	0.983				0.950				
Satd. Flow (prot)	1474	0	1698	0	1729	1802			
Flt Permitted	0.983				0.494				
Satd. Flow (perm)	1440	0	1698	0	868	1802			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	199.2		180.1			99.7			
Travel Time (s)	17.9		16.2			9.0			
Confl. Peds. (#/hr)	23	46		33	33				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	0%	0%	3%	9%	0%	1%			
Adj. Flow (vph)	52	96	314	53	249	696			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	148	0	367	0	249	696			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	3.0	1.0
Minimum Split (s)	19.4		26.4		10.4	10.4	5.0	5.0	5.0
Total Split (s)	21.0		49.0		49.0	49.0	5.0	5.0	5.0
Total Split (%)	26.3%		61.3%		61.3%	61.3%	6%	6%	6%
Maximum Green (s)	15.6		43.6		43.6	43.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.4		2.4		2.4	2.4	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			
Total Lost Time (s)	5.4		5.4		5.4	5.4			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		6.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	12.8		43.6		43.6	43.6			
Actuated g/C Ratio	0.16		0.54		0.54	0.54			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
v/c Ratio	0.64		0.40		0.53	0.71			
Control Delay	44.0		11.6		5.3	7.4			
Queue Delay	0.0		0.0		0.4	2.4			
Total Delay	44.0		11.6		5.7	9.8			
LOS	D		B		A	A			
Approach Delay	44.0		11.6			8.7			
Approach LOS	D		B			A			
Queue Length 50th (m)	20.9		24.4		2.9	8.1			
Queue Length 95th (m)	38.0		40.5		m3.6	m9.7			
Internal Link Dist (m)	175.2		156.1			75.7			
Turn Bay Length (m)					15.0				
Base Capacity (vph)	280		925		473	982			
Starvation Cap Reductn	0		0		36	168			
Spillback Cap Reductn	0		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.53		0.40		0.57	0.86			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 13.0 Intersection LOS: B
Intersection Capacity Utilization 61.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

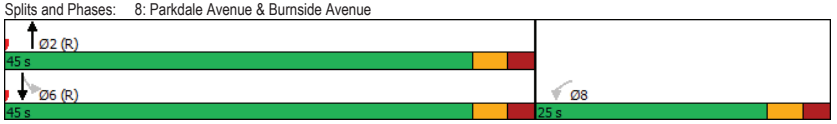


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	232	600	57	78	570
Future Volume (vph)	49	232	600	57	78	570
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88		1.00			1.00
Frt	0.889		0.988			
Flt Protected	0.991					0.994
Satd. Flow (prot)	1418	0	1789	0	0	1793
Flt Permitted	0.991					0.868
Satd. Flow (perm)	1405	0	1789	0	0	1565
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	232		11			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	21	46		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	0%	0%	2%	0%	1%
Adj. Flow (vph)	49	232	600	57	78	570
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	657	0	0	648
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	19.6		39.6		39.6	39.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	11.2		48.0			48.0
Actuated g/C Ratio	0.16		0.69			0.69
v/c Ratio	0.67		0.53			0.60
Control Delay	14.5		8.5			10.3
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	14.5		8.5			10.3
LOS	B		A			B
Approach Delay	14.5		8.5			10.3
Approach LOS	B		A			B
Queue Length 50th (m)	5.4		40.3			44.0
Queue Length 95th (m)	24.1		76.3			87.1
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	560		1229			1072
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.50		0.53			0.60

Intersection Summary			
Area Type:	Other		
Cycle Length: 70			
Actuated Cycle Length: 70			
Offset: 23 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 107.9%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



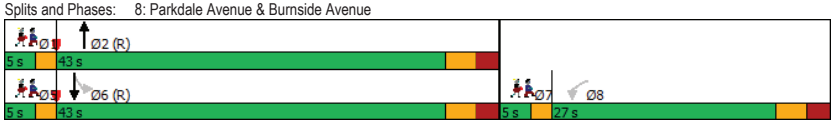
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	49	232	600	57	78	570			
Future Volume (vph)	49	232	600	57	78	570			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)	0.0	0.0		0.0	15.0				
Storage Lanes	1	0		0	0				
Taper Length (m)	2.5				2.5				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.87		1.00		0.99				
Frt	0.889		0.988						
Flt Protected	0.991				0.950				
Satd. Flow (prot)	1397	0	1788	0	1729	1802			
Flt Permitted	0.991				0.206				
Satd. Flow (perm)	1382	0	1788	0	373	1802			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	199.2		180.1			99.7			
Travel Time (s)	17.9		16.2			9.0			
Confl. Peds. (#/hr)	21	46		12	12				
Confl. Bikes (#/hr)				3					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	4%	0%	0%	2%	0%	1%			
Adj. Flow (vph)	49	232	600	57	78	570			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	281	0	657	0	78	570			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.4		26.4		10.4	10.4	5.0	5.0	5.0
Total Split (s)	27.0		43.0		43.0	43.0	5.0	5.0	5.0
Total Split (%)	33.8%		53.8%		53.8%	53.8%	6%	6%	6%
Maximum Green (s)	21.6		37.6		37.6	37.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.4		2.4		2.4	2.4	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			
Total Lost Time (s)	5.4		5.4		5.4	5.4			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		6.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	19.5		37.6		37.6	37.6			
Actuated g/C Ratio	0.24		0.47		0.47	0.47			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
v/c Ratio	0.84		0.78		0.45	0.67			
Control Delay	50.6		14.9		15.2	12.7			
Queue Delay	4.4		2.4		0.0	0.6			
Total Delay	55.1		17.3		15.2	13.3			
LOS	E		B		B	B			
Approach Delay	55.1		17.3			13.5			
Approach LOS	E		B			B			
Queue Length 50th (m)	39.1		23.9		3.5	25.5			
Queue Length 95th (m)	#74.6		#38.9		m6.0	33.6			
Internal Link Dist (m)	175.2		156.1			75.7			
Turn Bay Length (m)					15.0				
Base Capacity (vph)	373		840		175	846			
Starvation Cap Reductn	0		0		0	71			
Spillback Cap Reductn	45		89		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.86		0.87		0.45	0.74			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 8 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 22.4 Intersection LOS: C
Intersection Capacity Utilization 76.2% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

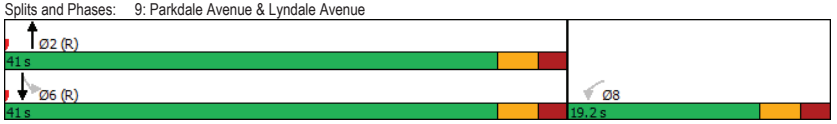


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	10	357	29	3	745
Future Volume (vph)	31	10	357	29	3	745
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		1.00			1.00
Frt	0.967		0.990			
Flt Protected	0.964					
Satd. Flow (prot)	1612	0	1744	0	0	1784
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1541	0	1744	0	0	1783
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	10		12			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	27	4		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%
Adj. Flow (vph)	31	10	357	29	3	745
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	386	0	0	748
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		41.0		41.0	41.0
Total Split (%)	31.9%		68.1%		68.1%	68.1%
Maximum Green (s)	14.0		35.9		35.9	35.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		45.6			45.6
Actuated g/C Ratio	0.18		0.76			0.76
v/c Ratio	0.15		0.29			0.55
Control Delay	16.6		5.5			8.6
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	16.6		5.5			8.6
LOS	B		A			A
Approach Delay	16.6		5.5			8.6
Approach LOS	B		A			A
Queue Length 50th (m)	2.7		18.4			49.8
Queue Length 95th (m)	9.1		32.1			85.5
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	366		1324			1351
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.11		0.29			0.55

Intersection Summary			
Area Type:	Other		
Cycle Length: 60.2			
Actuated Cycle Length: 60.2			
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.9		Intersection LOS: A	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

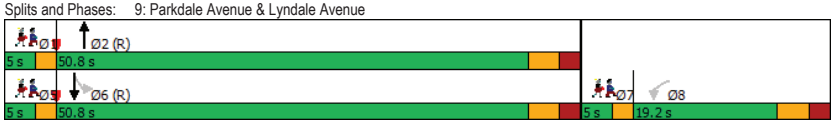


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	31	10	357	29	3	745			
Future Volume (vph)	31	10	357	29	3	745			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.93		1.00			1.00			
Frt	0.967		0.990						
Flt Protected	0.964								
Satd. Flow (prot)	1611	0	1743	0	0	1784			
Flt Permitted	0.964					0.999			
Satd. Flow (perm)	1517	0	1743	0	0	1783			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	167.5		221.0			180.1			
Travel Time (s)	15.1		19.9			16.2			
Confl. Peds. (#/hr)	27	4		12	12				
Confl. Bikes (#/hr)				3					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%			
Adj. Flow (vph)	31	10	357	29	3	745			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	41	0	386	0	0	748			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.2		25.1		10.1	10.1	5.0	5.0	5.0
Total Split (s)	19.2		50.8		50.8	50.8	5.0	5.0	5.0
Total Split (%)	24.0%		63.5%		63.5%	63.5%	6%	6%	6%
Maximum Green (s)	14.0		45.7		45.7	45.7	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.2		2.1		2.1	2.1	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.2		5.1			5.1			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		5.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	10.8		45.7			45.7			
Actuated g/C Ratio	0.14		0.57			0.57			
v/c Ratio	0.20		0.39			0.73			
Control Delay	31.3		10.9			4.9			
Queue Delay	0.0		0.0			0.0			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Total Delay	31.3		10.9			4.9			
LOS	C		B			A			
Approach Delay	31.3		10.9			4.9			
Approach LOS	C		B			A			
Queue Length 50th (m)	5.3		29.6			0.0			
Queue Length 95th (m)	13.7		47.2			11.5			
Internal Link Dist (m)	143.5		197.0			156.1			
Turn Bay Length (m)									
Base Capacity (vph)	265		995			1018			
Starvation Cap Reductn	0		0			0			
Spillback Cap Reductn	0		0			0			
Storage Cap Reductn	0		0			0			
Reduced v/c Ratio	0.15		0.39			0.73			

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 15 (19%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 57.6%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

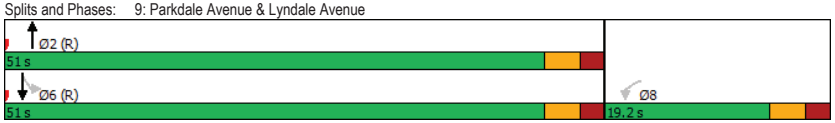


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	6	631	34	9	610
Future Volume (vph)	18	6	631	34	9	610
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		1.00			1.00
Frt	0.966		0.993			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1682	0	1801	0	0	1783
Flt Permitted	0.964					0.992
Satd. Flow (perm)	1619	0	1801	0	0	1770
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6		8			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	20	4		22	22	
Confl. Bikes (#/hr)				10		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	18	6	631	34	9	610
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	665	0	0	619
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		51.0		51.0	51.0
Total Split (%)	27.4%		72.6%		72.6%	72.6%
Maximum Green (s)	14.0		45.9		45.9	45.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		55.6			55.6
Actuated g/C Ratio	0.15		0.79			0.79
v/c Ratio	0.10		0.47			0.44
Control Delay	20.0		6.3			6.1
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	20.0		6.3			6.1
LOS	B		A			A
Approach Delay	20.0		6.3			6.1
Approach LOS	B		A			A
Queue Length 50th (m)	1.9		40.1			36.8
Queue Length 95th (m)	7.5		64.7			59.4
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	327		1428			1402
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.07		0.47			0.44

Intersection Summary			
Area Type:	Other		
Cycle Length: 70.2			
Actuated Cycle Length: 70.2			
Offset: 18 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.47			
Intersection Signal Delay: 6.5		Intersection LOS: A	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



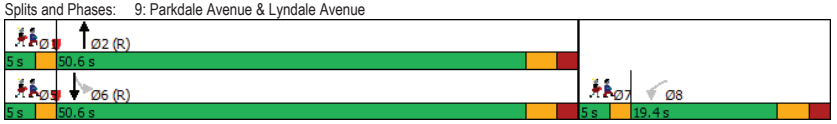
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	18	6	631	34	9	610			
Future Volume (vph)	18	6	631	34	9	610			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.95		1.00			1.00			
Frt	0.966		0.993						
Flt Protected	0.964					0.999			
Satd. Flow (prot)	1682	0	1801	0	0	1783			
Flt Permitted	0.964					0.991			
Satd. Flow (perm)	1610	0	1801	0	0	1768			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	167.5		221.0			180.1			
Travel Time (s)	15.1		19.9			16.2			
Confl. Peds. (#/hr)	20	4		22	22				
Confl. Bikes (#/hr)				10					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%			
Adj. Flow (vph)	18	6	631	34	9	610			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	24	0	665	0	0	619			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.2		25.1		10.1	10.1	5.0	5.0	5.0
Total Split (s)	19.4		50.6		50.6	50.6	5.0	5.0	5.0
Total Split (%)	24.3%		63.3%		63.3%	63.3%	6%	6%	6%
Maximum Green (s)	14.2		45.5		45.5	45.5	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.2		2.1		2.1	2.1	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.2		5.1			5.1			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		5.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	10.7		45.5			45.5			
Actuated g/C Ratio	0.13		0.57			0.57			
v/c Ratio	0.11		0.65			0.62			
Control Delay	29.5		15.6			11.0			
Queue Delay	0.0		0.0			0.0			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Total Delay	29.5		15.6			11.0			
LOS	C		B			B			
Approach Delay	29.5		15.6			11.0			
Approach LOS	C		B			B			
Queue Length 50th (m)	3.1		63.4			30.0			
Queue Length 95th (m)	9.3		97.9			57.2			
Internal Link Dist (m)	143.5		197.0			156.1			
Turn Bay Length (m)									
Base Capacity (vph)	285		1024			1005			
Starvation Cap Reductn	0		0			0			
Spillback Cap Reductn	0		0			0			
Storage Cap Reductn	0		0			0			
Reduced v/c Ratio	0.08		0.65			0.62			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 55.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	394	72	39	232	40	123	203	70	74	505	197
Future Volume (vph)	134	394	72	39	232	40	123	203	70	74	505	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.91	0.97		0.87		0.98		0.96		0.94
Frt			0.850			0.850		0.976				0.850
Flt Protected	0.950			0.950				0.985		0.950		
Satd. Flow (prot)	1695	1701	1146	1729	1750	1432	0	1668	0	1712	1802	1517
Flt Permitted	0.576			0.391				0.392		0.475		
Satd. Flow (perm)	946	1701	1046	692	1750	1242	0	661	0	823	1802	1421
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107			107		13				119
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			279.3			221.0	
Travel Time (s)		17.9			21.6			25.1			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	7%	35%	0%	4%	8%	4%	3%	1%	1%	1%	2%
Adj. Flow (vph)	134	394	72	39	232	40	123	203	70	74	505	197
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	394	72	39	232	40	0	396	0	74	505	197
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	45.3%	45.3%		45.3%	45.3%	45.3%
Maximum Green (s)	37.9	37.9	37.9	37.9	37.9	37.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	37.9	37.9	37.9	37.9	37.9	37.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40		0.39		0.39	0.39	0.39

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Future Total 2038 Conditions
Weekday AM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

Synchro 11 Report
February 2026

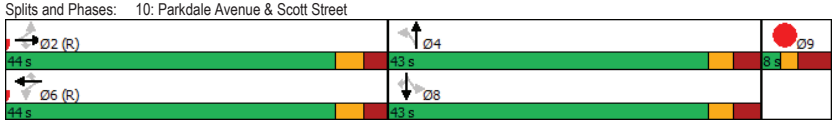
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.36	0.58	0.15	0.14	0.33	0.07		1.51		0.23	0.73	0.32
Control Delay	20.6	21.6	2.8	20.0	21.5	0.2		272.1		22.2	32.1	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	20.6	21.6	2.8	20.0	21.5	0.2		272.1		22.2	32.1	9.9
LOS	C	C	A	B	C	A		F		C	C	A
Approach Delay		19.2			18.6			272.1			25.5	
Approach LOS		B			B			F			C	
Queue Length 50th (m)	13.0	38.2	0.8	4.5	28.9	0.0		~101.1		9.0	77.5	9.1
Queue Length 95th (m)	m17.0	m46.2	m0.8	11.4	46.7	0.0		#156.9		19.4	115.0	24.3
Internal Link Dist (m)		225.1			275.4			255.3			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	377	678	481	276	698	559		263		317	696	621
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.36	0.58	0.15	0.14	0.33	0.07		1.51		0.23	0.73	0.32

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 91 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.51
Intersection Signal Delay: 69.5 Intersection LOS: E
Intersection Capacity Utilization 101.8% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	394	72	39	232	40	123	203	70	74	505	197
Future Volume (vph)	134	394	72	39	232	40	123	203	70	74	505	197
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	40.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.91	0.97		0.86		0.97		0.94		0.93
Frt			0.850			0.850		0.962				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1701	1146	1729	1750	1432	1662	1661	0	1712	1802	1517
Flt Permitted	0.537			0.314			0.147			0.591		
Satd. Flow (perm)	880	1701	1041	556	1750	1234	257	1661	0	999	1802	1418
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			170		24				168
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			265.8			221.0	
Travel Time (s)		17.9			21.6			23.9			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	7%	35%	0%	4%	8%	4%	3%	1%	1%	1%	2%
Adj. Flow (vph)	134	394	72	39	232	40	123	203	70	74	505	197
Shared Lane Traffic (%)												
Lane Group Flow (vph)	134	394	72	39	232	40	123	273	0	74	505	197
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	7	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	11.3	31.3		31.3	31.3	31.3
Total Split (s)	38.0	38.0	38.0	38.0	38.0	38.0	13.0	54.0		41.0	41.0	41.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	13.0%	54.0%		41.0%	41.0%	41.0%
Maximum Green (s)	31.9	31.9	31.9	31.9	31.9	31.9	6.7	47.7		34.7	34.7	34.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0		15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30		30		30	30	30
Act Effct Green (s)	31.9	31.9	31.9	31.9	31.9	31.9	45.0	45.0		32.0	32.0	32.0
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.45	0.45		0.32	0.32	0.32

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

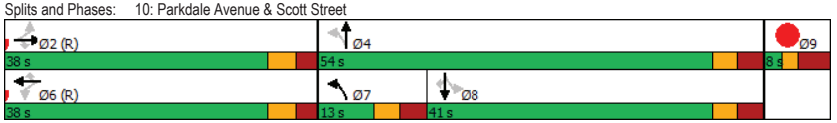
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2038 OPT MOD
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.48	0.73	0.16	0.22	0.42	0.08	0.59	0.36		0.23	0.88	0.35
Control Delay	26.6	29.0	0.7	29.1	29.6	0.3	27.4	17.2		25.9	49.1	7.3
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	26.6	29.0	0.7	29.1	29.6	0.3	27.4	17.2		25.9	49.1	7.3
LOS	C	C	A	C	C	A	C	B		C	D	A
Approach Delay		25.1			25.7			20.4			36.3	
Approach LOS		C			C			C			D	
Queue Length 50th (m)	12.3	42.4	0.0	5.5	35.1	0.0	13.0	28.7		10.0	87.9	3.7
Queue Length 95th (m)	m25.0	m85.2	m0.0	14.3	56.1	0.0	23.4	46.7		20.9	#138.4	18.7
Internal Link Dist (m)		225.1			275.4			241.8			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	40.0			65.0		30.0
Base Capacity (vph)	280	542	447	177	558	509	209	804		346	625	601
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	0.48	0.73	0.16	0.22	0.42	0.08	0.59	0.34		0.21	0.81	0.33

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 42 (42%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 28.5 Intersection LOS: C
Intersection Capacity Utilization 85.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	297	386	133	74	387	47	104	321	53	69	403	157
Future Volume (vph)	297	386	133	74	387	47	104	321	53	69	403	157
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		0.83	0.91		0.85		0.98		0.96		0.91
Frt			0.850			0.850		0.985				0.850
Flt Protected	0.950			0.950				0.989		0.950		
Satd. Flow (prot)	1729	1784	1473	1712	1750	1547	0	1682	0	1729	1802	1532
Flt Permitted	0.227			0.533				0.561		0.391		
Satd. Flow (perm)	396	1784	1220	875	1750	1321	0	948	0	685	1802	1392
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			133			163		7				160
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			279.3			221.0	
Travel Time (s)		17.9			21.6			25.1			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	5%	1%	4%	0%	14%	1%	2%	0%	1%	1%
Adj. Flow (vph)	297	386	133	74	387	47	104	321	53	69	403	157
Shared Lane Traffic (%)												
Lane Group Flow (vph)	297	386	133	74	387	47	0	478	0	69	403	157
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.6	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	15.0	49.0	49.0	34.0	34.0	34.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	15.0%	49.0%	49.0%	34.0%	34.0%	34.0%	43.0%	43.0%		43.0%	43.0%	43.0%
Maximum Green (s)	9.4	42.9	42.9	27.9	27.9	27.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	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		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	43.4	42.9	42.9	27.9	27.9	27.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.43	0.43	0.43	0.28	0.28	0.28		0.37		0.37	0.37	0.37

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Future Total 2038 Conditions
Weekday PM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	1.00	0.50	0.22	0.30	0.79	0.10		1.36		0.27	0.61	0.26
Control Delay	77.4	23.7	4.1	32.6	46.9	0.4		207.2		26.1	30.6	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	77.4	23.7	4.1	32.6	46.9	0.4		207.2		26.1	30.6	4.5
LOS	E	C	A	C	D	A		F		C	C	A
Approach Delay		40.1			40.5			207.2			23.6	
Approach LOS		D			D			F			C	
Queue Length 50th (m)	38.3	53.2	0.0	11.3	69.3	0.0		~122.5		9.3	62.8	0.0
Queue Length 95th (m)	#89.9	79.6	10.4	23.9	#113.1	0.0		#183.4		20.5	93.6	12.1
Internal Link Dist (m)		225.1			275.4			255.3			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	297	765	599	244	488	486		352		251	661	612
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	1.00	0.50	0.22	0.30	0.79	0.10		1.36		0.27	0.61	0.26

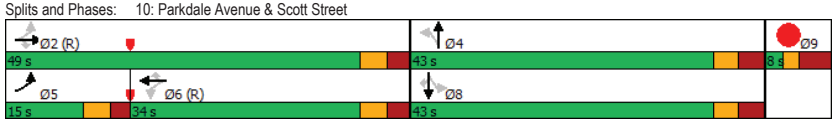
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 135
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.36
Intersection Signal Delay: 68.8 Intersection LOS: E
Intersection Capacity Utilization 109.4% ICU Level of Service H
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	297	386	133	74	387	47	104	321	53	69	403	157
Future Volume (vph)	297	386	133	74	387	47	104	321	53	69	403	157
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	40.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		0.78	0.88		0.82		0.98		0.92		0.89
Frt			0.850			0.850		0.979				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1784	1473	1712	1750	1547	1517	1723	0	1729	1802	1532
Flt Permitted	0.220			0.533			0.144			0.504		
Satd. Flow (perm)	383	1784	1155	849	1750	1269	230	1723	0	844	1802	1359
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			131			182		7				180
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			265.8			221.0	
Travel Time (s)		17.9			21.6			23.9			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	5%	1%	4%	0%	14%	1%	2%	0%	1%	1%
Adj. Flow (vph)	297	386	133	74	387	47	104	321	53	69	403	157
Shared Lane Traffic (%)												
Lane Group Flow (vph)	297	386	133	74	387	47	104	374	0	69	403	157
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	7	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.1	32.1	32.1	32.1	32.1	32.1	11.3	31.3		31.3	31.3	31.3
Total Split (s)	25.0	67.2	67.2	42.2	42.2	42.2	13.6	54.8		41.2	41.2	41.2
Total Split (%)	19.2%	51.7%	51.7%	32.5%	32.5%	32.5%	10.5%	42.2%		31.7%	31.7%	31.7%
Maximum Green (s)	18.9	61.1	61.1	36.1	36.1	36.1	7.3	48.5		34.9	34.9	34.9
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0		15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30		30		30	30	30
Act Effct Green (s)	61.1	61.1	61.1	37.2	37.2	37.2	46.1	46.1		32.5	32.5	32.5
Actuated g/C Ratio	0.47	0.47	0.47	0.29	0.29	0.29	0.35	0.35		0.25	0.25	0.25

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	6%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

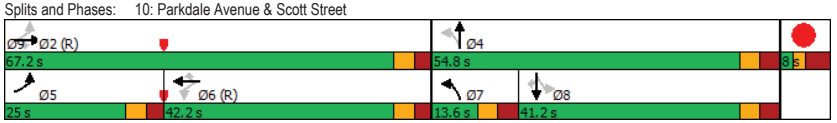
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2038 OPT MOD
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.82	0.46	0.22	0.31	0.77	0.10	0.68	0.61		0.33	0.90	0.33
Control Delay	38.0	28.7	6.1	41.3	54.8	0.4	51.8	38.3		43.7	70.3	5.3
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	38.0	28.7	6.1	41.3	54.8	0.4	51.8	38.3		43.7	70.3	5.3
LOS	D	C	A	D	D	A	D	D		D	E	A
Approach Delay		28.4			47.8			41.2			51.2	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	55.9	79.4	2.7	15.0	92.2	0.0	17.8	74.6		14.1	97.6	0.0
Queue Length 95th (m)	m68.5	m96.2	m6.1	29.3	#137.3	0.0	#35.4	106.6		28.1	#147.5	11.6
Internal Link Dist (m)		225.1			275.4			241.8			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	40.0			65.0		30.0
Base Capacity (vph)	375	838	612	242	500	492	153	647		226	483	496
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	0.79	0.46	0.22	0.31	0.77	0.10	0.68	0.58		0.31	0.83	0.32

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 126 (97%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 40.9 Intersection LOS: D
Intersection Capacity Utilization 88.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	483	79	88	254	112	158	263	143	52	131	31
Future Volume (vph)	47	483	79	88	254	112	158	263	143	52	131	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.78	0.95		0.95		0.64	0.69		0.63	0.77		0.61
Frt		0.979				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1496	0	1679	1670	1473	1465	1802	1517	1517	1767	1459
Flt Permitted	0.551			0.216			0.673			0.467		
Satd. Flow (perm)	768	1496	0	361	1670	944	713	1802	949	577	1767	889
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			184.8	
Travel Time (s)		20.2			17.9			20.2			22.2	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	10%	36%	3%	9%	5%	18%	1%	2%	14%	3%	6%
Adj. Flow (vph)	47	483	79	88	254	112	158	263	143	52	131	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	562	0	88	254	112	158	263	143	52	131	31
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	44.0	44.0		44.0	44.0	44.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%	46.3%	43.2%	43.2%	43.2%	43.2%	43.2%	43.2%
Maximum Green (s)	37.8	37.8		37.8	37.8	37.8	34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							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	C-Max	C-Max		C-Max	C-Max	C-Max	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	37.8	37.8		37.8	37.8	37.8	25.9	25.9	25.9	25.9	25.9	25.9
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.27	0.27	0.27	0.27	0.27	0.27

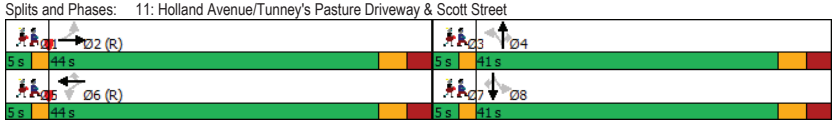
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?		Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.15	0.94		0.62	0.38	0.30	0.81	0.54	0.55	0.33	0.27	0.13
Control Delay	20.1	54.8		35.9	17.8	17.8	61.2	32.1	36.1	30.4	26.3	23.5
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	20.1	54.8		35.9	17.8	17.8	61.2	32.1	36.1	30.4	26.3	23.5
LOS	C	D		D	B	B	E	C	D	C	C	C
Approach Delay		52.1			21.3			41.2			26.9	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	5.4	97.4		10.7	27.8	11.8	26.5	40.1	21.9	7.4	18.4	4.2
Queue Length 95th (m)	13.0	#163.1		m18.8	m40.1	m20.4	46.0	55.9	36.4	16.1	29.1	9.8
Internal Link Dist (m)		256.5			225.1			200.2			160.8	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	305	595		143	664	375	261	660	347	211	647	325
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	0.15	0.94		0.62	0.38	0.30	0.61	0.40	0.41	0.25	0.20	0.10

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 85 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 38.3 Intersection LOS: D
Intersection Capacity Utilization 87.8% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	483	79	88	254	112	158	263	143	52	131	31
Future Volume (vph)	47	483	79	88	254	112	158	263	143	52	131	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.76	0.95		0.94		0.62	0.67		0.61	0.77		0.59
Frt		0.979				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1497	0	1679	1670	1473	1465	1802	1517	1517	1767	1459
Flt Permitted	0.557			0.243			0.673			0.448		
Satd. Flow (perm)	760	1497	0	403	1670	921	695	1802	920	552	1767	860
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	10%	36%	3%	9%	5%	18%	1%	2%	14%	3%	6%
Adj. Flow (vph)	47	483	79	88	254	112	158	263	143	52	131	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	47	562	0	88	254	112	158	263	143	52	131	31
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	54.0	54.0		54.0	54.0	54.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	54.0%	54.0%		54.0%	54.0%	54.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%
Maximum Green (s)	47.8	47.8		47.8	47.8	47.8	29.8	29.8	29.8	29.8	29.8	29.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Min	C-Min		C-Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	42.7	42.7		42.7	42.7	42.7	25.9	25.9	25.9	25.9	25.9	25.9
Actuated g/C Ratio	0.43	0.43		0.43	0.43	0.43	0.26	0.26	0.26	0.26	0.26	0.26

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

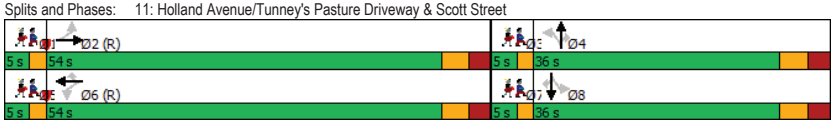
11: Holland Avenue/Tunney's Pasture Driveway & Scott Street Future Total 2038 OPT MOD
Tunney's Pasture TIA Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.15	0.88		0.51	0.36	0.28	0.88	0.56	0.60	0.37	0.29	0.14
Control Delay	5.5	25.0		29.0	20.2	18.9	77.5	36.3	42.7	36.4	30.0	27.9
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	5.5	25.0		29.0	20.2	18.9	77.5	36.3	42.7	36.4	30.0	27.9
LOS	A	C		C	C	B	E	D	D	D	C	C
Approach Delay		23.5			21.6			49.5			31.3	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	1.1	106.1		9.5	26.2	11.3	27.8	41.7	23.0	7.8	19.2	4.4
Queue Length 95th (m)	m1.6	m125.1		m22.1	45.1	m23.5	#61.0	65.5	42.8	18.8	34.1	11.5
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	363	715		192	798	440	207	536	274	164	526	256
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	0.13	0.79		0.46	0.32	0.25	0.76	0.49	0.52	0.32	0.25	0.12

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 26 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 31.9 Intersection LOS: C
Intersection Capacity Utilization 87.8% ICU Level of Service E
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	578	101	181	575	76	159	177	235	125	320	54
Future Volume (vph)	44	578	101	181	575	76	159	177	235	125	320	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91	0.95				0.55	0.78		0.66	0.76		0.53
Frt		0.978				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1578	0	1695	1701	1419	1429	1802	1547	1695	1802	1517
Flt Permitted	0.236			0.092			0.343			0.586		
Satd. Flow (perm)	383	1578	0	164	1701	780	401	1802	1025	798	1802	803
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			184.8	
Travel Time (s)		20.2			17.9			20.2			22.2	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	26%	2%	7%	9%	21%	1%	0%	2%	1%	2%
Adj. Flow (vph)	44	578	101	181	575	76	159	177	235	125	320	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	679	0	181	575	76	159	177	235	125	320	54
Turn Type	Perm	NA		custom	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		15	6 15			4			8	
Permitted Phases	2			6		6 15	4		4	8		8
Detector Phase	2	2		15	6 15	6 15	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0			5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		11.2			30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	50.0	50.0		15.0			35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	45.5%	45.5%		13.6%			31.8%	31.8%	31.8%	31.8%	31.8%	31.8%
Maximum Green (s)	43.8	43.8		8.8			28.8	28.8	28.8	28.8	28.8	28.8
Yellow Time (s)	3.3	3.3		3.3			3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9			2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2			6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min		None			Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0					2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0					22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30					30	30	30	30	30	30
Act Effct Green (s)	43.8	43.8		52.6	52.6	52.6	28.8	28.8	28.8	28.8	28.8	28.8
Actuated g/C Ratio	0.40	0.40		0.48	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26

11: Holland Avenue/Tunney's Pasture Driveway & Scott Street Future Total 2038 Conditions
Tunney's Pasture TIA Weekday PM Peak Hour

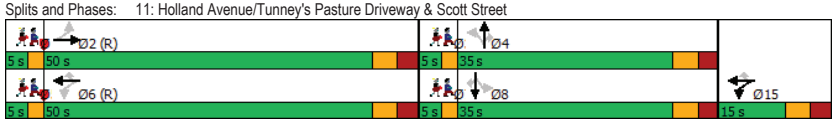
Lane Group	Ø1	Ø3	Ø5	Ø6	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	5	6	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	1.0	5.0	1.0
Minimum Split (s)	3.0	3.0	3.0	27.2	3.0
Total Split (s)	5.0	5.0	5.0	50.0	5.0
Total Split (%)	5%	5%	5%	45%	5%
Maximum Green (s)	3.0	3.0	3.0	43.8	3.0
Yellow Time (s)	2.0	2.0	2.0	3.3	2.0
All-Red Time (s)	0.0	0.0	0.0	2.9	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead			Lead
Lead-Lag Optimize?		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	C-Min	Max
Walk Time (s)	0.0	0.0	0.0	2.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	19.0	0.0
Pedestrian Calls (#/hr)	0	0	0	30	0
Act Effct Green (s)					
Actuated g/C Ratio					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	1.08		0.91	0.71	0.20	1.53	0.38	0.88	0.60	0.68	0.26
Control Delay	29.1	92.8		69.7	25.9	13.3	311.7	36.1	71.2	49.3	44.9	36.2
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	29.1	92.8		69.7	25.9	13.3	311.7	36.1	71.2	49.3	44.9	36.2
LOS	C	F		E	C	B	F	D	E	D	D	D
Approach Delay		88.9			34.3			127.3			45.1	
Approach LOS		F			C			F			D	
Queue Length 50th (m)	6.3	~163.4		23.8	73.9	7.2	~47.7	31.2	48.4	23.5	61.8	9.2
Queue Length 95th (m)	16.1	#231.9		#64.5	106.3	14.8	#88.4	50.9	#92.6	44.4	92.2	20.4
Internal Link Dist (m)		256.5			225.1			200.2			160.8	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	152	628		200	813	372	104	471	268	208	471	210
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	0.29	1.08		0.91	0.71	0.20	1.53	0.38	0.88	0.60	0.68	0.26

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 10 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 130
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.53
Intersection Signal Delay: 71.6 Intersection LOS: E
Intersection Capacity Utilization 100.1% ICU Level of Service G
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	578	101	181	575	76	159	177	235	125	320	54
Future Volume (vph)	44	578	101	181	575	76	159	177	235	125	320	54
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94				0.49	0.79		0.61	0.72		0.48
Frt		0.978				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1567	0	1695	1701	1419	1429	1802	1547	1695	1802	1517
Flt Permitted	0.285			0.205			0.176			0.554		
Satd. Flow (perm)	509	1567	0	366	1701	689	209	1802	938	716	1802	720
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	26%	2%	7%	9%	21%	1%	0%	2%	1%	2%
Adj. Flow (vph)	44	578	101	181	575	76	159	177	235	125	320	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	679	0	181	575	76	159	177	235	125	320	54
Turn Type	Perm	NA		Perm	NA	Perm	custom	NA	Perm	Perm	NA	Perm
Protected Phases		2			6		15	4 15			8	
Permitted Phases	2			6		6	4		4 15	8		8
Detector Phase	2	2		6	6	6	15	4 15	4 15	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0			5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	11.2			30.2	30.2	30.2
Total Split (s)	72.0	72.0		72.0	72.0	72.0	17.6			30.4	30.4	30.4
Total Split (%)	55.4%	55.4%		55.4%	55.4%	55.4%	13.5%			23.4%	23.4%	23.4%
Maximum Green (s)	65.8	65.8		65.8	65.8	65.8	11.4			24.2	24.2	24.2
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3			3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9			2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.2			6.2	6.2	6.2
Lead/Lag										Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None			None	None	None
Walk Time (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0				22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30				30	30	30
Act Effct Green (s)	65.8	65.8		65.8	65.8	65.8	35.6	41.8	41.8	24.2	24.2	24.2
Actuated g/C Ratio	0.51	0.51		0.51	0.51	0.51	0.27	0.32	0.32	0.19	0.19	0.19

Lane Group	Ø1	Ø3	Ø4	Ø5	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	4	5	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	5.0	1.0	1.0
Minimum Split (s)	5.0	5.0	30.2	5.0	5.0
Total Split (s)	5.0	5.0	30.4	5.0	5.0
Total Split (%)	4%	4%	23%	4%	4%
Maximum Green (s)	3.0	3.0	24.2	3.0	3.0
Yellow Time (s)	2.0	2.0	3.3	2.0	2.0
All-Red Time (s)	0.0	0.0	2.9	0.0	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		Lead
Lead-Lag Optimize?		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Min	Max	Max
Walk Time (s)			2.0		
Flash Dont Walk (s)			22.0		
Pedestrian Calls (#/hr)			30		
Act Effct Green (s)					
Actuated g/C Ratio					

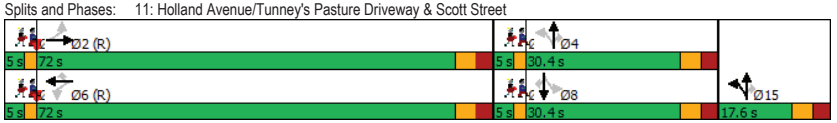
11: Holland Avenue/Tunney's Pasture Driveway & Scott Street Future Total 2038 OPT MOD
Tunney's Pasture TIA Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.17	0.86		0.98	0.67	0.22	0.97	0.31	0.78	0.94	0.96	0.40
Control Delay	18.5	26.9		77.2	14.6	11.3	115.2	35.0	59.3	116.4	91.9	57.0
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	18.5	26.9		77.2	14.6	11.3	115.2	35.0	59.3	116.4	91.9	57.0
LOS	B	C		E	B	B	F	D	E	F	F	E
Approach Delay		26.4			27.9			67.3			94.3	
Approach LOS		C			C			E			F	
Queue Length 50th (m)	3.6	56.3		42.5	40.6	4.9	31.1	34.1	54.4	31.9	82.0	12.3
Queue Length 95th (m)	m6.8	#218.7		m#85.4	60.3	m9.0	#74.5	53.5	#95.9	#71.0	#138.5	26.2
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	257	793		185	860	348	164	562	292	133	335	134
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	0.17	0.86		0.98	0.67	0.22	0.97	0.31	0.80	0.94	0.96	0.40

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 48.7 Intersection LOS: D
Intersection Capacity Utilization 100.1% ICU Level of Service G
Analysis Period (min) 15
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: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	133	480	0	0	262	151	1	0	12	48	0	48
Future Vol, veh/h	133	480	0	0	262	151	1	0	12	48	0	48
Conflicting Peds, #/hr	51	0	20	20	0	51	6	0	2	2	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	10	0	0	14	3	0	0	0	0	0	6
Mvmt Flow	133	480	0	0	262	151	1	0	12	48	0	48

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	464	0	0	500	0	0	1134	1230	502	1143	1155	395
Stage 1	-	-	-	-	-	-	766	766	-	389	389	-
Stage 2	-	-	-	-	-	-	368	464	-	754	766	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.26
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.354
Pot Cap-1 Maneuver	1108	-	-	1075	-	-	181	179	573	179	199	646
Stage 1	-	-	-	-	-	-	398	415	-	639	612	-
Stage 2	-	-	-	-	-	-	656	567	-	404	415	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1056	-	-	1055	-	-	141	139	561	145	154	612
Mov Cap-2 Maneuver	-	-	-	-	-	-	141	139	-	145	154	-
Stage 1	-	-	-	-	-	-	324	337	-	504	583	-
Stage 2	-	-	-	-	-	-	601	540	-	327	337	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.9	0	13.1	30.7
HCM LOS			B	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	456	1056	-	-	1055	-	-	234
HCM Lane V/C Ratio	0.029	0.126	-	-	-	-	-	0.41
HCM Control Delay (s)	13.1	8.9	0	-	0	-	-	30.7
HCM Lane LOS	B	A	A	-	A	-	-	D
HCM 95th %tile Q(veh)	0.1	0.4	-	-	0	-	-	1.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	133	480	0	0	262	151	1	0	12	48	0	48
Future Volume (vph)	133	480	0	0	262	151	1	0	12	48	0	48
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		0.0	25.0		20.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93				0.94			0.97			0.98	
Frt					0.951			0.875			0.932	
Flt Protected	0.950							0.996			0.976	
Satd. Flow (prot)	1729	1655	0	0	1487	0	0	1539	0	0	1576	0
Flt Permitted	0.950							0.974			0.822	
Satd. Flow (perm)	1616	1655	0	0	1487	0	0	1503	0	0	1323	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)					33							
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		302.8			168.9			203.1			119.6	
Travel Time (s)		21.8			12.2			24.4			14.4	
Confl. Peds. (#/hr)	51		20	20		51	6		2	2		6
Confl. Bikes (#/hr)			82			20			3			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	10%	0%	0%	14%	3%	0%	0%	0%	0%	0%	6%
Adj. Flow (vph)	133	480	0	0	262	151	1	0	12	48	0	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	480	0	0	413	0	0	13	0	0	96	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	13	2			6			4			8	
Permitted Phases							4			8		
Detector Phase	13	2			6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.5	27.5			27.5		22.9	22.9		22.9	22.9	
Total Split (s)	25.0	42.0			42.0		23.0	23.0		23.0	23.0	
Total Split (%)	25.0%	42.0%			42.0%		23.0%	23.0%		23.0%	23.0%	
Maximum Green (s)	19.5	36.5			36.5		17.1	17.1		17.1	17.1	
Yellow Time (s)	3.6	3.6			3.6		2.7	2.7		2.7	2.7	
All-Red Time (s)	1.9	1.9			1.9		3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5			5.5			5.9			5.9	
Lead/Lag		Lag			Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	C-Max			C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)		30			30		30	30		30	30	
Act Effct Green (s)	25.5	36.5			36.5			12.4			13.7	
Actuated g/C Ratio	0.26	0.36			0.36			0.12			0.14	

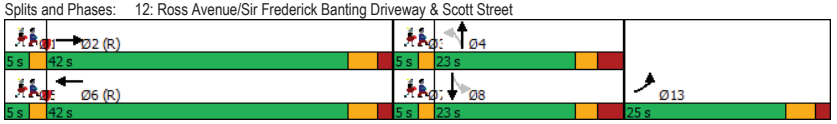
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.30	0.79			0.73			0.07			0.53	
Control Delay	35.6	39.9			23.5			36.1			50.1	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	35.6	39.9			23.5			36.1			50.1	
LOS	D	D			C			D			D	
Approach Delay		38.9			23.5			36.1			50.1	
Approach LOS		D			C			D			D	
Queue Length 50th (m)	22.6	82.1			20.2			2.1			16.8	
Queue Length 95th (m)	40.0	#131.4			49.6			7.4			32.5	
Internal Link Dist (m)		278.8			144.9			179.1			95.6	
Turn Bay Length (m)	40.0											
Base Capacity (vph)	441	604			563			257			226	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.30	0.79			0.73			0.05			0.42	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 96 (96%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 60.7% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street



Intersection	
Int Delay, s/veh	71.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	652	0	0	565	113	4	0	13	127	0	128
Future Vol, veh/h	91	652	0	0	565	113	4	0	13	127	0	128
Conflicting Peds, #/hr	42	0	25	25	0	42	3	0	4	4	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	5	0	0	7	2	0	0	0	0	0	2
Mvmt Flow	91	652	0	0	565	113	4	0	13	127	0	128

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	720	0	0	677	0	0	1548	1579	681	1509	1523	667
Stage 1	-	-	-	-	-	-	859	859	-	664	664	-
Stage 2	-	-	-	-	-	-	689	720	-	845	859	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	891	-	-	924	-	-	94	110	454	~ 100	119	459
Stage 1	-	-	-	-	-	-	354	376	-	453	461	-
Stage 2	-	-	-	-	-	-	439	435	-	360	376	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	856	-	-	903	-	-	57	86	442	~ 81	93	440
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	86	-	~ 81	93	-
Stage 1	-	-	-	-	-	-	288	306	-	363	443	-
Stage 2	-	-	-	-	-	-	310	418	-	290	306	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	0	28.4	$ 469.1
HCM LOS			D	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	171	856	-	-	903	-	-	137
HCM Lane V/C Ratio	0.099	0.106	-	-	-	-	-	1.861
HCM Control Delay (s)	28.4	9.7	0	-	0	-	-	$ 469.1
HCM Lane LOS	D	A	A	-	A	-	-	F
HCM 95th %tile Q(veh)	0.3	0.4	-	-	0	-	-	19.6

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	652	0	0	565	113	4	0	13	127	0	128
Future Volume (vph)	91	652	0	0	565	113	4	0	13	127	0	128
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		0.0	25.0		20.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95				0.97			0.97			0.98	
Frt					0.977			0.897			0.932	
Flt Protected	0.950							0.988			0.976	
Satd. Flow (prot)	1729	1733	0	0	1624	0	0	1570	0	0	1611	0
Flt Permitted	0.950							0.937			0.834	
Satd. Flow (perm)	1645	1733	0	0	1624	0	0	1487	0	0	1366	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)					10							
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		302.8			168.9			203.1			119.6	
Travel Time (s)		21.8			12.2			24.4			14.4	
Confl. Peds. (#/hr)	42		25	25		42	3		4	4		3
Confl. Bikes (#/hr)			16			59						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	0%	0%	7%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	91	652	0	0	565	113	4	0	13	127	0	128
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	652	0	0	678	0	0	17	0	0	255	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	13	2			6			4			8	
Permitted Phases							4			8		
Detector Phase	13	2			6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.5	27.5			27.5		23.9	23.9		23.9	23.9	
Total Split (s)	20.5	66.0			66.0		33.5	33.5		33.5	33.5	
Total Split (%)	15.8%	50.8%			50.8%		25.8%	25.8%		25.8%	25.8%	
Maximum Green (s)	15.0	60.5			60.5		27.6	27.6		27.6	27.6	
Yellow Time (s)	3.6	3.6			3.6		2.7	2.7		2.7	2.7	
All-Red Time (s)	1.9	1.9			1.9		3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5			5.5			5.9			5.9	
Lead/Lag		Lag			Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	C-Max			C-Max		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)		30			30		30	30		30	30	
Act Effct Green (s)	16.2	60.5			60.5			26.4			26.4	
Actuated g/C Ratio	0.12	0.47			0.47			0.20			0.20	

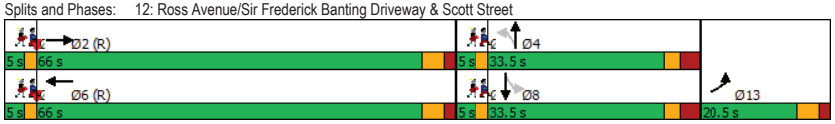
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	4%	4%	4%	4%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.43	0.81			0.89			0.06			0.92	
Control Delay	60.1	39.3			32.4			41.6			87.2	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	60.1	39.3			32.4			41.6			87.2	
LOS	E	D			C			D			F	
Approach Delay		41.8			32.4			41.6			87.2	
Approach LOS		D			C			D			F	
Queue Length 50th (m)	22.1	140.2			53.7			3.5			63.8	
Queue Length 95th (m)	39.7	192.7			#225.2			10.1			#111.2	
Internal Link Dist (m)		278.8			144.9			179.1			95.6	
Turn Bay Length (m)	40.0											
Base Capacity (vph)	214	806			761			315			290	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.43	0.81			0.89			0.05			0.88	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 44.9 Intersection LOS: D
Intersection Capacity Utilization 81.2% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street



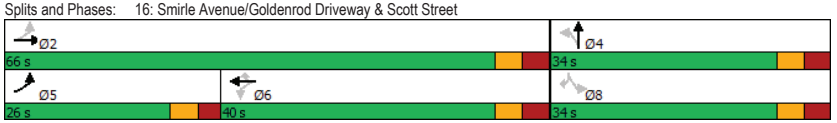
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	468	26	4	362	45	11	0	12	68	0	31
Future Volume (vph)	35	468	26	4	362	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		0.96		0.85		0.94		0.94		0.95
Frt		0.992				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	856	1738	0	1729	1784	802	0	1580	0	869	0	762
Flt Permitted	0.469			0.483				0.977		0.742		
Satd. Flow (perm)	408	1738	0	843	1784	681	0	1558	0	635	0	725
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	102%	3%	4%	0%	2%	93%	0%	0%	0%	99%	0%	103%
Adj. Flow (vph)	35	468	26	4	362	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	494	0	4	362	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	26.0	66.0		40.0	40.0	40.0	34.0	34.0		34.0		34.0
Total Split (%)	26.0%	66.0%		40.0%	40.0%	40.0%	34.0%	34.0%		34.0%		34.0%
Maximum Green (s)	20.0	59.4		33.4	33.4	33.4	27.4	27.4		27.4		27.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	Max		Max	Max	Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	66.5	67.4		59.1	59.1	59.1		15.3		15.4		15.4
Actuated g/C Ratio	0.73	0.74		0.64	0.64	0.64		0.17		0.17		0.17

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.11	0.39		0.01	0.31	0.09		0.07		0.64		0.15
Control Delay	7.1	8.2		13.5	13.3	0.4		0.3		60.7		1.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	7.1	8.2		13.5	13.3	0.4		0.3		60.7		1.5
LOS	A	A		B	B	A		A		E		A
Approach Delay		8.1			11.9			0.3			42.1	
Approach LOS		A			B			A			D	
Queue Length 50th (m)	1.6	31.3		0.3	32.9	0.0		0.0		10.7		0.0
Queue Length 95th (m)	6.3	69.0		2.3	69.2	0.0		0.0		24.1		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	393	1278		543	1150	476		541		190		291
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	0.09	0.39		0.01	0.31	0.09		0.04		0.36		0.11

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 91.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.6 Intersection LOS: B
Intersection Capacity Utilization 57.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	468	26	4	362	45	11	0	12	68	0	31
Future Volume (vph)	35	468	26	4	362	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.99				0.85		0.94		0.94		0.95
Frt		0.992				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	856	1734	0	1729	1784	802	0	1580	0	869	0	762
Flt Permitted	0.321			0.143				0.977		0.729		
Satd. Flow (perm)	276	1734	0	260	1784	680	0	1558	0	624	0	725
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			194.8			114.1	
Travel Time (s)		12.2			20.2			23.4			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	102%	3%	4%	0%	2%	93%	0%	0%	0%	99%	0%	103%
Adj. Flow (vph)	35	468	26	4	362	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	494	0	4	362	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	13	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	13	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	24.0	38.4		38.4	38.4	38.4	27.6	27.6		27.6		27.6
Total Split (%)	24.0%	38.4%		38.4%	38.4%	38.4%	27.6%	27.6%		27.6%		27.6%
Maximum Green (s)	18.0	31.8		31.8	31.8	31.8	21.0	21.0		21.0		21.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag		Lag		Lag	Lag	Lag	Lag	Lag		Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)	11.0	10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30		30		30
Act Effct Green (s)	45.5	31.8		31.8	31.8	31.8		14.9		16.2		16.2
Actuated g/C Ratio	0.46	0.32		0.32	0.32	0.32		0.15		0.16		0.16

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.17	0.90		0.05	0.64	0.21		0.10		0.67		0.26
Control Delay	10.7	35.8		25.2	33.0	25.9		33.7		68.6		39.7
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	10.7	35.8		25.2	33.0	25.9		33.7		68.6		39.7
LOS	B	D		C	C	C		C		E		D
Approach Delay		34.1			32.1			33.7			59.5	
Approach LOS		C			C			C			E	
Queue Length 50th (m)	1.9	29.0		0.5	52.0	5.6		3.6		11.8		5.0
Queue Length 95th (m)	m4.1	m#134.2		m1.4	m82.3	m11.0		10.1		#27.1		13.3
Internal Link Dist (m)		144.9			256.5			170.8			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	243	551		82	567	216		327		131		152
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	0.14	0.90		0.05	0.64	0.21		0.07		0.52		0.20

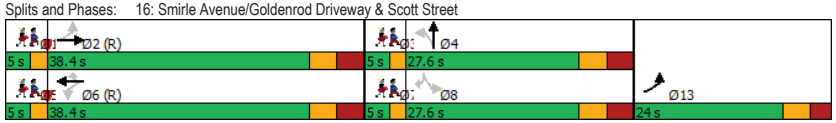
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 35.7 — Intersection LOS: D
Intersection Capacity Utilization 57.4% — ICU Level of Service B
Analysis Period (min) 15

\# 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: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



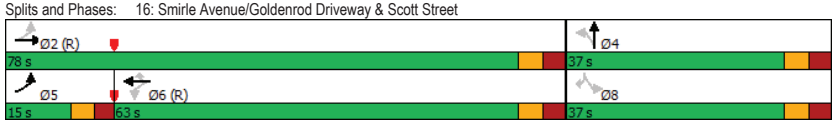
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	746	25	9	617	68	7	0	7	40	0	37
Future Volume (vph)	27	746	25	9	617	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99		0.76		0.94		0.95		0.93
Frt		0.995				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	882	1789	0	1729	1802	774	0	1595	0	873	0	806
Flt Permitted	0.332			0.355				0.976		0.748		
Satd. Flow (perm)	308	1789	0	640	1802	588	0	1553	0	651	0	749
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				91		91				91
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	96%	1%	0%	0%	1%	100%	0%	0%	0%	98%	0%	92%
Adj. Flow (vph)	27	746	25	9	617	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	771	0	9	617	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	15.0	78.0		63.0	63.0	63.0	37.0	37.0		37.0		37.0
Total Split (%)	13.0%	67.8%		54.8%	54.8%	54.8%	32.2%	32.2%		32.2%		32.2%
Maximum Green (s)	9.0	71.4		56.4	56.4	56.4	30.4	30.4		30.4		30.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	89.3	90.0		82.1	82.1	82.1		15.5		15.5		15.5
Actuated g/C Ratio	0.78	0.78		0.71	0.71	0.71		0.13		0.13		0.13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.55		0.02	0.48	0.15		0.05		0.46		0.21
Control Delay	5.7	8.9		10.3	12.9	1.9		0.3		60.0		2.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	5.7	8.9		10.3	12.9	1.9		0.3		60.0		2.6
LOS	A	A		B	B	A		A		E		A
Approach Delay		8.8			11.8			0.3			32.4	
Approach LOS		A			B			A			C	
Queue Length 50th (m)	1.6	80.4		0.8	80.7	0.0		0.0		7.9		0.0
Queue Length 95th (m)	4.3	113.4		3.1	117.7	3.7		0.0		18.9		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	283	1400		456	1286	445		477		172		264
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	0.10	0.55		0.02	0.48	0.15		0.03		0.23		0.14

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.55
Intersection Signal Delay: 11.2 Intersection LOS: B
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	746	25	9	617	68	7	0	7	40	0	37
Future Volume (vph)	27	746	25	9	617	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00				0.74		0.93		0.94		0.92
Frt		0.995				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	882	1789	0	1729	1802	774	0	1589	0	873	0	806
Flt Permitted	0.277			0.166				0.976		0.745		
Satd. Flow (perm)	257	1789	0	302	1802	574	0	1542	0	643	0	743
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			194.8			114.1	
Travel Time (s)		12.2			20.2			23.4			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	96%	1%	0%	0%	1%	100%	0%	0%	0%	98%	0%	92%
Adj. Flow (vph)	27	746	25	9	617	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	771	0	9	617	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	13	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	13	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	11.0	81.2		81.2	81.2	81.2	27.8	27.8		27.8		27.8
Total Split (%)	8.5%	62.5%		62.5%	62.5%	62.5%	21.4%	21.4%		21.4%		21.4%
Maximum Green (s)	5.0	74.6		74.6	74.6	74.6	21.2	21.2		21.2		21.2
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag		Lag		Lag	Lag	Lag	Lag	Lag		Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	80.6	74.6		74.6	74.6	74.6		14.9		15.7		15.7
Actuated g/C Ratio	0.62	0.57		0.57	0.57	0.57		0.11		0.12		0.12

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	4%	4%	4%	4%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

16: Smirle Avenue/Goldenrod Driveway & Scott Street
Tunney's Pasture TIA
Future Total 2038 OPT MOD
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.15	0.75		0.05	0.60	0.21		0.08		0.52		0.41
Control Delay	4.2	10.2		7.7	11.8	8.9		48.0		74.2		63.9
Queue Delay	0.0	0.6		0.0	0.2	0.0		0.0		0.0		0.0
Total Delay	4.2	10.7		7.7	12.0	8.9		48.0		74.2		63.9
LOS	A	B		A	B	A		D		E		E
Approach Delay		10.5			11.7			48.0			69.3	
Approach LOS		B			B			D			E	
Queue Length 50th (m)	1.3	38.0		0.5	61.3	3.9		3.1		9.3		8.5
Queue Length 95th (m)	m1.5	m44.6		m0.8	m69.0	m5.4		9.1		21.6		19.8
Internal Link Dist (m)		144.9			256.5			170.8			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	184	1026		173	1034	329		251		104		121
Starvation Cap Reductn	0	57		0	0	0		0		0		0
Spillback Cap Reductn	0	0		0	60	0		0		0		0
Storage Cap Reductn	0	0		0	0	0		0		0		0
Reduced v/c Ratio	0.15	0.80		0.05	0.63	0.21		0.06		0.38		0.31

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 14.2 Intersection LOS: B
Intersection Capacity Utilization 71.9% ICU Level of Service C
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street

Future (2042) Total Traffic

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	520	2	75	5	0	0	4	5
Future Volume (vph)	0	0	0	6	520	2	75	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.955				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1691	0	0	1668	0
Flt Permitted					0.999			0.733				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1298	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	520	2	75	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	528	0	0	80	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				73.0	73.0		26.0	26.0			26.0	
Total Split (%)				63.5%	63.5%		22.6%	22.6%			22.6%	
Maximum Green (s)				67.3	67.3		15.7	15.7			15.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					67.3			15.7			15.7	
Actuated g/C Ratio					0.68			0.16			0.16	
v/c Ratio					0.23			0.39			0.03	
Control Delay					6.3			21.6			26.7	
Queue Delay					0.0			0.1			0.0	

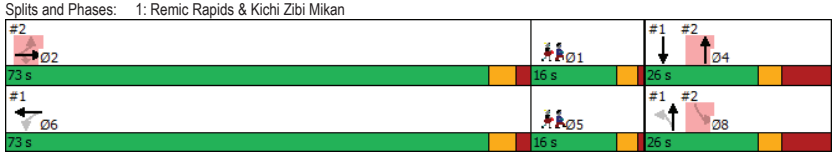
Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	73.0	16.0
Total Split (%)	14%	63%	14%
Maximum Green (s)	12.0	67.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.3			21.7			26.7	
LOS					A			C			C	
Approach Delay					6.3			21.7			26.7	
Approach LOS					A			C			C	
Queue Length 50th (m)					17.7			3.5			0.7	
Queue Length 95th (m)					24.2			m10.6			5.0	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2323			205			268	
Starvation Cap Reductn					0			6			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.23			0.40			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 8.6		Intersection LOS: A	
Intersection Capacity Utilization 40.1%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan

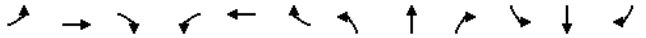


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	520	2	75	5	0	0	4	5
Future Volume (vph)	0	0	0	6	520	2	75	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.955				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1691	0	0	1668	0
Flt Permitted					0.999			0.733				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1298	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	3%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	520	2	75	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	528	0	0	80	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				51.7	51.7		22.3	22.3			22.3	
Total Split (%)				57.4%	57.4%		24.8%	24.8%			24.8%	
Maximum Green (s)				46.0	46.0		12.0	12.0			12.0	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					46.0			12.0			12.0	
Actuated g/C Ratio					0.62			0.16			0.16	
v/c Ratio					0.25			0.38			0.03	
Control Delay					6.6			27.2			20.4	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	51.7	16.0
Total Split (%)	18%	57%	18%
Maximum Green (s)	12.0	46.0	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

Future Total 2042 OPT
Weekday AM Peak Hour

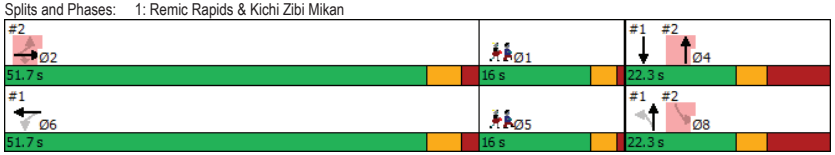


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.6			27.2			20.4	
LOS					A			C			C	
Approach Delay					6.6			27.2			20.4	
Approach LOS					A			C			C	
Queue Length 50th (m)					15.2			3.2			0.5	
Queue Length 95th (m)					21.9			m14.8			4.1	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2124			210			274	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.25			0.38			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 9.5		Intersection LOS: A	
Intersection Capacity Utilization 40.1%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



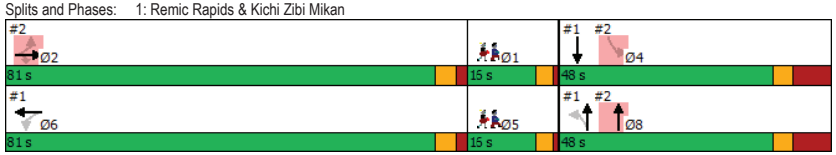
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1556	3	248	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1556	3	248	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1701	0	0	1665	0
Flt Permitted								0.724				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1288	0	0	1665	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1556	3	248	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1571	0	0	251	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				81.0	81.0		48.0	48.0			48.0	
Total Split (%)				55.9%	55.9%		33.1%	33.1%			33.1%	
Maximum Green (s)				75.3	75.3		37.7	37.7			37.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					75.3			37.7			37.7	
Actuated g/C Ratio					0.58			0.29			0.29	
v/c Ratio					0.78			0.67			0.01	
Control Delay					23.9			20.5			24.1	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	81.0	16.0
Total Split (%)	11%	56%	11%
Maximum Green (s)	12.0	75.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					23.9			20.5			24.1	
LOS					C			C			C	
Approach Delay					23.9			20.5			24.1	
Approach LOS					C			C			C	
Queue Length 50th (m)					152.6			9.4			0.6	
Queue Length 95th (m)					182.0			15.3			4.2	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2018			376			489	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.78			0.67			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 129			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan

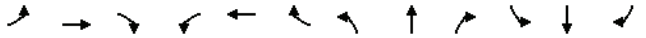


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1556	3	248	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1556	3	248	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1701	0	0	1666	0
Flt Permitted								0.724				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1289	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1556	3	248	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1571	0	0	251	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				56.2	56.2		37.8	37.8			37.8	
Total Split (%)				51.1%	51.1%		34.4%	34.4%			34.4%	
Maximum Green (s)				50.5	50.5		27.5	27.5			27.5	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					50.5			27.5			27.5	
Actuated g/C Ratio					0.54			0.29			0.29	
v/c Ratio					0.85			0.67			0.01	
Control Delay					24.0			20.5			18.3	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	56.2	16.0
Total Split (%)	15%	51%	15%
Maximum Green (s)	12.0	50.5	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

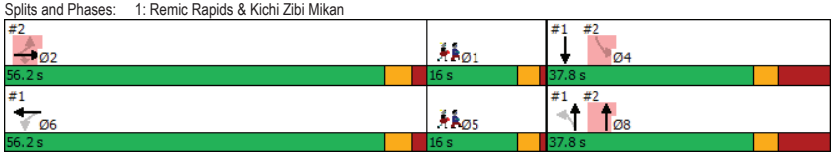
Future Total 2042 OPT
Weekday PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					24.0			20.5			18.3	
LOS					C			C			B	
Approach Delay					24.0			20.5			18.3	
Approach LOS					C			C			B	
Queue Length 50th (m)					120.0			7.8			0.4	
Queue Length 95th (m)					152.5			21.2			3.5	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					1857			377			490	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.85			0.67			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 80.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



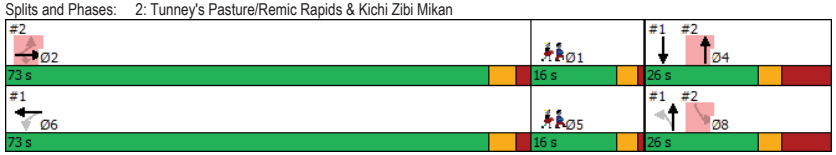
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1818	164	0	0	0	0	77	28	10	0	0
Future Volume (vph)	3	1818	164	0	0	0	0	77	28	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.964				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1502	0	0	0	0	1710	0	1729	0	0
Flt Permitted										0.689		
Satd. Flow (perm)	0	3458	1468	0	0	0	0	1710	0	1254	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164					13				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	3	1818	164	0	0	0	0	77	28	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1821	164	0	0	0	0	105	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	73.0	73.0	73.0					26.0		26.0		
Total Split (%)	63.5%	63.5%	63.5%					22.6%		22.6%		
Maximum Green (s)	67.3	67.3	67.3					15.7		15.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		67.3	67.3					15.7		15.7		
Actuated g/C Ratio		0.68	0.68					0.16		0.16		

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	73.0
Total Split (%)	14%	14%	63%
Maximum Green (s)	12.0	12.0	67.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.77	0.16					0.37		0.05		
Control Delay		13.7	1.2					36.9		32.9		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		13.7	1.2					36.9		32.9		
LOS		B	A					D		C		
Approach Delay		12.7						36.9			32.9	
Approach LOS		B						D			C	
Queue Length 50th (m)		109.9	0.0					15.9		1.7		
Queue Length 95th (m)		139.0	5.7					31.5		4.9		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2350	1050					282		198		
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		0.77	0.16					0.37		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 14.0		Intersection LOS: B	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



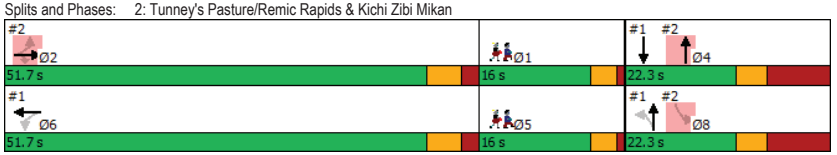
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1818	164	0	0	0	0	77	28	10	0	0
Future Volume (vph)	3	1818	164	0	0	0	0	77	28	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.964				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1502	0	0	0	0	1710	0	1729	0	0
Flt Permitted										0.689		
Satd. Flow (perm)	0	3458	1469	0	0	0	0	1710	0	1254	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164					17				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	3%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	3	1818	164	0	0	0	0	77	28	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1821	164	0	0	0	0	105	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	51.7	51.7	51.7					22.3		22.3		
Total Split (%)	57.4%	57.4%	57.4%					24.8%		24.8%		
Maximum Green (s)	46.0	46.0	46.0					12.0		12.0		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		46.0	46.0					12.0		12.0		
Actuated g/C Ratio		0.62	0.62					0.16		0.16		

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	51.7
Total Split (%)	18%	18%	57%
Maximum Green (s)	12.0	12.0	46.0
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.85	0.17					0.36		0.05		
Control Delay		16.2	1.5					27.3		23.4		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		16.2	1.5					27.3		23.4		
LOS		B	A					C		C		
Approach Delay		15.0						27.3			23.4	
Approach LOS		B						C			C	
Queue Length 50th (m)		94.2	0.0					11.0		1.2		
Queue Length 95th (m)		127.6	5.9					24.4		m3.9		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2149	975					291		203		
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		0.85	0.17					0.36		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 15.7		Intersection LOS: B	
Intersection Capacity Utilization 72.5%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	450	119	0	0	0	0	233	18	15	0	0
Future Volume (vph)	18	450	119	0	0	0	0	233	18	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850					0.990				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1502	0	0	0	0	1767	0	1729	0	0
Flt Permitted		0.998								0.532		
Satd. Flow (perm)	0	3418	1502	0	0	0	0	1767	0	966	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119					3				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	3%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	18	450	119	0	0	0	0	233	18	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	468	119	0	0	0	0	251	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	81.0	81.0	81.0					48.0		48.0		
Total Split (%)	55.9%	55.9%	55.9%					33.1%		33.1%		
Maximum Green (s)	75.3	75.3	75.3					37.7		37.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		75.3	75.3					37.7		37.7		
Actuated g/C Ratio		0.58	0.58					0.29		0.29		

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2042 Conditions
Weekday PM Peak Hour

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	81.0
Total Split (%)	11%	11%	56%
Maximum Green (s)	12.0	12.0	75.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

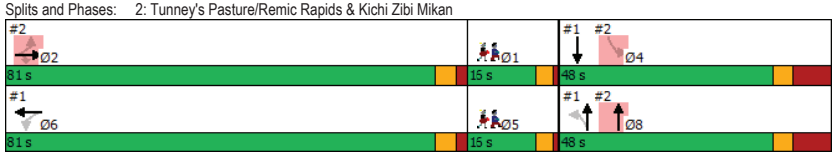
Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.23	0.13					0.48		0.05		
Control Delay		13.3	2.3					41.0		38.1		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		13.3	2.3					41.0		38.1		
LOS		B	A					D		D		
Approach Delay		11.1						41.0			38.1	
Approach LOS		B						D			D	
Queue Length 50th (m)		28.7	0.0					52.0		3.5		
Queue Length 95th (m)		37.8	7.8					77.9		m5.3		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1995	926					518		282		
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	0.13					0.48		0.05		

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 129
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 20.4 Intersection LOS: C
Intersection Capacity Utilization 41.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	450	119	0	0	0	0	233	18	15	0	0
Future Volume (vph)	18	450	119	0	0	0	0	233	18	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850					0.990				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1502	0	0	0	0	1767	0	1729	0	0
Flt Permitted		0.998								0.593		
Satd. Flow (perm)	0	3418	1502	0	0	0	0	1767	0	1077	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			119					3				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	3%	0%	0%	0%	0%	2%	0%	0%	0%	0%
Adj. Flow (vph)	18	450	119	0	0	0	0	233	18	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	468	119	0	0	0	0	251	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	56.2	56.2	56.2					37.8		37.8		
Total Split (%)	51.1%	51.1%	51.1%					34.4%		34.4%		
Maximum Green (s)	50.5	50.5	50.5					27.5		27.5		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		50.5	50.5					27.5		27.5		
Actuated g/C Ratio		0.54	0.54					0.29		0.29		

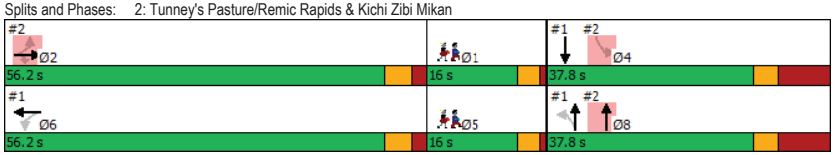
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	56.2
Total Split (%)	15%	15%	51%
Maximum Green (s)	12.0	12.0	50.5
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2042 OPT
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.25	0.14					0.48		0.05		
Control Delay		12.1	2.5					30.8		24.5		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		12.1	2.5					30.8		24.5		
LOS		B	A					C		C		
Approach Delay		10.2						30.8			24.5	
Approach LOS		B						C			C	
Queue Length 50th (m)		22.5	0.0					36.9		2.5		
Queue Length 95th (m)		31.5	7.4					59.5		m3.6		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1836	861					519		315		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		0	0					0		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.25	0.14					0.48		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 16.5		Intersection LOS: B	
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	35	0	369	916	60
Future Vol, veh/h	0	35	0	369	916	60
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	35	0	369	916	60

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	953	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-	-
Pot Cap-1 Maneuver	0	313	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	311	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	311	-	-
HCM Lane V/C Ratio	-	0.113	-	-
HCM Control Delay (s)	-	18	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	78	0	900	488	50
Future Vol, veh/h	0	78	0	900	488	50
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	78	0	900	488	50

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	520	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	560	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	556	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	556	-	-
HCM Lane V/C Ratio	-	0.14	-	-
HCM Control Delay (s)	-	12.5	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	13	356	5	26	925
Future Vol, veh/h	6	13	356	5	26	925
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	6	13	356	5	26	925

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1340	359	0	0	361	0
Stage 1	359	-	-	-	-	-
Stage 2	981	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	170	690	-	-	1209	-
Stage 1	711	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	162	690	-	-	1209	-
Mov Cap-2 Maneuver	162	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	348	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.2	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	340	1209	-
HCM Lane V/C Ratio	-	-	0.056	0.022	-
HCM Control Delay (s)	-	-	16.2	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	9	905	9	15	551
Future Vol, veh/h	7	9	905	9	15	551
Conflicting Peds, #/hr	9	5	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	7	9	905	9	15	551

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1501	916	0	0	915	0
Stage 1	911	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	136	333	-	-	754	-
Stage 1	395	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	131	331	-	-	753	-
Mov Cap-2 Maneuver	131	-	-	-	-	-
Stage 1	395	-	-	-	-	-
Stage 2	537	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.8	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	198	753	-
HCM Lane V/C Ratio	-	-	0.081	0.02	-
HCM Control Delay (s)	-	-	24.8	9.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	49	64	93	296	874	73
Future Vol, veh/h	49	64	93	296	874	73
Conflicting Peds, #/hr	4	3	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	4	13	3	1	1	3
Mvmt Flow	49	64	93	296	874	73

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1437	954	987	0	-	0
Stage 1	951	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Critical Hdwy	6.44	6.33	4.13	-	-	-
Critical Hdwy Stg 1	5.44	-	-	-	-	-
Critical Hdwy Stg 2	5.44	-	-	-	-	-
Follow-up Hdwy	3.536	3.417	2.227	-	-	-
Pot Cap-1 Maneuver	145	299	696	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	112	287	670	-	-	-
Mov Cap-2 Maneuver	112	-	-	-	-	-
Stage 1	299	-	-	-	-	-
Stage 2	591	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	59.7	2.7	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	670	-	171	-	-
HCM Lane V/C Ratio	0.139	-	0.661	-	-
HCM Control Delay (s)	11.2	0	59.7	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.5	-	3.8	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	5	64	5	5	5	93	296	5	5	874	73
Future Volume (vph)	49	5	64	5	5	5	93	296	5	5	874	73
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	0.0		0.0	45.0		0.0	0.0		20.0
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99		0.98					0.91
Frt		0.861			0.955			0.998				0.850
Flt Protected	0.950				0.984		0.950					
Satd. Flow (prot)	1662	1378	0	0	1694	0	1679	1799	0	0	1802	1502
Flt Permitted	0.748				0.905		0.950				0.998	
Satd. Flow (perm)	1298	1378	0	0	1556	0	1643	1799	0	0	1798	1363
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		30			30			40			40	
Link Distance (m)		174.2			161.4			99.7			87.5	
Travel Time (s)		20.9			19.4			9.0			7.9	
Confl. Peds. (#/hr)	4		3	3		4	40					40
Confl. Bikes (#/hr)												2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	0%	13%	0%	0%	0%	3%	1%	0%	0%	1%	3%
Adj. Flow (vph)	49	5	64	5	5	5	93	296	5	5	874	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	49	69	0	0	15	0	93	301	0	0	879	73
Turn Type	Perm	NA		Perm	NA		Prot	NA		Perm	NA	Perm
Protected Phases		4			8		13	2			6	
Permitted Phases	4			8						6		6
Detector Phase	4	4		8	8		13	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	23.2	23.2		23.2	23.2		10.5	27.5		27.5	27.5	27.5
Total Split (s)	24.2	24.2		24.2	24.2		10.8	45.0		45.0	45.0	45.0
Total Split (%)	30.3%	30.3%		30.3%	30.3%		13.5%	56.3%		56.3%	56.3%	56.3%
Maximum Green (s)	19.0	19.0		19.0	19.0		5.3	39.5		39.5	39.5	39.5
Yellow Time (s)	2.7	2.7		2.7	2.7		3.2	3.2		3.2	3.2	3.2
All-Red Time (s)	2.5	2.5		2.5	2.5		2.3	2.3		2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.2	5.2			5.2		5.5	5.5			5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30		30	30			30		30	30	30
Act Effct Green (s)	11.7	11.7			11.7		8.1	46.1			46.1	46.1
Actuated g/C Ratio	0.15	0.15			0.15		0.10	0.58			0.58	0.58

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.26	0.34			0.07		0.55	0.29			0.85	0.09
Control Delay	31.1	33.1			26.4		48.2	15.4			27.4	10.6
Queue Delay	0.0	0.0			0.0		0.0	0.3			0.0	0.0
Total Delay	31.1	33.1			26.4		48.2	15.7			27.4	10.6
LOS	C	C			C		D	B			C	B
Approach Delay		32.3			26.4			23.3			26.1	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	7.0	9.9			2.1		14.8	33.8			110.9	5.0
Queue Length 95th (m)	14.6	19.2			6.4		m#35.7	50.0			#205.9	12.3
Internal Link Dist (m)		150.2			137.4			75.7			63.5	
Turn Bay Length (m)	55.0						45.0					20.0
Base Capacity (vph)	308	327			369		170	1036			1035	785
Starvation Cap Reductn	0	0			0		0	308			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	0.16	0.21			0.04		0.55	0.41			0.85	0.09

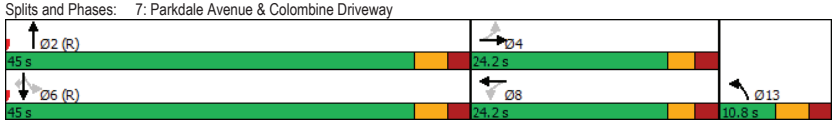
Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 66 (83%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 87.0% ICU Level of Service E
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Parkdale Avenue & Colombine Driveway



Intersection

Int Delay, s/veh 55.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	154	105	90	743	493	82
Future Vol, veh/h	154	105	90	743	493	82
Conflicting Peds, #/hr	16	0	25	0	0	25
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	4	2	0	1	0
Mvmt Flow	154	105	90	743	493	82

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1498	559	600	0	-	0
Stage 1	559	-	-	-	-	-
Stage 2	939	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	~ 136	525	977	-	-	-
Stage 1	576	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 109	513	954	-	-	-
Mov Cap-2 Maneuver	~ 109	-	-	-	-	-
Stage 1	472	-	-	-	-	-
Stage 2	375	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 355.9	1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	954	-	160	-	-
HCM Lane V/C Ratio	0.094	-	1.619	-	-
HCM Control Delay (s)	9.2	0	$ 355.9	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.3	-	17.8	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

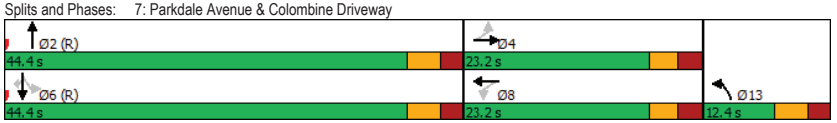
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	5	105	5	5	5	90	743	5	5	493	82
Future Volume (vph)	154	5	105	5	5	5	90	743	5	5	493	82
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	0.0		0.0	45.0		0.0	0.0		20.0
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97				0.98		0.98	1.00				0.93
Frt		0.857			0.955			0.999				0.850
Flt Protected	0.950				0.984		0.950				0.999	
Satd. Flow (prot)	1729	1502	0	0	1679	0	1695	1818	0	0	1800	1547
Flt Permitted	0.748				0.913		0.950				0.994	
Satd. Flow (perm)	1314	1502	0	0	1558	0	1657	1818	0	0	1791	1446
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		30			40			40			40	
Link Distance (m)		174.2			161.4			99.7			87.5	
Travel Time (s)		20.9			14.5			9.0			7.9	
Confl. Peds. (#/hr)	16					16	25					25
Confl. Bikes (#/hr)									4			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	4%	0%	0%	0%	2%	0%	0%	0%	1%	0%
Adj. Flow (vph)	154	5	105	5	5	5	90	743	5	5	493	82
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	110	0	0	15	0	90	748	0	0	498	82
Turn Type	Perm	NA		Perm	NA		Prot	NA		Perm	NA	Perm
Protected Phases		4			8		13	2			6	
Permitted Phases	4			8						6		6
Detector Phase	4	4		8	8		13	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	23.2	23.2		23.2	23.2		10.5	27.5		27.5	27.5	27.5
Total Split (s)	23.2	23.2		23.2	23.2		12.4	44.4		44.4	44.4	44.4
Total Split (%)	29.0%	29.0%		29.0%	29.0%		15.5%	55.5%		55.5%	55.5%	55.5%
Maximum Green (s)	18.0	18.0		18.0	18.0		6.9	38.9		38.9	38.9	38.9
Yellow Time (s)	2.7	2.7		2.7	2.7		3.2	3.2		3.2	3.2	3.2
All-Red Time (s)	2.5	2.5		2.5	2.5		2.3	2.3		2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.2	5.2			5.2		5.5	5.5			5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30		30	30			30		30	30	30
Act Effct Green (s)	14.1	14.1			14.1		7.6	44.4			44.4	44.4
Actuated g/C Ratio	0.18	0.18			0.18		0.10	0.56			0.56	0.56

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.66	0.42			0.05		0.56	0.74			0.50	0.10
Control Delay	44.1	32.9			25.5		43.8	14.6			15.2	11.3
Queue Delay	0.0	0.0			0.0		0.0	1.1			0.0	0.0
Total Delay	44.1	32.9			25.5		43.8	15.6			15.2	11.3
LOS	D	C			C		D	B			B	B
Approach Delay		39.4			25.5			18.7			14.6	
Approach LOS		D			C			B			B	
Queue Length 50th (m)	21.9	14.9			1.9		12.1	46.5			50.2	6.3
Queue Length 95th (m)	38.7	27.7			6.4		m18.1	#158.4			79.4	13.7
Internal Link Dist (m)		150.2			137.4			75.7			63.5	
Turn Bay Length (m)	55.0						45.0					20.0
Base Capacity (vph)	295	337			350		164	1008			993	802
Starvation Cap Reductn	0	0			0		0	95			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	0.52	0.33			0.04		0.55	0.82			0.50	0.10

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 78 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 20.6 Intersection LOS: C
Intersection Capacity Utilization 98.5% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Parkdale Avenue & Colombine Driveway



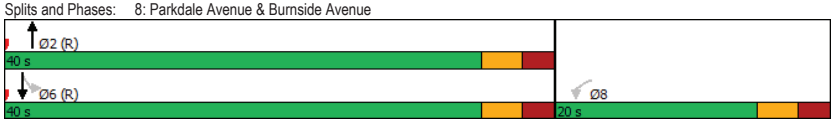
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	96	278	53	249	694
Future Volume (vph)	52	96	278	53	249	694
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.99			0.99
Frt	0.912		0.978			
Flt Protected	0.983					0.987
Satd. Flow (prot)	1508	0	1680	0	0	1783
Flt Permitted	0.983					0.801
Satd. Flow (perm)	1482	0	1680	0	0	1436
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	96		27			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	23	46		33	33	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	4%	9%	0%	1%
Adj. Flow (vph)	52	96	278	53	249	694
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	331	0	0	943
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	20.0		40.0		40.0	40.0
Total Split (%)	33.3%		66.7%		66.7%	66.7%
Maximum Green (s)	14.6		34.6		34.6	34.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		41.8			41.8
Actuated g/C Ratio	0.18		0.70			0.70
v/c Ratio	0.43		0.28			0.94
Control Delay	12.7		5.7			34.4
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	12.7		5.7			34.4
LOS	B		A			C
Approach Delay	12.7		5.7			34.4
Approach LOS	B		A			C
Queue Length 50th (m)	4.6		14.7			~123.5
Queue Length 95th (m)	17.0		26.8			#184.5
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	433		1179			1001
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.34		0.28			0.94

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.94
Intersection Signal Delay: 25.4 Intersection LOS: C
Intersection Capacity Utilization 97.6% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



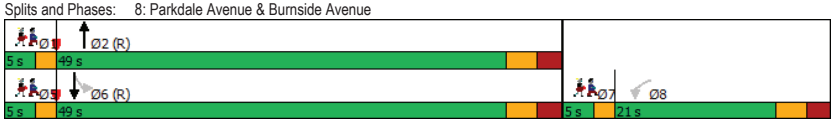
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	52	96	278	53	249	694			
Future Volume (vph)	52	96	278	53	249	694			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)	0.0	0.0		0.0	15.0				
Storage Lanes	1	0		0	0				
Taper Length (m)	2.5				2.5				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.88		0.99		0.96				
Frt	0.912		0.978						
Flt Protected	0.983				0.950				
Satd. Flow (prot)	1474	0	1676	0	1729	1802			
Flt Permitted	0.983				0.525				
Satd. Flow (perm)	1440	0	1676	0	920	1802			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	199.2		180.1			99.7			
Travel Time (s)	17.9		16.2			9.0			
Confl. Peds. (#/hr)	23	46		33	33				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	0%	0%	4%	9%	0%	1%			
Adj. Flow (vph)	52	96	278	53	249	694			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	148	0	331	0	249	694			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.4		26.4		10.4	10.4	5.0	5.0	5.0
Total Split (s)	21.0		49.0		49.0	49.0	5.0	5.0	5.0
Total Split (%)	26.3%		61.3%		61.3%	61.3%	6%	6%	6%
Maximum Green (s)	15.6		43.6		43.6	43.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.4		2.4		2.4	2.4	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			
Total Lost Time (s)	5.4		5.4		5.4	5.4			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		6.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	12.8		43.6		43.6	43.6			
Actuated g/C Ratio	0.16		0.54		0.54	0.54			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
v/c Ratio	0.64		0.36		0.50	0.71			
Control Delay	44.0		10.7		4.7	5.8			
Queue Delay	0.0		0.0		0.4	2.3			
Total Delay	44.0		10.7		5.1	8.2			
LOS	D		B		A	A			
Approach Delay	44.0		10.7			7.4			
Approach LOS	D		B			A			
Queue Length 50th (m)	20.9		22.0		2.9	8.3			
Queue Length 95th (m)	38.0		33.6		m3.6	m9.8			
Internal Link Dist (m)	175.2		156.1			75.7			
Turn Bay Length (m)					15.0				
Base Capacity (vph)	280		913		501	982			
Starvation Cap Reductn	0		0		50	168			
Spillback Cap Reductn	0		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.53		0.36		0.55	0.85			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 72 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 12.0 Intersection LOS: B
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



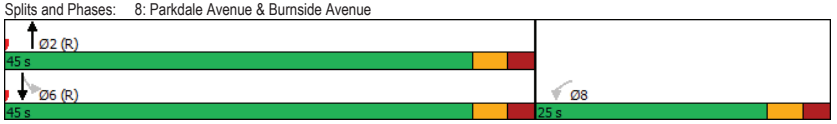
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	232	586	57	78	505
Future Volume (vph)	49	232	586	57	78	505
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88		1.00			1.00
Frt	0.889		0.988			
Flt Protected	0.991					0.993
Satd. Flow (prot)	1418	0	1788	0	0	1776
Flt Permitted	0.991					0.858
Satd. Flow (perm)	1405	0	1788	0	0	1534
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	232		12			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	21	46		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	0%	0%	2%	0%	2%
Adj. Flow (vph)	49	232	586	57	78	505
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	643	0	0	583
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	19.6		39.6		39.6	39.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	11.2		48.0			48.0
Actuated g/C Ratio	0.16		0.69			0.69
v/c Ratio	0.67		0.52			0.56
Control Delay	14.5		8.3			9.4
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	14.5		8.3			9.4
LOS	B		A			A
Approach Delay	14.5		8.3			9.4
Approach LOS	B		A			A
Queue Length 50th (m)	5.4		39.0			37.4
Queue Length 95th (m)	24.1		73.7			74.0
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	560		1228			1050
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.50		0.52			0.56

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 23 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 9.9 Intersection LOS: A
Intersection Capacity Utilization 103.5% ICU Level of Service G
Analysis Period (min) 15

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



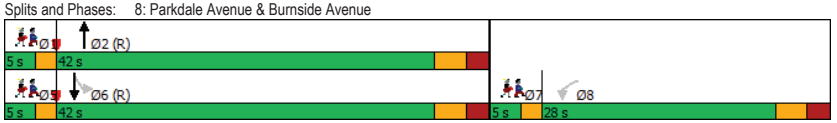
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	49	232	586	57	78	505			
Future Volume (vph)	49	232	586	57	78	505			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)	0.0	0.0		0.0	15.0				
Storage Lanes	1	0		0	0				
Taper Length (m)	2.5				2.5				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.87		1.00		0.99				
Frt	0.889		0.988						
Flt Protected	0.991				0.950				
Satd. Flow (prot)	1397	0	1788	0	1729	1784			
Flt Permitted	0.991				0.205				
Satd. Flow (perm)	1382	0	1788	0	371	1784			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	199.2		180.1			99.7			
Travel Time (s)	17.9		16.2			9.0			
Confl. Peds. (#/hr)	21	46		12	12				
Confl. Bikes (#/hr)				3					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	4%	0%	0%	2%	0%	2%			
Adj. Flow (vph)	49	232	586	57	78	505			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	281	0	643	0	78	505			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.4		26.4		10.4	10.4	5.0	5.0	5.0
Total Split (s)	28.0		42.0		42.0	42.0	5.0	5.0	5.0
Total Split (%)	35.0%		52.5%		52.5%	52.5%	6%	6%	6%
Maximum Green (s)	22.6		36.6		36.6	36.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.4		2.4		2.4	2.4	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			
Total Lost Time (s)	5.4		5.4		5.4	5.4			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		6.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	19.8		36.6		36.6	36.6			
Actuated g/C Ratio	0.25		0.46		0.46	0.46			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
v/c Ratio	0.82		0.79		0.46	0.62			
Control Delay	48.4		16.0		17.1	13.2			
Queue Delay	1.0		1.1		0.0	0.4			
Total Delay	49.3		17.0		17.1	13.6			
LOS	D		B		B	B			
Approach Delay	49.3		17.0			14.1			
Approach LOS	D		B			B			
Queue Length 50th (m)	39.0		24.7		3.7	23.5			
Queue Length 95th (m)	#71.9		#41.5		m7.2	31.5			
Internal Link Dist (m)	175.2		156.1			75.7			
Turn Bay Length (m)					15.0				
Base Capacity (vph)	390		818		169	816			
Starvation Cap Reductn	0		0		0	68			
Spillback Cap Reductn	20		50		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.76		0.84		0.46	0.68			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 21.9 Intersection LOS: C
Intersection Capacity Utilization 75.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	10	321	29	3	743
Future Volume (vph)	31	10	321	29	3	743
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		1.00			1.00
Frt	0.967		0.989			
Flt Protected	0.964					
Satd. Flow (prot)	1612	0	1742	0	0	1784
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1541	0	1742	0	0	1783
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	10		13			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	27	4		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%
Adj. Flow (vph)	31	10	321	29	3	743
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	350	0	0	746
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		41.0		41.0	41.0
Total Split (%)	31.9%		68.1%		68.1%	68.1%
Maximum Green (s)	14.0		35.9		35.9	35.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		45.6			45.6
Actuated g/C Ratio	0.18		0.76			0.76
v/c Ratio	0.15		0.26			0.55
Control Delay	16.6		5.3			8.6
Queue Delay	0.0		0.0			0.0

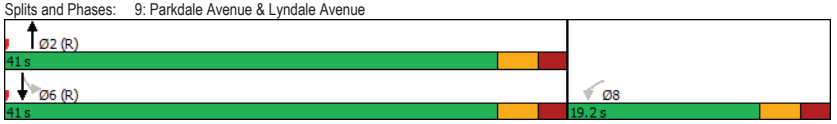
9: Parkdale Avenue & Lyndale Avenue
Tunney's Pasture TIA

Future Total 2042 Conditions
Weekday AM Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	16.6		5.3			8.6
LOS	B		A			A
Approach Delay	16.6		5.3			8.6
Approach LOS	B		A			A
Queue Length 50th (m)	2.7		16.1			49.5
Queue Length 95th (m)	9.1		28.4			85.1
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	366		1323			1351
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.11		0.26			0.55

Intersection Summary			
Area Type:	Other		
Cycle Length: 60.2			
Actuated Cycle Length: 60.2			
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.9		Intersection LOS: A	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



Lanes, Volumes, Timings
BD

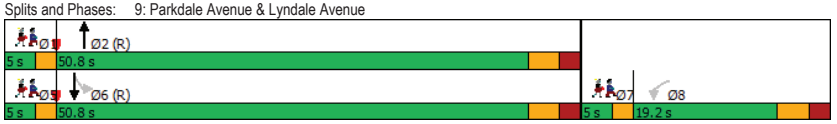
Synchro 11 Report
February 2026

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	31	10	321	29	3	743			
Future Volume (vph)	31	10	321	29	3	743			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.93		1.00			1.00			
Frt	0.967		0.989						
Flt Protected	0.964								
Satd. Flow (prot)	1611	0	1741	0	0	1784			
Flt Permitted	0.964					0.999			
Satd. Flow (perm)	1517	0	1741	0	0	1783			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	167.5		221.0			180.1			
Travel Time (s)	15.1		19.9			16.2			
Confl. Peds. (#/hr)	27	4		12	12				
Confl. Bikes (#/hr)				3					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	6%	0%	3%	3%	0%	2%			
Adj. Flow (vph)	31	10	321	29	3	743			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	41	0	350	0	0	746			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.2		25.1		10.1	10.1	5.0	5.0	5.0
Total Split (s)	19.2		50.8		50.8	50.8	5.0	5.0	5.0
Total Split (%)	24.0%		63.5%		63.5%	63.5%	6%	6%	6%
Maximum Green (s)	14.0		45.7		45.7	45.7	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.2		2.1		2.1	2.1	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.2		5.1			5.1			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		5.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	10.8		45.7			45.7			
Actuated g/C Ratio	0.14		0.57			0.57			
v/c Ratio	0.20		0.35			0.73			
Control Delay	31.3		10.5			4.9			
Queue Delay	0.0		0.0			0.0			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Total Delay	31.3		10.5			4.9			
LOS	C		B			A			
Approach Delay	31.3		10.5			4.9			
Approach LOS	C		B			A			
Queue Length 50th (m)	5.3		26.2			0.0			
Queue Length 95th (m)	13.7		42.0			0.0			
Internal Link Dist (m)	143.5		197.0			156.1			
Turn Bay Length (m)									
Base Capacity (vph)	265		994			1018			
Starvation Cap Reductn	0		0			0			
Spillback Cap Reductn	0		0			0			
Storage Cap Reductn	0		0			0			
Reduced v/c Ratio	0.15		0.35			0.73			

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 6 (8%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 7.5		Intersection LOS: A	
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

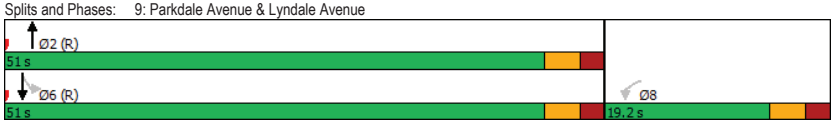


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	6	617	34	9	545
Future Volume (vph)	18	6	617	34	9	545
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		1.00			1.00
Frt	0.966		0.993			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1682	0	1801	0	0	1783
Flt Permitted	0.964					0.991
Satd. Flow (perm)	1619	0	1801	0	0	1768
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6		8			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	20	4		22	22	
Confl. Bikes (#/hr)				10		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	18	6	617	34	9	545
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	651	0	0	554
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		51.0		51.0	51.0
Total Split (%)	27.4%		72.6%		72.6%	72.6%
Maximum Green (s)	14.0		45.9		45.9	45.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		55.6			55.6
Actuated g/C Ratio	0.15		0.79			0.79
v/c Ratio	0.10		0.46			0.40
Control Delay	20.0		6.2			5.7
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	20.0		6.2			5.7
LOS	B		A			A
Approach Delay	20.0		6.2			5.7
Approach LOS	B		A			A
Queue Length 50th (m)	1.9		38.8			31.2
Queue Length 95th (m)	7.5		62.5			50.1
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	327		1428			1401
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.07		0.46			0.40

Intersection Summary			
Area Type:	Other		
Cycle Length: 70.2			
Actuated Cycle Length: 70.2			
Offset: 18 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.46			
Intersection Signal Delay: 6.2		Intersection LOS: A	
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

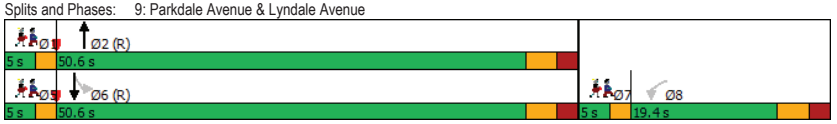


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	18	6	617	34	9	545			
Future Volume (vph)	18	6	617	34	9	545			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.95		1.00			1.00			
Frt	0.966		0.993						
Flt Protected	0.964					0.999			
Satd. Flow (prot)	1682	0	1801	0	0	1783			
Flt Permitted	0.964					0.990			
Satd. Flow (perm)	1610	0	1801	0	0	1767			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	167.5		221.0			180.1			
Travel Time (s)	15.1		19.9			16.2			
Confl. Peds. (#/hr)	20	4		22	22				
Confl. Bikes (#/hr)				10					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%			
Adj. Flow (vph)	18	6	617	34	9	545			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	24	0	651	0	0	554			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.2		25.1		10.1	10.1	5.0	5.0	5.0
Total Split (s)	19.4		50.6		50.6	50.6	5.0	5.0	5.0
Total Split (%)	24.3%		63.3%		63.3%	63.3%	6%	6%	6%
Maximum Green (s)	14.2		45.5		45.5	45.5	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.2		2.1		2.1	2.1	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.2		5.1			5.1			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		5.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	10.7		45.5			45.5			
Actuated g/C Ratio	0.13		0.57			0.57			
v/c Ratio	0.11		0.64			0.55			
Control Delay	29.5		15.2			9.2			
Queue Delay	0.0		0.0			0.0			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Total Delay	29.5		15.2			9.2			
LOS	C		B			A			
Approach Delay	29.5		15.2			9.2			
Approach LOS	C		B			A			
Queue Length 50th (m)	3.1		61.4			19.0			
Queue Length 95th (m)	9.3		94.8			46.2			
Internal Link Dist (m)	143.5		197.0			156.1			
Turn Bay Length (m)									
Base Capacity (vph)	285		1024			1004			
Starvation Cap Reductn	0		0			0			
Spillback Cap Reductn	0		0			0			
Storage Cap Reductn	0		0			0			
Reduced v/c Ratio	0.08		0.64			0.55			

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 72 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 51.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	390	69	39	203	30	94	185	70	73	504	198
Future Volume (vph)	126	390	69	39	203	30	94	185	70	73	504	198
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.92		0.91	0.97		0.87		0.98		0.96		0.94
Frt			0.850			0.850		0.973				0.850
Flt Protected	0.950			0.950				0.987		0.950		
Satd. Flow (prot)	1695	1701	1138	1729	1750	1406	0	1651	0	1712	1802	1517
Flt Permitted	0.611			0.395				0.456		0.497		
Satd. Flow (perm)	998	1701	1039	698	1750	1220	0	760	0	858	1802	1421
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107			107		15				120
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			279.3			221.0	
Travel Time (s)		17.9			21.6			25.1			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	7%	36%	0%	4%	10%	5%	4%	1%	1%	1%	2%
Adj. Flow (vph)	126	390	69	39	203	30	94	185	70	73	504	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	390	69	39	203	30	0	349	0	73	504	198
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	45.3%	45.3%		45.3%	45.3%	45.3%
Maximum Green (s)	37.9	37.9	37.9	37.9	37.9	37.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	37.9	37.9	37.9	37.9	37.9	37.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40		0.39		0.39	0.39	0.39

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Future Total 2042 Conditions
Weekday AM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

Synchro 11 Report
February 2026

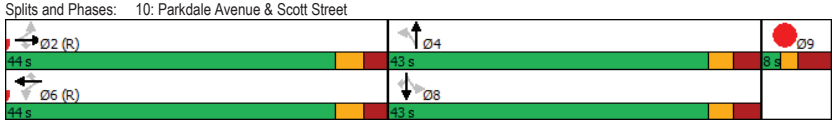
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.32	0.58	0.14	0.14	0.29	0.05		1.16		0.22	0.72	0.32
Control Delay	19.4	23.3	2.4	19.9	20.9	0.2		129.6		21.9	32.1	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	19.4	23.3	2.4	19.9	20.9	0.2		129.6		21.9	32.1	9.9
LOS	B	C	A	B	C	A		F		C	C	A
Approach Delay		20.0			18.5			129.6			25.4	
Approach LOS		B			B			F			C	
Queue Length 50th (m)	13.5	57.2	0.1	4.5	24.7	0.0		~74.5		8.8	77.3	9.1
Queue Length 95th (m)	m19.7	61.0	m1.7	11.4	40.9	0.0		#127.5		19.1	114.5	24.3
Internal Link Dist (m)		225.1			275.4			255.3			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	398	678	478	278	698	551		302		331	696	622
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.32	0.58	0.14	0.14	0.29	0.05		1.16		0.22	0.72	0.32

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 91 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.16
Intersection Signal Delay: 41.2 Intersection LOS: D
Intersection Capacity Utilization 98.7% ICU Level of Service F
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	390	69	39	203	30	94	185	70	73	504	198
Future Volume (vph)	126	390	69	39	203	30	94	185	70	73	504	198
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	40.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.91	0.97		0.86		0.97		0.94		0.93
Frt			0.850			0.850		0.959				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1701	1138	1729	1750	1406	1647	1641	0	1712	1802	1517
Flt Permitted	0.574			0.304			0.155			0.601		
Satd. Flow (perm)	935	1701	1033	538	1750	1211	269	1641	0	1015	1802	1418
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			170		26				168
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			265.8			221.0	
Travel Time (s)		17.9			21.6			23.9			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	7%	36%	0%	4%	10%	5%	4%	1%	1%	1%	2%
Adj. Flow (vph)	126	390	69	39	203	30	94	185	70	73	504	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	126	390	69	39	203	30	94	255	0	73	504	198
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	7	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	11.3	31.3		31.3	31.3	31.3
Total Split (s)	38.0	38.0	38.0	38.0	38.0	38.0	12.0	54.0		42.0	42.0	42.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	12.0%	54.0%		42.0%	42.0%	42.0%
Maximum Green (s)	31.9	31.9	31.9	31.9	31.9	31.9	5.7	47.7		35.7	35.7	35.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0		15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30		30		30	30	30
Act Effct Green (s)	31.9	31.9	31.9	31.9	31.9	31.9	42.1	42.1		32.5	32.5	32.5
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.42	0.42		0.32	0.32	0.32

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

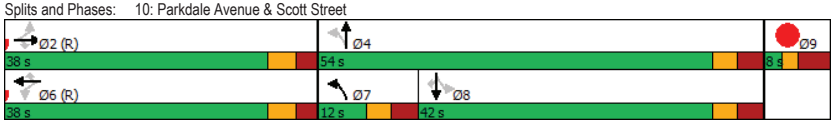
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2042 OPT MOD
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.42	0.72	0.16	0.23	0.36	0.06	0.49	0.36		0.22	0.86	0.35
Control Delay	24.0	27.7	0.7	29.4	28.6	0.2	24.6	17.9		25.1	47.1	7.2
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	24.0	27.7	0.7	29.4	28.6	0.2	24.6	17.9		25.1	47.1	7.2
LOS	C	C	A	C	C	A	C	B		C	D	A
Approach Delay		23.7			25.6			19.7			34.8	
Approach LOS		C			C			B			C	
Queue Length 50th (m)	10.1	39.5	0.0	5.5	30.1	0.0	9.8	26.4		9.7	86.8	3.8
Queue Length 95th (m)	m22.3	m84.1	m0.0	14.4	49.4	0.0	18.7	43.4		20.2	#129.1	18.4
Internal Link Dist (m)		225.1			275.4			241.8			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	40.0			65.0		30.0
Base Capacity (vph)	298	542	445	171	558	502	191	796		362	643	614
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	0.42	0.72	0.16	0.23	0.36	0.06	0.49	0.32		0.20	0.78	0.32

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 27.6 Intersection LOS: C
Intersection Capacity Utilization 83.2% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	352	110	74	375	43	90	315	53	58	359	147
Future Volume (vph)	294	352	110	74	375	43	90	315	53	58	359	147
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		0.83	0.91		0.85		0.98		0.96		0.91
Frt			0.850			0.850		0.984				0.850
Flt Protected	0.950			0.950				0.990		0.950		
Satd. Flow (prot)	1729	1784	1473	1712	1750	1547	0	1676	0	1729	1802	1532
Flt Permitted	0.242			0.550				0.665		0.396		
Satd. Flow (perm)	421	1784	1220	899	1750	1321	0	1118	0	692	1802	1392
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			110			163		7				160
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			279.3			221.0	
Travel Time (s)		17.9			21.6			25.1			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	5%	1%	4%	0%	17%	1%	2%	0%	1%	1%
Adj. Flow (vph)	294	352	110	74	375	43	90	315	53	58	359	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	294	352	110	74	375	43	0	458	0	58	359	147
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.6	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	15.0	49.0	49.0	34.0	34.0	34.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	15.0%	49.0%	49.0%	34.0%	34.0%	34.0%	43.0%	43.0%		43.0%	43.0%	43.0%
Maximum Green (s)	9.4	42.9	42.9	27.9	27.9	27.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	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		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	43.4	42.9	42.9	27.9	27.9	27.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.43	0.43	0.43	0.28	0.28	0.28		0.37		0.37	0.37	0.37

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2042 Conditions
Weekday PM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.96	0.46	0.19	0.30	0.77	0.09		1.11		0.23	0.54	0.24
Control Delay	67.8	22.8	4.3	32.3	45.1	0.3		107.8		25.0	28.8	4.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	67.8	22.8	4.3	32.3	45.1	0.3		107.8		25.0	28.8	4.0
LOS	E	C	A	C	D	A		F		C	C	A
Approach Delay		37.6			39.3			107.8			21.9	
Approach LOS		D			D			F			C	
Queue Length 50th (m)	37.8	47.3	0.0	11.3	66.6	0.0		~101.1		7.7	54.2	0.0
Queue Length 95th (m)	#86.4	71.4	9.6	23.8	#107.4	0.0		#160.7		17.6	81.7	10.3
Internal Link Dist (m)		225.1			275.4			255.3			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	305	765	586	250	488	486		414		253	661	612
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.96	0.46	0.19	0.30	0.77	0.09		1.11		0.23	0.54	0.24

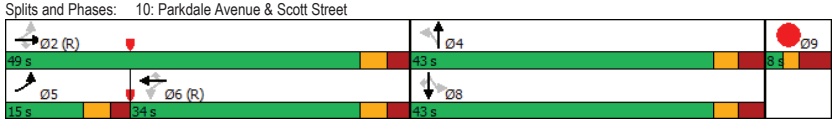
Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 105
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.11
Intersection Signal Delay: 48.2 Intersection LOS: D
Intersection Capacity Utilization 106.6% ICU Level of Service G
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	352	110	74	375	43	90	315	53	58	359	147
Future Volume (vph)	294	352	110	74	375	43	90	315	53	58	359	147
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	40.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		0.81	0.90		0.84	0.97	0.98		0.93		0.90
Frt			0.850			0.850		0.978				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1784	1473	1712	1750	1547	1478	1726	0	1729	1802	1532
Flt Permitted	0.232			0.550			0.177			0.502		
Satd. Flow (perm)	403	1784	1199	890	1750	1305	268	1726	0	850	1802	1378
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155			215		8				213
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			265.8			221.0	
Travel Time (s)		17.9			21.6			23.9			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	5%	1%	4%	0%	17%	1%	2%	0%	1%	1%
Adj. Flow (vph)	294	352	110	74	375	43	90	315	53	58	359	147
Shared Lane Traffic (%)												
Lane Group Flow (vph)	294	352	110	74	375	43	90	368	0	58	359	147
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	7	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.1	32.1	32.1	32.1	32.1	32.1	11.3	31.3		31.3	31.3	31.3
Total Split (s)	19.0	57.0	57.0	38.0	38.0	38.0	12.0	45.0		33.0	33.0	33.0
Total Split (%)	17.3%	51.8%	51.8%	34.5%	34.5%	34.5%	10.9%	40.9%		30.0%	30.0%	30.0%
Maximum Green (s)	12.9	50.9	50.9	31.9	31.9	31.9	5.7	38.7		26.7	26.7	26.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0		15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30		30		30	30	30
Act Effct Green (s)	50.9	50.9	50.9	31.9	31.9	31.9	34.6	34.6		25.0	25.0	25.0
Actuated g/C Ratio	0.46	0.46	0.46	0.29	0.29	0.29	0.31	0.31		0.23	0.23	0.23

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	7%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

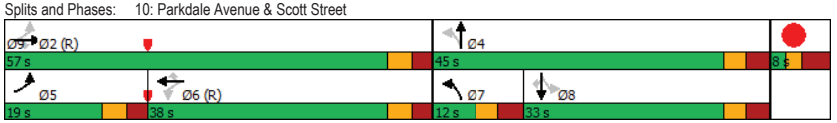
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2042 OPT MOD
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.86	0.43	0.17	0.29	0.74	0.08	0.62	0.67		0.30	0.88	0.31
Control Delay	45.2	27.7	3.8	34.0	45.5	0.3	45.1	37.8		39.2	63.8	2.7
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	45.2	27.7	3.8	34.0	45.5	0.3	45.1	37.8		39.2	63.8	2.7
LOS	D	C	A	C	D	A	D	D		D	E	A
Approach Delay		31.0			39.8			39.3			45.4	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	50.8	64.8	0.2	12.3	72.6	0.0	13.2	63.0		10.2	73.2	0.0
Queue Length 95th (m)	m#69.2	m76.8	m3.0	25.3	106.9	0.0	#25.9	93.8		22.1	#118.4	3.7
Internal Link Dist (m)		225.1			275.4			241.8			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	40.0			65.0		30.0
Base Capacity (vph)	341	825	638	258	507	531	146	612		206	437	495
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	0.86	0.43	0.17	0.29	0.74	0.08	0.62	0.60		0.28	0.82	0.30

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 108 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 38.2 Intersection LOS: D
Intersection Capacity Utilization 85.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	481	76	87	233	76	139	186	134	50	123	33
Future Volume (vph)	39	481	76	87	233	76	139	186	134	50	123	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.77	0.96		0.95		0.64	0.68		0.63	0.73		0.61
Frt		0.980				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1679	1499	0	1679	1655	1432	1429	1802	1517	1517	1767	1459
Flt Permitted	0.576			0.221			0.678			0.588		
Satd. Flow (perm)	783	1499	0	369	1655	917	697	1802	949	684	1767	889
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			184.8	
Travel Time (s)		20.2			17.9			20.2			22.2	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	10%	37%	3%	10%	8%	21%	1%	2%	14%	3%	6%
Adj. Flow (vph)	39	481	76	87	233	76	139	186	134	50	123	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	557	0	87	233	76	139	186	134	50	123	33
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	44.0	44.0		44.0	44.0	44.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%	46.3%	43.2%	43.2%	43.2%	43.2%	43.2%	43.2%
Maximum Green (s)	37.8	37.8		37.8	37.8	37.8	34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max		C-Max	C-Max	C-Max	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	37.8	37.8		37.8	37.8	37.8	24.2	24.2	24.2	24.2	24.2	24.2
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.25	0.25	0.25	0.25	0.25	0.25

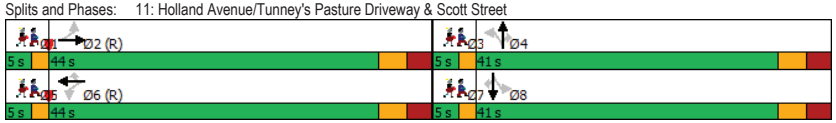
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.13	0.93		0.60	0.35	0.21	0.79	0.41	0.56	0.29	0.27	0.15
Control Delay	19.6	52.9		35.9	17.8	16.9	59.9	30.0	37.5	29.2	27.3	24.8
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	19.6	52.9		35.9	17.8	16.9	59.9	30.0	37.5	29.2	27.3	24.8
LOS	B	D		D	B	B	E	C	D	C	C	C
Approach Delay		50.8			21.6			41.3			27.4	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	4.4	95.9		10.6	25.5	7.9	23.4	28.0	21.0	7.3	17.8	4.6
Queue Length 95th (m)	11.3	#160.6		m19.4	m38.9	m15.4	39.8	39.9	34.0	15.0	27.6	10.4
Internal Link Dist (m)		256.5			225.1			200.2			160.8	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	311	596		146	658	364	255	660	347	250	647	325
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	0.13	0.93		0.60	0.35	0.21	0.55	0.28	0.39	0.20	0.19	0.10

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 85 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 38.3 Intersection LOS: D
Intersection Capacity Utilization 86.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	481	76	87	233	76	139	186	134	50	123	33
Future Volume (vph)	39	481	76	87	233	76	139	186	134	50	123	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.75	0.96		0.94		0.62	0.67		0.61	0.72		0.59
Frt		0.980				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1679	1500	0	1679	1655	1432	1429	1802	1517	1517	1767	1459
Flt Permitted	0.579			0.245			0.678			0.574		
Satd. Flow (perm)	770	1500	0	405	1655	895	680	1802	920	661	1767	860
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	10%	37%	3%	10%	8%	21%	1%	2%	14%	3%	6%
Adj. Flow (vph)	39	481	76	87	233	76	139	186	134	50	123	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	557	0	87	233	76	139	186	134	50	123	33
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	54.0	54.0		54.0	54.0	54.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	54.0%	54.0%		54.0%	54.0%	54.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%
Maximum Green (s)	47.8	47.8		47.8	47.8	47.8	29.8	29.8	29.8	29.8	29.8	29.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Min	C-Min		C-Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	42.4	42.4		42.4	42.4	42.4	24.3	24.3	24.3	24.3	24.3	24.3
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.24	0.24	0.24	0.24	0.24	0.24

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

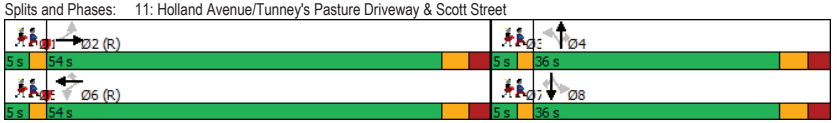
11: Holland Avenue/Tunney's Pasture Driveway & Scott Street Future Total 2042 OPT MOD
Tunney's Pasture TIA Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.12	0.88		0.51	0.33	0.20	0.84	0.43	0.60	0.31	0.29	0.16
Control Delay	5.4	25.5		29.7	20.6	17.6	73.9	33.6	43.7	34.0	30.8	28.9
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	5.4	25.5		29.7	20.6	17.6	73.9	33.6	43.7	34.0	30.8	28.9
LOS	A	C		C	C	B	E	C	D	C	C	C
Approach Delay		24.2			22.0			48.8			31.3	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	0.9	105.2		9.7	24.7	7.8	24.6	29.2	22.1	7.6	18.6	4.8
Queue Length 95th (m)	m1.5	m126.4		22.5	42.2	17.3	#52.2	46.7	39.9	17.5	32.1	12.1
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	368	717		193	791	427	202	536	274	196	526	256
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	0.11	0.78		0.45	0.29	0.18	0.69	0.35	0.49	0.26	0.23	0.13

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 22 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 31.4 Intersection LOS: C
Intersection Capacity Utilization 86.3% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	554	88	170	566	61	150	143	231	93	230	46
Future Volume (vph)	45	554	88	170	566	61	150	143	231	93	230	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91	0.96				0.55	0.71		0.66	0.74		0.53
Frt		0.979				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1584	0	1695	1701	1381	1417	1802	1547	1695	1802	1517
Flt Permitted	0.244			0.128			0.493			0.647		
Satd. Flow (perm)	394	1584	0	228	1701	759	522	1802	1025	856	1802	803
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			184.8	
Travel Time (s)		20.2			17.9			20.2			22.2	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	29%	2%	7%	12%	22%	1%	0%	2%	1%	2%
Adj. Flow (vph)	45	554	88	170	566	61	150	143	231	93	230	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	642	0	170	566	61	150	143	231	93	230	46
Turn Type	Perm	NA		custom	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		15	6 15			4			8	
Permitted Phases	2			6		6 15	4		4	8		8
Detector Phase	2	2		15	6 15	6 15	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0			5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		11.2			30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	50.0	50.0		15.0			35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	45.5%	45.5%		13.6%			31.8%	31.8%	31.8%	31.8%	31.8%	31.8%
Maximum Green (s)	43.8	43.8		8.8			28.8	28.8	28.8	28.8	28.8	28.8
Yellow Time (s)	3.3	3.3		3.3			3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9			2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2			6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min		None			Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0					2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0					22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30					30	30	30	30	30	30
Act Effct Green (s)	43.8	43.8		52.6	52.6	52.6	28.8	28.8	28.8	28.8	28.8	28.8
Actuated g/C Ratio	0.40	0.40		0.48	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26

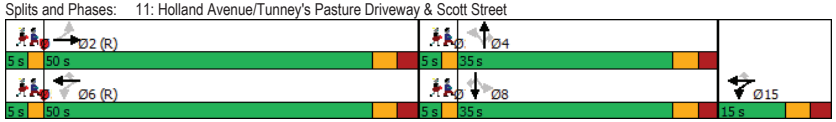
Lane Group	Ø1	Ø3	Ø5	Ø6	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	5	6	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	1.0	5.0	1.0
Minimum Split (s)	3.0	3.0	3.0	27.2	3.0
Total Split (s)	5.0	5.0	5.0	50.0	5.0
Total Split (%)	5%	5%	5%	45%	5%
Maximum Green (s)	3.0	3.0	3.0	43.8	3.0
Yellow Time (s)	2.0	2.0	2.0	3.3	2.0
All-Red Time (s)	0.0	0.0	0.0	2.9	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead			Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	C-Min	Max
Walk Time (s)	0.0	0.0	0.0	2.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	19.0	0.0
Pedestrian Calls (#/hr)	0	0	0	30	0
Act Effct Green (s)					
Actuated g/C Ratio					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	1.02		0.75	0.70	0.17	1.10	0.30	0.86	0.42	0.49	0.22
Control Delay	28.8	74.6		39.0	25.4	12.6	147.4	34.7	68.9	40.4	38.6	35.2
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	28.8	74.6		39.0	25.4	12.6	147.4	34.7	68.9	40.4	38.6	35.2
LOS	C	E		D	C	B	F	C	E	D	D	D
Approach Delay		71.6			27.3			82.1			38.6	
Approach LOS		E			C			F			D	
Queue Length 50th (m)	6.5	~141.4		16.0	72.1	5.6	~36.6	24.7	47.4	16.6	41.8	7.7
Queue Length 95th (m)	16.4	#213.4		#46.8	103.8	12.2	#76.4	41.8	#90.8	32.7	65.6	18.0
Internal Link Dist (m)		256.5			225.1			200.2			160.8	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	156	630		226	813	362	136	471	268	224	471	210
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	0.29	1.02		0.75	0.70	0.17	1.10	0.30	0.86	0.42	0.49	0.22

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 10 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 53.9 Intersection LOS: D
Intersection Capacity Utilization 96.6% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	554	88	170	566	61	150	143	231	93	230	46
Future Volume (vph)	45	554	88	170	566	61	150	143	231	93	230	46
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91	0.96				0.55	0.71		0.66	0.74		0.53
Frt		0.979				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1585	0	1695	1701	1381	1417	1802	1547	1695	1802	1517
Flt Permitted	0.271			0.207			0.429			0.657		
Satd. Flow (perm)	439	1585	0	369	1701	758	457	1802	1026	865	1802	801
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	29%	2%	7%	12%	22%	1%	0%	2%	1%	2%
Adj. Flow (vph)	45	554	88	170	566	61	150	143	231	93	230	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	642	0	170	566	61	150	143	231	93	230	46
Turn Type	Perm	NA		Perm	NA	Perm	custom	NA	Perm	Perm	NA	Perm
Protected Phases		2			6		15	4 15			8	
Permitted Phases	2			6		6	4		4 15	8		8
Detector Phase	2	2		6	6	6	15	4 15	4 15	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0			5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	11.2			30.2	30.2	30.2
Total Split (s)	57.8	57.8		57.8	57.8	57.8	12.0			30.2	30.2	30.2
Total Split (%)	52.5%	52.5%		52.5%	52.5%	52.5%	10.9%			27.5%	27.5%	27.5%
Maximum Green (s)	51.6	51.6		51.6	51.6	51.6	5.8			24.0	24.0	24.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3			3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9			2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.2			6.2	6.2	6.2
Lead/Lag										Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None			None	None	None
Walk Time (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0				22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30				30	30	30
Act Effct Green (s)	51.6	51.6		51.6	51.6	51.6	28.6	34.8	34.8	22.1	22.1	22.1
Actuated g/C Ratio	0.47	0.47		0.47	0.47	0.47	0.26	0.32	0.32	0.20	0.20	0.20

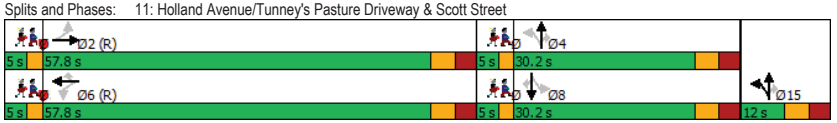
Lane Group	Ø1	Ø3	Ø4	Ø5	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	4	5	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	5.0	1.0	1.0
Minimum Split (s)	5.0	5.0	30.2	5.0	5.0
Total Split (s)	5.0	5.0	30.2	5.0	5.0
Total Split (%)	5%	5%	27%	5%	5%
Maximum Green (s)	3.0	3.0	24.0	3.0	3.0
Yellow Time (s)	2.0	2.0	3.3	2.0	2.0
All-Red Time (s)	0.0	0.0	2.9	0.0	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		Lead
Lead-Lag Optimize?		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Min	Max	Max
Walk Time (s)			2.0		
Flash Dont Walk (s)			22.0		
Pedestrian Calls (#/hr)			30		
Act Effct Green (s)					
Actuated g/C Ratio					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	0.86		0.98	0.71	0.17	0.85	0.25	0.71	0.54	0.64	0.29
Control Delay	12.8	20.1		81.5	15.9	10.0	78.0	28.8	46.5	51.1	48.5	41.5
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	12.8	20.1		81.5	15.9	10.0	78.0	28.8	46.5	51.1	48.5	41.5
LOS	B	C		F	B	A	E	C	D	D	D	D
Approach Delay		19.7			29.4			50.7			48.3	
Approach LOS		B			C			D			D	
Queue Length 50th (m)	1.6	24.3		33.5	35.5	3.4	24.1	22.3	42.9	17.6	44.5	8.2
Queue Length 95th (m)	m3.9	m#176.6		m#72.2	65.5	m6.5	#45.4	37.9	#72.5	34.7	69.8	19.1
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	205	743		173	797	355	176	556	316	188	393	174
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	0.22	0.86		0.98	0.71	0.17	0.85	0.26	0.73	0.49	0.59	0.26

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 34.2 Intersection LOS: C
Intersection Capacity Utilization 96.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	473	0	0	266	109	1	0	12	43	0	43
Future Volume (vph)	93	473	0	0	266	109	1	0	12	43	0	43
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		0.0	25.0		20.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93				0.96			0.97			0.98	
Frt					0.961			0.875			0.932	
Flt Protected	0.950							0.996			0.976	
Satd. Flow (prot)	1729	1655	0	0	1506	0	0	1539	0	0	1568	0
Flt Permitted	0.950							0.975			0.826	
Satd. Flow (perm)	1610	1655	0	0	1506	0	0	1505	0	0	1323	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)					26							
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		302.8			168.9			203.1			119.6	
Travel Time (s)		21.8			12.2			24.4			14.4	
Confl. Peds. (#/hr)	51		20	20		51	6		2	2		6
Confl. Bikes (#/hr)			82			20			3			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	10%	0%	0%	14%	4%	0%	0%	0%	0%	0%	7%
Adj. Flow (vph)	93	473	0	0	266	109	1	0	12	43	0	43
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	473	0	0	375	0	0	13	0	0	86	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	13	2			6			4			8	
Permitted Phases							4			8		
Detector Phase	13	2			6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.5	27.5			27.5		22.9	22.9		22.9	22.9	
Total Split (s)	17.5	49.5			49.5		23.0	23.0		23.0	23.0	
Total Split (%)	17.5%	49.5%			49.5%		23.0%	23.0%		23.0%	23.0%	
Maximum Green (s)	12.0	44.0			44.0		17.1	17.1		17.1	17.1	
Yellow Time (s)	3.6	3.6			3.6		2.7	2.7		2.7	2.7	
All-Red Time (s)	1.9	1.9			1.9		3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5			5.5			5.9			5.9	
Lead/Lag		Lag			Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	C-Max			C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)		30			30		30	30		30	30	
Act Effct Green (s)	18.2	44.0			44.0			12.4			13.4	
Actuated g/C Ratio	0.18	0.44			0.44			0.12			0.13	

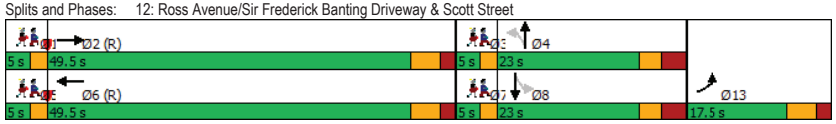
12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street Future Total 2042 OPT MOD
Tunney's Pasture TIA Weekday AM Peak Hour

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.30	0.65			0.55			0.07			0.49	
Control Delay	42.3	27.1			9.2			36.2			48.2	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	42.3	27.1			9.2			36.2			48.2	
LOS	D	C			A			D			D	
Approach Delay		29.6			9.2			36.2			48.2	
Approach LOS		C			A			D			D	
Queue Length 50th (m)	17.0	70.0			8.8			2.1			15.0	
Queue Length 95th (m)	32.4	104.5			16.2			7.4			29.6	
Internal Link Dist (m)		278.8			144.9			179.1			95.6	
Turn Bay Length (m)	40.0											
Base Capacity (vph)	314	728			677			257			226	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.30	0.65			0.55			0.05			0.38	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 92 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 23.9		Intersection LOS: C	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street



Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	93	473	0	0	266	109	1	0	12	43	0	43
Future Vol, veh/h	93	473	0	0	266	109	1	0	12	43	0	43
Conflicting Peds, #/hr	51	0	20	20	0	51	6	0	2	2	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	10	0	0	14	4	0	0	0	0	0	7
Mvmt Flow	93	473	0	0	266	109	1	0	12	43	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	426	0	0	493	0	0	1027	1105	495	1039	1051	378
Stage 1	-	-	-	-	-	-	679	679	-	372	372	-
Stage 2	-	-	-	-	-	-	348	426	-	667	679	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.363
Pot Cap-1 Maneuver	1144	-	-	1081	-	-	215	213	579	211	229	658
Stage 1	-	-	-	-	-	-	445	454	-	653	622	-
Stage 2	-	-	-	-	-	-	672	589	-	451	454	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	1061	-	-	178	176	567	179	189	624
Mov Cap-2 Maneuver	-	-	-	-	-	-	178	176	-	179	189	-
Stage 1	-	-	-	-	-	-	386	394	-	550	593	-
Stage 2	-	-	-	-	-	-	622	561	-	390	394	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.4	0	12.6	23.6
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	1090	-	-	1061	-	-	278
HCM Lane V/C Ratio	0.027	0.085	-	-	-	-	-	0.309
HCM Control Delay (s)	12.6	8.6	0	-	0	-	-	23.6
HCM Lane LOS	B	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.3	-	-	0	-	-	1.3

Intersection	
Int Delay, s/veh	25.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	73	650	0	0	555	98	4	0	13	93	0	95
Future Vol, veh/h	73	650	0	0	555	98	4	0	13	93	0	95
Conflicting Peds, #/hr	42	0	25	25	0	42	3	0	4	4	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	5	0	0	7	2	0	0	0	0	0	2
Mvmt Flow	73	650	0	0	555	98	4	0	13	93	0	95

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	695	0	0	675	0	0	1476	1516	679	1453	1467	649
Stage 1	-	-	-	-	-	-	821	821	-	646	646	-
Stage 2	-	-	-	-	-	-	655	695	-	807	821	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.318
Pot Cap-1 Maneuver	910	-	-	926	-	-	105	121	455	109	129	470
Stage 1	-	-	-	-	-	-	371	391	-	464	470	-
Stage 2	-	-	-	-	-	-	458	447	-	378	391	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	875	-	-	905	-	-	73	99	443	~ 91	105	451
Mov Cap-2 Maneuver	-	-	-	-	-	-	73	99	-	~ 91	105	-
Stage 1	-	-	-	-	-	-	315	332	-	387	452	-
Stage 2	-	-	-	-	-	-	361	430	-	318	332	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0	24.5	205.1
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	202	875	-	-	905	-	-	153
HCM Lane V/C Ratio	0.084	0.083	-	-	-	-	-	1.229
HCM Control Delay (s)	24.5	9.5	0	-	0	-	-	205.1
HCM Lane LOS	C	A	A	-	A	-	-	F
HCM 95th %tile Q(veh)	0.3	0.3	-	-	0	-	-	10.9

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	650	0	0	555	98	4	0	13	93	0	95
Future Volume (vph)	73	650	0	0	555	98	4	0	13	93	0	95
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		0.0	25.0		20.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96				0.98			0.97			0.98	
Frt					0.980			0.897			0.932	
Flt Protected	0.950							0.988			0.976	
Satd. Flow (prot)	1729	1733	0	0	1637	0	0	1573	0	0	1612	0
Flt Permitted	0.950							0.930			0.835	
Satd. Flow (perm)	1656	1733	0	0	1637	0	0	1478	0	0	1370	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)					11							
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		302.8			168.9			203.1			119.6	
Travel Time (s)		21.8			12.2			24.4			14.4	
Confl. Peds. (#/hr)	42		25	25		42	3		4	4		3
Confl. Bikes (#/hr)			16			59						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	0%	0%	7%	2%	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	73	650	0	0	555	98	4	0	13	93	0	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	73	650	0	0	653	0	0	17	0	0	188	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	13	2			6			4			8	
Permitted Phases							4			8		
Detector Phase	13	2			6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.5	27.5			27.5		23.9	23.9		23.9	23.9	
Total Split (s)	14.0	56.0			56.0		30.0	30.0		30.0	30.0	
Total Split (%)	12.7%	50.9%			50.9%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	8.5	50.5			50.5		24.1	24.1		24.1	24.1	
Yellow Time (s)	3.6	3.6			3.6		2.7	2.7		2.7	2.7	
All-Red Time (s)	1.9	1.9			1.9		3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5			5.5			5.9			5.9	
Lead/Lag		Lag			Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	C-Max			C-Max		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)		30			30		30	30		30	30	
Act Effct Green (s)	13.2	50.5			50.5			19.4			19.4	
Actuated g/C Ratio	0.12	0.46			0.46			0.18			0.18	

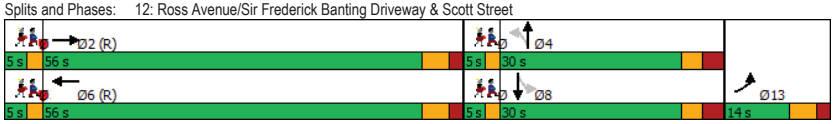
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.35	0.82			0.86			0.07			0.78	
Control Delay	52.3	35.9			37.8			35.8			64.3	
Queue Delay	0.0	0.4			0.0			0.0			0.0	
Total Delay	52.3	36.3			37.8			35.8			64.3	
LOS	D	D			D			D			E	
Approach Delay		37.9			37.8			35.8			64.3	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	14.8	117.5			74.1			3.0			38.6	
Queue Length 95th (m)	#31.9	#170.5			#187.9			8.8			60.7	
Internal Link Dist (m)		278.8			144.9			179.1			95.6	
Turn Bay Length (m)	40.0											
Base Capacity (vph)	207	795			757			323			300	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	16			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.35	0.83			0.86			0.05			0.63	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 102 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 41.0 Intersection LOS: D
Intersection Capacity Utilization 74.4% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	455	26	4	324	45	11	0	12	68	0	31
Future Volume (vph)	35	455	26	4	324	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.99				0.85		0.94		0.94		0.95
Frt		0.992				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	856	1734	0	1729	1767	802	0	1580	0	869	0	762
Flt Permitted	0.379			0.146				0.977		0.729		
Satd. Flow (perm)	323	1734	0	266	1767	680	0	1558	0	624	0	725
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			194.8			114.1	
Travel Time (s)		12.2			20.2			23.4			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	102%	3%	4%	0%	3%	93%	0%	0%	0%	99%	0%	103%
Adj. Flow (vph)	35	455	26	4	324	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	481	0	4	324	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	13	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	13	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	24.0	38.4		38.4	38.4	38.4	27.6	27.6		27.6		27.6
Total Split (%)	24.0%	38.4%		38.4%	38.4%	38.4%	27.6%	27.6%		27.6%		27.6%
Maximum Green (s)	18.0	31.8		31.8	31.8	31.8	21.0	21.0		21.0		21.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag		Lag		Lag	Lag	Lag	Lag	Lag		Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)	11.0	10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30		30		30
Act Effct Green (s)	45.5	31.8		31.8	31.8	31.8		14.9		16.2		16.2
Actuated g/C Ratio	0.46	0.32		0.32	0.32	0.32		0.15		0.16		0.16

16: Smirle Avenue/Goldenrod Driveway & Scott Street Future Total 2042 OPT MOD
Tunney's Pasture TIA Weekday AM Peak Hour

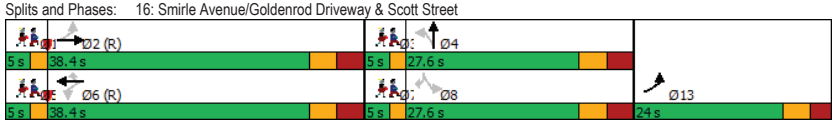
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.16	0.87		0.05	0.58	0.21		0.10		0.67		0.26
Control Delay	10.0	36.0		25.5	31.5	26.0		33.7		68.6		39.7
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	10.0	36.0		25.5	31.5	26.0		33.7		68.6		39.7
LOS	B	D		C	C	C		C		E		D
Approach Delay		34.2			30.8			33.7			59.5	
Approach LOS		C			C			C			E	
Queue Length 50th (m)	1.8	29.3		0.0	39.7	5.5		3.6		11.8		5.0
Queue Length 95th (m)	m4.7	#136.7		m1.6	74.7	m11.5		10.1		#27.1		13.3
Internal Link Dist (m)		144.9			256.5			170.8			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	258	551		84	561	216		327		131		152
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	0.14	0.87		0.05	0.58	0.21		0.07		0.52		0.20

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 96 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 35.4 Intersection LOS: D
Intersection Capacity Utilization 56.0% ICU Level of Service B
Analysis Period (min) 15
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: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	455	26	4	324	45	11	0	12	68	0	31
Future Volume (vph)	35	455	26	4	324	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96	0.99		0.96		0.85		0.94		0.94		0.95
Frt		0.992				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	856	1738	0	1729	1767	802	0	1580	0	869	0	762
Flt Permitted	0.496			0.489				0.977		0.742		
Satd. Flow (perm)	428	1738	0	852	1767	681	0	1558	0	635	0	725
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	102%	3%	4%	0%	3%	93%	0%	0%	0%	99%	0%	103%
Adj. Flow (vph)	35	455	26	4	324	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	481	0	4	324	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	26.0	66.0		40.0	40.0	40.0	34.0	34.0		34.0		34.0
Total Split (%)	26.0%	66.0%		40.0%	40.0%	40.0%	34.0%	34.0%		34.0%		34.0%
Maximum Green (s)	20.0	59.4		33.4	33.4	33.4	27.4	27.4		27.4		27.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	Max		Max	Max	Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	66.5	67.4		59.1	59.1	59.1		15.3		15.4		15.4
Actuated g/C Ratio	0.73	0.74		0.64	0.64	0.64		0.17		0.17		0.17

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.38		0.01	0.28	0.09		0.07		0.64		0.15
Control Delay	7.0	8.1		13.5	13.0	0.4		0.3		60.7		1.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	7.0	8.1		13.5	13.0	0.4		0.3		60.7		1.5
LOS	A	A		B	B	A		A		E		A
Approach Delay		8.0			11.5			0.3			42.1	
Approach LOS		A			B			A			D	
Queue Length 50th (m)	1.6	30.0		0.3	28.8	0.0		0.0		10.7		0.0
Queue Length 95th (m)	6.3	66.6		2.3	61.4	0.0		0.0		24.1		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	404	1278		549	1139	476		541		190		291
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	0.09	0.38		0.01	0.28	0.09		0.04		0.36		0.11

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 91.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.5 Intersection LOS: B
Intersection Capacity Utilization 56.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street

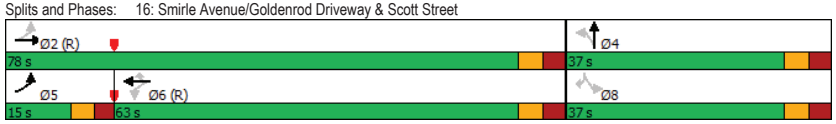
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	711	25	9	592	68	7	0	7	40	0	37
Future Volume (vph)	27	711	25	9	592	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99		0.76		0.94		0.95		0.93
Frt		0.995				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	882	1789	0	1729	1784	774	0	1595	0	873	0	806
Flt Permitted	0.346			0.375				0.976		0.748		
Satd. Flow (perm)	321	1789	0	675	1784	588	0	1553	0	651	0	749
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				91		91				91
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	96%	1%	0%	0%	2%	100%	0%	0%	0%	98%	0%	92%
Adj. Flow (vph)	27	711	25	9	592	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	736	0	9	592	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	15.0	78.0		63.0	63.0	63.0	37.0	37.0		37.0		37.0
Total Split (%)	13.0%	67.8%		54.8%	54.8%	54.8%	32.2%	32.2%		32.2%		32.2%
Maximum Green (s)	9.0	71.4		56.4	56.4	56.4	30.4	30.4		30.4		30.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	89.3	90.0		82.1	82.1	82.1		15.5		15.5		15.5
Actuated g/C Ratio	0.78	0.78		0.71	0.71	0.71		0.13		0.13		0.13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.53		0.02	0.47	0.15		0.05		0.46		0.21
Control Delay	5.6	8.5		10.3	12.7	1.9		0.3		60.0		2.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	5.6	8.5		10.3	12.7	1.9		0.3		60.0		2.6
LOS	A	A		B	B	A		A		E		A
Approach Delay		8.4			11.5			0.3			32.4	
Approach LOS		A			B			A			C	
Queue Length 50th (m)	1.6	74.3		0.8	76.2	0.0		0.0		7.9		0.0
Queue Length 95th (m)	4.3	104.6		3.1	111.5	3.7		0.0		18.9		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	293	1400		481	1273	445		477		172		264
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	0.09	0.53		0.02	0.47	0.15		0.03		0.23		0.14

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 10.9 Intersection LOS: B
Intersection Capacity Utilization 70.5% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	711	25	9	592	68	7	0	7	40	0	37
Future Volume (vph)	27	711	25	9	592	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00				0.77		0.94		0.95		0.93
Frt		0.995				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	882	1789	0	1729	1784	774	0	1596	0	873	0	806
Flt Permitted	0.238			0.114				0.976		0.751		
Satd. Flow (perm)	221	1789	0	207	1784	594	0	1557	0	655	0	750
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			194.8			114.1	
Travel Time (s)		12.2			20.2			23.4			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	96%	1%	0%	0%	2%	100%	0%	0%	0%	98%	0%	92%
Adj. Flow (vph)	27	711	25	9	592	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	736	0	9	592	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	13	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	13	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	11.0	61.4		61.4	61.4	61.4	27.6	27.6		27.6		27.6
Total Split (%)	10.0%	55.8%		55.8%	55.8%	55.8%	25.1%	25.1%		25.1%		25.1%
Maximum Green (s)	5.0	54.8		54.8	54.8	54.8	21.0	21.0		21.0		21.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag		Lag		Lag	Lag	Lag	Lag	Lag		Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	60.7	54.8		54.8	54.8	54.8		14.8		15.5		15.5
Actuated g/C Ratio	0.55	0.50		0.50	0.50	0.50		0.13		0.14		0.14

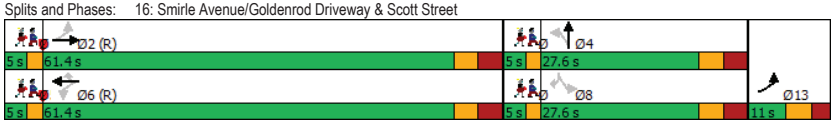
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.18	0.83		0.09	0.67	0.23		0.07		0.43		0.35
Control Delay	4.7	13.3		18.4	20.6	17.6		37.8		55.3		49.2
Queue Delay	0.0	0.4		0.0	0.5	0.0		0.0		0.0		0.0
Total Delay	4.7	13.6		18.4	21.0	17.6		37.8		55.3		49.2
LOS	A	B		B	C	B		D		E		D
Approach Delay		13.3			20.7			37.8			52.4	
Approach LOS		B			C			D			D	
Queue Length 50th (m)	0.9	27.2		0.8	60.1	6.1		2.5		7.5		6.8
Queue Length 95th (m)	m1.2	#36.7		m1.5	m105.2	m11.3		7.9		18.3		16.8
Internal Link Dist (m)		144.9			256.5			170.8			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	153	891		103	888	295		297		125		143
Starvation Cap Reductn	0	17		0	0	0		0		0		0
Spillback Cap Reductn	0	0		0	68	0		0		0		0
Storage Cap Reductn	0	0		0	0	0		0		0		0
Reduced v/c Ratio	0.18	0.84		0.09	0.72	0.23		0.05		0.32		0.26

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 108 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 18.7 Intersection LOS: B
Intersection Capacity Utilization 70.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



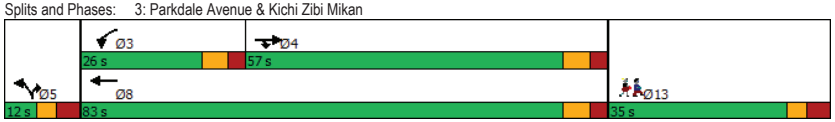
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
Lane Configurations							
Traffic Volume (vph)	1303	553	423	420	108	191	
Future Volume (vph)	1303	553	423	420	108	191	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		0.0	0.0		80.0	0.0	
Storage Lanes		1	2		2	1	
Taper Length (m)			2.5		2.5		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00	
Ped Bike Factor					0.94		
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3458	1547	3354	3458	3288	1532	
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	3458	1547	3354	3458	3075	1532	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		399				191	
Link Speed (k/h)	60			60	40		
Link Distance (m)	190.6			177.2	173.2		
Travel Time (s)	11.4			10.6	15.6		
Confl. Peds. (#/hr)					5	2	
Confl. Bikes (#/hr)						5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	
Adj. Flow (vph)	1303	553	423	420	108	191	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1303	553	423	420	108	191	
Turn Type	NA	Prot	Prot	NA	Prot	Prot	
Protected Phases	4	4	3	8	5	5	13
Permitted Phases							
Detector Phase	4	4	3	8	5	5	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.1	28.1	12.1	28.1	12.0	12.0	35.0
Total Split (s)	57.0	57.0	26.0	83.0	12.0	12.0	35.0
Total Split (%)	43.8%	43.8%	20.0%	63.8%	9.2%	9.2%	27%
Maximum Green (s)	49.9	49.9	18.9	75.9	5.0	5.0	28.0
Yellow Time (s)	4.1	4.1	4.1	4.1	3.2	3.2	3.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.0	7.0	
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0
Flash Dont Walk (s)	14.0	14.0		14.0			21.0
Pedestrian Calls (#/hr)	30	30		30			30
Act Effct Green (s)	50.3	50.3	18.5	75.9	5.0	5.0	
Actuated g/C Ratio	0.39	0.39	0.14	0.58	0.04	0.04	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
v/c Ratio	0.97	0.66	0.88	0.21	0.86	0.79	
Control Delay	58.8	12.7	75.5	13.1	110.6	30.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	58.8	12.7	75.5	13.1	110.6	30.9	
LOS	E	B	E	B	F	C	
Approach Delay	45.0			44.4	59.7		
Approach LOS	D			D	E		
Queue Length 50th (m)	172.2	29.7	55.3	25.5	14.4	0.0	
Queue Length 95th (m)	#221.3	69.9	#81.5	34.0	#31.4	#34.4	
Internal Link Dist (m)	166.6			153.2	149.2		
Turn Bay Length (m)					80.0		
Base Capacity (vph)	1337	842	487	2018	126	242	
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	0.97	0.66	0.87	0.21	0.86	0.79	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 46.3 Intersection LOS: D
Intersection Capacity Utilization 72.6% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Parkdale Avenue & Kichi Zibi Mikan



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
Lane Configurations							
Traffic Volume (vph)	390	93	445	1095	476	424	
Future Volume (vph)	390	93	445	1095	476	424	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		0.0	0.0		80.0	0.0	
Storage Lanes		1	2		2	1	
Taper Length (m)			2.5		2.5		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00	
Ped Bike Factor					0.98		
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3458	1532	3321	3458	3354	1547	
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	3458	1532	3321	3458	3293	1547	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		93				424	
Link Speed (k/h)	60			60	40		
Link Distance (m)	190.6			177.2	173.2		
Travel Time (s)	11.4			10.6	15.6		
Confl. Peds. (#/hr)					7		
Confl. Bikes (#/hr)						10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Adj. Flow (vph)	390	93	445	1095	476	424	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	390	93	445	1095	476	424	
Turn Type	NA	Prot	Prot	NA	Prot	Prot	
Protected Phases	4	4	3	8	5	5	13
Permitted Phases							
Detector Phase	4	4	3	8	5	5	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.1	28.1	12.1	28.1	12.0	12.0	35.0
Total Split (s)	28.1	28.1	27.0	55.1	29.9	29.9	35.0
Total Split (%)	23.4%	23.4%	22.5%	45.9%	24.9%	24.9%	29%
Maximum Green (s)	21.0	21.0	19.9	48.0	22.9	22.9	28.0
Yellow Time (s)	4.1	4.1	4.1	4.1	3.2	3.2	3.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.0	7.0	
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0
Flash Dont Walk (s)	14.0	14.0		14.0			21.0
Pedestrian Calls (#/hr)	30	30		30			30
Act Effct Green (s)	21.8	21.8	19.1	48.0	22.9	22.9	
Actuated g/C Ratio	0.18	0.18	0.16	0.40	0.19	0.19	

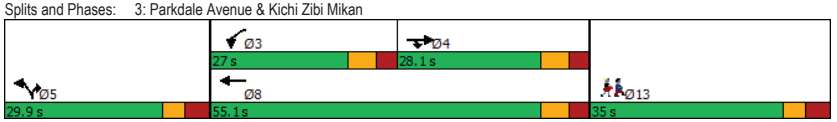
3: Parkdale Avenue & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2042 OPT MOD
Weekday PM Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
v/c Ratio	0.62	0.26	0.84	0.79	0.74	0.66	
Control Delay	50.5	10.6	64.3	36.8	53.8	9.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.5	10.6	64.3	36.8	53.8	9.6	
LOS	D	B	E	D	D	A	
Approach Delay	42.8			44.7	33.0		
Approach LOS	D			D	C		
Queue Length 50th (m)	45.4	0.0	52.6	117.5	55.0	0.0	
Queue Length 95th (m)	62.0	14.2	#74.9	144.2	73.3	28.9	
Internal Link Dist (m)	166.6			153.2	149.2		
Turn Bay Length (m)					80.0		
Base Capacity (vph)	628	354	550	1383	640	638	
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	0.62	0.26	0.81	0.79	0.74	0.66	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.84
Intersection Signal Delay: 40.8 Intersection LOS: D
Intersection Capacity Utilization 58.0% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Parkdale Avenue & Kichi Zibi Mikan



Future (2046) Total Traffic

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	517	2	56	5	0	0	4	5
Future Volume (vph)	0	0	0	6	517	2	56	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.956				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1678	0	0	1668	0
Flt Permitted					0.999			0.737				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1294	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	517	2	56	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	525	0	0	61	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				73.0	73.0		26.0	26.0			26.0	
Total Split (%)				63.5%	63.5%		22.6%	22.6%			22.6%	
Maximum Green (s)				67.3	67.3		15.7	15.7			15.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					67.3			15.7			15.7	
Actuated g/C Ratio					0.68			0.16			0.16	
v/c Ratio					0.23			0.30			0.03	
Control Delay					6.3			17.9			26.7	
Queue Delay					0.0			0.0			0.0	

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2046 Conditions
Weekday AM Peak Hour

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	73.0	16.0
Total Split (%)	14%	63%	14%
Maximum Green (s)	12.0	67.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

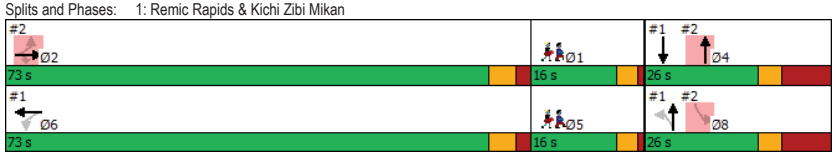
Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.3			17.9			26.7	
LOS					A			B			C	
Approach Delay					6.3			17.9			26.7	
Approach LOS					A			B			C	
Queue Length 50th (m)					17.6			3.7			0.7	
Queue Length 95th (m)					24.0			m6.2			5.0	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2323			205			268	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.23			0.30			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 38.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan

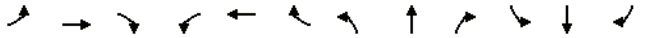


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	517	2	56	5	0	0	4	5
Future Volume (vph)	0	0	0	6	517	2	56	5	0	0	4	5
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor					1.00						0.99	
Frt					0.999						0.925	
Flt Protected					0.999			0.956				
Satd. Flow (prot)	0	0	0	0	3417	0	0	1678	0	0	1668	0
Flt Permitted					0.999			0.737				
Satd. Flow (perm)	0	0	0	0	3417	0	0	1294	0	0	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					1						5	
Link Speed (k/h)		60			60			30			30	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			6.3	
Confl. Peds. (#/hr)									8	8		
Confl. Bikes (#/hr)						1						3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	6	517	2	56	5	0	0	4	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	525	0	0	61	0	0	9	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				51.7	51.7		22.3	22.3			22.3	
Total Split (%)				57.4%	57.4%		24.8%	24.8%			24.8%	
Maximum Green (s)				46.0	46.0		12.0	12.0			12.0	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?												
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					46.0			12.0			12.0	
Actuated g/C Ratio					0.62			0.16			0.16	
v/c Ratio					0.25			0.29			0.03	
Control Delay					6.6			22.2			20.4	
Queue Delay					0.0			0.0			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	51.7	16.0
Total Split (%)	18%	57%	18%
Maximum Green (s)	12.0	46.0	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

Future Total 2046 OPT
Weekday AM Peak Hour

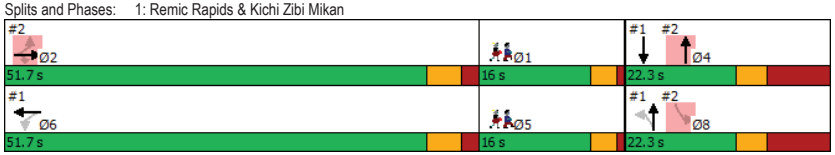


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					6.6			22.2			20.4	
LOS					A			C			C	
Approach Delay					6.6			22.2			20.4	
Approach LOS					A			C			C	
Queue Length 50th (m)					15.1			3.2			0.5	
Queue Length 95th (m)					21.8			m10.6			4.1	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2124			209			274	
Starvation Cap Reductn					0			0			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.25			0.29			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 8.4		Intersection LOS: A	
Intersection Capacity Utilization 38.9%		ICU Level of Service A	
Analysis Period (min) 15			

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1534	3	138	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1534	3	138	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1669	0	0	1665	0
Flt Permitted								0.726				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1267	0	0	1665	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1534	3	138	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1549	0	0	141	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				81.0	81.0		48.0	48.0			48.0	
Total Split (%)				55.9%	55.9%		33.1%	33.1%			33.1%	
Maximum Green (s)				75.3	75.3		37.7	37.7			37.7	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					75.3			37.7			37.7	
Actuated g/C Ratio					0.58			0.29			0.29	
v/c Ratio					0.77			0.38			0.01	
Control Delay					23.5			15.8			24.1	
Queue Delay					0.0			0.8			0.0	

1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2046 Conditions
Weekday PM Peak Hour

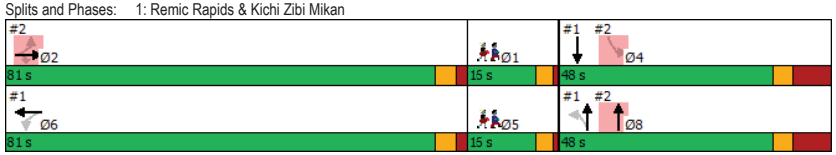
Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	81.0	16.0
Total Split (%)	11%	56%	11%
Maximum Green (s)	12.0	75.3	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					23.5			16.6			24.1	
LOS					C			B			C	
Approach Delay					23.5			16.6			24.1	
Approach LOS					C			B			C	
Queue Length 50th (m)					148.6			7.7			0.6	
Queue Length 95th (m)					177.8			11.6			4.2	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					2018			370			489	
Starvation Cap Reductn					0			78			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.77			0.48			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 145			
Actuated Cycle Length: 129			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 22.9		Intersection LOS: C	
Intersection Capacity Utilization 73.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	12	1534	3	138	3	0	0	3	4
Future Volume (vph)	0	0	0	12	1534	3	138	3	0	0	3	4
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00			0.99	
Frt											0.923	
Flt Protected								0.953				
Satd. Flow (prot)	0	0	0	0	3458	0	0	1669	0	0	1666	0
Flt Permitted								0.726				
Satd. Flow (perm)	0	0	0	0	3458	0	0	1268	0	0	1666	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)											4	
Link Speed (k/h)		60			60			30			50	
Link Distance (m)		143.2			148.1			68.2			52.4	
Travel Time (s)		8.6			8.9			8.2			3.8	
Confl. Peds. (#/hr)							1		2	2		1
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	0	0	12	1534	3	138	3	0	0	3	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	1549	0	0	141	0	0	7	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					6			8			4	
Permitted Phases				6			8					
Detector Phase				6	6		8	8			4	
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)				25.7	25.7		22.3	22.3			22.3	
Total Split (s)				56.2	56.2		37.8	37.8			37.8	
Total Split (%)				51.1%	51.1%		34.4%	34.4%			34.4%	
Maximum Green (s)				50.5	50.5		27.5	27.5			27.5	
Yellow Time (s)				3.7	3.7		3.3	3.3			3.3	
All-Red Time (s)				2.0	2.0		7.0	7.0			7.0	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					5.7			10.3			10.3	
Lead/Lag				Lead	Lead							
Lead-Lag Optimize?				Yes	Yes							
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Recall Mode				Max	Max		None	None			Max	
Walk Time (s)				15.0	15.0		7.0	7.0			7.0	
Flash Dont Walk (s)				5.0	5.0		5.0	5.0			5.0	
Pedestrian Calls (#/hr)				30	30		30	30			30	
Act Effct Green (s)					50.5			27.5			27.5	
Actuated g/C Ratio					0.54			0.29			0.29	
v/c Ratio					0.83			0.38			0.01	
Control Delay					23.3			13.3			18.3	
Queue Delay					0.0			0.6			0.0	

Lane Group	Ø1	Ø2	Ø5
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	2	5
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	25.7	16.0
Total Split (s)	16.0	56.2	16.0
Total Split (%)	15%	51%	15%
Maximum Green (s)	12.0	50.5	12.0
Yellow Time (s)	3.0	3.7	3.0
All-Red Time (s)	1.0	2.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	Max	None
Walk Time (s)	7.0	15.0	7.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	30	0
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			

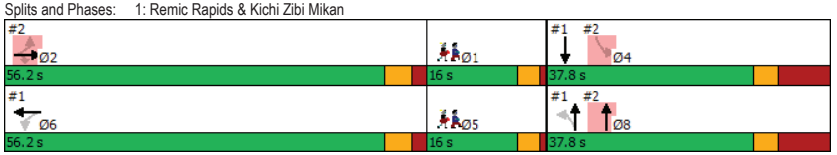
1: Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA

Future Total 2046 OPT
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Total Delay					23.3			13.9			18.3	
LOS					C			B			B	
Approach Delay					23.3			13.9			18.3	
Approach LOS					C			B			B	
Queue Length 50th (m)					116.7			6.2			0.4	
Queue Length 95th (m)					148.6			10.0			3.5	
Internal Link Dist (m)		119.2			124.1			44.2			28.4	
Turn Bay Length (m)												
Base Capacity (vph)					1857			370			490	
Starvation Cap Reductn					0			61			0	
Spillback Cap Reductn					0			0			0	
Storage Cap Reductn					0			0			0	
Reduced v/c Ratio					0.83			0.46			0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 22.5		Intersection LOS: C	
Intersection Capacity Utilization 73.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1801	86	0	0	0	0	58	33	10	0	0
Future Volume (vph)	3	1801	86	0	0	0	0	58	33	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.951				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1459	0	0	0	0	1690	0	1729	0	0
Flt Permitted										0.698		
Satd. Flow (perm)	0	3458	1426	0	0	0	0	1690	0	1270	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107					21				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	3	1801	86	0	0	0	0	58	33	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1804	86	0	0	0	0	91	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	73.0	73.0	73.0					26.0		26.0		
Total Split (%)	63.5%	63.5%	63.5%					22.6%		22.6%		
Maximum Green (s)	67.3	67.3	67.3					15.7		15.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		67.3	67.3					15.7		15.7		
Actuated g/C Ratio		0.68	0.68					0.16		0.16		

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2046 Conditions
Weekday AM Peak Hour

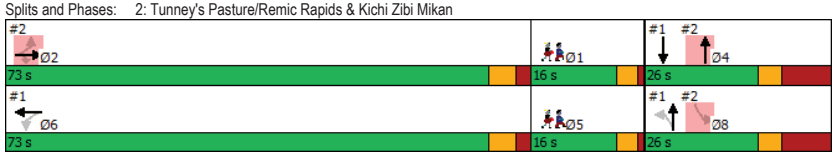
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	73.0
Total Split (%)	14%	14%	63%
Maximum Green (s)	12.0	12.0	67.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.77	0.09					0.32		0.05		
Control Delay		13.5	0.9					32.0		33.0		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		13.5	0.9					32.0		33.0		
LOS		B	A					C		C		
Approach Delay		12.9						32.0			33.0	
Approach LOS		B						C			C	
Queue Length 50th (m)		107.7	0.0					11.9		1.7		
Queue Length 95th (m)		136.1	3.0					26.2		4.9		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2350	1003					285		201		
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		0.77	0.09					0.32		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 115			
Actuated Cycle Length: 99			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 13.9		Intersection LOS: B	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



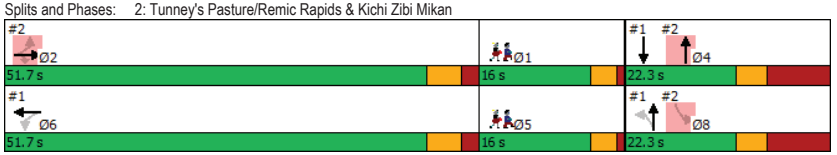
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	1801	86	0	0	0	0	58	33	10	0	0
Future Volume (vph)	3	1801	86	0	0	0	0	58	33	10	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			0.98					1.00				
Frt			0.850					0.951				
Flt Protected										0.950		
Satd. Flow (prot)	0	3458	1459	0	0	0	0	1690	0	1729	0	0
Flt Permitted										0.698		
Satd. Flow (perm)	0	3458	1427	0	0	0	0	1690	0	1270	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			137					26				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)			1	1								
Confl. Bikes (#/hr)									1			2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	6%	0%	0%	0%	0%	3%	0%	0%	0%	0%
Adj. Flow (vph)	3	1801	86	0	0	0	0	58	33	10	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1804	86	0	0	0	0	91	0	10	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						4				
Permitted Phases	2		2							8		
Detector Phase	2	2	2					4		8		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	51.7	51.7	51.7					22.3		22.3		
Total Split (%)	57.4%	57.4%	57.4%					24.8%		24.8%		
Maximum Green (s)	46.0	46.0	46.0					12.0		12.0		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					Max		None		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		46.0	46.0					12.0		12.0		
Actuated g/C Ratio		0.62	0.62					0.16		0.16		

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	51.7
Total Split (%)	18%	18%	57%
Maximum Green (s)	12.0	12.0	46.0
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes		
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.84	0.09					0.31		0.05		
Control Delay		15.8	0.6					23.8		23.7		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		15.8	0.6					23.8		23.7		
LOS		B	A					C		C		
Approach Delay		15.1						23.8			23.7	
Approach LOS		B						C			C	
Queue Length 50th (m)		92.3	0.0					8.0		1.2		
Queue Length 95th (m)		125.0	1.7					20.1		m3.9		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		2149	938					295		205		
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		0.84	0.09					0.31		0.05		

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 74			
Natural Cycle: 90			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 15.6		Intersection LOS: B	
Intersection Capacity Utilization 71.3%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	442	78	0	0	0	0	124	21	15	0	0
Future Volume (vph)	18	442	78	0	0	0	0	124	21	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850					0.980				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1488	0	0	0	0	1720	0	1729	0	0
Flt Permitted		0.998								0.665		
Satd. Flow (perm)	0	3418	1488	0	0	0	0	1720	0	1207	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			85					6				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	4%	0%	0%	0%	0%	4%	0%	0%	0%	0%
Adj. Flow (vph)	18	442	78	0	0	0	0	124	21	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	460	78	0	0	0	0	145	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	81.0	81.0	81.0					48.0		48.0		
Total Split (%)	55.9%	55.9%	55.9%					33.1%		33.1%		
Maximum Green (s)	75.3	75.3	75.3					37.7		37.7		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		75.3	75.3					37.7		37.7		
Actuated g/C Ratio		0.58	0.58					0.29		0.29		

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2046 Conditions
Weekday PM Peak Hour

Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	81.0
Total Split (%)	11%	11%	56%
Maximum Green (s)	12.0	12.0	75.3
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

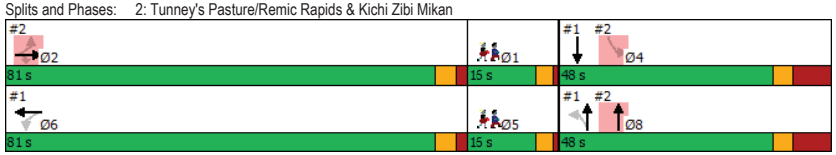
Lanes, Volumes, Timings
BD
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.23	0.09					0.29		0.04		
Control Delay		13.3	2.3					35.6		37.9		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		13.3	2.3					35.6		37.9		
LOS		B	A					D		D		
Approach Delay		11.7						35.6			37.9	
Approach LOS		B						D			D	
Queue Length 50th (m)		28.2	0.0					27.3		3.5		
Queue Length 95th (m)		37.1	5.8					45.3		m5.5		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1995	903					506		352		
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	0.09					0.29		0.04		

Intersection Summary

Area Type: Other
Cycle Length: 145
Actuated Cycle Length: 129
Natural Cycle: 90
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 17.2 Intersection LOS: B
Intersection Capacity Utilization 35.1% ICU Level of Service A
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	442	78	0	0	0	0	124	21	15	0	0
Future Volume (vph)	18	442	78	0	0	0	0	124	21	15	0	0
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	0.0		90.0	0.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor								1.00		1.00		
Frt			0.850					0.980				
Flt Protected		0.998								0.950		
Satd. Flow (prot)	0	3418	1488	0	0	0	0	1720	0	1729	0	0
Flt Permitted		0.998								0.665		
Satd. Flow (perm)	0	3418	1488	0	0	0	0	1720	0	1208	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112					7				
Link Speed (k/h)		60			60			30			40	
Link Distance (m)		142.7			164.5			84.3			68.2	
Travel Time (s)		8.6			9.9			10.1			6.1	
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)									2			
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	1%	4%	0%	0%	0%	0%	4%	0%	0%	0%	0%
Adj. Flow (vph)	18	442	78	0	0	0	0	124	21	15	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	460	78	0	0	0	0	145	0	15	0	0
Turn Type	Perm	NA	Perm					NA		Perm		
Protected Phases		2						8				
Permitted Phases	2		2							4		
Detector Phase	2	2	2					8		4		
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0					5.0		5.0		
Minimum Split (s)	25.7	25.7	25.7					22.3		22.3		
Total Split (s)	56.2	56.2	56.2					37.8		37.8		
Total Split (%)	51.1%	51.1%	51.1%					34.4%		34.4%		
Maximum Green (s)	50.5	50.5	50.5					27.5		27.5		
Yellow Time (s)	3.7	3.7	3.7					3.3		3.3		
All-Red Time (s)	2.0	2.0	2.0					7.0		7.0		
Lost Time Adjust (s)		0.0	0.0					0.0		0.0		
Total Lost Time (s)		5.7	5.7					10.3		10.3		
Lead/Lag	Lead	Lead	Lead									
Lead-Lag Optimize?	Yes	Yes	Yes									
Vehicle Extension (s)	3.0	3.0	3.0					3.0		3.0		
Recall Mode	Max	Max	Max					None		Max		
Walk Time (s)	15.0	15.0	15.0					7.0		7.0		
Flash Dont Walk (s)	5.0	5.0	5.0					5.0		5.0		
Pedestrian Calls (#/hr)	30	30	30					30		30		
Act Effct Green (s)		50.5	50.5					27.5		27.5		
Actuated g/C Ratio		0.54	0.54					0.29		0.29		

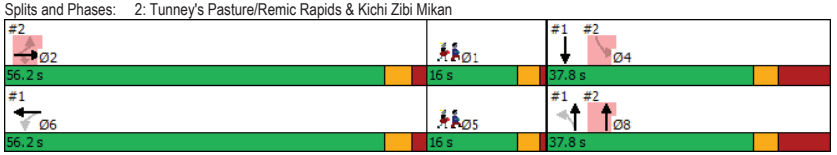
Lane Group	Ø1	Ø5	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (m)			
Storage Lanes			
Taper Length (m)			
Lane Util. Factor			
Ped Bike Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Confl. Peds. (#/hr)			
Confl. Bikes (#/hr)			
Peak Hour Factor			
Heavy Vehicles (%)			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Turn Type			
Protected Phases	1	5	6
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	16.0	16.0	25.7
Total Split (s)	16.0	16.0	56.2
Total Split (%)	15%	15%	51%
Maximum Green (s)	12.0	12.0	50.5
Yellow Time (s)	3.0	3.0	3.7
All-Red Time (s)	1.0	1.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	None	None	Max
Walk Time (s)	7.0	7.0	15.0
Flash Dont Walk (s)	5.0	5.0	5.0
Pedestrian Calls (#/hr)	0	0	30
Act Effct Green (s)			
Actuated g/C Ratio			

2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2046 OPT
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio		0.25	0.09					0.29		0.04		
Control Delay		12.1	1.2					26.3		24.4		
Queue Delay		0.0	0.0					0.0		0.0		
Total Delay		12.1	1.2					26.3		24.4		
LOS		B	A					C		C		
Approach Delay		10.5						26.3			24.4	
Approach LOS		B						C			C	
Queue Length 50th (m)		22.1	0.0					19.2		2.6		
Queue Length 95th (m)		30.9	3.2					34.7		m3.6		
Internal Link Dist (m)		118.7			140.5			60.3			44.2	
Turn Bay Length (m)			90.0									
Base Capacity (vph)		1836	851					508		353		
Starvation Cap Reductn		0	0					0		0		
Spillback Cap Reductn		0	0					0		0		
Storage Cap Reductn		0	0					0		0		
Reduced v/c Ratio		0.25	0.09					0.29		0.04		

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 94			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 35.1%		ICU Level of Service A	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 2: Tunney's Pasture/Remic Rapids & Kichi Zibi Mikan



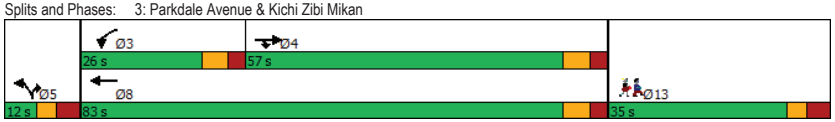
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
Lane Configurations							
Traffic Volume (vph)	1308	536	391	420	105	185	
Future Volume (vph)	1308	536	391	420	105	185	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		0.0	0.0		80.0	0.0	
Storage Lanes		1	2		2	1	
Taper Length (m)			2.5		2.5		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00	
Ped Bike Factor					0.94		
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3458	1547	3354	3458	3288	1532	
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	3458	1547	3354	3458	3075	1532	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		385				185	
Link Speed (k/h)	60			60	40		
Link Distance (m)	190.6			177.2	173.2		
Travel Time (s)	11.4			10.6	15.6		
Confl. Peds. (#/hr)					5	2	
Confl. Bikes (#/hr)						5	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	0%	0%	0%	2%	1%	
Adj. Flow (vph)	1308	536	391	420	105	185	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	1308	536	391	420	105	185	
Turn Type	NA	Prot	Prot	NA	Prot	Prot	
Protected Phases	4	4	3	8	5	5	13
Permitted Phases							
Detector Phase	4	4	3	8	5	5	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.1	28.1	12.1	28.1	12.0	12.0	35.0
Total Split (s)	57.0	57.0	26.0	83.0	12.0	12.0	35.0
Total Split (%)	43.8%	43.8%	20.0%	63.8%	9.2%	9.2%	27%
Maximum Green (s)	49.9	49.9	18.9	75.9	5.0	5.0	28.0
Yellow Time (s)	4.1	4.1	4.1	4.1	3.2	3.2	3.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.0	7.0	
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0
Flash Dont Walk (s)	14.0	14.0		14.0			21.0
Pedestrian Calls (#/hr)	30	30		30			30
Act Effct Green (s)	50.6	50.6	18.2	75.9	5.0	5.0	
Actuated g/C Ratio	0.39	0.39	0.14	0.58	0.04	0.04	

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
v/c Ratio	0.97	0.64	0.84	0.21	0.83	0.78	
Control Delay	57.8	12.5	70.6	13.1	106.6	31.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	57.8	12.5	70.6	13.1	106.6	31.1	
LOS	E	B	E	B	F	C	
Approach Delay	44.6			40.8	58.4		
Approach LOS	D			D	E		
Queue Length 50th (m)	173.3	28.7	50.6	25.5	14.0	0.0	
Queue Length 95th (m)	#222.7	67.2	#71.9	34.0	#30.6	#33.8	
Internal Link Dist (m)	166.6			153.2	149.2		
Turn Bay Length (m)					80.0		
Base Capacity (vph)	1347	837	487	2018	126	236	
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	0.97	0.64	0.80	0.21	0.83	0.78	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 44.9 Intersection LOS: D
Intersection Capacity Utilization 71.8% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Parkdale Avenue & Kichi Zibi Mikan



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
Lane Configurations							
Traffic Volume (vph)	393	85	433	1095	454	381	
Future Volume (vph)	393	85	433	1095	454	381	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	
Storage Length (m)		0.0	0.0		80.0	0.0	
Storage Lanes		1	2		2	1	
Taper Length (m)			2.5		2.5		
Lane Util. Factor	0.95	1.00	0.97	0.95	0.97	1.00	
Ped Bike Factor					0.98		
Frt		0.850				0.850	
Flt Protected			0.950		0.950		
Satd. Flow (prot)	3458	1532	3321	3458	3354	1547	
Flt Permitted			0.950		0.950		
Satd. Flow (perm)	3458	1532	3321	3458	3293	1547	
Right Turn on Red		Yes				Yes	
Satd. Flow (RTOR)		85				381	
Link Speed (k/h)	60			60	40		
Link Distance (m)	190.6			177.2	173.2		
Travel Time (s)	11.4			10.6	15.6		
Confl. Peds. (#/hr)					7		
Confl. Bikes (#/hr)						10	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Heavy Vehicles (%)	0%	1%	1%	0%	0%	0%	
Adj. Flow (vph)	393	85	433	1095	454	381	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	393	85	433	1095	454	381	
Turn Type	NA	Prot	Prot	NA	Prot	Prot	
Protected Phases	4	4	3	8	5	5	13
Permitted Phases							
Detector Phase	4	4	3	8	5	5	
Switch Phase							
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	28.1	28.1	12.1	28.1	12.0	12.0	35.0
Total Split (s)	28.1	28.1	27.0	55.1	29.9	29.9	35.0
Total Split (%)	23.4%	23.4%	22.5%	45.9%	24.9%	24.9%	29%
Maximum Green (s)	21.0	21.0	19.9	48.0	22.9	22.9	28.0
Yellow Time (s)	4.1	4.1	4.1	4.1	3.2	3.2	3.2
All-Red Time (s)	3.0	3.0	3.0	3.0	3.8	3.8	3.8
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.1	7.1	7.1	7.1	7.0	7.0	
Lead/Lag	Lag	Lag	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	None	Max	Max	Max	Max
Walk Time (s)	7.0	7.0		7.0			7.0
Flash Dont Walk (s)	14.0	14.0		14.0			21.0
Pedestrian Calls (#/hr)	30	30		30			30
Act Effct Green (s)	22.0	22.0	18.9	48.0	22.9	22.9	
Actuated g/C Ratio	0.18	0.18	0.16	0.40	0.19	0.19	

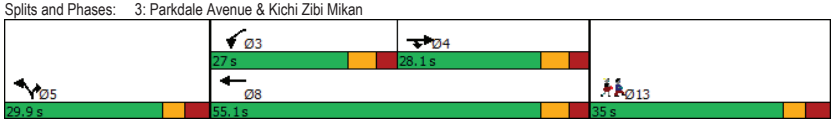
3: Parkdale Avenue & Kichi Zibi Mikan
Tunney's Pasture TIA
Future Total 2046 OPT MOD
Weekday PM Peak Hour

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø13
v/c Ratio	0.62	0.24	0.83	0.79	0.71	0.63	
Control Delay	50.4	10.8	63.2	36.8	52.4	9.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	50.4	10.8	63.2	36.8	52.4	9.4	
LOS	D	B	E	D	D	A	
Approach Delay	43.3			44.2	32.8		
Approach LOS	D			D	C		
Queue Length 50th (m)	45.7	0.0	51.0	117.5	52.1	0.0	
Queue Length 95th (m)	62.5	13.6	#69.7	144.2	69.6	27.1	
Internal Link Dist (m)	166.6			153.2	149.2		
Turn Bay Length (m)					80.0		
Base Capacity (vph)	634	350	550	1383	640	603	
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	0.62	0.24	0.79	0.79	0.71	0.63	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 40.7 Intersection LOS: D
Intersection Capacity Utilization 57.4% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Parkdale Avenue & Kichi Zibi Mikan



Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	32	0	359	893	35
Future Vol, veh/h	0	32	0	359	893	35
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	3	0	0	0	0
Mvmt Flow	0	32	0	359	893	35

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	918	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.23	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.327	-	-	-	-
Pot Cap-1 Maneuver	0	328	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	326	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	326	-	-
HCM Lane V/C Ratio	-	0.098	-	-
HCM Control Delay (s)	-	17.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	46	0	836	480	38
Future Vol, veh/h	0	46	0	836	480	38
Conflicting Peds, #/hr	0	0	7	0	0	7
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	46	0	836	480	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	506	-	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.2	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	570	0	-	-	-
Stage 1	0	-	0	-	-	-
Stage 2	0	-	0	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	566	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	-	566	-	-
HCM Lane V/C Ratio	-	0.081	-	-
HCM Control Delay (s)	-	11.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	6	13	346	5	26	899
Future Vol, veh/h	6	13	346	5	26	899
Conflicting Peds, #/hr	4	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	3	0	0	1
Mvmt Flow	6	13	346	5	26	899

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1304	349	0	0	351	0
Stage 1	349	-	-	-	-	-
Stage 2	955	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	179	699	-	-	1219	-
Stage 1	719	-	-	-	-	-
Stage 2	377	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	171	699	-	-	1219	-
Mov Cap-2 Maneuver	171	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	359	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.7	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	354	1219	-
HCM Lane V/C Ratio	-	-	0.054	0.021	-
HCM Control Delay (s)	-	-	15.7	8	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	9	841	9	15	512
Future Vol, veh/h	7	9	841	9	15	512
Conflicting Peds, #/hr	9	5	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	1
Mvmt Flow	7	9	841	9	15	512

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1398	852	0	0	851	0
Stage 1	847	-	-	-	-	-
Stage 2	551	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	157	362	-	-	796	-
Stage 1	424	-	-	-	-	-
Stage 2	581	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	152	360	-	-	795	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	424	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	0.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	225	795	-
HCM Lane V/C Ratio	-	-	0.071	0.019	-
HCM Control Delay (s)	-	-	22.2	9.6	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	64	60	297	870	50
Future Vol, veh/h	39	64	60	297	870	50
Conflicting Peds, #/hr	4	3	40	0	0	40
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	5	13	5	1	1	4
Mvmt Flow	39	64	60	297	870	50

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1356	938	960	0	-	0
Stage 1	935	-	-	-	-	-
Stage 2	421	-	-	-	-	-
Critical Hdwy	6.45	6.33	4.15	-	-	-
Critical Hdwy Stg 1	5.45	-	-	-	-	-
Critical Hdwy Stg 2	5.45	-	-	-	-	-
Follow-up Hdwy	3.545	3.417	2.245	-	-	-
Pot Cap-1 Maneuver	162	306	705	-	-	-
Stage 1	377	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	134	294	679	-	-	-
Mov Cap-2 Maneuver	134	-	-	-	-	-
Stage 1	325	-	-	-	-	-
Stage 2	632	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	40	1.8	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	679	-	202	-	-
HCM Lane V/C Ratio	0.088	-	0.51	-	-
HCM Control Delay (s)	10.8	0	40	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.3	-	2.6	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	5	64	5	5	5	60	297	5	5	870	50
Future Volume (vph)	39	5	64	5	5	5	60	297	5	5	870	50
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	0.0		0.0	45.0		0.0	0.0		20.0
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	0.99			0.99		0.98					0.91
Frt		0.861			0.955			0.998				0.850
Flt Protected	0.950				0.984		0.950					
Satd. Flow (prot)	1647	1378	0	0	1694	0	1647	1799	0	0	1802	1488
Flt Permitted	0.748				0.905		0.950				0.998	
Satd. Flow (perm)	1285	1378	0	0	1556	0	1611	1799	0	0	1798	1350
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		30			30			40			40	
Link Distance (m)		174.2			161.4			99.7			87.5	
Travel Time (s)		20.9			19.4			9.0			7.9	
Confl. Peds. (#/hr)	4		3	3		4	40					40
Confl. Bikes (#/hr)												2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	5%	0%	13%	0%	0%	0%	5%	1%	0%	0%	1%	4%
Adj. Flow (vph)	39	5	64	5	5	5	60	297	5	5	870	50
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	69	0	0	15	0	60	302	0	0	875	50
Turn Type	Perm	NA		Perm	NA		Prot	NA		Perm	NA	Perm
Protected Phases		4			8		13	2			6	
Permitted Phases	4			8						6		6
Detector Phase	4	4		8	8		13	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	23.2	23.2		23.2	23.2		10.5	27.5		27.5	27.5	27.5
Total Split (s)	23.2	23.2		23.2	23.2		10.5	46.3		46.3	46.3	46.3
Total Split (%)	29.0%	29.0%		29.0%	29.0%		13.1%	57.9%		57.9%	57.9%	57.9%
Maximum Green (s)	18.0	18.0		18.0	18.0		5.0	40.8		40.8	40.8	40.8
Yellow Time (s)	2.7	2.7		2.7	2.7		3.2	3.2		3.2	3.2	3.2
All-Red Time (s)	2.5	2.5		2.5	2.5		2.3	2.3		2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.2	5.2			5.2		5.5	5.5			5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30		30	30			30		30	30	30
Act Effct Green (s)	11.7	11.7			11.7		6.3	51.3			51.3	51.3
Actuated g/C Ratio	0.15	0.15			0.15		0.08	0.64			0.64	0.64

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.21	0.34			0.07		0.46	0.26			0.76	0.06
Control Delay	29.9	33.1			26.4		49.1	14.5			21.4	9.5
Queue Delay	0.0	0.0			0.0		0.0	0.2			0.0	0.0
Total Delay	29.9	33.1			26.4		49.1	14.8			21.4	9.5
LOS	C	C			C		D	B			C	A
Approach Delay		32.0			26.4			20.5			20.8	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	5.5	9.9			2.1		9.8	34.0			101.3	3.1
Queue Length 95th (m)	12.4	19.2			6.4		m#23.6	51.9			#199.9	8.8
Internal Link Dist (m)		150.2			137.4			75.7			63.5	
Turn Bay Length (m)	55.0						45.0					20.0
Base Capacity (vph)	289	310			350		130	1152			1151	865
Starvation Cap Reductn	0	0			0		0	349			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	0.13	0.22			0.04		0.46	0.38			0.76	0.06

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 66 (83%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 21.6 Intersection LOS: C
Intersection Capacity Utilization 68.4% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Parkdale Avenue & Colombine Driveway

Intersection

Int Delay, s/veh 10.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	91	77	77	742	460	76
Future Vol, veh/h	91	77	77	742	460	76
Conflicting Peds, #/hr	16	0	25	0	0	25
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	100	100	100	100	100	100
Heavy Vehicles, %	0	5	3	0	1	0
Mvmt Flow	91	77	77	742	460	76

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1435	523	561	0	-	0
Stage 1	523	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Critical Hdwy	6.4	6.25	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.345	2.227	-	-	-
Pot Cap-1 Maneuver	149	548	1005	-	-	-
Stage 1	599	-	-	-	-	-
Stage 2	395	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	123	535	982	-	-	-
Mov Cap-2 Maneuver	123	-	-	-	-	-
Stage 1	507	-	-	-	-	-
Stage 2	386	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	88.5	0.8	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	982	-	190	-	-
HCM Lane V/C Ratio	0.078	-	0.884	-	-
HCM Control Delay (s)	9	0	88.5	-	-
HCM Lane LOS	A	A	F	-	-
HCM 95th %tile Q(veh)	0.3	-	6.7	-	-

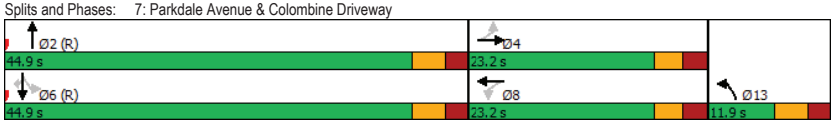
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	5	77	5	5	5	77	742	5	5	460	76
Future Volume (vph)	91	5	77	5	5	5	77	742	5	5	460	76
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	55.0		0.0	0.0		0.0	45.0		0.0	0.0		20.0
Storage Lanes	1		0	0		0	1		0	0		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.97				0.98		0.98	1.00				0.93
Frt		0.859			0.955			0.999				0.850
Flt Protected	0.950				0.984		0.950				0.999	
Satd. Flow (prot)	1729	1493	0	0	1679	0	1679	1818	0	0	1800	1547
Flt Permitted	0.748				0.905		0.950				0.994	
Satd. Flow (perm)	1314	1493	0	0	1544	0	1639	1818	0	0	1791	1446
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		30			30			40			40	
Link Distance (m)		174.2			161.4			99.7			87.5	
Travel Time (s)		20.9			19.4			9.0			7.9	
Confl. Peds. (#/hr)	16					16	25					25
Confl. Bikes (#/hr)									4			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	5%	0%	0%	0%	3%	0%	0%	0%	1%	0%
Adj. Flow (vph)	91	5	77	5	5	5	77	742	5	5	460	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	91	82	0	0	15	0	77	747	0	0	465	76
Turn Type	Perm	NA		Perm	NA		Prot	NA		Perm	NA	Perm
Protected Phases		4			8		13	2			6	
Permitted Phases	4			8						6		6
Detector Phase	4	4		8	8		13	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	23.2	23.2		23.2	23.2		10.5	27.5		27.5	27.5	27.5
Total Split (s)	23.2	23.2		23.2	23.2		11.9	44.9		44.9	44.9	44.9
Total Split (%)	29.0%	29.0%		29.0%	29.0%		14.9%	56.1%		56.1%	56.1%	56.1%
Maximum Green (s)	18.0	18.0		18.0	18.0		6.4	39.4		39.4	39.4	39.4
Yellow Time (s)	2.7	2.7		2.7	2.7		3.2	3.2		3.2	3.2	3.2
All-Red Time (s)	2.5	2.5		2.5	2.5		2.3	2.3		2.3	2.3	2.3
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0			0.0	0.0
Total Lost Time (s)	5.2	5.2			5.2		5.5	5.5			5.5	5.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30		30	30			30		30	30	30
Act Effct Green (s)	12.3	12.3			12.2		7.1	50.0			50.0	50.0
Actuated g/C Ratio	0.15	0.15			0.15		0.09	0.62			0.62	0.62

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.45	0.36			0.06		0.52	0.66			0.42	0.08
Control Delay	36.2	32.7			26.1		44.1	11.8			12.7	10.4
Queue Delay	0.0	0.0			0.0		0.0	0.4			0.0	0.0
Total Delay	36.2	32.7			26.1		44.1	12.2			12.7	10.4
LOS	D	C			C		D	B			B	B
Approach Delay		34.5			26.1			15.2			12.4	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	13.1	11.6			2.0		10.2	46.3			40.0	5.1
Queue Length 95th (m)	24.0	21.8			6.4		m15.9	#155.8			71.6	12.7
Internal Link Dist (m)		150.2			137.4			75.7			63.5	
Turn Bay Length (m)	55.0						45.0					20.0
Base Capacity (vph)	295	335			347		152	1135			1118	903
Starvation Cap Reductn	0	0			0		0	101			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	0.31	0.24			0.04		0.51	0.72			0.42	0.08

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 78 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.66
Intersection Signal Delay: 16.5 Intersection LOS: B
Intersection Capacity Utilization 88.4% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Parkdale Avenue & Colombine Driveway



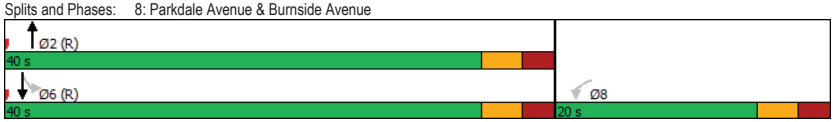
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	96	246	53	249	690
Future Volume (vph)	52	96	246	53	249	690
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.99			0.99
Frt	0.912		0.976			
Flt Protected	0.983					0.987
Satd. Flow (prot)	1508	0	1673	0	0	1783
Flt Permitted	0.983					0.811
Satd. Flow (perm)	1482	0	1673	0	0	1453
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	96		31			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	23	46		33	33	
Confl. Bikes (#/hr)				2		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	4%	9%	0%	1%
Adj. Flow (vph)	52	96	246	53	249	690
Shared Lane Traffic (%)						
Lane Group Flow (vph)	148	0	299	0	0	939
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	20.0		40.0		40.0	40.0
Total Split (%)	33.3%		66.7%		66.7%	66.7%
Maximum Green (s)	14.6		34.6		34.6	34.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		41.8			41.8
Actuated g/C Ratio	0.18		0.70			0.70
v/c Ratio	0.43		0.25			0.93
Control Delay	12.7		5.5			31.8
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	12.7		5.5			31.8
LOS	B		A			C
Approach Delay	12.7		5.5			31.8
Approach LOS	B		A			C
Queue Length 50th (m)	4.6		12.7			~121.4
Queue Length 95th (m)	17.0		23.5			#182.2
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	433		1176			1013
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.34		0.25			0.93

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 60
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 24.1 Intersection LOS: C
Intersection Capacity Utilization 95.6% ICU Level of Service F
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



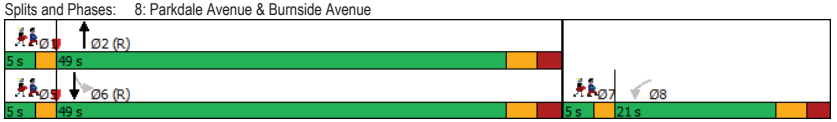
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	52	96	246	53	249	690			
Future Volume (vph)	52	96	246	53	249	690			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)	0.0	0.0		0.0	15.0				
Storage Lanes	1	0		0	0				
Taper Length (m)	2.5				2.5				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.88		0.99		0.96				
Frt	0.912		0.976						
Flt Protected	0.983				0.950				
Satd. Flow (prot)	1474	0	1669	0	1729	1802			
Flt Permitted	0.983				0.553				
Satd. Flow (perm)	1440	0	1669	0	967	1802			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	199.2		180.1			99.7			
Travel Time (s)	17.9		16.2			9.0			
Confl. Peds. (#/hr)	23	46		33	33				
Confl. Bikes (#/hr)				2					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	0%	0%	4%	9%	0%	1%			
Adj. Flow (vph)	52	96	246	53	249	690			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	148	0	299	0	249	690			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.4		26.4		10.4	10.4	5.0	5.0	5.0
Total Split (s)	21.0		49.0		49.0	49.0	5.0	5.0	5.0
Total Split (%)	26.3%		61.3%		61.3%	61.3%	6%	6%	6%
Maximum Green (s)	15.6		43.6		43.6	43.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.4		2.4		2.4	2.4	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			
Total Lost Time (s)	5.4		5.4		5.4	5.4			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?							Yes	Yes	
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		6.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	12.8		43.6		43.6	43.6			
Actuated g/C Ratio	0.16		0.54		0.54	0.54			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
v/c Ratio	0.64		0.33		0.47	0.70			
Control Delay	44.0		10.1		5.1	6.8			
Queue Delay	0.0		0.0		0.4	1.7			
Total Delay	44.0		10.1		5.4	8.6			
LOS	D		B		A	A			
Approach Delay	44.0		10.1			7.7			
Approach LOS	D		B			A			
Queue Length 50th (m)	20.9		19.8		3.1	8.6			
Queue Length 95th (m)	38.0		29.1		m4.2	11.3			
Internal Link Dist (m)	175.2		156.1			75.7			
Turn Bay Length (m)					15.0				
Base Capacity (vph)	280		909		527	982			
Starvation Cap Reductn	0		0		59	150			
Spillback Cap Reductn	0		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.53		0.33		0.53	0.83			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 72 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 12.1 Intersection LOS: B
Intersection Capacity Utilization 59.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



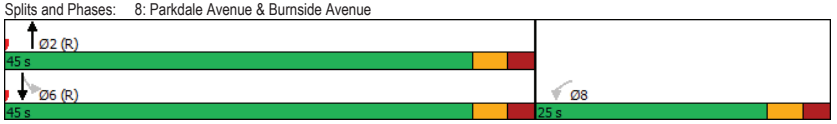
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	49	232	571	57	78	443
Future Volume (vph)	49	232	571	57	78	443
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88		1.00			1.00
Frt	0.889		0.988			
Flt Protected	0.991					0.993
Satd. Flow (prot)	1418	0	1788	0	0	1777
Flt Permitted	0.991					0.848
Satd. Flow (perm)	1405	0	1788	0	0	1516
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	232		12			
Link Speed (k/h)	40		40			40
Link Distance (m)	199.2		180.1			99.7
Travel Time (s)	17.9		16.2			9.0
Confl. Peds. (#/hr)	21	46		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	4%	0%	0%	2%	0%	2%
Adj. Flow (vph)	49	232	571	57	78	443
Shared Lane Traffic (%)						
Lane Group Flow (vph)	281	0	628	0	0	521
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.4		26.4		10.4	10.4
Total Split (s)	25.0		45.0		45.0	45.0
Total Split (%)	35.7%		64.3%		64.3%	64.3%
Maximum Green (s)	19.6		39.6		39.6	39.6
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.4		2.4		2.4	2.4
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.4		5.4			5.4
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		6.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	11.2		48.0			48.0
Actuated g/C Ratio	0.16		0.69			0.69
v/c Ratio	0.67		0.51			0.50
Control Delay	14.5		8.1			8.5
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	14.5		8.1			8.5
LOS	B		A			A
Approach Delay	14.5		8.1			8.5
Approach LOS	B		A			A
Queue Length 50th (m)	5.4		37.5			31.5
Queue Length 95th (m)	24.1		71.2			62.4
Internal Link Dist (m)	175.2		156.1			75.7
Turn Bay Length (m)						
Base Capacity (vph)	560		1228			1038
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.50		0.51			0.50

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 23 (33%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 9.5 Intersection LOS: A
Intersection Capacity Utilization 99.2% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue



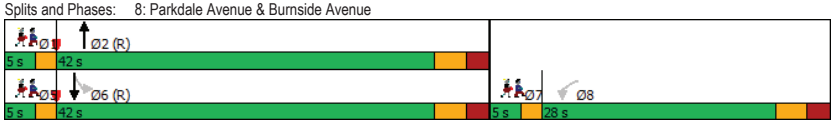
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	49	232	571	57	78	443			
Future Volume (vph)	49	232	571	57	78	443			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Storage Length (m)	0.0	0.0		0.0	15.0				
Storage Lanes	1	0		0	0				
Taper Length (m)	2.5				2.5				
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.87		1.00		0.99				
Frt	0.889		0.988						
Flt Protected	0.991				0.950				
Satd. Flow (prot)	1397	0	1788	0	1729	1784			
Flt Permitted	0.991				0.218				
Satd. Flow (perm)	1382	0	1788	0	395	1784			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	199.2		180.1			99.7			
Travel Time (s)	17.9		16.2			9.0			
Confl. Peds. (#/hr)	21	46		12	12				
Confl. Bikes (#/hr)				3					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	4%	0%	0%	2%	0%	2%			
Adj. Flow (vph)	49	232	571	57	78	443			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	281	0	628	0	78	443			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.4		26.4		10.4	10.4	5.0	5.0	5.0
Total Split (s)	28.0		42.0		42.0	42.0	5.0	5.0	5.0
Total Split (%)	35.0%		52.5%		52.5%	52.5%	6%	6%	6%
Maximum Green (s)	22.6		36.6		36.6	36.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.4		2.4		2.4	2.4	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			
Total Lost Time (s)	5.4		5.4		5.4	5.4			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		6.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	19.8		36.6		36.6	36.6			
Actuated g/C Ratio	0.25		0.46		0.46	0.46			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
v/c Ratio	0.82		0.77		0.43	0.54			
Control Delay	48.4		13.9		15.5	12.2			
Queue Delay	0.8		0.9		0.0	0.4			
Total Delay	49.1		14.9		15.5	12.6			
LOS	D		B		B	B			
Approach Delay	49.1		14.9			13.0			
Approach LOS	D		B			B			
Queue Length 50th (m)	39.0		21.7		3.3	18.9			
Queue Length 95th (m)	#71.9		29.4		6.6	25.9			
Internal Link Dist (m)	175.2		156.1			75.7			
Turn Bay Length (m)					15.0				
Base Capacity (vph)	390		818		180	816			
Starvation Cap Reductn	0		0		0	86			
Spillback Cap Reductn	17		50		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.75		0.82		0.43	0.61			

Intersection Summary

Area Type: Other
Cycle Length: 80
Actuated Cycle Length: 80
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 20.9 Intersection LOS: C
Intersection Capacity Utilization 74.6% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Parkdale Avenue & Burnside Avenue

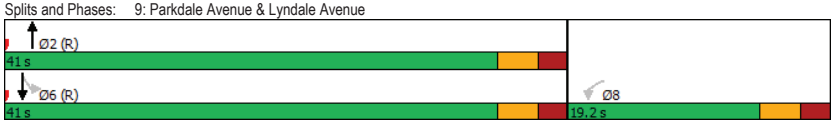


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	31	10	289	29	3	739
Future Volume (vph)	31	10	289	29	3	739
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		1.00			1.00
Frt	0.967		0.988			
Flt Protected	0.964					
Satd. Flow (prot)	1612	0	1724	0	0	1784
Flt Permitted	0.964					0.999
Satd. Flow (perm)	1541	0	1724	0	0	1783
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	10		15			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	27	4		12	12	
Confl. Bikes (#/hr)				3		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	6%	0%	4%	3%	0%	2%
Adj. Flow (vph)	31	10	289	29	3	739
Shared Lane Traffic (%)						
Lane Group Flow (vph)	41	0	318	0	0	742
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		41.0		41.0	41.0
Total Split (%)	31.9%		68.1%		68.1%	68.1%
Maximum Green (s)	14.0		35.9		35.9	35.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		45.6			45.6
Actuated g/C Ratio	0.18		0.76			0.76
v/c Ratio	0.15		0.24			0.55
Control Delay	16.6		5.1			8.5
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	16.6		5.1			8.5
LOS	B		A			A
Approach Delay	16.6		5.1			8.5
Approach LOS	B		A			A
Queue Length 50th (m)	2.7		14.2			49.1
Queue Length 95th (m)	9.1		25.5			84.3
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	366		1310			1351
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.11		0.24			0.55

Intersection Summary			
Area Type:	Other		
Cycle Length: 60.2			
Actuated Cycle Length: 60.2			
Offset: 18 (30%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.55			
Intersection Signal Delay: 7.8		Intersection LOS: A	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

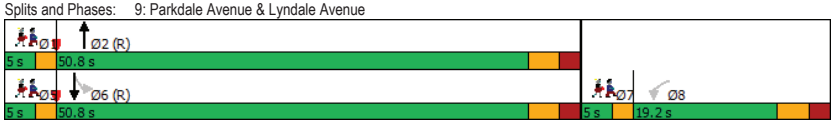


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	31	10	289	29	3	739			
Future Volume (vph)	31	10	289	29	3	739			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.93		1.00			1.00			
Frt	0.967		0.988						
Flt Protected	0.964								
Satd. Flow (prot)	1611	0	1723	0	0	1784			
Flt Permitted	0.964					0.999			
Satd. Flow (perm)	1517	0	1723	0	0	1783			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	167.5		221.0			180.1			
Travel Time (s)	15.1		19.9			16.2			
Confl. Peds. (#/hr)	27	4		12	12				
Confl. Bikes (#/hr)				3					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	6%	0%	4%	3%	0%	2%			
Adj. Flow (vph)	31	10	289	29	3	739			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	41	0	318	0	0	742			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.2		25.1		10.1	10.1	5.0	5.0	5.0
Total Split (s)	19.2		50.8		50.8	50.8	5.0	5.0	5.0
Total Split (%)	24.0%		63.5%		63.5%	63.5%	6%	6%	6%
Maximum Green (s)	14.0		45.7		45.7	45.7	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.2		2.1		2.1	2.1	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.2		5.1			5.1			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		5.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	10.8		45.7			45.7			
Actuated g/C Ratio	0.14		0.57			0.57			
v/c Ratio	0.20		0.32			0.73			
Control Delay	31.3		10.2			4.9			
Queue Delay	0.0		0.0			0.0			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Total Delay	31.3		10.2			4.9			
LOS	C		B			A			
Approach Delay	31.3		10.2			4.9			
Approach LOS	C		B			A			
Queue Length 50th (m)	5.3		23.3			8.9			
Queue Length 95th (m)	13.7		38.0			11.5			
Internal Link Dist (m)	143.5		197.0			156.1			
Turn Bay Length (m)									
Base Capacity (vph)	265		984			1018			
Starvation Cap Reductn	0		0			0			
Spillback Cap Reductn	0		0			0			
Storage Cap Reductn	0		0			0			
Reduced v/c Ratio	0.15		0.32			0.73			

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 6 (8%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay: 7.4		Intersection LOS: A	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

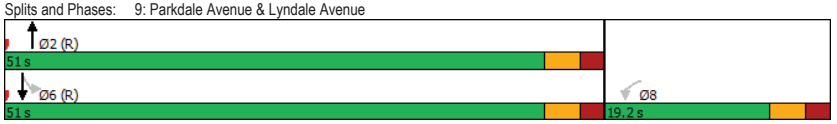


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	18	6	603	34	9	483
Future Volume (vph)	18	6	603	34	9	483
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96		1.00			1.00
Frt	0.966		0.993			
Flt Protected	0.964					0.999
Satd. Flow (prot)	1682	0	1801	0	0	1783
Flt Permitted	0.964					0.990
Satd. Flow (perm)	1619	0	1801	0	0	1767
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	6		8			
Link Speed (k/h)	40		40			40
Link Distance (m)	167.5		221.0			180.1
Travel Time (s)	15.1		19.9			16.2
Confl. Peds. (#/hr)	20	4		22	22	
Confl. Bikes (#/hr)				10		
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%
Adj. Flow (vph)	18	6	603	34	9	483
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	637	0	0	492
Turn Type	Perm		NA		Perm	NA
Protected Phases			2			6
Permitted Phases	8				6	
Detector Phase	8		2		6	6
Switch Phase						
Minimum Initial (s)	5.0		5.0		5.0	5.0
Minimum Split (s)	19.2		25.1		10.1	10.1
Total Split (s)	19.2		51.0		51.0	51.0
Total Split (%)	27.4%		72.6%		72.6%	72.6%
Maximum Green (s)	14.0		45.9		45.9	45.9
Yellow Time (s)	3.0		3.0		3.0	3.0
All-Red Time (s)	2.2		2.1		2.1	2.1
Lost Time Adjust (s)	0.0		0.0			0.0
Total Lost Time (s)	5.2		5.1			5.1
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max
Walk Time (s)	7.0		15.0			
Flash Dont Walk (s)	7.0		5.0			
Pedestrian Calls (#/hr)	50		50			
Act Effct Green (s)	10.6		55.6			55.6
Actuated g/C Ratio	0.15		0.79			0.79
v/c Ratio	0.10		0.45			0.35
Control Delay	20.0		6.1			5.3
Queue Delay	0.0		0.0			0.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Total Delay	20.0		6.1			5.3
LOS	B		A			A
Approach Delay	20.0		6.1			5.3
Approach LOS	B		A			A
Queue Length 50th (m)	1.9		37.6			26.3
Queue Length 95th (m)	7.5		60.2			42.6
Internal Link Dist (m)	143.5		197.0			156.1
Turn Bay Length (m)						
Base Capacity (vph)	327		1428			1400
Starvation Cap Reductn	0		0			0
Spillback Cap Reductn	0		0			0
Storage Cap Reductn	0		0			0
Reduced v/c Ratio	0.07		0.45			0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 70.2			
Actuated Cycle Length: 70.2			
Offset: 18 (26%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 50			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 6.0		Intersection LOS: A	
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue

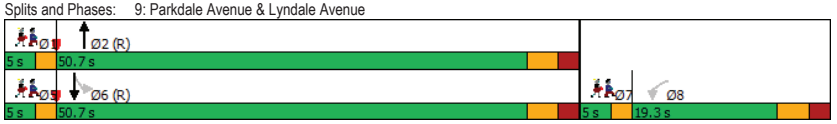


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Lane Configurations									
Traffic Volume (vph)	18	6	603	34	9	483			
Future Volume (vph)	18	6	603	34	9	483			
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Ped Bike Factor	0.95		1.00			1.00			
Frt	0.966		0.993						
Flt Protected	0.964					0.999			
Satd. Flow (prot)	1682	0	1801	0	0	1783			
Flt Permitted	0.964					0.989			
Satd. Flow (perm)	1610	0	1801	0	0	1765			
Right Turn on Red		No		No					
Satd. Flow (RTOR)									
Link Speed (k/h)	40		40			40			
Link Distance (m)	167.5		221.0			180.1			
Travel Time (s)	15.1		19.9			16.2			
Confl. Peds. (#/hr)	20	4		22	22				
Confl. Bikes (#/hr)				10					
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00			
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%			
Adj. Flow (vph)	18	6	603	34	9	483			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	24	0	637	0	0	492			
Turn Type	Perm		NA		Perm	NA			
Protected Phases			2			6	1	5	7
Permitted Phases	8				6				
Detector Phase	8		2		6	6			
Switch Phase									
Minimum Initial (s)	5.0		5.0		5.0	5.0	1.0	1.0	1.0
Minimum Split (s)	19.2		25.1		10.1	10.1	5.0	5.0	5.0
Total Split (s)	19.3		50.7		50.7	50.7	5.0	5.0	5.0
Total Split (%)	24.1%		63.4%		63.4%	63.4%	6%	6%	6%
Maximum Green (s)	14.1		45.6		45.6	45.6	3.0	3.0	3.0
Yellow Time (s)	3.0		3.0		3.0	3.0	2.0	2.0	2.0
All-Red Time (s)	2.2		2.1		2.1	2.1	0.0	0.0	0.0
Lost Time Adjust (s)	0.0		0.0			0.0			
Total Lost Time (s)	5.2		5.1			5.1			
Lead/Lag	Lag		Lag		Lag	Lag	Lead	Lead	Lead
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0
Recall Mode	None		C-Max		C-Max	C-Max	Max	Max	Max
Walk Time (s)	7.0		15.0						
Flash Dont Walk (s)	7.0		5.0						
Pedestrian Calls (#/hr)	50		50						
Act Effct Green (s)	10.7		45.6			45.6			
Actuated g/C Ratio	0.13		0.57			0.57			
v/c Ratio	0.11		0.62			0.49			
Control Delay	29.5		14.8			9.5			
Queue Delay	0.0		0.0			0.0			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	Ø1	Ø5	Ø7
Total Delay	29.5		14.8			9.5			
LOS	C		B			A			
Approach Delay	29.5		14.8			9.5			
Approach LOS	C		B			A			
Queue Length 50th (m)	3.1		59.3			16.7			
Queue Length 95th (m)	9.3		91.2			45.2			
Internal Link Dist (m)	143.5		197.0			156.1			
Turn Bay Length (m)									
Base Capacity (vph)	283		1026			1006			
Starvation Cap Reductn	0		0			0			
Spillback Cap Reductn	0		0			0			
Storage Cap Reductn	0		0			0			
Reduced v/c Ratio	0.08		0.62			0.49			

Intersection Summary			
Area Type:	Other		
Cycle Length: 80			
Actuated Cycle Length: 80			
Offset: 70 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay: 12.8		Intersection LOS: B	
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 9: Parkdale Avenue & Lyndale Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	386	67	39	178	22	68	169	70	71	501	198
Future Volume (vph)	119	386	67	39	178	22	68	169	70	71	501	198
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.91	0.97		0.87		0.97		0.95		0.94
Frt			0.850			0.850		0.969				0.850
Flt Protected	0.950			0.950				0.989		0.950		
Satd. Flow (prot)	1679	1701	1129	1729	1733	1357	0	1638	0	1712	1802	1517
Flt Permitted	0.642			0.400				0.551		0.522		
Satd. Flow (perm)	1033	1701	1031	707	1733	1177	0	909	0	897	1802	1421
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			107			107		18				121
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			279.3			221.0	
Travel Time (s)		17.9			21.6			25.1			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	7%	37%	0%	5%	14%	7%	4%	1%	1%	1%	2%
Adj. Flow (vph)	119	386	67	39	178	22	68	169	70	71	501	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	386	67	39	178	22	0	307	0	71	501	198
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	44.0	44.0	44.0	44.0	44.0	44.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	46.3%	46.3%	46.3%	46.3%	46.3%	46.3%	45.3%	45.3%		45.3%	45.3%	45.3%
Maximum Green (s)	37.9	37.9	37.9	37.9	37.9	37.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag												
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	37.9	37.9	37.9	37.9	37.9	37.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.40	0.40	0.40	0.40	0.40	0.40		0.39		0.39	0.39	0.39

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Future Total 2046 Conditions
Weekday AM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	7.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.57	0.14	0.14	0.26	0.04		0.85		0.21	0.72	0.32
Control Delay	18.8	23.3	1.9	19.9	20.4	0.1		48.3		21.5	31.9	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	18.8	23.3	1.9	19.9	20.4	0.1		48.3		21.5	31.9	9.8
LOS	B	C	A	B	C	A		D		C	C	A
Approach Delay		19.8			18.5			48.3			25.2	
Approach LOS		B			B			D			C	
Queue Length 50th (m)	13.0	59.6	0.2	4.5	21.4	0.0		47.9		8.5	76.6	9.0
Queue Length 95th (m)	m18.0	60.9	m1.3	11.4	36.4	0.0		#96.4		18.3	113.6	24.1
Internal Link Dist (m)		225.1			275.4			255.3			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	412	678	475	282	691	533		362		346	696	623
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.29	0.57	0.14	0.14	0.26	0.04		0.85		0.21	0.72	0.32

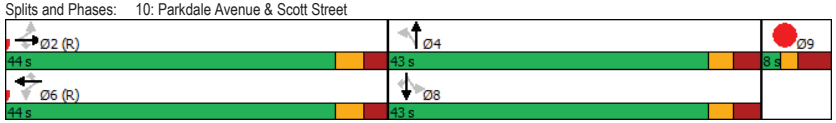
Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 91 (96%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 26.5 Intersection LOS: C
Intersection Capacity Utilization 98.0% ICU Level of Service F
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	386	67	39	178	22	68	169	70	71	501	198
Future Volume (vph)	119	386	67	39	178	22	68	169	70	71	501	198
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	40.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.91		0.91	0.97		0.86		0.97		0.94		0.93
Frt			0.850			0.850		0.956				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1679	1701	1129	1729	1733	1357	1616	1634	0	1712	1802	1517
Flt Permitted	0.613			0.309			0.150			0.610		
Satd. Flow (perm)	983	1701	1025	547	1733	1169	255	1634	0	1028	1802	1418
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			170		29				168
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			265.8			221.0	
Travel Time (s)		17.9			21.6			23.9			19.9	
Confl. Peds. (#/hr)	63		33	33		63	23		45	45		23
Confl. Bikes (#/hr)			9									
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	7%	37%	0%	5%	14%	7%	4%	1%	1%	1%	2%
Adj. Flow (vph)	119	386	67	39	178	22	68	169	70	71	501	198
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	386	67	39	178	22	68	239	0	71	501	198
Turn Type	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	2	2	2	6	6	6	7	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	32.1	32.1	32.1	32.1	32.1	32.1	11.3	31.3		31.3	31.3	31.3
Total Split (s)	38.0	38.0	38.0	38.0	38.0	38.0	13.0	54.0		41.0	41.0	41.0
Total Split (%)	38.0%	38.0%	38.0%	38.0%	38.0%	38.0%	13.0%	54.0%		41.0%	41.0%	41.0%
Maximum Green (s)	31.9	31.9	31.9	31.9	31.9	31.9	6.7	47.7		34.7	34.7	34.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		10.0		10.0	10.0	10.0
Flash Dont Walk (s)	19.0	19.0	19.0	19.0	19.0	19.0		15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)	30	30	30	30	30	30		30		30	30	30
Act Effct Green (s)	31.9	31.9	31.9	31.9	31.9	31.9	42.3	42.3		31.9	31.9	31.9
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.42	0.42		0.32	0.32	0.32

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

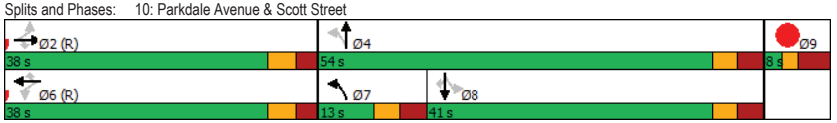
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2046 OPT MOD
Weekday AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.38	0.71	0.15	0.22	0.32	0.05	0.35	0.34		0.22	0.87	0.35
Control Delay	25.4	29.4	0.8	29.2	27.9	0.2	19.8	16.9		25.5	48.7	7.4
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	25.4	29.4	0.8	29.2	27.9	0.2	19.8	16.9		25.5	48.7	7.4
LOS	C	C	A	C	C	A	B	B		C	D	A
Approach Delay		25.2			25.6			17.6			35.9	
Approach LOS		C			C			B			D	
Queue Length 50th (m)	11.1	36.5	0.0	5.5	26.0	0.0	7.0	23.6		9.6	86.9	3.9
Queue Length 95th (m)	m20.3	m83.2	m0.0	14.3	43.6	0.0	14.3	40.0		20.1	#136.8	18.8
Internal Link Dist (m)		225.1			275.4			241.8			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	40.0			65.0		30.0
Base Capacity (vph)	313	542	442	174	552	488	198	794		356	625	601
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	0.38	0.71	0.15	0.22	0.32	0.05	0.34	0.30		0.20	0.80	0.33

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 22 (22%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 28.4 Intersection LOS: C
Intersection Capacity Utilization 81.3% ICU Level of Service D
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	320	89	74	362	39	77	307	53	48	318	137
Future Volume (vph)	291	320	89	74	362	39	77	307	53	48	318	137
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	0.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		0.83	0.90		0.85		0.98		0.96		0.91
Frt			0.850			0.850		0.984				0.850
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1729	1784	1446	1712	1750	1547	0	1676	0	1729	1802	1532
Flt Permitted	0.258			0.567				0.768		0.404		
Satd. Flow (perm)	448	1784	1197	922	1750	1321	0	1290	0	705	1802	1392
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			101			163		8				160
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			279.3			221.0	
Travel Time (s)		17.9			21.6			25.1			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	7%	1%	4%	0%	19%	1%	2%	0%	1%	1%
Adj. Flow (vph)	291	320	89	74	362	39	77	307	53	48	318	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	291	320	89	74	362	39	0	437	0	48	318	137
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2			6			4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	4	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	10.6	32.1	32.1	32.1	32.1	32.1	31.3	31.3		31.3	31.3	31.3
Total Split (s)	15.0	49.0	49.0	34.0	34.0	34.0	43.0	43.0		43.0	43.0	43.0
Total Split (%)	15.0%	49.0%	49.0%	34.0%	34.0%	34.0%	43.0%	43.0%		43.0%	43.0%	43.0%
Maximum Green (s)	9.4	42.9	42.9	27.9	27.9	27.9	36.7	36.7		36.7	36.7	36.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.3	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	6.1	6.1	6.1	6.1	6.1		6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	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		3.0	3.0	3.0
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max		Max	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	10.0	10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0	15.0	15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30	30	30		30	30	30
Act Effct Green (s)	43.4	42.9	42.9	27.9	27.9	27.9		36.7		36.7	36.7	36.7
Actuated g/C Ratio	0.43	0.43	0.43	0.28	0.28	0.28		0.37		0.37	0.37	0.37

10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA

Future Total 2046 Conditions
Weekday PM Peak Hour

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	8%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

Lanes, Volumes, Timings
BD

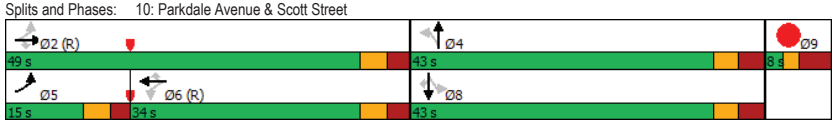
Synchro 11 Report
February 2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.93	0.42	0.16	0.29	0.74	0.08		0.91		0.19	0.48	0.22
Control Delay	59.2	22.0	3.6	32.1	43.5	0.3		55.8		24.0	27.4	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Delay	59.2	22.0	3.6	32.1	43.5	0.3		55.8		24.0	27.4	3.3
LOS	E	C	A	C	D	A		E		C	C	A
Approach Delay		35.1			38.1			55.8			20.5	
Approach LOS		D			D			E			C	
Queue Length 50th (m)	37.4	42.1	0.0	11.2	63.8	0.0		78.3		6.2	46.7	0.0
Queue Length 95th (m)	#82.3	64.3	7.2	23.6	#98.3	0.0		#137.6		14.8	71.5	8.7
Internal Link Dist (m)		225.1			275.4			255.3			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0				65.0		30.0
Base Capacity (vph)	314	765	571	257	488	486		478		258	661	612
Starvation Cap Reductn	0	0	0	0	0	0		0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0		0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0		0		0	0	0
Reduced v/c Ratio	0.93	0.42	0.16	0.29	0.74	0.08		0.91		0.19	0.48	0.22

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 85
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 36.6 Intersection LOS: D
Intersection Capacity Utilization 105.2% ICU Level of Service G
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	320	89	74	362	39	77	307	53	48	318	137
Future Volume (vph)	291	320	89	74	362	39	77	307	53	48	318	137
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		45.0	55.0		30.0	40.0		0.0	65.0		30.0
Storage Lanes	1		1	1		1	1		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95		0.81	0.89		0.84	0.97	0.98		0.93		0.90
Frt			0.850			0.850		0.978				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1729	1784	1446	1712	1750	1547	1453	1725	0	1729	1802	1532
Flt Permitted	0.248			0.567			0.220			0.510		
Satd. Flow (perm)	430	1784	1176	912	1750	1305	326	1725	0	863	1802	1378
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155			215		9				213
Link Speed (k/h)		50			50			40			40	
Link Distance (m)		249.1			299.4			265.8			221.0	
Travel Time (s)		17.9			21.6			23.9			19.9	
Confl. Peds. (#/hr)	60		79	79		60	34		53	53		34
Confl. Bikes (#/hr)			4			11						5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	2%	7%	1%	4%	0%	19%	1%	2%	0%	1%	1%
Adj. Flow (vph)	291	320	89	74	362	39	77	307	53	48	318	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	291	320	89	74	362	39	77	360	0	48	318	137
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases	5	2			6		7	4			8	
Permitted Phases	2		2	6		6	4			8		8
Detector Phase	5	2	2	6	6	6	7	4		8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	11.1	32.1	32.1	32.1	32.1	32.1	11.3	31.3		31.3	31.3	31.3
Total Split (s)	19.0	57.0	57.0	38.0	38.0	38.0	12.0	45.0		33.0	33.0	33.0
Total Split (%)	17.3%	51.8%	51.8%	34.5%	34.5%	34.5%	10.9%	40.9%		30.0%	30.0%	30.0%
Maximum Green (s)	12.9	50.9	50.9	31.9	31.9	31.9	5.7	38.7		26.7	26.7	26.7
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3	3.3	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3		3.3	3.3	3.3
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)	6.1	6.1	6.1	6.1	6.1	6.1	6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead			Lag	Lag	Lag	Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max	C-Max	C-Max	C-Max	None	None		None	None	None
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		10.0		10.0	10.0	10.0
Flash Dont Walk (s)		19.0	19.0	19.0	19.0	19.0		15.0		15.0	15.0	15.0
Pedestrian Calls (#/hr)		30	30	30	30	30		30		30	30	30
Act Effct Green (s)	50.9	50.9	50.9	31.9	31.9	31.9	33.5	33.5		23.9	23.9	23.9
Actuated g/C Ratio	0.46	0.46	0.46	0.29	0.29	0.29	0.30	0.30		0.22	0.22	0.22

Lane Group	Ø9
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (m)	
Storage Lanes	
Taper Length (m)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (k/h)	
Link Distance (m)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	1.0
Minimum Split (s)	8.0
Total Split (s)	8.0
Total Split (%)	7%
Maximum Green (s)	2.0
Yellow Time (s)	2.0
All-Red Time (s)	4.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	Max
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
Act Effct Green (s)	
Actuated g/C Ratio	

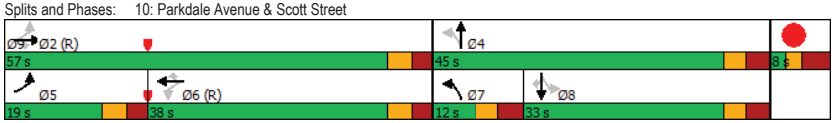
10: Parkdale Avenue & Scott Street
Tunney's Pasture TIA
Future Total 2046 OPT MOD
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.83	0.39	0.14	0.28	0.71	0.07	0.49	0.68		0.26	0.81	0.29
Control Delay	45.0	29.1	2.8	33.8	44.0	0.3	36.8	38.7		38.4	57.7	2.1
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	45.0	29.1	2.8	33.8	44.0	0.3	36.8	38.7		38.4	57.7	2.1
LOS	D	C	A	C	D	A	D	D		D	E	A
Approach Delay		32.3			38.8			38.3			40.7	
Approach LOS		C			D			D			D	
Queue Length 50th (m)	51.1	56.4	0.0	12.3	69.5	0.0	11.4	62.2		8.5	64.1	0.0
Queue Length 95th (m)	m#73.5	m73.3	m0.6	25.2	102.8	0.0	22.1	91.2		18.9	94.1	1.5
Internal Link Dist (m)		225.1			275.4			241.8			197.0	
Turn Bay Length (m)	50.0		45.0	55.0		30.0	40.0			65.0		30.0
Base Capacity (vph)	351	825	627	264	508	531	157	612		209	437	495
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	0.83	0.39	0.14	0.28	0.71	0.07	0.49	0.59		0.23	0.73	0.28

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 108 (98%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 37.0 Intersection LOS: D
Intersection Capacity Utilization 84.6% ICU Level of Service E
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: Parkdale Avenue & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	478	73	86	214	45	122	118	126	47	114	34
Future Volume (vph)	33	478	73	86	214	45	122	118	126	47	114	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.76	0.96		0.94		0.64	0.68		0.63	0.70		0.61
Frt		0.980				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1679	1501	0	1662	1640	1369	1394	1784	1517	1503	1767	1459
Flt Permitted	0.599			0.227			0.684			0.681		
Satd. Flow (perm)	803	1501	0	375	1640	877	682	1784	949	752	1767	889
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			184.8	
Travel Time (s)		20.2			17.9			20.2			22.2	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	10%	38%	4%	11%	13%	24%	2%	2%	15%	3%	6%
Adj. Flow (vph)	33	478	73	86	214	45	122	118	126	47	114	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	551	0	86	214	45	122	118	126	47	114	34
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	3.0	3.0	3.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	44.0	44.0		44.0	44.0	44.0	41.0	41.0	41.0	41.0	41.0	41.0
Total Split (%)	46.3%	46.3%		46.3%	46.3%	46.3%	43.2%	43.2%	43.2%	43.2%	43.2%	43.2%
Maximum Green (s)	37.8	37.8		37.8	37.8	37.8	34.8	34.8	34.8	34.8	34.8	34.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Max	C-Max		C-Max	C-Max	C-Max	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	37.8	37.8		37.8	37.8	37.8	22.9	22.9	22.9	22.9	22.9	22.9
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.24	0.24	0.24	0.24	0.24	0.24

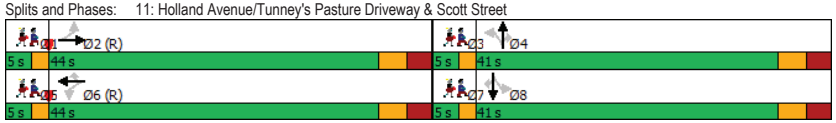
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	3.0	3.0	3.0	3.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.92		0.58	0.33	0.13	0.74	0.27	0.55	0.26	0.27	0.16
Control Delay	19.2	50.9		35.4	18.1	16.3	57.2	28.1	38.4	28.9	28.0	25.9
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	19.2	50.9		35.4	18.1	16.3	57.2	28.1	38.4	28.9	28.0	25.9
LOS	B	D		D	B	B	E	C	D	C	C	C
Approach Delay		49.1			22.1			41.4			27.8	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	3.7	94.1		10.5	24.1	4.6	20.4	17.4	19.9	6.9	16.7	4.9
Queue Length 95th (m)	9.9	#158.2		m#21.4	m38.4	m10.5	35.0	26.5	32.0	13.8	25.8	10.6
Internal Link Dist (m)		256.5			225.1			200.2			160.8	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	319	597		149	652	348	249	653	347	275	647	325
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	0.10	0.92		0.58	0.33	0.13	0.49	0.18	0.36	0.17	0.18	0.10

Intersection Summary

Area Type: Other
Cycle Length: 95
Actuated Cycle Length: 95
Offset: 85 (89%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.92
Intersection Signal Delay: 38.2 Intersection LOS: D
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	478	73	86	214	45	122	118	126	47	114	34
Future Volume (vph)	33	478	73	86	214	45	122	118	126	47	114	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.74	0.96		0.93		0.62	0.66		0.61	0.68		0.59
Frt		0.980				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1679	1502	0	1662	1640	1369	1394	1784	1517	1503	1767	1459
Flt Permitted	0.600			0.247			0.684			0.681		
Satd. Flow (perm)	786	1502	0	404	1640	855	665	1784	920	735	1767	860
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	149		98	98		149	190		180	180		190
Confl. Bikes (#/hr)			122			15			8			4
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	3%	10%	38%	4%	11%	13%	24%	2%	2%	15%	3%	6%
Adj. Flow (vph)	33	478	73	86	214	45	122	118	126	47	114	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	551	0	86	214	45	122	118	126	47	114	34
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			6			4			8	
Permitted Phases	2			6		6	4		4	8		8
Detector Phase	2	2		6	6	6	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	54.0	54.0		54.0	54.0	54.0	36.0	36.0	36.0	36.0	36.0	36.0
Total Split (%)	54.0%	54.0%		54.0%	54.0%	54.0%	36.0%	36.0%	36.0%	36.0%	36.0%	36.0%
Maximum Green (s)	47.8	47.8		47.8	47.8	47.8	29.8	29.8	29.8	29.8	29.8	29.8
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)	6.2	6.2		6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
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	C-Min	C-Min		C-Min	C-Min	C-Min	Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30	30	30	30	30
Act Effct Green (s)	42.0	42.0		42.0	42.0	42.0	22.7	22.7	22.7	22.7	22.7	22.7
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.23	0.23	0.23	0.23	0.23	0.23

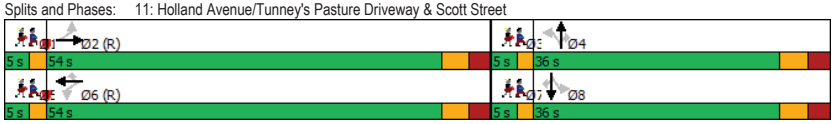
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag		Lead		Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)	0.0	0.0	0.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	0.0
Pedestrian Calls (#/hr)	0	0	0	0
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.87		0.51	0.31	0.13	0.81	0.29	0.61	0.28	0.28	0.18
Control Delay	16.2	41.7		27.7	18.4	14.1	71.7	31.8	45.5	33.4	31.6	30.0
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	16.2	41.7		27.7	18.4	14.1	71.7	31.8	45.5	33.4	31.6	30.0
LOS	B	D		C	B	B	E	C	D	C	C	C
Approach Delay		40.3			20.1			49.8			31.8	
Approach LOS		D			C			D			C	
Queue Length 50th (m)	3.7	92.1		9.3	21.6	4.3	22.1	18.7	21.6	7.4	18.0	5.3
Queue Length 95th (m)	8.8	129.6		20.0	34.7	10.2	#44.2	31.0	37.6	16.4	30.1	12.5
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	375	717		193	783	408	198	531	274	219	526	256
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	0.09	0.77		0.45	0.27	0.11	0.62	0.22	0.46	0.21	0.22	0.13

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 36.8 Intersection LOS: D
Intersection Capacity Utilization 72.5% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	532	77	160	557	46	142	110	227	62	146	38
Future Volume (vph)	44	532	77	160	557	46	142	110	227	62	146	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.90	0.96				0.55	0.64		0.66	0.72		0.53
Frt		0.981				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1588	0	1679	1701	1345	1406	1784	1547	1679	1802	1502
Flt Permitted	0.080			0.220			0.647			0.686		
Satd. Flow (perm)	129	1588	0	389	1701	740	610	1784	1025	878	1802	795
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			184.8	
Travel Time (s)		20.2			17.9			20.2			22.2	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	34%	3%	7%	15%	23%	2%	0%	3%	1%	3%
Adj. Flow (vph)	44	532	77	160	557	46	142	110	227	62	146	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	609	0	160	557	46	142	110	227	62	146	38
Turn Type	Perm	NA		custom	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2		15	6 15			4			8	
Permitted Phases	2			6		6 15	4		4	8		8
Detector Phase	2	2		15	6 15	6 15	4	4	4	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0			5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		11.2			30.2	30.2	30.2	30.2	30.2	30.2
Total Split (s)	50.0	50.0		15.0			35.0	35.0	35.0	35.0	35.0	35.0
Total Split (%)	45.5%	45.5%		13.6%			31.8%	31.8%	31.8%	31.8%	31.8%	31.8%
Maximum Green (s)	43.8	43.8		8.8			28.8	28.8	28.8	28.8	28.8	28.8
Yellow Time (s)	3.3	3.3		3.3			3.3	3.3	3.3	3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9			2.9	2.9	2.9	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0			0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2			6.2	6.2	6.2	6.2	6.2	6.2
Lead/Lag							Lag	Lag	Lag	Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0			3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	C-Min	C-Min		None			Min	Min	Min	Min	Min	Min
Walk Time (s)	2.0	2.0					2.0	2.0	2.0	2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0					22.0	22.0	22.0	22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30					30	30	30	30	30	30
Act Effct Green (s)	49.8	49.8		60.5	66.7	66.7	30.9	30.9	30.9	30.9	30.9	30.9
Actuated g/C Ratio	0.45	0.45		0.55	0.61	0.61	0.28	0.28	0.28	0.28	0.28	0.28

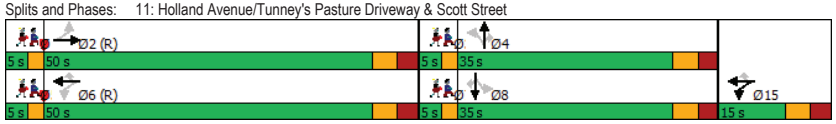
Lane Group	Ø1	Ø3	Ø5	Ø6	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	5	6	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	1.0	5.0	1.0
Minimum Split (s)	3.0	3.0	3.0	27.2	3.0
Total Split (s)	5.0	5.0	5.0	50.0	5.0
Total Split (%)	5%	5%	5%	45%	5%
Maximum Green (s)	3.0	3.0	3.0	43.8	3.0
Yellow Time (s)	2.0	2.0	2.0	3.3	2.0
All-Red Time (s)	0.0	0.0	0.0	2.9	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead			Lead
Lead-Lag Optimize?					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	C-Min	None
Walk Time (s)	0.0	0.0	0.0	2.0	0.0
Flash Dont Walk (s)	0.0	0.0	0.0	19.0	0.0
Pedestrian Calls (#/hr)	0	0	0	30	0
Act Effct Green (s)					
Actuated g/C Ratio					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.76	0.85		0.47	0.54	0.10	0.83	0.22	0.79	0.25	0.29	0.17
Control Delay	95.6	40.1		15.3	15.9	11.0	73.3	30.4	56.4	32.2	31.7	30.4
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	95.6	40.1		15.3	15.9	11.0	73.3	30.4	56.4	32.2	31.7	30.4
LOS	F	D		B	B	B	E	C	E	C	C	C
Approach Delay		43.9			15.5			55.5			31.6	
Approach LOS		D			B			E			C	
Queue Length 50th (m)	7.8	115.1		15.0	70.3	4.2	27.4	17.4	43.2	9.9	23.6	5.9
Queue Length 95th (m)	#29.7	#181.2		25.1	101.3	9.7	#60.6	31.1	#78.2	21.0	39.8	14.3
Internal Link Dist (m)		256.5			225.1			200.2			160.8	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	58	718		339	1031	448	178	522	299	256	527	233
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	0.76	0.85		0.47	0.54	0.10	0.80	0.21	0.76	0.24	0.28	0.16

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 10 (9%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 34.9 Intersection LOS: C
Intersection Capacity Utilization 93.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	532	77	160	557	46	142	110	227	62	146	38
Future Volume (vph)	44	532	77	160	557	46	142	110	227	62	146	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	50.0		0.0	135.0		65.0	70.0		40.0	65.0		30.0
Storage Lanes	1		0	1		1	1		1	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.90	0.96				0.55	0.64		0.66	0.72		0.53
Frt		0.981				0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1695	1588	0	1679	1701	1345	1406	1784	1547	1679	1802	1502
Flt Permitted	0.279			0.235			0.617			0.686		
Satd. Flow (perm)	450	1588	0	415	1701	739	585	1784	1026	878	1802	793
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			40			30	
Link Distance (m)		280.5			249.1			224.2			108.7	
Travel Time (s)		20.2			17.9			20.2			13.0	
Confl. Peds. (#/hr)	152		112	112		152	198		140	140		198
Confl. Bikes (#/hr)			31			86			3			8
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	2%	4%	34%	3%	7%	15%	23%	2%	0%	3%	1%	3%
Adj. Flow (vph)	44	532	77	160	557	46	142	110	227	62	146	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	44	609	0	160	557	46	142	110	227	62	146	38
Turn Type	Perm	NA		Perm	NA	Perm	custom	NA	Perm	Perm	NA	Perm
Protected Phases		2			6		15	4 15			8	
Permitted Phases	2			6		6	4		4 15	8		8
Detector Phase	2	2		6	6	6	15	4 15	4 15	8	8	8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0			5.0	5.0	5.0
Minimum Split (s)	27.2	27.2		27.2	27.2	27.2	11.2			30.2	30.2	30.2
Total Split (s)	57.8	57.8		57.8	57.8	57.8	12.0			30.2	30.2	30.2
Total Split (%)	52.5%	52.5%		52.5%	52.5%	52.5%	10.9%			27.5%	27.5%	27.5%
Maximum Green (s)	51.6	51.6		51.6	51.6	51.6	5.8			24.0	24.0	24.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3			3.3	3.3	3.3
All-Red Time (s)	2.9	2.9		2.9	2.9	2.9	2.9			2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)	6.2	6.2		6.2	6.2	6.2	6.2			6.2	6.2	6.2
Lead/Lag										Lag	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0			3.0	3.0	3.0
Recall Mode	C-Max	C-Max		C-Max	C-Max	C-Max	None			None	None	None
Walk Time (s)	2.0	2.0		2.0	2.0	2.0				2.0	2.0	2.0
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0				22.0	22.0	22.0
Pedestrian Calls (#/hr)	30	30		30	30	30				30	30	30
Act Effct Green (s)	51.6	51.6		51.6	51.6	51.6	28.1	34.3	34.3	22.0	22.0	22.0
Actuated g/C Ratio	0.47	0.47		0.47	0.47	0.47	0.26	0.31	0.31	0.20	0.20	0.20

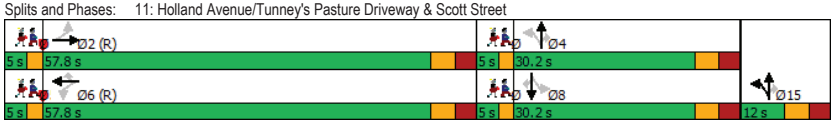
Lane Group	Ø1	Ø3	Ø4	Ø5	Ø7
Lane Configurations					
Traffic Volume (vph)					
Future Volume (vph)					
Ideal Flow (vphpl)					
Storage Length (m)					
Storage Lanes					
Taper Length (m)					
Lane Util. Factor					
Ped Bike Factor					
Frt					
Flt Protected					
Satd. Flow (prot)					
Flt Permitted					
Satd. Flow (perm)					
Right Turn on Red					
Satd. Flow (RTOR)					
Link Speed (k/h)					
Link Distance (m)					
Travel Time (s)					
Confl. Peds. (#/hr)					
Confl. Bikes (#/hr)					
Peak Hour Factor					
Heavy Vehicles (%)					
Adj. Flow (vph)					
Shared Lane Traffic (%)					
Lane Group Flow (vph)					
Turn Type					
Protected Phases	1	3	4	5	7
Permitted Phases					
Detector Phase					
Switch Phase					
Minimum Initial (s)	1.0	1.0	5.0	1.0	1.0
Minimum Split (s)	5.0	5.0	30.2	5.0	5.0
Total Split (s)	5.0	5.0	30.2	5.0	5.0
Total Split (%)	5%	5%	27%	5%	5%
Maximum Green (s)	3.0	3.0	24.0	3.0	3.0
Yellow Time (s)	2.0	2.0	3.3	2.0	2.0
All-Red Time (s)	0.0	0.0	2.9	0.0	0.0
Lost Time Adjust (s)					
Total Lost Time (s)					
Lead/Lag		Lead	Lag		Lead
Lead-Lag Optimize?		Yes			Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Min	Max	Max
Walk Time (s)			2.0		
Flash Dont Walk (s)			22.0		
Pedestrian Calls (#/hr)			30		
Act Effct Green (s)					
Actuated g/C Ratio					

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.21	0.82		0.82	0.70	0.13	0.73	0.20	0.71	0.35	0.41	0.24
Control Delay	20.5	36.0		45.9	15.4	9.5	57.7	28.1	46.6	43.2	41.3	40.1
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	20.5	36.0		45.9	15.4	9.5	57.7	28.1	46.6	43.2	41.3	40.1
LOS	C	D		D	B	A	E	C	D	D	D	D
Approach Delay		34.9			21.4			45.6			41.6	
Approach LOS		C			C			D			D	
Queue Length 50th (m)	5.4	109.4		10.3	34.9	2.5	22.7	16.8	41.9	11.3	26.8	6.8
Queue Length 95th (m)	13.3	#165.0		m#62.4	51.7	m5.1	#46.3	30.2	70.6	23.9	45.4	16.3
Internal Link Dist (m)		256.5			225.1			200.2			84.7	
Turn Bay Length (m)	50.0			135.0		65.0	70.0		40.0	65.0		30.0
Base Capacity (vph)	211	744		194	797	346	195	543	312	191	393	173
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	0.21	0.82		0.82	0.70	0.13	0.73	0.20	0.73	0.32	0.37	0.22

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 8 (7%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 33.3 Intersection LOS: C
Intersection Capacity Utilization 93.6% ICU Level of Service F
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 11: Holland Avenue/Tunney's Pasture Driveway & Scott Street



Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	466	0	0	268	73	1	0	12	38	0	38
Future Vol, veh/h	58	466	0	0	268	73	1	0	12	38	0	38
Conflicting Peds, #/hr	51	0	20	20	0	51	6	0	2	2	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	11	0	0	14	6	0	0	0	0	0	8
Mvmt Flow	58	466	0	0	268	73	1	0	12	38	0	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	392	0	0	486	0	0	932	994	488	946	958	362
Stage 1	-	-	-	-	-	-	602	602	-	356	356	-
Stage 2	-	-	-	-	-	-	330	392	-	590	602	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.28
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.372
Pot Cap-1 Maneuver	1178	-	-	1087	-	-	249	247	584	243	259	669
Stage 1	-	-	-	-	-	-	490	492	-	666	633	-
Stage 2	-	-	-	-	-	-	687	610	-	497	492	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1123	-	-	1067	-	-	216	215	572	214	225	634
Mov Cap-2 Maneuver	-	-	-	-	-	-	216	215	-	214	225	-
Stage 1	-	-	-	-	-	-	447	449	-	590	603	-
Stage 2	-	-	-	-	-	-	642	581	-	452	449	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0	12.3	19.7
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	508	1123	-	-	1067	-	-	320
HCM Lane V/C Ratio	0.026	0.052	-	-	-	-	-	0.238
HCM Control Delay (s)	12.3	8.4	0	-	0	-	-	19.7
HCM Lane LOS	B	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0	-	-	0.9

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	466	0	0	268	73	1	0	12	38	0	38
Future Volume (vph)	58	466	0	0	268	73	1	0	12	38	0	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		0.0	25.0		20.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93				0.97			0.97			0.98	
Frt					0.971			0.875			0.932	
Flt Protected	0.950							0.996			0.976	
Satd. Flow (prot)	1729	1640	0	0	1523	0	0	1539	0	0	1561	0
Flt Permitted	0.950							0.976			0.829	
Satd. Flow (perm)	1604	1640	0	0	1523	0	0	1507	0	0	1322	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)					16							
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		302.8			168.9			203.1			119.6	
Travel Time (s)		21.8			12.2			24.4			14.4	
Confl. Peds. (#/hr)	51		20	20		51	6		2	2		6
Confl. Bikes (#/hr)			82			20			3			1
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	11%	0%	0%	14%	6%	0%	0%	0%	0%	0%	8%
Adj. Flow (vph)	58	466	0	0	268	73	1	0	12	38	0	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	466	0	0	341	0	0	13	0	0	76	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	13	2			6			4			8	
Permitted Phases							4			8		
Detector Phase	13	2			6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.5	27.5			27.5		22.9	22.9		22.9	22.9	
Total Split (s)	21.0	45.0			45.0		24.0	24.0		24.0	24.0	
Total Split (%)	21.0%	45.0%			45.0%		24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	15.5	39.5			39.5		18.1	18.1		18.1	18.1	
Yellow Time (s)	3.6	3.6			3.6		2.7	2.7		2.7	2.7	
All-Red Time (s)	1.9	1.9			1.9		3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5			5.5			5.9			5.9	
Lead/Lag		Lag			Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	C-Max			C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)		30			30		30	30		30	30	
Act Effct Green (s)	22.8	39.5			39.5			12.4			13.2	
Actuated g/C Ratio	0.23	0.40			0.40			0.12			0.13	

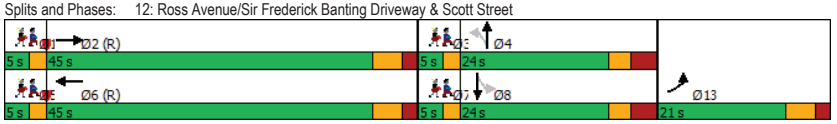
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.15	0.72			0.56			0.07			0.44	
Control Delay	36.6	33.2			26.6			36.2			46.3	
Queue Delay	0.0	0.0			0.0			0.0			0.0	
Total Delay	36.6	33.2			26.6			36.2			46.3	
LOS	D	C			C			D			D	
Approach Delay		33.6			26.6			36.2			46.3	
Approach LOS		C			C			D			D	
Queue Length 50th (m)	9.8	75.0			48.0			2.1			13.1	
Queue Length 95th (m)	21.1	112.2			75.5			7.4			26.7	
Internal Link Dist (m)		278.8			144.9			179.1			95.6	
Turn Bay Length (m)	40.0											
Base Capacity (vph)	394	647			611			272			239	
Starvation Cap Reductn	0	0			0			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.15	0.72			0.56			0.05			0.32	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 86 (86%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.72
Intersection Signal Delay: 32.1 Intersection LOS: C
Intersection Capacity Utilization 50.8% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street



Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	648	0	0	544	83	4	0	13	63	0	65
Future Vol, veh/h	57	648	0	0	544	83	4	0	13	63	0	65
Conflicting Peds, #/hr	42	0	25	25	0	42	3	0	4	4	0	3
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	5	0	0	8	2	0	0	0	0	0	3
Mvmt Flow	57	648	0	0	544	83	4	0	13	63	0	65

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	669	0	0	673	0	0	1408	1456	677	1401	1415	631
Stage 1	-	-	-	-	-	-	787	787	-	628	628	-
Stage 2	-	-	-	-	-	-	621	669	-	773	787	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.327
Pot Cap-1 Maneuver	931	-	-	927	-	-	118	131	456	119	139	479
Stage 1	-	-	-	-	-	-	388	406	-	474	479	-
Stage 2	-	-	-	-	-	-	478	459	-	395	406	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	895	-	-	906	-	-	91	111	444	102	117	459
Mov Cap-2 Maneuver	-	-	-	-	-	-	91	111	-	102	117	-
Stage 1	-	-	-	-	-	-	341	357	-	410	460	-
Stage 2	-	-	-	-	-	-	409	441	-	344	357	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	21.7	72.9
HCM LOS			C	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	232	895	-	-	906	-	-	169
HCM Lane V/C Ratio	0.073	0.064	-	-	-	-	-	0.757
HCM Control Delay (s)	21.7	9.3	0	-	0	-	-	72.9
HCM Lane LOS	C	A	A	-	A	-	-	F
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	4.8

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	648	0	0	544	83	4	0	13	63	0	65
Future Volume (vph)	57	648	0	0	544	83	4	0	13	63	0	65
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	40.0		0.0	25.0		20.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	0		0	0		0	0		0
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.96				0.98			0.97			0.98	
Frt					0.982			0.897			0.931	
Flt Protected	0.950							0.988			0.976	
Satd. Flow (prot)	1729	1733	0	0	1631	0	0	1573	0	0	1602	0
Flt Permitted	0.950							0.931			0.835	
Satd. Flow (perm)	1653	1733	0	0	1631	0	0	1479	0	0	1362	0
Right Turn on Red			Yes			Yes			No			No
Satd. Flow (RTOR)					9							
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		302.8			168.9			203.1			119.6	
Travel Time (s)		21.8			12.2			24.4			14.4	
Confl. Peds. (#/hr)	42		25	25		42	3		4	4		3
Confl. Bikes (#/hr)			16			59						2
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	0%	5%	0%	0%	8%	2%	0%	0%	0%	0%	0%	3%
Adj. Flow (vph)	57	648	0	0	544	83	4	0	13	63	0	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	648	0	0	627	0	0	17	0	0	128	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	13	2			6			4			8	
Permitted Phases							4			8		
Detector Phase	13	2			6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	10.5	27.5			27.5		23.9	23.9		23.9	23.9	
Total Split (s)	14.0	56.0			56.0		30.0	30.0		30.0	30.0	
Total Split (%)	12.7%	50.9%			50.9%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	8.5	50.5			50.5		24.1	24.1		24.1	24.1	
Yellow Time (s)	3.6	3.6			3.6		2.7	2.7		2.7	2.7	
All-Red Time (s)	1.9	1.9			1.9		3.2	3.2		3.2	3.2	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.5	5.5			5.5			5.9			5.9	
Lead/Lag		Lag			Lag		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	C-Max			C-Max		Min	Min		Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		15.0			15.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)		30			30		30	30		30	30	
Act Effct Green (s)	16.8	50.5			50.5			15.8			15.8	
Actuated g/C Ratio	0.15	0.46			0.46			0.14			0.14	

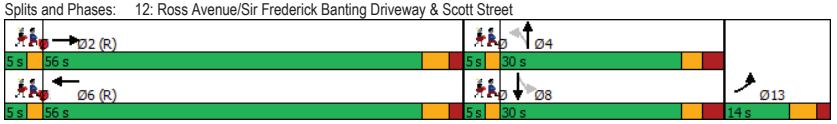
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?			Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.22	0.82			0.83			0.08			0.66	
Control Delay	46.1	35.7			37.2			38.8			59.4	
Queue Delay	0.0	0.0			4.4			0.0			0.0	
Total Delay	46.1	35.7			41.6			38.8			59.4	
LOS	D	D			D			D			E	
Approach Delay		36.5			41.6			38.8			59.4	
Approach LOS		D			D			D			E	
Queue Length 50th (m)	11.0	117.0			113.3			3.2			26.0	
Queue Length 95th (m)	24.3	#169.0			#178.3			9.0			43.2	
Internal Link Dist (m)		278.8			144.9			179.1			95.6	
Turn Bay Length (m)	40.0											
Base Capacity (vph)	263	795			753			324			298	
Starvation Cap Reductn	0	0			74			0			0	
Spillback Cap Reductn	0	0			0			0			0	
Storage Cap Reductn	0	0			0			0			0	
Reduced v/c Ratio	0.22	0.82			0.92			0.05			0.43	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 102 (93%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 40.7 Intersection LOS: D
Intersection Capacity Utilization 69.0% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 12: Ross Avenue/Sir Frederick Banting Driveway & Scott Street



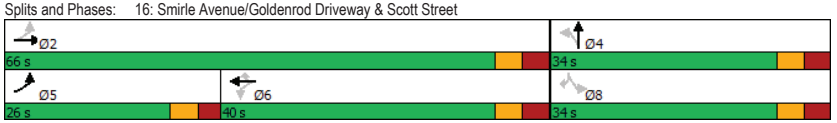
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	443	26	4	290	45	11	0	12	68	0	31
Future Volume (vph)	35	443	26	4	290	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.99		0.96		0.85		0.94		0.94		0.95
Frt		0.992				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	856	1737	0	1729	1767	802	0	1580	0	869	0	762
Flt Permitted	0.521			0.494				0.977		0.742		
Satd. Flow (perm)	447	1737	0	860	1767	681	0	1558	0	635	0	725
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				105		105				105
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	102%	3%	4%	0%	3%	93%	0%	0%	0%	99%	0%	103%
Adj. Flow (vph)	35	443	26	4	290	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	469	0	4	290	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	26.0	66.0		40.0	40.0	40.0	34.0	34.0		34.0		34.0
Total Split (%)	26.0%	66.0%		40.0%	40.0%	40.0%	34.0%	34.0%		34.0%		34.0%
Maximum Green (s)	20.0	59.4		33.4	33.4	33.4	27.4	27.4		27.4		27.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	Max		Max	Max	Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	66.5	67.4		59.1	59.1	59.1		15.3		15.4		15.4
Actuated g/C Ratio	0.73	0.74		0.64	0.64	0.64		0.17		0.17		0.17

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.10	0.37		0.01	0.25	0.09		0.07		0.64		0.15
Control Delay	7.0	8.0		13.5	12.7	0.4		0.3		60.7		1.5
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	7.0	8.0		13.5	12.7	0.4		0.3		60.7		1.5
LOS	A	A		B	B	A		A		E		A
Approach Delay		7.9			11.1			0.3			42.1	
Approach LOS		A			B			A			D	
Queue Length 50th (m)	1.6	29.1		0.3	25.1	0.0		0.0		10.7		0.0
Queue Length 95th (m)	6.3	64.5		2.3	54.4	0.0		0.0		24.1		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	413	1277		554	1139	476		541		190		291
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	0.08	0.37		0.01	0.25	0.09		0.04		0.36		0.11

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 91.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.64
Intersection Signal Delay: 12.4 Intersection LOS: B
Intersection Capacity Utilization 56.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	443	26	4	290	45	11	0	12	68	0	31
Future Volume (vph)	35	443	26	4	290	45	11	0	12	68	0	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.99				0.85		0.94		0.93		0.95
Frt		0.992				0.850		0.930				0.850
Flt Protected	0.950			0.950				0.977		0.950		
Satd. Flow (prot)	856	1734	0	1729	1767	802	0	1578	0	869	0	762
Flt Permitted	0.450			0.203				0.977		0.727		
Satd. Flow (perm)	380	1734	0	369	1767	678	0	1555	0	620	0	725
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			194.8			114.1	
Travel Time (s)		12.2			20.2			23.4			13.7	
Confl. Peds. (#/hr)	38		28	28		38	12		28	28		12
Confl. Bikes (#/hr)			86			21						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	102%	3%	4%	0%	3%	93%	0%	0%	0%	99%	0%	103%
Adj. Flow (vph)	35	443	26	4	290	45	11	0	12	68	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	469	0	4	290	45	0	23	0	68	0	31
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	13	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	13	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	24.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	24.0	42.3		42.3	42.3	42.3	27.7	27.7		27.7		27.7
Total Split (%)	23.1%	40.7%		40.7%	40.7%	40.7%	26.6%	26.6%		26.6%		26.6%
Maximum Green (s)	18.0	35.7		35.7	35.7	35.7	21.1	21.1		21.1		21.1
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag		Lag		Lag	Lag	Lag	Lag	Lag		Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)	11.0	10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)	30	30		30	30	30	30	30		30		30
Act Effct Green (s)	49.4	35.7		35.7	35.7	35.7		14.9		16.4		16.4
Actuated g/C Ratio	0.48	0.34		0.34	0.34	0.34		0.14		0.16		0.16

16: Smirle Avenue/Goldenrod Driveway & Scott Street Future Total 2046 OPT MOD
Tunney's Pasture TIA Weekday AM Peak Hour

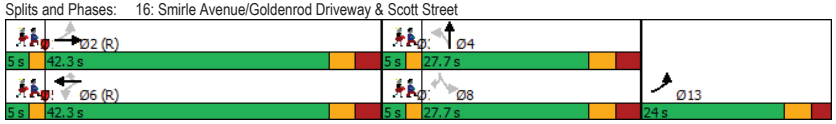
Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	5%	5%	5%	5%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.15	0.79		0.03	0.48	0.19		0.10		0.70		0.27
Control Delay	9.8	41.9		23.8	30.1	26.9		35.7		74.9		42.1
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	9.8	41.9		23.8	30.1	26.9		35.7		74.9		42.1
LOS	A	D		C	C	C		D		E		D
Approach Delay		39.7			29.6			35.7			64.6	
Approach LOS		D			C			D			E	
Queue Length 50th (m)	2.5	84.6		0.5	45.6	6.4		3.8		12.4		5.3
Queue Length 95th (m)	6.4	#132.4		2.9	70.3	15.3		10.5		#29.6		14.0
Internal Link Dist (m)		144.9			256.5			170.8			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	280	595		126	606	232		315		125		147
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	0.13	0.79		0.03	0.48	0.19		0.07		0.54		0.21

Intersection Summary

Area Type: Other
Cycle Length: 104
Actuated Cycle Length: 104
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 38.6 — Intersection LOS: D
Intersection Capacity Utilization 56.0% — ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



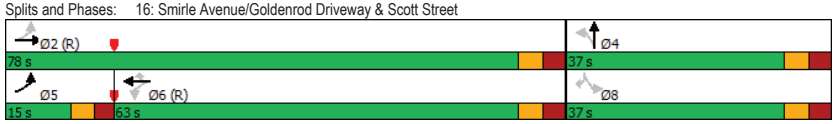
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	678	25	9	566	68	7	0	7	40	0	37
Future Volume (vph)	27	678	25	9	566	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99		0.76		0.94		0.95		0.93
Frt		0.995				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	882	1789	0	1729	1784	774	0	1595	0	873	0	806
Flt Permitted	0.361			0.394				0.976		0.748		
Satd. Flow (perm)	335	1789	0	708	1784	588	0	1553	0	651	0	749
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3				91		91				91
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			105.3			114.1	
Travel Time (s)		12.2			20.2			12.6			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	96%	1%	0%	0%	2%	100%	0%	0%	0%	98%	0%	92%
Adj. Flow (vph)	27	678	25	9	566	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	703	0	9	566	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	5	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	5	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	15.0	78.0		63.0	63.0	63.0	37.0	37.0		37.0		37.0
Total Split (%)	13.0%	67.8%		54.8%	54.8%	54.8%	32.2%	32.2%		32.2%		32.2%
Maximum Green (s)	9.0	71.4		56.4	56.4	56.4	30.4	30.4		30.4		30.4
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag	Lead			Lag	Lag	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		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	89.3	90.0		82.1	82.1	82.1		15.5		15.5		15.5
Actuated g/C Ratio	0.78	0.78		0.71	0.71	0.71		0.13		0.13		0.13

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.09	0.50		0.02	0.44	0.15		0.05		0.46		0.21
Control Delay	5.6	8.1		10.3	12.3	1.9		0.3		60.0		2.6
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	5.6	8.1		10.3	12.3	1.9		0.3		60.0		2.6
LOS	A	A		B	B	A		A		E		A
Approach Delay		8.0			11.2			0.3			32.4	
Approach LOS		A			B			A			C	
Queue Length 50th (m)	1.6	68.6		0.8	71.4	0.0		0.0		7.9		0.0
Queue Length 95th (m)	4.3	96.5		3.1	104.7	3.7		0.0		18.9		0.0
Internal Link Dist (m)		144.9			256.5			81.3			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	302	1400		505	1273	445		477		172		264
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	0.09	0.50		0.02	0.44	0.15		0.03		0.23		0.14

Intersection Summary

Area Type: Other
Cycle Length: 115
Actuated Cycle Length: 115
Offset: 20 (17%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 69.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	678	25	9	566	68	7	0	7	40	0	37
Future Volume (vph)	27	678	25	9	566	68	7	0	7	40	0	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	80.0		0.0	35.0		100.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		1	0		0	1		1
Taper Length (m)	2.5			2.5			2.5			2.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00				0.79		0.95		0.96		0.94
Frt		0.995				0.850		0.932				0.850
Flt Protected	0.950			0.950				0.976		0.950		
Satd. Flow (prot)	882	1789	0	1729	1784	774	0	1604	0	873	0	806
Flt Permitted	0.140			0.140				0.976		0.756		
Satd. Flow (perm)	130	1789	0	255	1784	608	0	1572	0	666	0	757
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			30			30	
Link Distance (m)		168.9			280.5			194.8			114.1	
Travel Time (s)		12.2			20.2			23.4			13.7	
Confl. Peds. (#/hr)	55		12	12		55	19		20	20		19
Confl. Bikes (#/hr)			19			62						
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles (%)	96%	1%	0%	0%	2%	100%	0%	0%	0%	98%	0%	92%
Adj. Flow (vph)	27	678	25	9	566	68	7	0	7	40	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	703	0	9	566	68	0	14	0	40	0	37
Turn Type	pm+pt	NA		Perm	NA	Perm	Perm	NA		Perm		Perm
Protected Phases	13	2			6			4				
Permitted Phases	2			6		6	4			8		8
Detector Phase	13	2		6	6	6	4	4		8		8
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0		5.0
Minimum Split (s)	11.0	23.6		23.6	23.6	23.6	27.6	27.6		27.6		27.6
Total Split (s)	11.0	41.4		41.4	41.4	41.4	27.6	27.6		27.6		27.6
Total Split (%)	12.2%	46.0%		46.0%	46.0%	46.0%	30.7%	30.7%		30.7%		30.7%
Maximum Green (s)	5.0	34.8		34.8	34.8	34.8	21.0	21.0		21.0		21.0
Yellow Time (s)	3.3	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
All-Red Time (s)	2.7	3.3		3.3	3.3	3.3	3.3	3.3		3.3		3.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Lost Time (s)	6.0	6.6		6.6	6.6	6.6		6.6		6.6		6.6
Lead/Lag		Lag		Lag	Lag	Lag	Lag	Lag		Lag		Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0		3.0
Recall Mode	None	C-Max		C-Max	C-Max	C-Max	None	None		None		None
Walk Time (s)		7.0		7.0	7.0	7.0	7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0	10.0	14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		30		30	30	30	30	30		30		30
Act Effct Green (s)	40.6	34.8		34.8	34.8	34.8		14.8		15.3		15.3
Actuated g/C Ratio	0.45	0.39		0.39	0.39	0.39		0.16		0.17		0.17

Lane Group	Ø1	Ø3	Ø5	Ø7
Lane Configurations				
Traffic Volume (vph)				
Future Volume (vph)				
Ideal Flow (vphpl)				
Storage Length (m)				
Storage Lanes				
Taper Length (m)				
Lane Util. Factor				
Ped Bike Factor				
Frt				
Flt Protected				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (k/h)				
Link Distance (m)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Heavy Vehicles (%)				
Adj. Flow (vph)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	5	7
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	1.0	1.0	1.0	1.0
Minimum Split (s)	5.0	5.0	5.0	5.0
Total Split (s)	5.0	5.0	5.0	5.0
Total Split (%)	6%	6%	6%	6%
Maximum Green (s)	3.0	3.0	3.0	3.0
Yellow Time (s)	2.0	2.0	2.0	2.0
All-Red Time (s)	0.0	0.0	0.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead	Lead	Lead
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Recall Mode	Max	Max	Max	Max
Walk Time (s)				
Flash Dont Walk (s)				
Pedestrian Calls (#/hr)				
Act Effct Green (s)				
Actuated g/C Ratio				

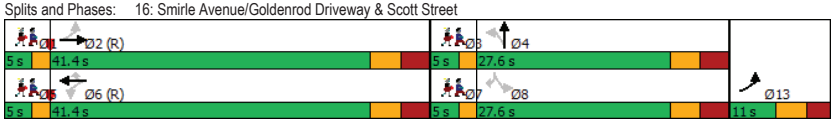
16: Smirle Avenue/Goldenrod Driveway & Scott Street
Tunney's Pasture TIA
Future Total 2046 OPT MOD
Weekday PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.26	1.02		0.09	0.82	0.29		0.05		0.35		0.29
Control Delay	16.0	67.9		20.7	36.6	23.4		27.7		38.9		35.4
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0		0.0
Total Delay	16.0	67.9		20.7	36.6	23.4		27.7		38.9		35.4
LOS	B	E		C	D	C		C		D		D
Approach Delay		66.0			35.0			27.7			37.2	
Approach LOS		E			D			C			D	
Queue Length 50th (m)	1.9	~123.6		1.0	86.2	8.0		1.9		5.7		5.2
Queue Length 95th (m)	5.5	#194.4		4.4	#141.0	18.7		6.6		14.7		13.6
Internal Link Dist (m)		144.9			256.5			170.8			90.1	
Turn Bay Length (m)	80.0			35.0		100.0						
Base Capacity (vph)	102	691		98	689	235		366		155		176
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	0.26	1.02		0.09	0.82	0.29		0.04		0.26		0.21

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: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 50.5 Intersection LOS: D
Intersection Capacity Utilization 69.1% ICU Level of Service C
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 16: Smirle Avenue/Goldenrod Driveway & Scott Street



Appendix G – Trip Generation Data

3.2 Recommended Residential Trip Generation Rates

A blended trip rate was developed from the three data sources through application of a rank-sum weighting process, considering the strengths and weaknesses of each dataset for the dwelling type in question. The recommended blended **residential person-trip rates** are presented in **Table 3**. All rates represent person-trips per dwelling unit and are to be applied to the **AM or PM peak period.**

Table 3: Recommended Residential Person-trip Rates

ITE Land Use Code	Dwelling Unit Type	Period	Person-Trip Rate
210	Single-detached	AM	2.05
		PM	2.48
220	Multi-Unit (Low-Rise)	AM	1.35
		PM	1.58
221 & 222	Multi-Unit (High-Rise)	AM	0.80
		PM	0.90

3.3 Adjustment Factors – Peak Period to Peak Hour

The various trip generation data sources require some adjustment to standardize the data for developing robust blended trip rates. The peak period conversion factor in **Table 4** may be used where applicable to develop trip generation rate estimates in the desired format.

Table 4: Adjustment Factors for Residential Trip Generation Rates

Factor	Application	Apply To	Period	Value
Peak Period Conversion Factor	**Peak period to peak hour conversion.** Because the 2020 TRANS Trip Generation Study reports trip generation rates by peak period, factors must be applied if the practitioner requires peak hour rates. In practice, the conversion to peak hour trip rates should occur **after** the application of modal shares.	Person-trip rates per peak period	AM	0.50
			PM	0.44
		Vehicle trip rates per peak period	AM	0.48
			PM	0.44
		Transit trip rates per peak period	AM	0.55
			PM	0.47
		Cycling trip rates per peak period	AM	0.58
			PM	0.48
		Walking trip rates per peak period	AM	0.58
			PM	0.52

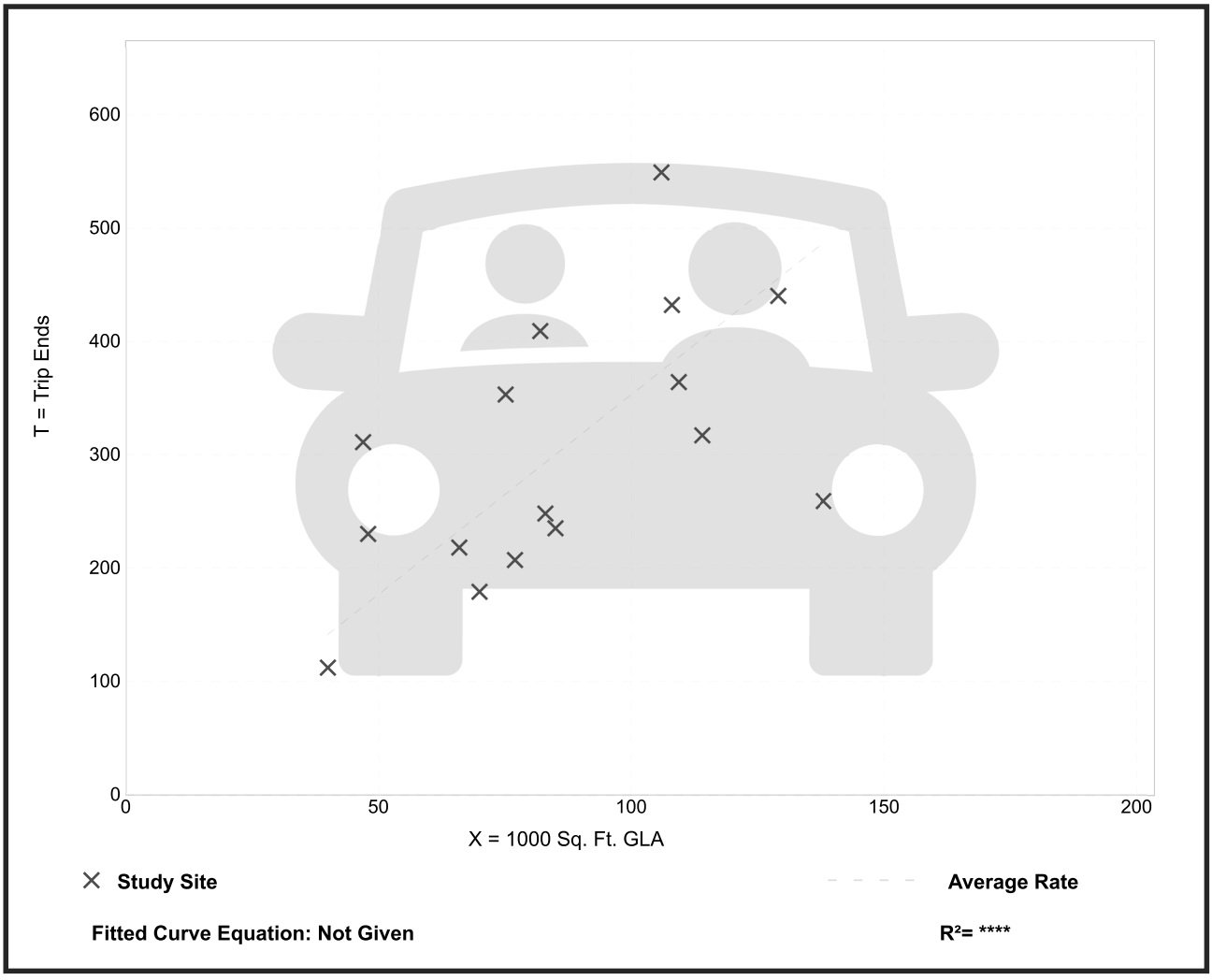
Shopping Plaza (40-150k) - Supermarket - Yes
(821)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 16
Avg. 1000 Sq. Ft. GLA: 86
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.53	1.88 - 6.62	1.17

Data Plot and Equation



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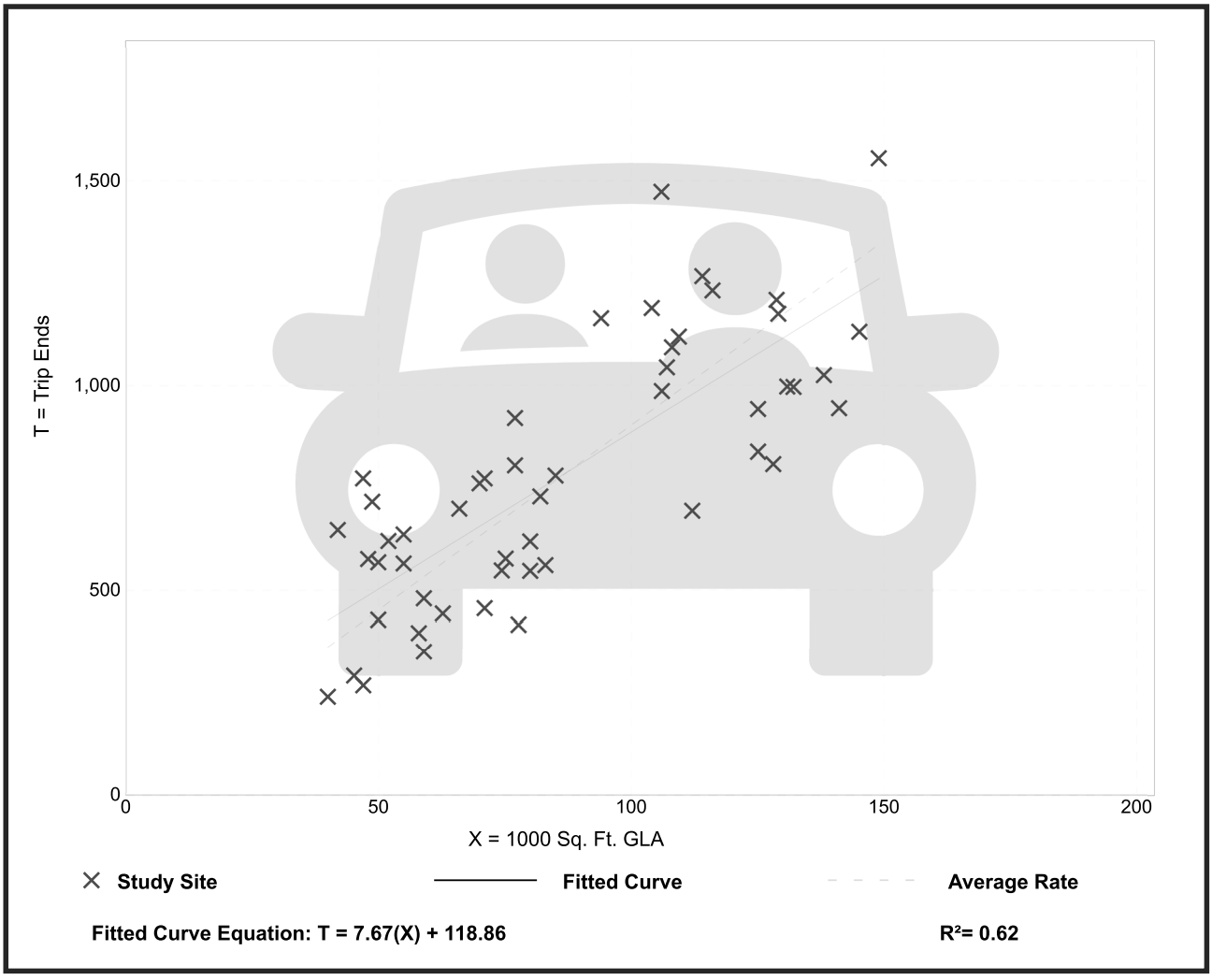
Shopping Plaza (40-150k) - Supermarket - Yes
(821)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 51
Avg. 1000 Sq. Ft. GLA: 87
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
9.03	5.35 - 16.45	2.37

Data Plot and Equation



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Development of a Local Trip Generation Rate for Tunney's Pasture Office/Laboratory Trips 2025-02-26

Time Period	From May 2023 TMCs (excludes driveways on Parkdale Ave)			From ITE (750 - Office Park) Source: ITE Trip Gen (11th Ed) Peak Hour of Adjacent Street Traffic (ITE rates x1.28 and factored by ex. auto driver mode share)		
	In	Out	Total	In	Out	Total
AM Peak Hour	692	198	890	2483	307	2790
PM Peak Hour	387	851	1238	382	2345	2727
Directional Splits	AM IN	AM OUT		AM IN	AM OUT	
	78%	22%	100%	89%	11%	100%
	PM OUT	PM OUT		PM OUT	PM OUT	
	31%	69%	100%	14%	86%	100%

Based on the above, a local rate should be further developed and considered. ITE rates are found to be to overly conservative and the directional splits are too skewed to suit the uniqe travel characteristics of office/laboratory uses within the Tunney's Pasture development.

Total Office Space at time May 2023 Turning Movement Counts were collected:	Office GFA (m2)	324,000
	Office GFA (ft2)	3,487,507
	Office GFA (/1000ft2)	3,487.507

Time Period	From 2014 MMTS (excludes driveways along Parkdale Ave)			Parkdale Ave 2014 MMTS Driveway Volumes Driveways Only			Total 2014 MMTS TMCs (includes driveways along Parkdale Ave)		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	1088	447	1535	234	94	328	1322	541	1863
PM Peak Hour	353	1240	1593	164	182	346	517	1422	1939

Time Period	Proportion of 2009 Parkdale Ave driveways volumes out of total 2014 MMTS vehicle site-gen volumes	
	In	Out
AM Peak Hour	18%	17%
PM Peak Hour	32%	13%

Vehicle Trips

Time Period	May 2023 TMCs (excludes driveways on Parkdale Ave)			Approximation of Parkdale Ave Driveway Peak Hour Vehicle Volumes Only			May 2023 TMCs w/ factors applied to account for Parkdale Ave driveways		
	In	Out	Total	In	Out	Total	In	Out	Total
AM Peak Hour	692	198	890	122	34	157	814	232	1047
PM Peak Hour	387	851	1238	123	109	232	510	960	1470

Office Mode Share Rates under Existing Conditions (interpolated from 2020 TRANS Trip Generation Summary Report)

Auto Driver	47%	Note: divide by existing 'auto driver' percentage to convert vehicle trips to person trips
Auto Passenger	7%	
Transit	32%	
Biking	6%	
Walking	8%	
Total	**100%**	

Person Trips (Peak Hour)

Time Period	May 2023 TMCs w/ factors applied to account for Parkdale Ave driveways		
	In	Out	Total
AM Peak Hour	1733	494	2227
PM Peak Hour	1085	2042	3127

Applying a conservative factor of 1.5 to account for transtition from 2 to 3 days mandatory days a week in the office for federal civil servants since turning movement counts were conducted in May 2023
Conservatively assumes 50% increase in activity on-site, even though traffic count data was collected on the core working days from Tuesday to Thursday

Person-Trips w/ 1.5 factor applied Factor 1.5

Time Period	May 2023 TMCs w/ factors applied to account for Parkdale Ave driveways		
	In	Out	Total
AM Peak Hour	2599	742	3341
PM Peak Hour	1627	3064	4690

Person Trip Rate Rates for Weekday AM & PM Peak Hours (includes 1.5 amplification factor to consider potential full return to office 5 days a week)

Time Period	Unrounded Local Person-Trip Rates (/1000ft2 GFA)	Rounded Local Person-Trip Rates (/1000ft2 GFA)
AM Peak Hour	0.9580	**T=0.96*X**
PM Peak Hour	1.3449	**T=1.34*X**

Vehicle Trip Rates (includes 1.5 amplification factor to consider potential full return to office 5 days a week)

Time Period	Unrounded Local Vehicle-Trip Rates (/1000ft2 GFA)	Rounded Local Vehicle-Trip Rates (/1000ft2 GFA)
AM Peak Hour	0.4503	**T=0.45*X**
PM Peak Hour	0.6321	**T=0.63*X**

Maintain directional splits determined from May 2023 TMCs for Local Rates

Time Period	IN	OUT	TOTAL
AM Peak Hour	78%	22%	100%
PM Peak Hour	31%	69%	100%

Validation of Local Vehicle Trip Rates in Comparison with Other Sources

Time Period	Local Trip Rates	2014 MMTS TMCs	ITE (750 - Office Park Complex) (x1.28 and factored by existing auto driver mode share
AM Peak Hour	1569	1863	2790
PM Peak Hour	2197	1939	2727

Notes:
1. 2014 MMTS volumes differed significantly from the 750 - Office Park ITE trip generation rates.
2. Traffic data collected in 2023 was even lower than what the MMTS assumed, largely as a result of hybrid work (2 days a week).
3. 2023 TMCs were amplified to consider the impact of a potential full return to work (5 days a week).
4. Based on the above analysis, these amplified volumes are generally comparable to the site-generated traffic indicated in the 2014 MMTS, noting that there have since been significant improvements to transit and AT infrastructure
5. This approach validates the appropriateness of a local trip generation rate as opposed to the use of published ITE rates.
6. It should also be noted that the composition of the Tunney's Pasture office complex includes a significant amount of laboratory and operational/systems uses that would not generate traffic as a standard office would
7. Even with the calculated site-generated traffic as an office complex being much lower than what ITE would suggest, the traffic generation remains significantly higher than the site operating as a mixed-use community

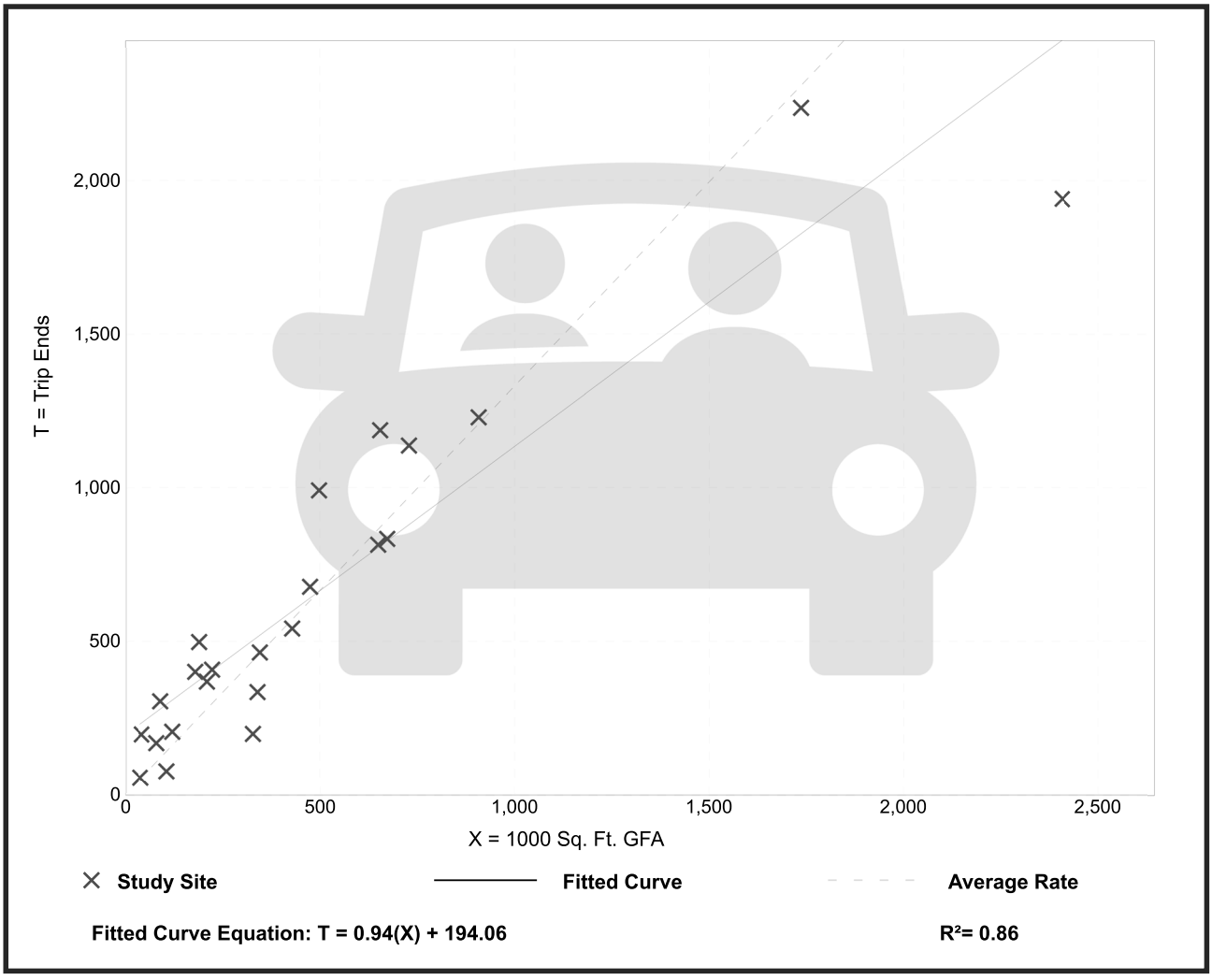
Office Park
(750)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 23
Avg. 1000 Sq. Ft. GFA: 498
Directional Distribution: 89% entering, 11% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.33	0.60 - 4.74	0.51

Data Plot and Equation



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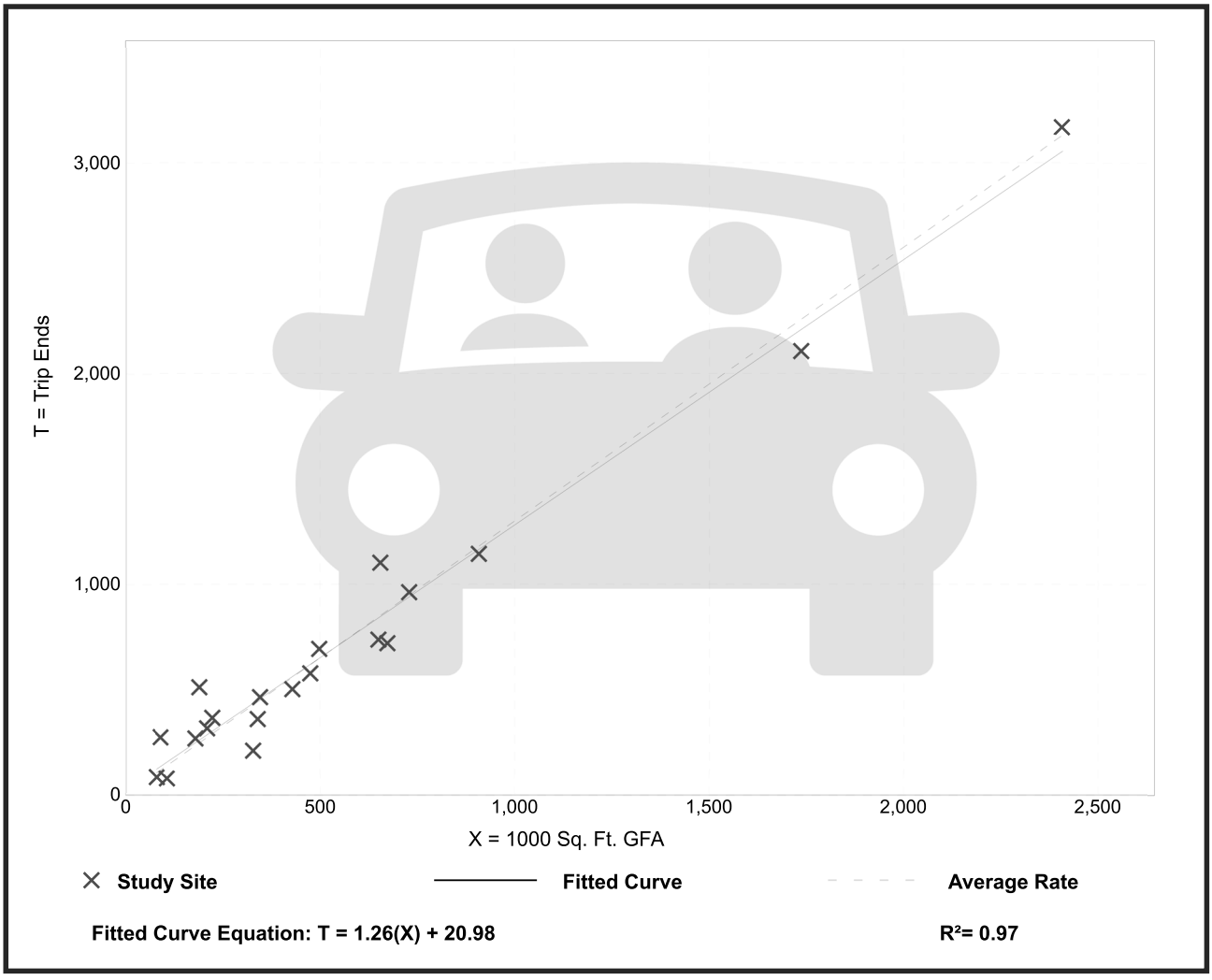
Office Park
(750)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GFA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	20
Avg. 1000 Sq. Ft. GFA:	563
Directional Distribution:	14% entering, 86% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.30	0.64 - 3.03	0.32

Data Plot and Equation



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NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Tunney's Pasture TIA	**Organization:**	Arcadis
Project Location:		**Performed By:**	IL
Scenario Description:	Phase 1	**Date:**	2023-11-10
Analysis Year:	2038	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				3,339	2,604	735
Retail				206	128	78
Restaurant				0		
Cinema/Entertainment				0		
Residential				1,693	518	1,175
Hotel				0		
All Other Land Uses[2]				0		
				5,238	3,250	1,988

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant						
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

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

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

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		41	0	0	0	0
Retail	23		0	0	10	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	24	12	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	5,238	3,250	1,988
Internal Capture Percentage	4%	3%	6%
External Vehicle-Trips[5]	5,018	3,140	1,878
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	2%	6%
Retail	41%	42%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

Project Name:	Tunney's Pasture TIA
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	2604	2604	1.00	735	735
Retail	1.00	128	128	1.00	78	78
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	518.3031033	518	1.00	1174.606207	1175
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		206	463	0	7	0
Retail	23		10	0	11	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	24	12	235	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		41	0	0	0	0
Retail	104		0	0	10	0
Restaurant	365	10		0	26	0
Cinema/Entertainment	0	0	0		0	0
Residential	78	22	0	0		0
Hotel	78	5	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	47	2557	2604	2557	0	0
Retail	53	75	128	75	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	10	508	518	508	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	41	694	735	694	0	0
Retail	33	45	78	45	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	36	1139	1175	1139	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Tunney's Pasture TIA	**Organization:**	Arcadis
Project Location:		**Performed By:**	IL
Scenario Description:	Phase 1	**Date:**	2024-11-14
Analysis Year:	2038	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				4,675	1,449	3,226
Retail				599	288	311
Restaurant				0		
Cinema/Entertainment				0		
Residential				1,931	1,118	813
Hotel				0		
All Other Land Uses[2]				0		
				7,205	2,855	4,350

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant						
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1100			1100	
Retail					1100	
Restaurant						
Cinema/Entertainment						
Residential		1100				
Hotel						

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	0	0	45	0
Retail	6		0	0	73	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	33	21	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	7,205	2,855	4,350
Internal Capture Percentage	5%	7%	4%
External Vehicle-Trips[5]	6,815	2,660	4,155
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	3%	2%
Retail	13%	25%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	11%	7%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

Project Name:	Tunney's Pasture TIA
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	1449	1449	1.00	3226	3226
Retail	1.00	288	288	1.00	311	311
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	1117.860621	1118	1.00	813.4303103	813
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		471	129	0	58	0
Retail	6		90	12	73	16
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	33	249	171	0		24
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		17	0	0	45	0
Retail	449		0	0	514	0
Restaurant	435	144		0	179	0
Cinema/Entertainment	87	12	0		45	0
Residential	826	21	0	0		0
Hotel	0	6	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	39	1410	1449	1410	0	0
Retail	38	250	288	250	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	118	1000	1118	1000	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	62	3164	3226	3164	0	0
Retail	79	232	311	232	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	54	759	813	759	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Tunney's Pasture TIA	**Organization:**	Arcadis
Project Location:		**Performed By:**	IL
Scenario Description:	Phase 2	**Date:**	2024-11-14
Analysis Year:	2042	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				2,153	1,679	474
Retail				295	183	112
Restaurant				0		
Cinema/Entertainment				0		
Residential				2,385	730	1,655
Hotel				0		
All Other Land Uses[2]				0		
				4,833	2,592	2,241

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant						
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

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

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

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		59	0	0	0	0
Retail	32		0	0	15	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	33	17	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	4,833	2,592	2,241
Internal Capture Percentage	6%	6%	7%
External Vehicle-Trips[5]	4,521	2,436	2,085
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	4%	12%
Retail	42%	42%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

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

Project Name:	Tunney's Pasture TIA
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	1679	1679	1.00	474	474
Retail	1.00	183	183	1.00	112	112
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	730.1416354	730	1.00	1655.283271	1655
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		133	299	0	5	0
Retail	32		15	0	16	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	33	17	331	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		59	0	0	0	0
Retail	67		0	0	15	0
Restaurant	235	15		0	37	0
Cinema/Entertainment	0	0	0		0	0
Residential	50	31	0	0		0
Hotel	50	7	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	65	1614	1679	1614	0	0
Retail	76	107	183	107	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	15	715	730	715	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	59	415	474	415	0	0
Retail	47	65	112	65	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	50	1605	1655	1605	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Tunney's Pasture TIA	**Organization:**	Arcadis
Project Location:		**Performed By:**	IL
Scenario Description:	Phase 2	**Date:**	2024-11-14
Analysis Year:	2042	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				3,013	934	2,079
Retail				793	380	413
Restaurant				0		
Cinema/Entertainment				0		
Residential				2,722	1,575	1,147
Hotel				0		
All Other Land Uses[2]				0		
				6,528	2,889	3,639

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant						
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1100			1100	
Retail					1100	
Restaurant						
Cinema/Entertainment						
Residential		1100				
Hotel						

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	37	0
Retail	8		0	0	97	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	46	28	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	6,528	2,889	3,639
Internal Capture Percentage	7%	8%	7%
External Vehicle-Trips[5]	6,052	2,651	3,401
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	6%	3%
Retail	13%	25%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	9%	6%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

Project Name:	Tunney's Pasture TIA
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	934	934	1.00	2079	2079
Retail	1.00	380	380	1.00	413	413
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	1575.028327	1575	1.00	1146.514164	1147
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		304	83	0	37	0
Retail	8		120	17	97	21
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	46	352	241	0		34
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		22	0	0	63	0
Retail	290		0	0	725	0
Restaurant	280	190		0	252	0
Cinema/Entertainment	56	15	0		63	0
Residential	532	28	0	0		0
Hotel	0	8	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	54	880	934	880	0	0
Retail	50	330	380	330	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	134	1441	1575	1441	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	59	2020	2079	2020	0	0
Retail	105	308	413	308	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	74	1073	1147	1073	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Tunney's Pasture TIA	**Organization:**	Arcadis
Project Location:		**Performed By:**	IL
Scenario Description:	Phase 3	**Date:**	2024-11-14
Analysis Year:	2046	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				966	753	213
Retail				384	238	146
Restaurant				0		
Cinema/Entertainment				0		
Residential				3,078	942	2,136
Hotel				0		
All Other Land Uses[2]				0		
				4,428	1,933	2,495

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant						
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

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

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

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		60	0	0	0	0
Retail	30		0	0	19	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	23	21	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	4,428	1,933	2,495
Internal Capture Percentage	7%	8%	6%
External Vehicle-Trips[5]	4,122	1,780	2,342
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	7%	28%
Retail	34%	34%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	2%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

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

Project Name:	Tunney's Pasture TIA
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	753	753	1.00	213	213
Retail	1.00	238	238	1.00	146	146
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	941.9801674	942	1.00	2135.960335	2136
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		60	134	0	2	0
Retail	42		19	0	20	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	43	21	427	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		76	0	0	0	0
Retail	30		0	0	19	0
Restaurant	105	19		0	47	0
Cinema/Entertainment	0	0	0		0	0
Residential	23	40	0	0		0
Hotel	23	10	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	53	700	753	700	0	0
Retail	81	157	238	157	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	19	923	942	923	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	60	153	213	153	0	0
Retail	49	97	146	97	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	44	2092	2136	2092	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Tunney's Pasture TIA	**Organization:**	Arcadis
Project Location:		**Performed By:**	IL
Scenario Description:	Phase 3	**Date:**	2024-11-14
Analysis Year:	2046	**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

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

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				1,352	419	933
Retail				987	474	513
Restaurant				0		
Cinema/Entertainment				0		
Residential				3,512	2,032	1,480
Hotel				0		
All Other Land Uses[2]				0		
				5,851	2,925	2,926

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office	1.00			1.00		
Retail	1.00			1.00		
Restaurant						
Cinema/Entertainment						
Residential	1.00			1.00		
Hotel						
All Other Land Uses[2]						

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		1100			1100	
Retail					1100	
Restaurant						
Cinema/Entertainment						
Residential		1100				
Hotel						

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

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		28	0	0	17	0
Retail	10		0	0	120	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	59	35	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	5,851	2,925	2,926
Internal Capture Percentage	9%	9%	9%
External Vehicle-Trips[5]	5,313	2,656	2,657
External Transit-Trips[6]	0	0	0
External Non-Motorized Trips[6]	0	0	0

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

Land Use	Entering Trips	Exiting Trips
Office	16%	5%
Retail	13%	25%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	7%	6%
Hotel	N/A	N/A

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

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

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

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

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

[6]Person-Trips

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

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

Project Name:	Tunney's Pasture TIA
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	419	419	1.00	933	933
Retail	1.00	474	474	1.00	513	513
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	2032.196033	2032	1.00	1479.598017	1480
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		136	37	0	17	0
Retail	10		149	21	120	26
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	59	454	311	0		44
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		28	0	0	81	0
Retail	130		0	0	935	0
Restaurant	126	237		0	325	0
Cinema/Entertainment	25	19	0		81	0
Residential	239	35	0	0		0
Hotel	0	9	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	69	350	419	350	0	0
Retail	63	411	474	411	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	137	1895	2032	1895	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	45	888	933	888	0	0
Retail	130	383	513	383	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	94	1386	1480	1386	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	0	0	0	0	0

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

[2]Person-Trips

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

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

Vehicle Pass-By Rates by Land Use

Source: ITE *Trip Generation Manual* , 11th Edition

Land Use Code	821
Land Use	Shopping Plaza (40 - 150k)
Setting	General Urban/Suburban
Time Period	Weekday PM Peak Period
# Data Sites	15
Average Pass-By Rate	40%

Pass-By Characteristics for Individual Sites

GLA (000)	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
					Primary (%)	Diverted (%)	Total (%)		
45	Florida	1992	844	56	24	20	44	—	30
50	Florida	1992	555	41	41	18	59	—	30
52	Florida	1995	665	42	33	25	58	—	30
53	Florida	1993	162	59	—	—	41	—	30
57.23	Kentucky	1993	247	31	53	16	69	2659	34
60	Florida	1995	1583	40	38	22	60	—	30
69.4	Kentucky	1993	109	25	42	33	75	1559	34
77	Florida	1992	365	46	—	—	54	—	30
78	Florida	1991	702	55	23	22	45	—	30
82	Florida	1992	336	34	—	—	66	—	30
92.857	Kentucky	1993	133	22	50	28	78	3555	34
100.888	Kentucky	1993	281	28	50	22	72	2111	34
121.54	Kentucky	1993	210	53	30	17	47	2636	34
144	New Jersey	1990	176	32	44	24	68	—	24
146.8	Kentucky	1993	—	36	39	25	64	—	34
Average 82.0				40					

An pass-by rate of 40% was applied during the weekday afternoon peak hour for commercial uses proposed on-site, corresponding to the average rate derived from the Shopping Plaza (40-150k) land use.

School Trip Generation - First Principles

A first principles approach was taken to develop the school trip generation for the possible elementary school within the Tunney's Pasture redevelopment to capture the unique characteristics of this school type within Ontario and within an urban context.

	Students	Teachers	Principals/Vice Principals	ly Childhood Educat	Office Staff	Custodian	Librarian
Elementary (Ontario Totals)	1,419,642	85,105	5,467	9,595	-	-	-
Elementary (Student to Faculty Ratios)	-	16.7	259.7	148.0	255	196	763

Sources: *https://www.ontario.ca/page/education-facts*
https://peopleforeducation.ca/report/2019-annual-report-on-schools-what-makes-a-school/#chapter3

Determine Breakdown of Faculty for 750-Student Elementary School

	Students	Teachers	Principals/Vice Principals	Early Childhood Educators	Office Staff	Custodian	Librarian	Total Staff
750-student Elementary School	750	45	3	5	3	4	1	61

Ottawa Student Transportation Assocation (OSTA) Mode Shares

	Walk	Bike	School bus	Transit	Drive+Walk	Drive	Carpool	Virtual	Total	Scaling Factor
City-Wide	16%	4%	64%	9%	3%	22%	1%	3%	122%	0.820
Inside Greenbelt	18%	4%	64%	10%	4%	19%	2%	4%	125%	0.800
Elementary	18%	3%	70%	1%	4%	20%	1%	3%	120%	0.833

Source: https://www.envirocentre.ca/wp-content/uploads/2024/09/OSTA-Transportation-Survey-2022-Report-Overview-Report.pdf

Reducing all mode shares by a scaling factor to achieve 100% total (100% / OSTA total %)

Re-categorized OSTA Mode Shares (maintaining school bus mode share, while reducing other modes proportionally to achieve 100%, reassigning 'virtual' proportionally to other non-school bus modes

	Walk	Bike	School bus	Transit	Drive+Walk	Drive	Carpool	Virtual	Total
City-Wide	10%	3%	64%	6%	2%	14%	1%	-	100%
Inside Greenbelt	11%	3%	64%	6%	3%	12%	1%	-	100%
Elementary	11%	2%	70%	1%	3%	13%	1%	-	100%

2011 OD Survey 'AM Within' District Mode Shares

TRANS-2011-OD-Survey-Final-Report-January-2013.pdf

	Walk	Bike	School Bus	Transit	Auto Drive+Passenger	Other	Total
Urban Transit Area (page 77)	12%	2%	9%	20%	57%	-	100%
Inside Greenbelt (page 79)	14%	4%	8%	22%	52%	-	100%
Ottawa West (page 106)	34%	6%	8%	4%	48%	-	100%

Adjustment factor (For OSTA) = (Inside Greenbelt/City Wide)*(Ottawa West TAZ/Inside Greenbelt OD Survey)	2.64	1.45	1.00	0.19	1.19	0.77	1.78		-

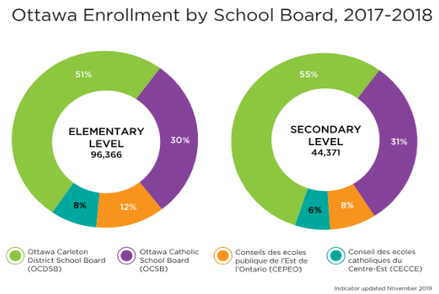
Adjusted OTSA Mode Shares (Based on Above 2011 OD Survey Data and Applying Adjustment Factors)

	Walk	Bike	School bus	Transit	Drive+Walk	Drive	Carpool	Virtual	Total
Elementary	17%	4%	70%	1%	2%	5%	1%	-	100%
	30%	4%	70%	0%	4%	5%	1%	-	115%

Ottawa West Traffic Assessment Zone (TAZ) - 2011 OD Survey

Occupation	Total	Percent
Work, Full Time	20,450	43%
Work, Part Time	2,480	5%
Student	9,370	20%
Retiree	11,840	25%
Unemployed	1,540	3%
Homemaker	1,020	2%
Other	1,270	3%
Total	**47,970**	**100%**
AM From+Within District Trips	**Total**	**Percent**
School	5,710	22%
Total	25,980	100%

Ottawa West TAZ - 2011 OD Survey		Notes
% English public elementary students enrolled in OCDSB	51%	see pie Ottawa Enrolment pie chart below
% elementary school students of total AM & Within Trips within Ottawa West TAZ	14%	assumes 10 years of elementary school (JK to Grade 8) and 16 years of schooling on average
% English public elementary students enrolled in OCDSB	7%	calculated from %elementary school students & % English public



Source: https://www.ottawainsights.ca/themes/education-and-learning/public-school/

Use 2020 TRANS Trip Generation Rates

	AM Peak PERIOD Outbound Residential Trips	Elementary Trips (Max Internal Inbound Trips based on Phase 1 Residential Unit Count)
Phases 1, 2 & 3	2,732	191
	AM Peak HOUR Outbound Residential Trips	**Elementary Trips (Max Internal Inbound Trips based on Phase 1 Residential Unit Count)**
Phases 1, 2 & 3	1,366	96

Elementary School (Phase 1: 750 students)

	Mode Shares			Inbound AM Peak Hour Person Trips (External)			Outbound AM Peak Hour Person Trips (External)			Total AM Peak Hour Person Trips (External)			Total PM Peak Hour Person Trips (External)		
Travel Mode	**Students**	**Parents**	**Staff (Based on employment use mode share)**	**Students**	**Parents**	**Staff**	**Students**	**Parents**	**Staff**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto Driver	0%	8%	41%	0	53	25	-	53	-	78	53	131	51	56	107
Auto Passenger	8%	-	6%	53	0	4	-	0	-	57	0	57		1	1
Transit	1%	-	24%	7	0	15	-	0	-	21	0	21		3	3
Bike	4%	4%	8%	26	13	5	-	13	-	44	13	57	1	2	4
Walk	17%	17%	21%	111	56	13	-	56	-	180	56	235	6	8	14
School Bus	70%	-	0%	458	0	0	-	0	-	458	0	458		0	
Virtual	0%	-	0%	0	0	0	-	0	-	0	0	0		0	
Total	**100%**	**29%**	**100%**	**655**	**122**	**61**		**122**		**838**	**122**	**960**	**58**	**70**	**128**

Elementary School (Phases 1 & 2: 750 students)

	Mode Shares			Inbound AM Peak Hour Person Trips (External)			Outbound AM Peak Hour Person Trips (External)			Total AM Peak Hour Person Trips (External)			Total PM Peak Hour Person Trips (External)		
Travel Mode	**Students**	**Parents**	**Staff (Based on employment use mode share)**	**Students**	**Parents**	**Staff**	**Students**	**Parents**	**Staff**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto Driver	0%	8%	39%	0	53	24	-	53	-	77	53	130	51	56	107
Auto Passenger	8%	-	6%	53	0	4	-	0	-	57	0	57		1	1
Transit	1%	-	24%	7	0	15	-	0	-	21	0	21		3	3
Bike	4%	4%	8%	26	13	5	-	13	-	44	13	57	1	2	4
Walk	17%	17%	23%	111	56	14	-	56	-	181	56	236	6	8	14
School Bus	70%	-	0%	458	0	0	-	0	-	458	0	458			
Virtual	0%	-	0%	0	0	0	-	0	-	0	0	0			
Total	**100%**	**29%**	**100%**	**655**	**122**	**61**		**122**		**838**	**122**	**960**	**58**	**70**	**128**

Elementary School (Phases 1, 2 & 3: 750 students)

	Mode Shares			Inbound AM Peak Hour Person Trips (External)			Outbound AM Peak Hour Person Trips (External)			Total AM Peak Hour Person Trips (External)			Total PM Peak Hour Person Trips (External)		
Travel Mode	**Students**	**Parents**	**Staff (Based on employment use mode share)**	**Students**	**Parents**	**Staff**	**Students**	**Parents**	**Staff**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto Driver	0%	8%	37%	0	53	22	-	53	-	76	53	129	51	56	107
Auto Passenger	8%	-	6%	53	0	4	-	0	-	57	0	57		1	1
Transit	1%	-	23%	7	0	14	-	0	-	20	0	20		3	3
Bike	4%	4%	9%	26	13	5	-	13	-	45	13	58	1	2	4
Walk	17%	17%	25%	111	56	15	-	56	-	182	56	238	6	9	14
School Bus	70%	-	0%	458	0	0	-	0	-	458	0	458			
Virtual	0%	-	0%	0	0	0	-	0	-	0	0	0			
Total	**100%**	**29%**	**100%**	**655**	**122**	**61**		**122**		**838**	**122**	**960**	**58**	**70**	**128**

			Internal Peak Hour School Person Trips						Internal Residential Person Trips Associated with School Uses					
			Total AM Trips			Total PM Trips			Total AM Trips			Total PM Trips		
Land Use	**Phase**		**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In (Parent Returns Home)**	**Out (Parent & Child Leave Home)**	**Total**	**In (Parent & Child Return Home)**	**Out (Parent Leaves Homes to Pick Up Child)**	**Total**
Elementary	Phase 1		144	48	191	5	14	19	48	144	192	14	5	19
	Phase 2		144	48	191	5	14	19	48	144	192	14	5	19
	Phase 3		144	48	191	5	14	19	48	144	192	14	5	19

1. Assume 10% of students are in activities and that their trips coincide with weekday afternoon peak hour.

Scenario	**Total Phase 1 Residential Trips Minus Internal Residential Trips Associated with Schools**					
	Total AM Trips			**Total PM Trips**		
	In	**Out**	**Total**	**In**	**Out**	**Total**
Phase 1 Residential Peak Hour Person Trips	614	1,366	1,980	1,137	823	1,960
Internal Residential Person Trips Associated with School Uses	48	144	192	14	5	19
Difference	**566**	**1,222**	**1,789**	**1,123**	**818**	**1,941**

External School Person Trips

Mode Share	**2038**						**2042**						**2046**					
	Total AM Trips			**Total PM Trips**			**Total AM Trips**			**Total PM Trips**			**Total AM Trips**			**Total PM Trips**		
	In	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Auto Driver	78	53	131	51	56	107	77	53	130	51	56	107	76	53	129	51	56	107
Auto Passenger	57	0	57	0	1	1	57	0	57	0	1	1	57	0	57	0	1	1
Transit	21	0	21	0	3	3	21	0	21	0	3	3	20	0	20	0	3	3
Bike	44	13	57	1	2	4	44	13	57	1	2	4	45	13	58	1	2	4
Walk	180	56	235	6	8	14	181	56	236	6	8	14	182	56	238	6	9	14
School Bus	458	0	458	0	0	0	458	0	458	0	0	0	458	0	458	0	0	0
Total	**838**	**122**	**960**	**58**	**70**	**128**	**838**	**122**	**960**	**58**	**70**	**128**	**838**	**122**	**960**	**58**	**70**	**128**

Total Internal & External School Person Trips

Phases	Total AM Trips			Total PM Trips		
	In	Out	Total	In	Out	Total
Phases 1, 2 & 3 External School Person Trips	838	122	960	58	70	128
Internal Peak Hour School Person Trips	144	48	192	5	14	19
Total Internal & External School Person Trips	982	170	1,152	63	84	147

Appendix H – Background Growth Rate Review

Derivation of Background Growth Rates 29-May-25

Parkdale Avenue Background Growth Rate

Traffic Count Data Date (Month-Year)	Intersection	Location	Weekday AM Peak Hour Vehicle Volumes			Weekday PM Peak Hour Vehicle Volumes		
			Northbound (Inbound)	Southbound (Outbound)	Total - South Leg	Northbound (Inbound)	Southbound (Outbound)	Total - South Leg
Jun-11	Parkdale & Scott	South Leg Link Volumes	571	343	914	654	606	1260
Jan-14	Parkdale & Scott	South Leg Link Volumes	354	409	763	506	416	922
Apr-14	Parkdale & Scott	South Leg Link Volumes	379	440	819	632	401	1033
Sep-15	Parkdale & Scott	South Leg Link Volumes	363	421	784	550	477	1027
Nov-17	Parkdale & Scott	South Leg Link Volumes	392	361	753	506	380	886
Mar-20	Parkdale & Bullman *	North Leg Link Volumes	430	317	747	542	469	1011
May-23	Parkdale & Scott	South Leg Link Volumes	284	365	649	386	370	756
Feb-25	Parkdale & Scott	South Leg Link Volumes	307	341	648	382	333	715
Line of Best Fit Annual Growth (2011 to 2025)			-2.63%	-1.05%	**-1.90%**	-2.82%	-2.39%	**-2.63%**
Traffic Count Data Date (Month-Year)	**Intersection**	**Location**	**Weekday AM Peak Hour Vehicle Volumes**			**Weekday PM Peak Hour Vehicle Volumes**		
			Northbound (Inbound)	**Southbound (Outbound)**	**Total - North Leg**	**Northbound (Inbound)**	**Southbound (Outbound)**	**Total - North Leg**
Jun-11	Parkdale & Scott	North Leg Link Volumes	439	293	732	569	431	1000
Jan-14	Parkdale & Scott	North Leg Link Volumes	390	569	959	560	687	1247
Apr-14	Parkdale & Scott	North Leg Link Volumes	425	594	1019	835	529	1364
Sep-15	Parkdale & Scott	North Leg Link Volumes	380	605	985	779	724	1503
Nov-17	Parkdale & Scott	North Leg Link Volumes	359	533	892	652	566	1218
May-23	Parkdale & Scott	North Leg Link Volumes	295	423	718	630	409	1039
Feb-25	Parkdale & Scott	North Leg Link Volumes	342	525	867	618	418	1036
Line of Best Fit Annual Growth (2011 to 2025)			-1.97%	0.35%	**-0.72%**	-0.35%	-1.90%	**-1.09%**

*North leg volumes used at the Parkdale & Bullman which is directly adjacent to Parkdale & Scott Street. Count collected on March 10, 2020, just prior to the start of the COVID-19 pandemic.

Conclusion: Historical traffic count data indicates a consistent decline in total traffic volumes on Parkdale Avenue from 2011 to 2025. A 0% growth rate is therefore appropriate on Parkdale Avenue and will serve as a conservative approximation of background traffic growth for the purposes of this TIA.

Scott Street Background Growth Rate

Traffic Count Data Date (Month-Year)	Intersection	Location	Weekday AM Peak Hour Vehicle Volumes			Weekday PM Peak Hour Vehicle Volumes		
			Eastbound (Inbound)	Westbound (Outbound)	Total - West Leg	Eastbound (Inbound)	Westbound (Outbound)	Total - East Leg
Jun-11	Parkdale & Scott	West Leg Link Volumes	586	662	1248	759	591	1350
Jan-14	Parkdale & Scott	West Leg Link Volumes	800	542	1342	769	957	1726
Apr-14	Parkdale & Scott	West Leg Link Volumes	810	451	1261	777	869	1646
Sep-15	Parkdale & Scott	West Leg Link Volumes	687	437	1124	687	906	1593
Nov-17	Parkdale & Scott	West Leg Link Volumes	704	542	1246	756	887	1643
May-23	Parkdale & Scott	West Leg Link Volumes	583	336	919	936	627	1563
Feb-25	Parkdale & Scott	West Leg Link Volumes	491	435	926	631	541	1172
Line of Best Fit Annual Growth (2011 to 2025)			-1.92%	-2.53%	**-2.18%**	0.08%	-1.93%	**-1.00%**
Traffic Count Data Date (Month-Year)	**Intersection**	**Location**	**Weekday AM Peak Hour Vehicle Volumes**			**Weekday PM Peak Hour Vehicle Volumes**		
			Eastbound (Inbound)	**Westbound (Outbound)**	**Total - East Leg**	**Eastbound (Inbound)**	**Westbound (Outbound)**	**Total - East Leg**
Jun-11	Parkdale & Scott	East Leg Link Volumes	615	609	1224	654	576	1230
Jan-14	Parkdale & Scott	East Leg Link Volumes	774	392	1166	611	836	1447
Apr-14	Parkdale & Scott	East Leg Link Volumes	815	348	1163	565	732	1297
Sep-15	Parkdale & Scott	East Leg Link Volumes	714	297	1011	468	669	1137
Nov-17	Parkdale & Scott	East Leg Link Volumes	764	397	1161	619	710	1329
May-23	Parkdale & Scott	East Leg Link Volumes	566	272	838	658	554	1212
Feb-25	Parkdale & Scott	East Leg Link Volumes	458	253	711	383	444	827
Line of Best Fit Annual Growth (2011 to 2025)			-2.24%	-3.70%	**-2.79%**	-1.38%	-2.21%	**-1.83%**

Conclusion: Historical traffic count data indicates a consistent decline in total traffic volumes on Scott Street from 2011 to 2025. As such, a 0% on Scott Street will provide a conservative approximation of background traffic growth for the purposes of this TIA.

Kichi Zibi Mikan Background Growth Rate

Traffic Count Data Date (Month-Year)	Intersection	Location	Weekday AM Peak Hour Vehicle Volumes			Weekday PM Peak Hour Vehicle Volumes		
			Eastbound (Inbound)	Westbound (Outbound)	Total - West Leg	Eastbound (Inbound)	Westbound (Outbound)	Total - East Leg
Aug-11	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	West Leg Link Volumes	2302	412	2714	780	2095	2875
Aug-13	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	West Leg Link Volumes	1604	406	2010	485	2293	2778
Jan-16	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	West Leg Link Volumes	2301	536	2837	655	2606	3261
Nov-22	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	West Leg Link Volumes	1195	477	1672	597	1646	2243
May-23	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	West Leg Link Volumes	1390	495	1885	349	1828	2177
Line of Best Fit Annual Growth (2011 to 2023)			-3.32%	1.34%	**-2.56%**	-2.71%	-1.97%	**-2.13%**

Traffic Count Data Date (Month-Year)	Intersection	Location	Weekday AM Peak Hour Vehicle Volumes			Weekday PM Peak Hour Vehicle Volumes		
			Eastbound (Inbound)	Westbound (Outbound)	Total - East Leg	Eastbound (Inbound)	Westbound (Outbound)	Total - East Leg
Aug-11	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	East Leg Link Volumes	1821	401	2222	676	2054	2730
Aug-13	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	East Leg Link Volumes	1345	390	1735	472	1951	2423
Jan-16	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	East Leg Link Volumes	1909	508	2417	538	2059	2597
Nov-22	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	East Leg Link Volumes	1009	469	1478	558	1396	1954
May-23	Kichi Zibi Mikan & Tunney's Pasture/ Remic Rapids	East Leg Link Volumes	1186	473	1659	366	1506	1872
Line of Best Fit Annual Growth (2011 to 2023)			-3.04%	1.38%	**-2.21%**	-2.08%	-2.55%	**-2.45%**

*East leg volumes used at the Parkdale & Bullman which is directly adjacent to Parkdale & Scott Street

Conclusion: Historical traffic count data indicates a consistent decline in total traffic volumes on Kichi Zibi Mikan from 2011 to 2025. As such, a 0% on Kichi Zibi Mikan will provide a conservative approximation of background traffic growth for the purposes of this TIA.

Appendix I – TDM Checklists

TDM-Supportive Development Design and Infrastructure Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☑
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☑
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☑
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☑
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☐
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists	☑
BETTER	2.1.5	Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season	☐
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met)	☐
	2.3	**Shower & change facilities**	
BASIC	2.3.1	Provide shower and change facilities for the use of active commuters	☑
BETTER	2.3.2	In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters	☐
	2.4	**Bicycle repair station**	
BETTER	2.4.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☑
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☑
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☑
	4.2	**Carpool parking**	
BASIC	4.2.1	Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools	☐
BETTER	4.2.2	At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement	☐
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces *(see Zoning By-law Section 94)*	☑
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐

		TDM-supportive design & infrastructure measures: *Non-residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☑
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☐
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa)	☐
	7.	**OTHER**	
	7.1	**On-site amenities to minimize off-site trips**	
BETTER	7.1.1	Provide on-site amenities to minimize mid-day or mid-commute errands	☐

TDM-Supportive Development Design and Infrastructure Checklist:
Residential Developments (multi-family or condominium)

Legend

REQUIRED	The Official Plan or Zoning By-law provides related guidance that must be followed
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	1.	**WALKING & CYCLING: ROUTES**	
	1.1	**Building location & access points**	
BASIC	1.1.1	Locate building close to the street, and do not locate parking areas between the street and building entrances	☑
BASIC	1.1.2	Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	☑
BASIC	1.1.3	Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	☑
	1.2	**Facilities for walking & cycling**	
REQUIRED	1.2.1	Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations *(see Official Plan policy 4.3.3)*	☑
REQUIRED	1.2.2	Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible *(see Official Plan policy 4.3.12)*	☑

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
REQUIRED	1.2.3	Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.4	Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps *(see Official Plan policy 4.3.10)*	☑
REQUIRED	1.2.5	Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians *(see Official Plan policy 4.3.11)*	☑
BASIC	1.2.6	Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	☑
BASIC	1.2.7	Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	☑
BASIC	1.2.8	Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility	☑
	1.3	**Amenities for walking & cycling**	
BASIC	1.3.1	Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails	☑
BASIC	1.3.2	Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious)	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	2.	**WALKING & CYCLING: END-OF-TRIP FACILITIES**	
	2.1	**Bicycle parking**	
REQUIRED	2.1.1	Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible *(see Official Plan policy 4.3.6)*	☑
REQUIRED	2.1.2	Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas *(see Zoning By-law Section 111)*	☑
REQUIRED	2.1.3	Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored *(see Zoning By-law Section 111)*	☐
BASIC	2.1.4	Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☑
	2.2	**Secure bicycle parking**	
REQUIRED	2.2.1	Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers *(see Zoning By-law Section 111)*	☐
BETTER	2.2.2	Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☐
	2.3	**Bicycle repair station**	
BETTER	2.3.1	Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☑
	3.	**TRANSIT**	
	3.1	**Customer amenities**	
BASIC	3.1.1	Provide shelters, lighting and benches at any on-site transit stops	☑
BASIC	3.1.2	Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3	Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐

		TDM-supportive design & infrastructure measures: *Residential developments*	Check if completed & add descriptions, explanations or plan/drawing references
	4.	**RIDESHARING**	
	4.1	**Pick-up & drop-off facilities**	
BASIC	4.1.1	Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☑
	5.	**CARSHARING & BIKESHARING**	
	5.1	**Carshare parking spaces**	
BETTER	5.1.1	Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses *(see Zoning By-law Section 94)*	☐
	5.2	**Bikeshare station location**	
BETTER	5.2.1	Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☑
	6.	**PARKING**	
	6.1	**Number of parking spaces**	
REQUIRED	6.1.1	Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☑
BASIC	6.1.2	Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☑
BASIC	6.1.3	Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly *(see Zoning By-law Section 104)*	☐
BETTER	6.1.4	Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking *(see Zoning By-law Section 111)*	☑
	6.2	**Separate long-term & short-term parking areas**	
BETTER	6.2.1	Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☐

TDM Measures Checklist:
Non-Residential Developments (office, institutional, retail or industrial)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☑
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances	☐
	2.2	**Bicycle skills training**	
		Commuter travel	
BETTER ★	2.2.1	Offer on-site cycling courses for commuters, or subsidize off-site courses	☑
	2.3	**Valet bike parking**	
		Visitor travel	
BETTER	2.3.1	Offer secure valet bike parking during public events when demand exceeds fixed supply (e.g. for festivals, concerts, games)	☑

			TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances	☐
BASIC		3.1.2	Provide online links to OC Transpo and STO information	☑
BETTER		3.1.3	Provide real-time arrival information display at entrances	☐
		3.2	**Transit fare incentives**	
			Commuter travel	
BETTER		3.2.1	Offer preloaded PRESTO cards to encourage commuters to use transit	☑
BETTER	★	3.2.2	Subsidize or reimburse monthly transit pass purchases by employees	☑
			Visitor travel	
BETTER		3.2.3	Arrange inclusion of same-day transit fare in price of tickets (e.g. for festivals, concerts, games)	☑
		3.3	**Enhanced public transit service**	
			Commuter travel	
BETTER		3.3.1	Contract with OC Transpo to provide enhanced transit services (e.g. for shift changes, weekends)	☑
			Visitor travel	
BETTER		3.3.2	Contract with OC Transpo to provide enhanced transit services (e.g. for festivals, concerts, games)	☐
		3.4	**Private transit service**	
			Commuter travel	
BETTER		3.4.1	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for shift changes, weekends)	☐
			Visitor travel	
BETTER		3.4.2	Provide shuttle service when OC Transpo cannot offer sufficient quality or capacity to serve demand (e.g. for festivals, concerts, games)	☐

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		4. RIDESHARING	
		4.1 Ridematching service	
		Commuter travel	
BASIC	★	4.1.1 Provide a dedicated ridematching portal at OttawaRideMatch.com	☐
		4.2 Carpool parking price incentives	
		Commuter travel	
BETTER		4.2.1 Provide discounts on parking costs for registered carpools	☑
		4.3 Vanpool service	
		Commuter travel	
BETTER		4.3.1 Provide a vanpooling service for long-distance commuters	☐
		5. CARSHARING & BIKESHARING	
		5.1 Bikeshare stations & memberships	
BETTER		5.1.1 Contract with provider to install on-site bikeshare station for use by commuters and visitors	☐
		Commuter travel	
BETTER		5.1.2 Provide employees with bikeshare memberships for local business travel	☐
		5.2 Carshare vehicles & memberships	
		Commuter travel	
BETTER		5.2.1 Contract with provider to install on-site carshare vehicles and promote their use by tenants	☑
BETTER		5.2.2 Provide employees with carshare memberships for local business travel	☐
		6. PARKING	
		6.1 Priced parking	
		Commuter travel	
BASIC	★	6.1.1 Charge for long-term parking (daily, weekly, monthly)	☑
BASIC		6.1.2 Unbundle parking cost from lease rates at multi-tenant sites	☑
		Visitor travel	
BETTER		6.1.3 Charge for short-term parking (hourly)	☐

		TDM measures: *Non-residential developments*	Check if proposed & add descriptions
		7. TDM MARKETING & COMMUNICATIONS	
		7.1 Multimodal travel information	
		Commuter travel	
BASIC	★	7.1.1 Provide a multimodal travel option information package to new/relocating employees and students	☑
		Visitor travel	
BETTER	★	7.1.2 Include multimodal travel option information in invitations or advertising that attract visitors or customers (e.g. for festivals, concerts, games)	☑
		7.2 Personalized trip planning	
		Commuter travel	
BETTER	★	7.2.1 Offer personalized trip planning to new/relocating employees	☐
		7.3 Promotions	
		Commuter travel	
BETTER		7.3.1 Deliver promotions and incentives to maintain awareness, build understanding, and encourage trial of sustainable modes	☐
		8. OTHER INCENTIVES & AMENITIES	
		8.1 Emergency ride home	
		Commuter travel	
BETTER	★	8.1.1 Provide emergency ride home service to non-driving commuters	☑
		8.2 Alternative work arrangements	
		Commuter travel	
BASIC	★	8.2.1 Encourage flexible work hours	☐
BETTER		8.2.2 Encourage compressed workweeks	☑
BETTER	★	8.2.3 Encourage telework	☐
		8.3 Local business travel options	
		Commuter travel	
BASIC	★	8.3.1 Provide local business travel options that minimize the need for employees to bring a personal car to work	☐
		8.4 Commuter incentives	
		Commuter travel	
BETTER		8.4.1 Offer employees a taxable, mode-neutral commuting allowance	☐
		8.5 On-site amenities	
		Commuter travel	
BETTER		8.5.1 Provide on-site amenities/services to minimize mid-day or mid-commute errands	☐

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend

BASIC — The measure is generally feasible and effective, and in most cases would benefit the development and its users

BETTER — The measure could maximize support for users of sustainable modes, and optimize development performance

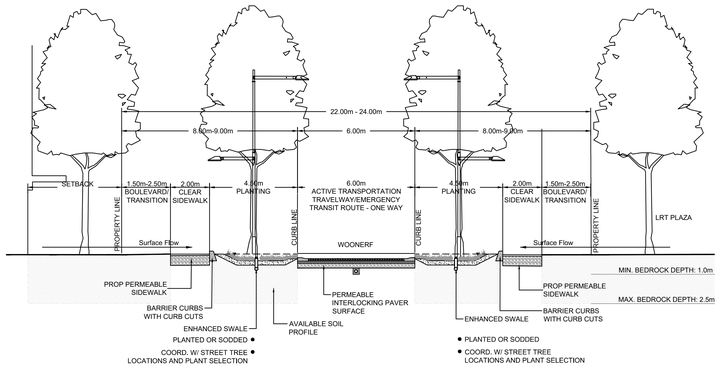
★ — The measure is one of the most dependably effective tools to encourage the use of sustainable modes

		TDM measures: *Residential developments*	Check if proposed & add descriptions
	1.	**TDM PROGRAM MANAGEMENT**	
	1.1	**Program coordinator**	
BASIC ★	1.1.1	Designate an internal coordinator, or contract with an external coordinator	☐
	1.2	**Travel surveys**	
BETTER	1.2.1	Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	☑
	2.	**WALKING AND CYCLING**	
	2.1	**Information on walking/cycling routes & destinations**	
BASIC	2.1.1	Display local area maps with walking/cycling access routes and key destinations at major entrances *(multi-family, condominium)*	☐
	2.2	**Bicycle skills training**	
BETTER	2.2.1	Offer on-site cycling courses for residents, or subsidize off-site courses	☑

			TDM measures: *Residential developments*	Check if proposed & add descriptions
		3.	**TRANSIT**	
		3.1	**Transit information**	
BASIC		3.1.1	Display relevant transit schedules and route maps at entrances *(multi-family, condominium)*	☑
BETTER		3.1.2	Provide real-time arrival information display at entrances *(multi-family, condominium)*	☑
		3.2	**Transit fare incentives**	
BASIC	★	3.2.1	Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	☑
BETTER		3.2.2	Offer at least one year of free monthly transit passes on residence purchase/move-in	☐
		3.3	**Enhanced public transit service**	
BETTER	★	3.3.1	Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels *(subdivision)*	☑
		3.4	**Private transit service**	
BETTER		3.4.1	Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	☑
		4.	**CARSHARING & BIKESHARING**	
		4.1	**Bikeshare stations & memberships**	
BETTER		4.1.1	Contract with provider to install on-site bikeshare station (*multi-family)*	☑
BETTER		4.1.2	Provide residents with bikeshare memberships, either free or subsidized *(multi-family)*	☑
		4.2	**Carshare vehicles & memberships**	
BETTER		4.2.1	Contract with provider to install on-site carshare vehicles and promote their use by residents	☐
BETTER		4.2.2	Provide residents with carshare memberships, either free or subsidized	☑
		5.	**PARKING**	
		5.1	**Priced parking**	
BASIC	★	5.1.1	Unbundle parking cost from purchase price *(condominium)*	☑
BASIC	★	5.1.2	Unbundle parking cost from monthly rent *(multi-family)*	☐

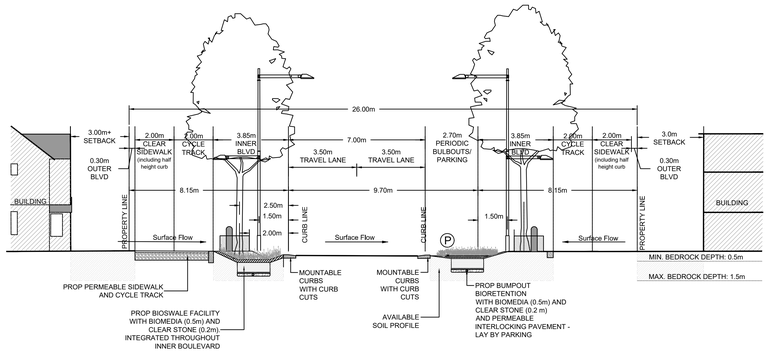
TDM measures: *Residential developments*				Check if proposed & add descriptions
		6.	**TDM MARKETING & COMMUNICATIONS**	
		6.1	**Multimodal travel information**	
BASIC	★	6.1.1	Provide a multimodal travel option information package to new residents	☑
		6.2	**Personalized trip planning**	
BETTER	★	6.2.1	Offer personalized trip planning to new residents	☐

Appendix J – Proposed Typical Cross-sections



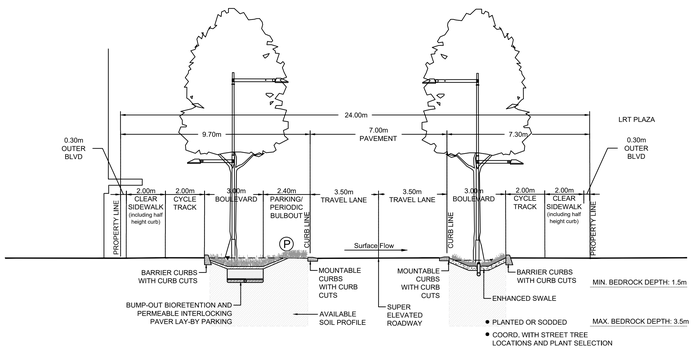
22.0 - 24.0m ROW
YARROW DRIVEWAY
(from BUS LOOP EMERGENCY ACCESS to TUNNEY'S PASTURE)
WOONERF

TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 100%



26A TREED BOULEVARDS
26m ROW COLLECTOR STREETS

TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 63%



24.0m ROW
YARROW DRIVEWAY
(from GOLDENROD to BUS LOOP EMERGENCY ACCESS)

TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 60%

24.0m ROW
LOCAL STREETS WITH LID

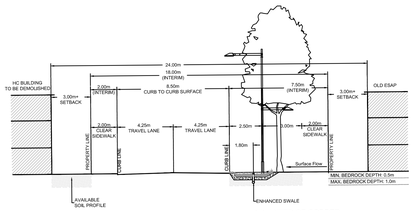
TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 64%

NOTE:
BIOSWALE TO BE LOCATED IMMEDIATELY BEHIND THE CURB. BIOSWALE LOCATION CAN ALTERNATE ON EITHER SIDE OF THE ROADWAY. TO BE IMPLEMENTED WHERE FEASIBLE.

34.0m ROW WITHOUT MEDIAN
COLOMBINE DRIVEWAY (FROM GOLDENROD TO PARKDALE)

- DRY SWALE PROFILE 2.5 m WIDE
- HARDEN DRY SWALE BOTTOM TO ACTIVATE PLAZAS, SEATING NODES, ETC. WITH SHALLOW FLOWS DURING RAIN EVENTS.

TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 71%

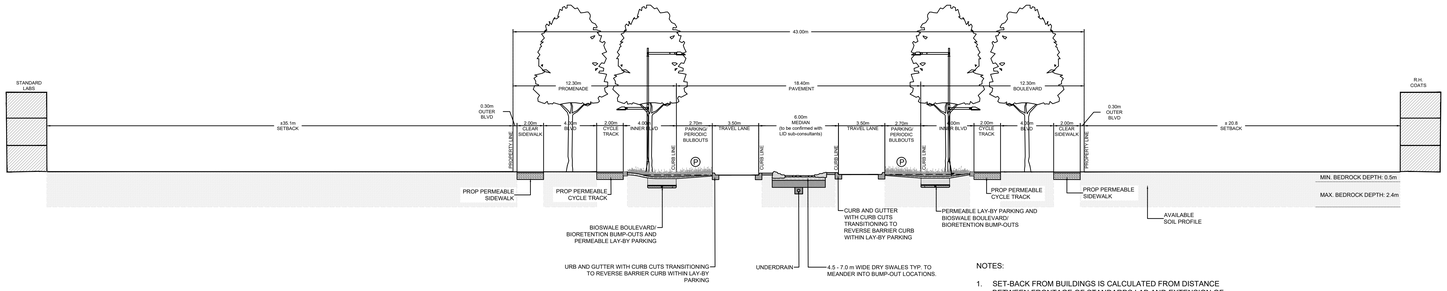


- PLANTED OR SODDED
- COORD. W/ STREET TREE LOCATIONS AND PLANT SELECTION

NOTE:
STAGE 1 IMPLEMENTATION: 18.0m + 3.0m + 3.0m = 24.0m
EFFECTIVE WIDTH BETWEEN BUILDINGS = 24.03m TO 24.12m
ON STREET ALTERNATING PARKING

TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 53%

18.0m ROW
STAGE 1 IMPLEMENTATION - CHARDON
(FROM SORREL TO EGLANTINE)



TARGETED PERCENTAGE OF ROW WIDTH ALLOCATED FOR NON-AUTO USES (URBAN DESIGN MANUAL 2018): 40%
NON-AUTO PERCENTAGE ACHIEVED FOR THIS TYPICAL CROSS SECTION: 71%

DRY SWALE PROFILE 4.5 m WIDE. HARDEN DRY SWALE BOTTOM TO ACTIVATE PLAZAS, SEATING NODES, ETC. WITH SHALLOW FLOWS DURING RAIN EVENTS.

43.0m ROW
WITH LID IN MEDIAN
TUNNEY'S PASTURE DRIVEWAY
(FROM COLOMBINE TO YARROW)

NOTES:

1. SET-BACK FROM BUILDINGS IS CALCULATED FROM DISTANCE BETWEEN FRONTAGE OF STANDARDS LAB AND EXTENSION OF FRONTAGE OF R.H. COATS BUILDING.
2. ROW WIDTH CAN BE FURTHER REDUCED BY KEEPING SINGLE-ROW OF TREES ON EITHER SIDE.
3. MEDIAN MAY RESULT IN SIGHT LINE ISSUES AT INTERSECTIONS ALONG TUNNEY'S PASTURE DRIVEWAY, ESPECIALLY IF THERE IS VEGETATION/PLANTINGS WITHIN CLOSE PROXIMITY TO THESE JUNCTIONS.
4. ONE-WAY VEHICLE LANES SEPARATED BY A MEDIAN ARE LIKELY TO ENCOURAGE HIGHER OPERATING SPEEDS AND MAY NOT BE COMPATIBLE A WITH 40KM/H POSTED SPEED WITHOUT SIGNIFICANT TRAFFIC CALMING MEASURES.
5. LID EFFICIENCY IN MEDIAN IS NOT OPTIMAL. LID IS RECOMMENDED BEHIND THE CURB.

PUBLIC ROAD REDEVELOPMENT

TUNNEY'S PASTURE
OTTAWA, ON

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Arcadis Professional Services (Canada) Inc.
formerly IBI Group Professional Services (Canada) Inc.

KEY PLAN - N.T.S.

INFORMATION REQUIRED
UNDER SECTION 51 (17) OF THE PLANNING ACT, R.S.O. 1990, c.P.13 AS AMENDED
(a) - AS SHOWN
(b) - AS SHOWN
(c) - AS SHOWN
(d) - AS LISTED
(e) - AS SHOWN
(f) - AS SHOWN
(g) - AS SHOWN
(h) - MUNICIPAL WATER
(i) - AS SHOWN
(j) - AS SHOWN
(k) - MUNICIPAL SANITARY AND STORM SEWERS
(l) - AS SHOWN

SURVEYOR'S CERTIFICATE
I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED ON THIS PLAN AND THEIR RELATIONSHIP TO THE ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN.

SIGNED
V. ANDREW SHELP, O.L.S.
ANNIS, O'SULLIVAN, VOLLEBEKH LTD

DATE _____

OWNER'S CERTIFICATE
I HEREBY CONSENT TO THE FILING OF THIS PLAN BY IBI GROUP, IN DRAFT FORM.

SIGNED
CANADA LANDS COMPANY

DATE _____

LAND USE SCHEDULE

BLOCKS	DESCRIPTION	AREA (ha)
1	MIXED-USE	2.019
2	MIXED-USE	2.435
3	MIXED-USE	2.256
4	MIXED-USE	0.628
5	MIXED-USE	1.568
6	TRANSIT (TO BE CONVEYED TO CITY)	0.636
7	OPEN SPACE	0.092
8	OPEN SPACE	0.107
9	OPEN SPACE	0.420
10	OPEN SPACE	0.156
11	PUBLIC ROW (Goldenrod Driveway)	0.953
12	PUBLIC ROW (Goldenrod Driveway)	0.687
13	PUBLIC ROW (Goldenrod Driveway)	0.304
14	PUBLIC ROW (Goldenrod Driveway)	0.179
15	PUBLIC ROW (Colombine Driveway)	1.282
16	PUBLIC ROW (Colombine Driveway)	0.952
17	PUBLIC ROW (Sir Frederick Banting Driveway)	0.343
18	PUBLIC ROW (Sir Frederick Banting Driveway)	0.691
19	PUBLIC ROW (Sorrel Driveway)	0.342
20	PUBLIC ROW (Sorrel Driveway)	0.153
21	PUBLIC ROW (Sorrel Driveway)	0.374
22	PUBLIC ROW (Eglantine Driveway)	0.153
23	PUBLIC ROW (Eglantine Driveway)	0.378
24	PUBLIC ROW (Chardon Driveway)	0.435
25	ROW WIDENING - FUTURE (Chardon Driveway)	0.063
26	PUBLIC ROW (Chardon Driveway)	0.190
27	PUBLIC ROW (Chardon Driveway)	0.304
28	PUBLIC ROW (Yarrow Driveway)	0.833
29	PUBLIC ROW (Tunney's Pasture Driveway)	2.691
30	ROW WIDENING (Parkdale Avenue)	0.175
	TOTAL:	21.395

#	DATE	BY	DESCRIPTION
1	2025-12-15	JS	Preliminary Draft LID Concept Plan

DRAWING ISSUE RECORD

APPROVALS

ARCADIS

Aquafor Beech Limited
6—202—2800 SKYMARK Ave.,
MISSISSAUGA, ONTARIO, L4W 5B2
PHONE: (905) 629—0099, FAX: (905) 629—0089

BENCHMARK
1. Elevations shown are geodetic and are referred to the CGVD2013 geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

SCALE 1:1000 (m)

PROJECT NO: 139833
DRAWN BY: SD
CHECKED BY:
PROJECT MGR: SA
APPROVED BY:

SHEET TITLE
DRAFT PLAN OF SUBDIVISION

SHEET NUMBER 2
ISSUE 1.8

File Location: J:\139833_TunneyPasture\12_Production\01.00_Design\12_Planning\Draft Plan of Subdivision

Appendix K – Neighbourhood Traffic Calming Strategy

Memo

SUBJECT
Neighbourhood Traffic Calming Strategy
Tunney's Pasture – Site Servicing and Public Road Redevelopment

TO
Wally Dubyk, Transportation Project Manager, City of Ottawa

DATE
March 5, 2026

OUR REF
139833 Public Rd Redevelopment Tunney's Pasture - Internal Documents (1)\6.0_Technical\6.23_Traffic\03_Reports\TIA

DEPARTMENT
Transportation Engineering

PROJECT NUMBER
139833

COPIES TO
Katherine Constantine (CLC)
Mikaela Coon (CLC)

NAME
Ben Pascolo-Neveu – Transportation Engineer

Introduction

This Neighborhood Traffic Calming (NTC) Strategy was conducted in support of the Draft Plan of Subdivision application for the Tunney's Pasture – Site Servicing and Public Road Redevelopment.

Canada Land Company's Role

It is important to recognize that this consultation process and subsequent preparation of the NTC Strategy document is a Canada Lands Company (CLC) initiative which is well beyond the requirements set out through the City of Ottawa's Draft Plan of Subdivision application process. As such, CLC's role was limited to serving as a facilitator to help voice the community's concerns and offer potential solutions regarding cut-through traffic to City technical staff for their consideration. It is up to City staff to determine how, when and to what extent these traffic calming solutions are implemented. The traffic calming plans developed through the consultation process propose comprehensive traffic management measures throughout adjacent communities and are outside of CLC's scope of work to support the transfer of the proposed internal street network within Tunney's Pasture to the City of Ottawa but may help to highlight and proposed mitigation strategies for some existing cut-through issues.

Objectives

This document is intended to evaluate potential concept-level traffic calming solutions within adjacent communities, as well as at the site access intersections. The primary objectives of this strategy are to limit cut-through between Tunney's Pasture and Mechanicsville, Hintonburg, Wellington Village and Champlain Park, while facilitating access to the subject site by active modes. These solutions are meant to build on existing traffic management measures identified within each of the above-noted communities and were mindful of the need to prioritize the mobility of individuals by active and sustainable modes over private automobile usage.

These neighbourhoods are located within the closest proximity to the subject site and therefore have the highest potential for experiencing traffic infiltration associated with the Tunney's Pasture redevelopment.

Traffic management measures proposed within the subject site, as presented in Section 4.3 and Exhibit 14 of the TIA, are intended to complement those discussed within this NTC Strategy.

Background

Despite the subject site's multiple connections to the arterial and regional road network, there have been concerns expressed by Communities' Perspective Group (CPG) members regarding the potential exacerbation of existing cut-through traffic patterns resulting from the Tunney's Pasture redevelopment. These concerns are based on the site's direct vehicular connections with adjacent neighborhoods and widely-known congestion issues on nearby key commuter routes, including Island Park Drive and Parkdale Avenue, during the weekday peak periods. It should be

noted that the purpose of this NTC Strategy is to prevent the exacerbation of cut-through traffic issues but that the resolution of existing issues is outside of the scope of this strategy report.

Community Engagement

A Communities' Perspective Group (CPG) was established at the onset of the Tunney's Pasture redevelopment to provide a forum for residents from adjacent communities and special interest groups to share input for consideration by the project team. A subset of the CPG, referred to as 'CPG Stream 1', is involved in the TIA process.

The project team is committed to working with the CPG Stream 1 to develop solutions that mitigate the impact of the Tunney's Pasture redevelopment on the surrounding transportation network and community, though it does not set out to resolve existing community issues with respect to transportation. As Canada Lands Company (CLC) has a mandate to accelerate the delivery of housing, this community engagement process allows the project team to move ahead with various stages of the Draft Plan of Subdivision application, while receiving input from the CPG.

Touch-Point Meetings

Over the course of the TIA process, three (3) touch-point meetings were proposed to allow for input/comment from the CPG Stream 1 members:

- Touchpoint 1 – TIA Terms of Reference (TOR) – December 2, 2024
- Touchpoint 2a – Neighbourhood Traffic Management Workshop (Mechanicsville) – January 8, 2025
- Touchpoint 2b – Neighbourhood Traffic Management Workshop (Hintonburg, Wellington Village & Champlain Park) – February 10, 2025
- Touchpoint 3 – Presentation of Preliminary TIA Conclusions & Recommendations – June 17, 2025

Touch-Point 1 provided CPG Stream 1 members with an overview of the TIA Terms of Reference (TOR), as well as an opportunity to provide input on these key study parameters for consideration by City technical staff.

The Touch-Point 2 sessions introduced CPG Stream 1 members to the Traffic Calming Toolbox, divided members into break-out groups to identify key issues, reviewed potential cut-through routes and engaged in discussions to better understand their primary concerns and possible solutions. Further refinements were made to the traffic calming plans by the project team after each workshop, with consideration of the ideas discussed during each session.

Lastly, Touch-Point 3 provided CPG Stream 1 members with an overview of the TIA study recommendations and conclusions, prior to the public release of the entire TIA on 'DevApps'.

Potential Traffic Infiltration Routes

Potential infiltration routes have been assessed based on community feedback from the Touch-Point 2 workshop meetings and were verified using traffic count data collected in May 2023 and March/April 2025.

Key routes include peripheral intersections identified in the TIA, namely Scott & Carruthers, Scott & Bayview Station, Burnside & Bayview Station/Slidell (roundabout), as well as streets within Mechanicsville, Hintonburg, Wellington Village, and Champlain Park that either connect directly or represent the most direct connections from that neighbourhood to Tunney's Pasture. **Exhibit 1** below provides a visual representation of the potential neighbourhood infiltration routes which were further reviewed and vetted as part of this NTC Strategy exercise.

ARCADIS

Tunney's Pasture - Site Servicing and Public Road Redevelopment
Neighbourhoood Traffic Calming Strategy

Exhibit 1
Potential Neighbourhood Infiltration Routes

PROJECT No. 139833

SCALE: 0m 125m 250m

Potential for Cut-Through Traffic

Based on the trip generation exercise undertaken as part of this TIA process, an increase of approximately 420 two-way vehicle trips is expected in Phase 1 and represents the peak direction of vehicular activity throughout the site's redevelopment. However, because residential traffic patterns typically follow an opposing flow to those of office-based land uses, the majority of this additional traffic does not significantly worsen traffic operations relative to existing conditions. Phase 1 traffic results in just a 5% increase (approximately 80 vehicle trips) in the peak direction dispersed across the entire road network. Furthermore, the site's transformation from a traffic *generator* to a traffic *source* has the positive effect of utilizing available roadway capacity that is opposite from the peak direction of travel. This shift mitigates operational impacts to the adjacent road network and therefore is less likely to exacerbate any existing cut-through issues.

Table 1 below provides a comparison of pre-pandemic and Phase 1 traffic volume projections.

Phase 2 of the development will result in significant reductions in both total and peak direction traffic volumes of approximately 24% and 28%, respectively, with further reductions anticipated in Phase 3. These reductions will decrease the likelihood of cut-through traffic on the adjacent road network and help alleviate longstanding congestion issues, which currently encourage motorists to seek alternative, less direct routes.

Table 1 – Comparison of Pre-Pandemic Site-Generated Traffic with Phase 1 Projections

Scenario	Vehicles – Weekday AM Peak Hour			Vehicles – Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Phase 1 Site Traffic Projections[1]	1,257	572	1,829	882	1,553	2,435
Pre-Pandemic Site-Generated Traffic	1,495	570	2,065	542	1,473	2,015
Difference (%)	**-238 (-16%)**	**+2 (0%)**	**-236 (-11%)**	**+340 (+63%)**	**+80 (+5%)**	**+420 (+21%)**

[1] Phase 1 traffic volume projections do not include 'pass-by trips'.

Traffic Calming Resources, Measures & Processes

The Local Residential Streets 30km/h Toolbox, published by the City of Ottawa in 2021, was the primary reference document utilized in the development of traffic calming solutions for this NTC Strategy, given the neighborhood context and local street composition of the internal street network of all four adjacent communities being reviewed in this study.

This Toolbox provides a range of traffic calming measures that are applicable to local streets to reduce operating speeds and the attractiveness of these low-order roads as potential cut-through routes, while improving safety for all road users. A targeted spacing of 50 to 60 metres between measures is considered acceptable to ensure adequate effectiveness. Low-cost, retrofit measures were determined to be the most appropriate for consideration in the context of achieving a reduction in existing cut-through traffic within these communities. It is acknowledged, however, that some recommended measures such as 'raised intersections' may be cost prohibitive for retrofit projects and are more likely to be implemented as part of an integrated road, sewer, and water renewal project.

Proposed Traffic Calming Measures & Feasibility for Implementation

To address existing traffic calming concerns expressed by CPG Stream 1 members, the following types of traffic calming measures from the Toolbox were considered:

- Physical Infrastructure:
    - Speed humps or raised crosswalks on traffic infiltration-prone streets;
    - Curb extensions or road narrowing to slow vehicle speeds; and
    - Traffic diverters to limit access to non-local traffic.

- Signage & Movement Restrictions:
    - Additional 'Local Traffic Only' signage; and
    - Expansion of vehicle movement restrictions.
- Active Transportation Enhancements:
    - Improved pedestrian crossings with visibility measures;
    - Dedicated bike lanes or shared cycling facilities; and
    - 'Modal filters' to limit vehicular movements, while maintaining access for active users.
- Season Measures
    - Centreline or curbside 'flexible stakes'; and
    - Pavement Markings such as painted bulb-outs.

The above-noted measures aim to reduce cut-through traffic, while improving safety and accessibility for active modes of transportation and were considered in the development of potential traffic calming solutions for each adjacent neighbourhood.

The implementation of the concept-level potential traffic calming measures are subject to further review during functional and detailed design studies. Further review may consider factors including, but not limited to, the following:

- For speed humps and other vertical measures, the spacing between consecutive vertical measures, the spacing between a speed hump and stop signs or signals, and the proximity to nearby driveways.
- For bulb-outs and medians, large vehicle turning movements and the need for new / relocated catch basins.
- For one-way street conversions and modal filters, careful consideration of traffic diversions to other streets within the study area.

The feasibility of traffic calming measures recommended in this NTC Strategy have been verified at a conceptual level based on existing conditions and through publicly available imagery; however, it is recognized that all of the adjacent neighbourhoods surrounding Tunney's Pasture are constantly evolving through private redevelopment or City-led capital projects, for instance, which may the impact the placement of these traffic calming measures. As such, the locations of any proposed measures will need to be verified based on the latest available plans just prior to implementation to ensure that these integrate well with both existing and planned infrastructure within the foreseeable future.

City of Ottawa Neighbourhood Traffic Calming (NTC) Study Process

The Neighbourhood Traffic Calming (NTC) Study Process, published by the City of Ottawa in April 2019, is a comprehensive framework designed to address traffic concerns within neighbourhoods in a fair, consistent, and efficient manner. The process is divided into three main phases: (1) Pre-Study; (2) Study, and (3) Implementation. The time required to complete a project varies depending on priority and public involvement, with high-priority requests typically taking between two-and-a-half to four years from initial planning to construction.

Pre-Study Phase

During the Pre-Study phase, the primary traffic concern is identified to determine whether the issue is related to speeding on specific streets or broader neighbourhood-wide traffic management. This distinction guides whether a Local Traffic Calming (LTC) or a Neighbourhood Traffic Management (NTM) study is appropriate. Community support for the project is confirmed alongside the availability of funding. Requests are then screened and prioritized based on criteria including vehicle speeds and traffic volumes. The area context, such as whether the neighbourhood is undeveloped, mixed-use, or a compact hub, is also considered to help tailor the study approach.

Prioritization of requests is conducted using a scoring system that can allocate up to 100 points. This system evaluates traffic behaviour using metrics such as the 85th and 95th percentile vehicle speeds and peak period traffic

volumes. Requests with the highest scores are placed at the top of the queue for further study and potential implementation.

Study Phase

In the Study phase, a Traffic Calming Plan is developed through preliminary functional designs. These designs are reviewed and refined with input from City departments and public stakeholders to ensure that technical, financial, and community considerations are balanced. Multiple design options may be explored to arrive at a preferred solution that meets the project objectives. The recommended design includes a high-level cost estimate and is intended to achieve community consensus, particularly if the measures proposed are significant.

Implementation Phase

Once a design is finalized, it proceeds to the Implementation phase, where it undergoes the City's Roadway Modification Approval (RMA) process, which requires the concurrence of the local Councillor. Upon approval and confirmation of funding, the City's Infrastructure Services group undertakes preliminary and detailed design work followed by construction. Construction typically occurs during the spring to fall season, and larger projects may be coordinated with other City works to maximize cost efficiencies. After construction, the project is monitored and evaluated to determine effectiveness and to inform any necessary revisions.

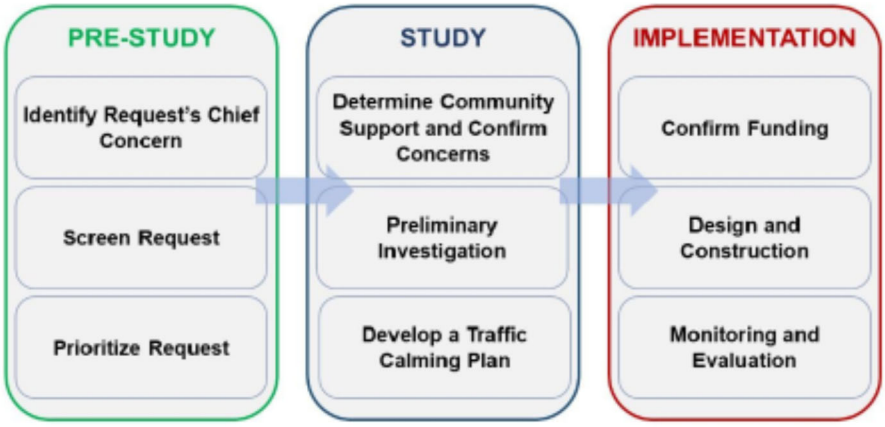
Overall Guiding Principles for NTC Study Process

Throughout the entire process, several guiding principles shape decision-making. The approach favors starting with simple, cost-effective traffic calming measures before moving onto more complex or expensive solutions. It is also important to consider secondary impacts on nearby streets to avoid simply transferring problems from one location to another. The overarching goal is to comprehensively address traffic concerns in a sustainable and equitable manner.

The NTC Study Process is subject to ongoing review and updates based on stakeholder input and operational improvements. These updates are approved by the General Manager of the Transportation Services Department under delegated authority, with City Council being informed of any significant changes.

The City of Ottawa Model Traffic Calming Process is outlined in **Figure 1** below.

Figure 1: City of Ottawa Model Traffic Calming Process



source: City of Ottawa NTC Study Process, April 2019

Neighbourhood Traffic Management (NTM) Studies

The primary objective of NTM studies is to address concerns related to vehicular speeding and/or through traffic within a defined study area (beyond a specific street).

NTM Studies are complex and often require significant resources and time to address. The nature of the qualification and prioritization processes for each study type will allow resources to be focused on the simpler and smaller studies, allowing for more requests to be addressed.

For requests where the chief concern is in relation to vehicle speeds on a specific street, a Local Traffic Calming Study (LTC) can be undertaken, while a Neighbourhood Traffic Management (NTM) study can help to address neighbourhood-wide concerns.

Regardless of the nature of the concern, a technical evaluation will be conducted to help identify the potential severity of the identified concern. Following this evaluation, a context review is undertaken to determine the potential for engineered traffic calming options to address the identified concern. Finally, the NTC Program will consult with the Ward Councillor to solicit support before qualifying the request.

Temporary Traffic Calming Measures (TTCM)

The Temporary Traffic Calming Measures (TTCM) facilitates the installation of effective, low-cost traffic calming measures that are temporary and/or seasonal in nature. These measures can be easily installed once the plan is created and approved. TTCM offers safety solutions for areas that often do not meet criteria for permanent roadway modifications.

Each Ward Councillor is allocated an annual budget for TTCM, which is currently set at $100,000 per Ward as of 2026, with an increases of $12,500 per year. The type of measure along with the implementation location is selected by the Ward Councillor, following consultation with Ward residents and technical TTCM Program staff.

Potential Traffic Calming Solutions for Adjacent Neighbourhoods

The following sub-sections provide a review of existing traffic calming measures in each of the four (4) neighbourhoods directly bordering Tunney's Pasture and offer a potential solution for each neighbourhood to help address traffic calming concerns identified by Communities' Perspective Group (CPG) Stream 1 members through the Neighbourhood Traffic Calming Workshops held in January and February of 2025.

Mechanicsville

Review of Existing Conditions

Mechanicsville is located to the east of Tunney's Pasture and is generally bound by Kichi Zibi Mikan to the north, Bayview Station Road to the east, Scott Street to the south and Parkdale Avenue to the west. This neighbourhood consists of a two-way grid-street pattern and, as such, there are numerous potential cut-through routes within Mechanicsville, as shown on **Exhibit 2** below.

Existing traffic management measures within Mechanicsville include the following:

- 'Flexible' centreline stakes (seasonal), 'Traffic Calmed Neighbourhood' signage and a speed display device on Burnside Avenue
- Turning movement prohibitions at Kichi Zibi Mikan & Slidell/Onigam
    - Authorized vehicles excepted: Westbound and southbound left-turning restrictions, as well as northbound turning movements
    - Restrictions from 7:00-9:00am and 4:00-6:00pm (Authorized vehicles excepted): Westbound right-turn and eastbound turning movements

Burnside Avenue has the highest potential for cut-through traffic of all streets within Mechanicsville, as a result of its direct connectivity from Parkdale Avenue to Scott Street via Bayview Station Road.

Turning movement count data referenced suggests that Burnside Avenue may be used as a possible cut-through route, with traffic volumes of a similar magnitude performing southbound left-turns at the Parkdale & Burnside and Scott & Bayview Station Road intersections during the weekday morning peak hour and the reverse in the weekday afternoon peak hour.

The Burnside & Bayview Station/Slidell roundabout was determined to operate at a high level of service (i.e. LOS 'A'), based on the intersection capacity analysis conducted for this TIA under Existing Conditions. As such, the high performance of this intersection may support the occurrence of cut-through traffic patterns within Mechanicsville. The attractiveness of Burnside Avenue as a potential cut-through route, however, is lessened by the significant turning movement restrictions which are already in place at the Kichi Zibi Mikan & Slidell/Onigam intersection.

Traffic count data collected at either the Parkdale & Lyndale or Scott & Carruthers intersections did not support a potential cut-through route using these two signalized intersections to by-pass weekday peak hour any congested conditions experienced at the Parkdale & Scott intersection. Similarly, data collection undertaken at the Parkdale & Emmerson intersection indicated nominal left- and right-turning movements during both the weekday morning and afternoon peak hour periods. As such, neither of these routes were carried forward as 'primary cut-through routes' from the initial screening of key routes identified previously in **Exhibit 1**.

Relevant traffic count data collected to support the TIA process, and discussed above to evaluate probable cut-through routes, is highlighted in **Appendix A**.

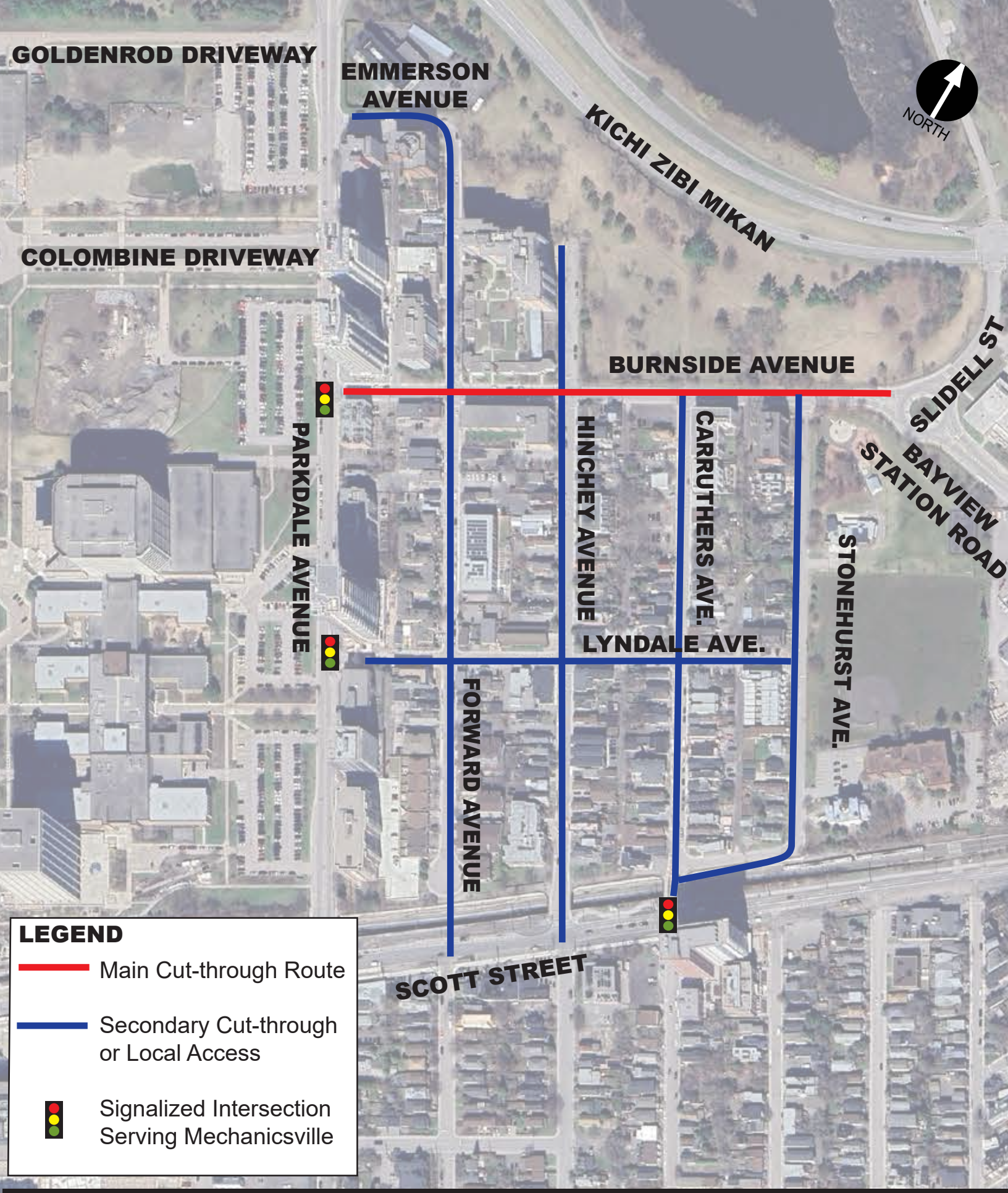
Proposed Traffic Calming Plan for Mechanicsville

A traffic calming plan was developed for Mechanicsville with input from community members. Key aspects of this traffic calming plan are outlined below:

- Introduce visual and horizontal 'friction' on Burnside Avenue through the implementation of streetscaping improvements, as specified in the 2014 Scott Street Community Design Plan (CDP), to reduce opportunities for use of this local street as a primary cut-through route within the Mechanicsville community.
    - More specifically, Burnside Avenue was envisioned as a 'complete street' in the Scott Street Community Design Plan (2014), and would accommodate two vehicular lanes, two bike lanes and landscaped boulevards with sidewalks and street trees on both sides within its existing right-of-way. Given the constrained ROW, vehicular lanes would likely need to be narrowed to help accommodate these streetscaping improvements, providing additional physical traffic calming.
- Impose vehicle directional measures to limit traffic flow on Stonehurst Avenue to northbound north of Lyndale Avenue and southbound south of Lyndale Avenue to mitigate the occurrence of cut-through traffic and higher operating speeds adjacent to Laroche Park. Contra-flow bike lanes would be introduced to maintain travel in both directions for cyclists along the entire length of Stonehurst Avenue, while limiting vehicular movements.
- Introduce regularly-spaced speed humps approximately every 50 to 60 metres, where feasible, across the Mechanicsville street network to reduce the probability of cut-through traffic shifting to 'the next parallel street' within the community, along with the above noted potential improvements to Burnside Avenue and Stonehurst Avenue. It is noted that speed humps generally require a segment of road that is at least 5 metres in length with no driveways on either side and cannot be within close proximity to intersections, as these vertical measures may interfere with turning movements of larger vehicles. These lower-cost, retrofit, vertical measures are among the most common forms of traffic calming infrastructure implemented on local residential streets across Ottawa and are considered highly suitable in this context, given that none of these streets exist or are envisioned as future transit routes serve. Speed humps are also considered to have a minimal impact on other existing or planned street features and are classified as Tier 1 measures (i.e. among the most effective), according to the Local Residential Streets 30km/h Toolbox; however, any negative impacts to accessibility for active users must be considered prior to their implementation.

It should be noted that a more aggressive strategy was presented to the CPG Stream 1 Mechanicsville representative to mitigate the impacts of cut-through traffic which featured traffic 'diverters' on key streets such as Burnside Avenue, however this option was deemed to be overly intrusive in limiting the movement of vehicular traffic within the community.

The potential traffic calming plan developed for Mechanicsville is provided in **Exhibit 3** below.



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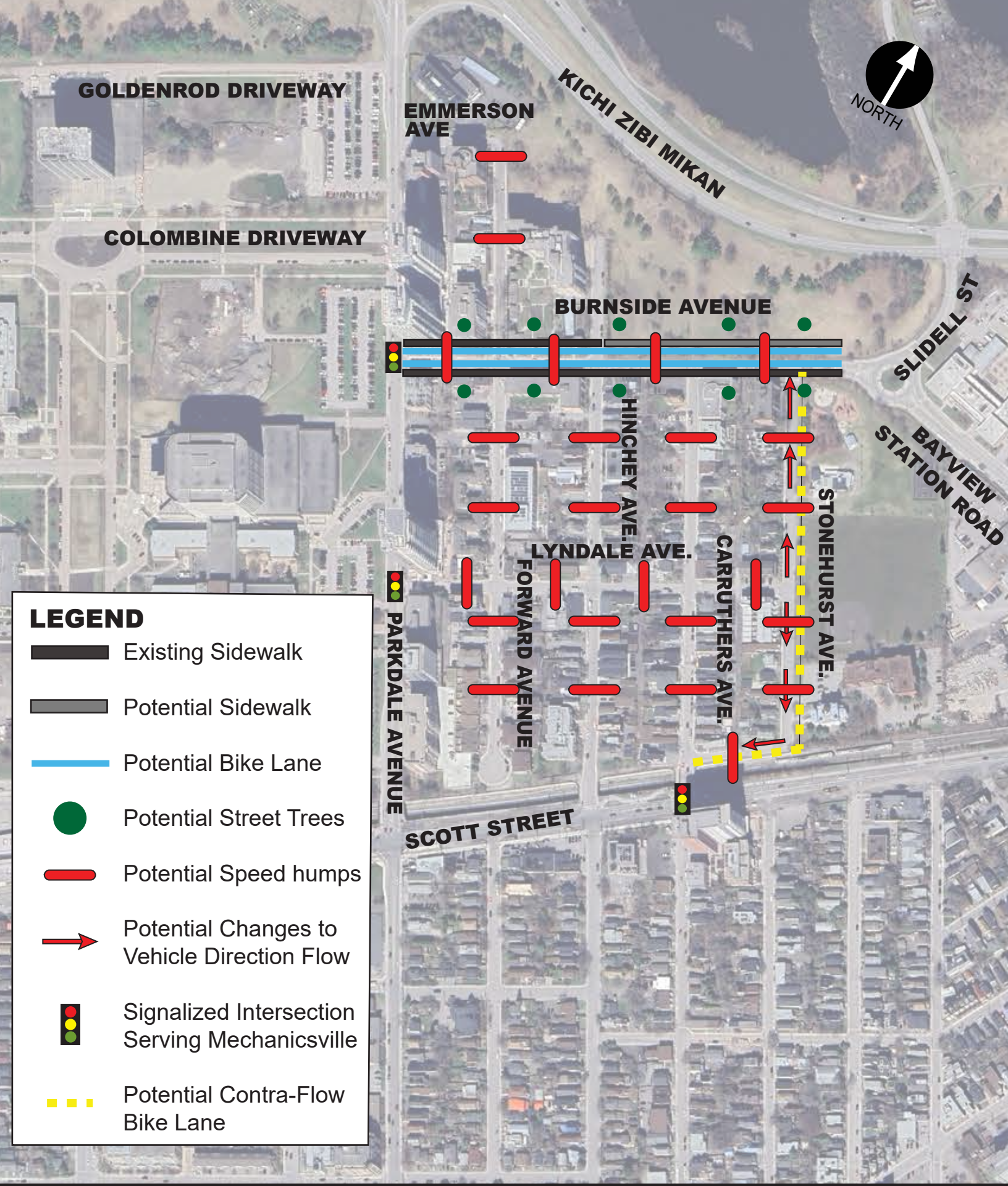
Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 2 – Existing Primary & Secondary Cut-Through Routes (Mechanicsville)

PROJECT No. 139833

SCALE: 0m 15m



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Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 3 – Potential Traffic Calming Plan (Mechanicsville)

PROJECT No. 139833

SCALE: 0m 15m

Hintonburg

Existing Conditions Review

Hintonburg is located south of Tunney's Pasture and east of Wellington Village, with boundaries generally defined by Scott Street to the north, Bayview Station Road to the east, Wellington Street West to the south, and Holland Avenue to the west. This review focuses on the portion of Hintonburg located west of Parkdale Avenue and directly abutting the Tunney's Pasture site, as this area is most relevant to the cut-through traffic assessment.

Existing potential primary and secondary cut-through routes within Hintonburg are shown in **Exhibit 4** below.

Similar to Mechanicsville, Hintonburg's internal street network is generally arranged in a grid pattern, which may promote traffic infiltration into adjacent communities during periods of congestion on the arterial road network. In contrast, other local streets east of Parkdale Avenue are configured in an offset grid pattern and are therefore less conducive to encouraging cut-through traffic.

CPG Stream 1 members expressed concerns about congested conditions experienced on Parkdale Avenue during the weekday peak periods and how these conditions are likely contributing to a shift in traffic demand to nearby parallel streets in Hintonburg, including Hamilton Avenue N, Hinton Avenue N and portions of Tyndall Street for motorists seeking out alternative routes to access Highway 417. Given the potential challenges in crossing Wellington Street West with a two-way stop-controlled intersection and likely few gaps in two-way traffic along this mainstreet during the weekday peak periods, it is possible that cut-through motorists may only use a portion of these potential routes.

Parkdale Avenue has experienced longstanding congested conditions, especially during commuter peak periods, as a result of its full interchange connections with both Highway 417 and Kichi Zibi Mikan. When Highway 417 is busy, then traffic will divert to Kichi Zibi Mikan, potentially using parallel neighbourhood routes to avoid congested conditions on Parkdale Avenue. The transformation of Tunney's Pasture into a transit-oriented development is expected to reduce the need for crosstown regional trips. This change may alleviate bottleneck conditions to/from Highway 417, which currently contribute to the neighbourhood traffic infiltration issues within Hintonburg.

As indicated through a review of traffic count data collected for this TIA process, peak direction traffic volumes of up to 750 vehicles per hour have been observed on Parkdale Avenue. South of Scott Street, observed traffic volumes decreased to approximately 300 to 400 vehicles per hour which is well within the capacity of a two-lane road. Despite these relatively low directional volumes, the portion of Parkdale Avenue between Bullman Street and Highway 417 does become congested and slow-moving during the weekday morning peak period. Additionally, during the weekday afternoon peak period this congestion extends from Kichi Zibi Mikan to Highway 417. Closely-spaced intersections with high pedestrian crossing volumes and an abundance of private driveways result in a low throughput along this corridor. Relevant link volumes on Parkdale Avenue referenced above are indicated in **Appendix A**.

Existing traffic calming measures within the portion of Hintonburg reviewed in this neighbourhood consist of midblock and intersection bulb-outs. A vehicle directional closure bulb-out exists on Hinton Avenue North, limiting traffic to northbound from Tyndall Street to Wellington Street West, while permitting two-way flow of pedestrians and cyclists within this block.

Proposed Traffic Calming Plan for Hintonburg

With consideration of the above, a potential traffic calming plan was developed for Hintonburg which included the more widespread use of intersection and midblock bulb-outs, as well as 'raised intersections' to provide vertical deflection and further disincentivizes motorists from using sidestreets within close proximity to Parkdale Avenue as alternative routes to access Highway 417. Notably, a potential vehicle directional closure is also proposed on Hamilton Avenue N immediately south of commercial access driveways, similar to the movement restrictions already in place on Hinton Avenue N to mitigate the potential impacts of neighbourhood traffic infiltration on the sidestreets. As Hamilton Avenue N is the closest and most direct north-south parallel route to Parkdale Avenue, it is a logical candidate for cut-through traffic.

In accordance with the Local Residential Streets 30km/h Toolbox, traffic calming measures with varying degrees of effectiveness are proposed within Hintonburg, including speed humps (Tier 1), intersection and midblock bulb-outs (Tier 2) and 'raised intersections' (Tier 1). Speed humps and midblock bulb-outs are among the common, lower-cost and versatile traffic calming measures applied on existing local residential streets across the City of Ottawa.

Bulb-outs are particularly versatile, as these can be implemented either midblock or at intersections and could occur across driveways, such as those recently introduced on Caroline Avenue, or potentially incorporate dedicated space for cyclists (i.e. cycle-friendly bulb-outs), as required.

A range of measures are proposed, as the implementation of more costly and disruptive measures need such as 'raised intersections' may not be feasible outside of an integrated road rehabilitation project.

The potential traffic calming plan developed for Hintonburg is provided in **Exhibit 5** below.

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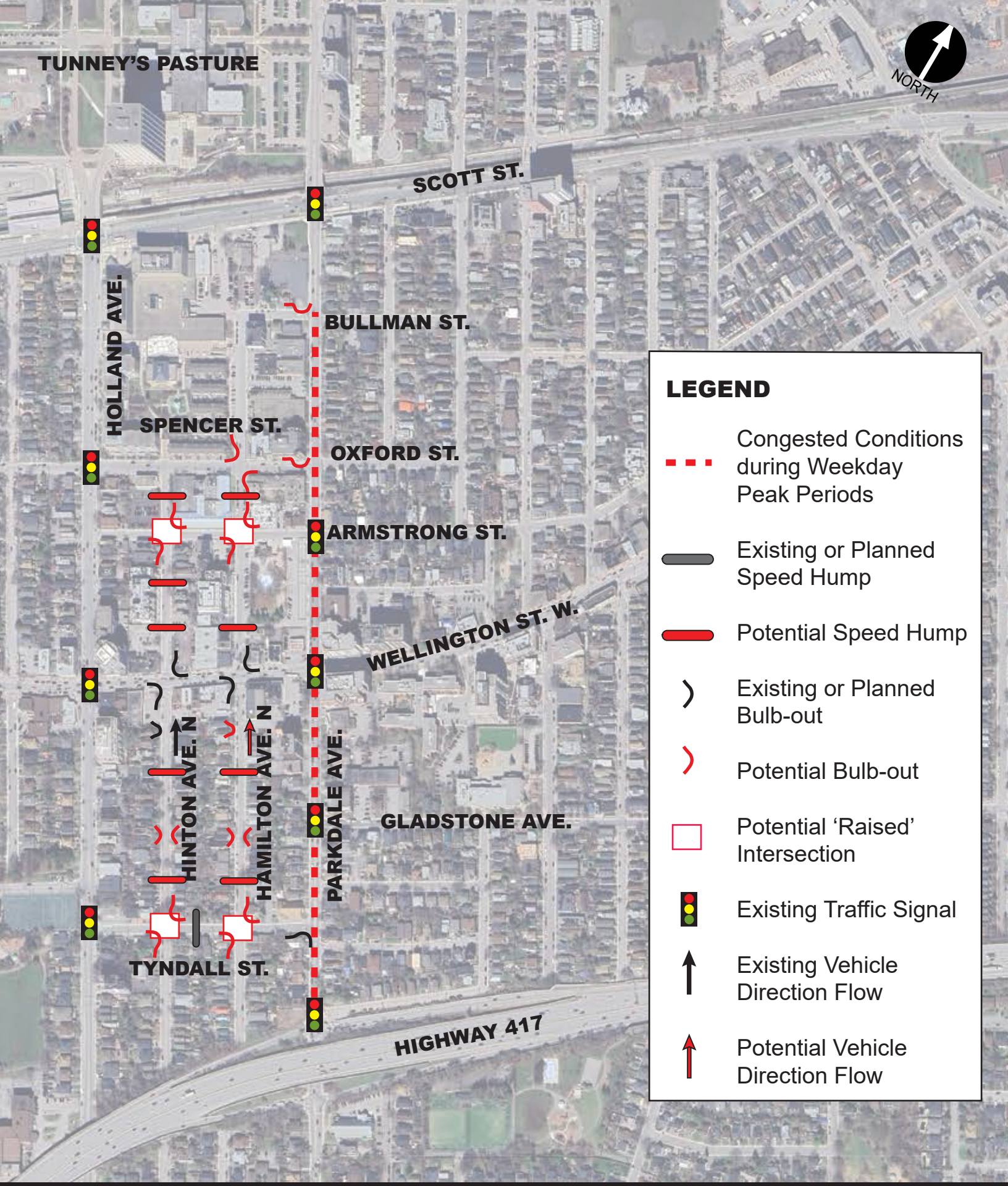
Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 4 – Existing Primary & Secondary Cut-Through Routes (Hintonburg)

PROJECT No. 139833

SCALE: 0m 15m



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Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 5 – Potential Traffic Calming Plan (Hintonburg)

PROJECT No. 139833

SCALE: 0m 15m

Wellington Village

Existing Conditions Review

Wellington Village is generally bound by Scott Street to the north, Holland Avenue to the east, Wellington Street West to the south, as well as Island Park Drive to the west. The western limit of the traffic calming plan for Wellington Village, as part of this NTC Strategy, was established as Carleton Avenue. This limit reflects the expected decrease in potential neighbourhood traffic infiltration from Tunney's Pasture beyond the site's immediate boundary streets.

Wellington Village has a higher potential for cut-through traffic as a result of its grid street pattern which acts as a 'sieve' to permit direct two-way vehicular connectivity between Scott Street and Wellington Street West. This street pattern does create challenges in achieving a robust traffic calming strategy by allowing traffic to shift to the 'next street over' and therefore required a more comprehensive review of the neighbourhood to mitigate these potential occurrences. Furthermore, the site's internal street network is aligned directly with local streets within Wellington Village further south, thereby increasing the likelihood of cut-through traffic.

Existing potential primary and secondary cut-through routes within Wellington Village are shown in **Exhibit 6** below. Ross Avenue is identified as a logical 'primary cut-through route', given its direct connectivity to the site. As indicated through the City's circulation comments received on December 17, 2025, the north leg of the Scott & Goldenrod/Smirle intersection will continue to serve as a bus-only access to the bus loop after LRT Stage 2 is open for full revenue service which will help to reduce its attractiveness of Smirle Avenue as a potential cut-through route. There is, however, some potential for cut-through traffic given the signalization of the Scott & Goldenrod/Smirle intersection and therefore this route remains as a 'primary cut-through route' for analysis purposes in this NTC Strategy. As identified in **Appendix A**, it is also noteworthy that there is some evidence of minor cut-through traffic patterns on the eastbound right-turn movement at Scott & Goldenrod/Smirle under both weekday morning and afternoon peak hour traffic, based on the traffic data collected at this intersection in May 2023 at the onset of the TIA.

All other streets within Wellington Village are identified as 'secondary cut-through routes' and are considered more indirect contributors to potential cut-through traffic from Tunney's Pasture.

A desktop survey of existing traffic management measures within Wellington Village identified a range of measures with varying degrees of effectiveness, including 'raised intersections', speed humps, bulb-outs (mid-block and at intersections), as well as seasonal measures such as 'flexible posts' and painted on-road messaging. Notably, Huron Avenue was reconstructed in 2025 to include short, raised center median segments and bulb-outs, both of which were implemented to add horizontal 'friction' for motorists.

The capacity analysis conducted as part of this TIA process indicated the need for upgrades to the Scott & Sir Frederick Banting/Ross intersection to accommodate a signalized and 'protected intersection' configuration at this location under Existing Conditions. These upgrades are further supported by the Scott Street Community Design Plan (CDP) which also recommended traffic signals at this location, while north-south turning movement prohibitions are recommended at the intersections of Scott Street with Sir Frederick Banting/Ross & Goldenrod/Smirle.

A 'gateway' 30km/h speed limit exists within Wellington Village and indicates that streets in this neighbourhood support low vehicular operating speeds which safely accommodate cyclists riding in mixed traffic where dedicated cycling facilities are not proposed.

Based on the configuration of the internal street pattern within Wellington Village and its connections to the arterial road network (i.e. Scott Street and Wellington Street West), the primary cut-through routes with respect to the subject site are as follows:

- Ross Avenue (Scott Street to Wellington Street West)
- Smirle Avenue (Scott Street to Wellington Street West)

Proposed Traffic Calming Plan for Wellington Village

A traffic calming plan for Wellington Village was developed with input from CPG Stream 1 members. Key aspects of this traffic calming plan are outlined below:

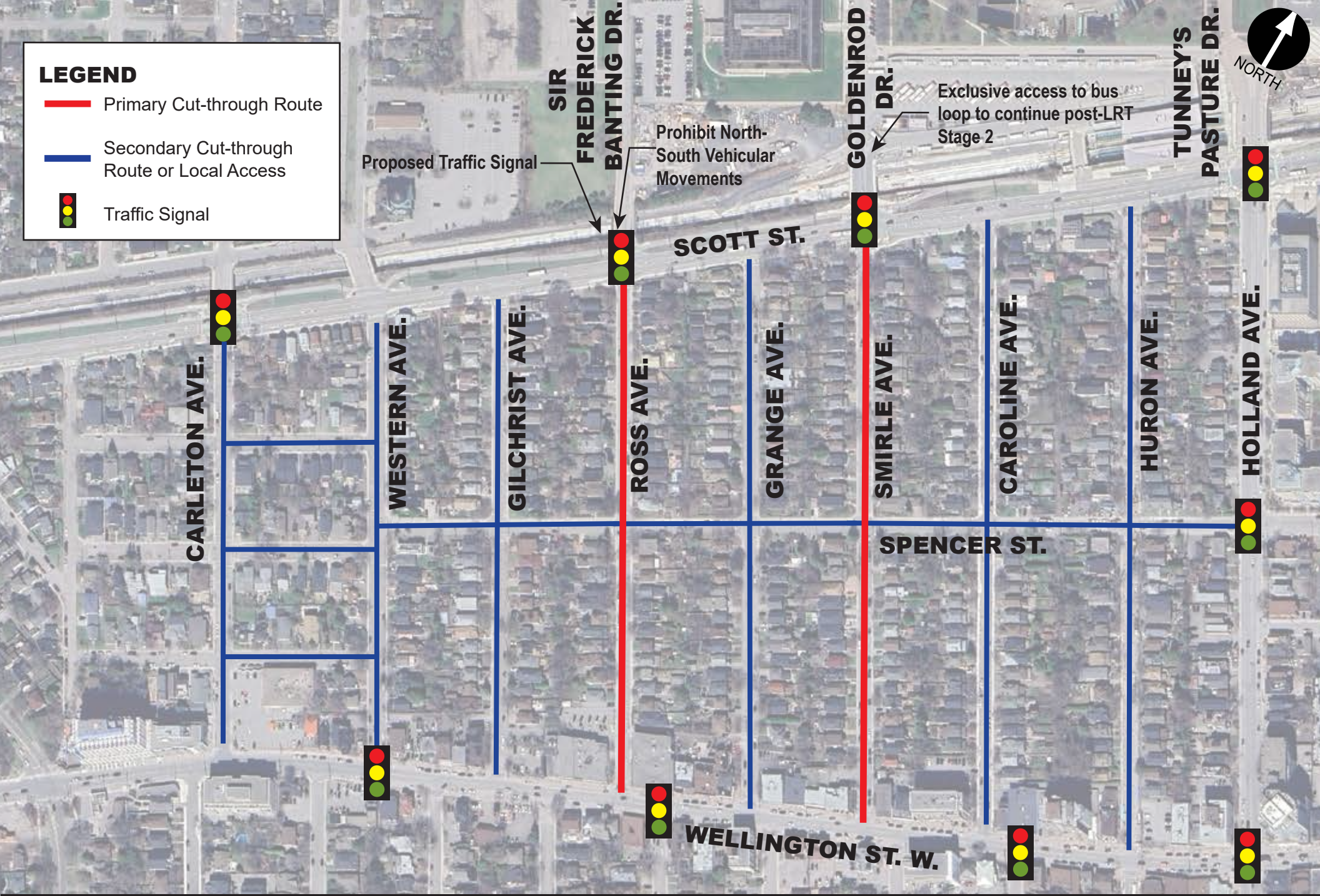
- Introduce traffic 'diverters' at the intersections of Spencer Street with Ross Avenue and Smirle Avenue to mitigate cut-though impacts associated with the two north-south primary cut-through routes. These traffic 'diverters' would serve as physical barriers to prevent cut-through traffic from travelling through Wellington

Village via Wellington Street West to either of these signalized intersections which facilitate direct or nearly direct vehicular connectivity directly into Tunney's Pasture.

- Restrict vehicle traffic to northbound left- and right-turns and no thru movements at the Scott & Sir Frederick Banting/Ross intersection to reduce opportunities for cut-through traffic through a combination of vehicle directional measures and prohibitive signage.
- Prohibit north-south vehicular movements at the Scott & Sir Frederick Banting/Ross intersection but permit pedestrian and cycling movements. Southbound thru movements would be prohibited through physical curb extensions configured as a 'modal filter' with an opening to except southbound thru cycling movements. Northbound thru vehicular movements would be banned through clearly posted prohibitive signage.
- Introduce speed humps, mid-block and intersection bulb-outs and potential raised median segments on streets with sufficiently wide pavement widths (i.e. generally pavement widths of at least 11 metres in width to accommodate 1.5-metre raised median and sufficient vehicle lane clearance on either side). It is proposed that intersection bulb-outs could be implemented in pairs and in conjunction with seasonal measures such as centreline 'flexible posts' for optimal effectiveness. Bulb-outs could also be used to frame on-street parking between blocks.

The proposed traffic calming plan developed for Wellington Village is illustrated in **Exhibit 7** below.

It should be noted that Carleton Avenue and Western Avenue between Scott Street and Wellington Street West are identified as key emergency response streets per Appendix D of the Traffic Calming Design Guidelines. Additional traffic calming measures on these streets will require careful consideration and consultation with City of Ottawa Emergency Services staff.



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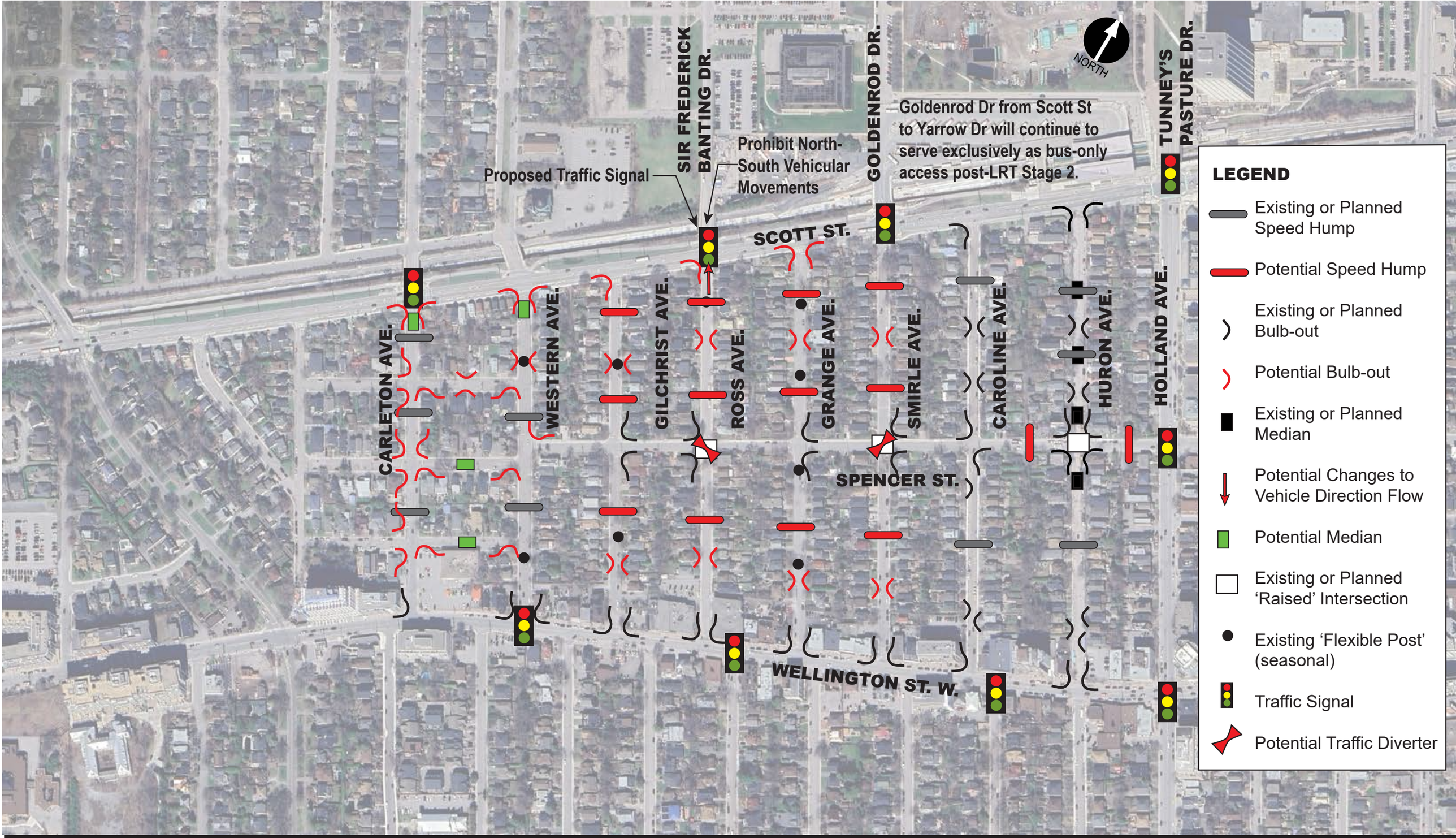
Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 6 – Existing Primary and Secondary Cut-through Routes (Wellington Village)

PROJECT No. 139833

SCALE: 0m 15m



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Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 7 – Potential Traffic Calming Plan (Wellington Village)

PROJECT No. 139833

SCALE: 0m 15m

Champlain Park

The Champlain Park community is located immediately west of the subject site. The portion of Champlain Park which will be reviewed in this study is limited to Kichi Zibi Mikan to the north, Tunney's Pasture to the east, Scott Street to the south and Island Park Drive to the west. Even though there are no existing or planned vehicular connections between Tunney's Pasture and Champlain Park, it is likely that this neighbourhood experiences an increase in cut-through traffic as a result of commuter traffic, some of which may be generated from the existing Tunney's Pasture development, navigating around widely-known congested conditions on Island Park Drive during the weekday peak periods.

Existing potential primary and secondary cut-through routes within Champlain Park are shown in **Exhibit 8** below.

Existing Conditions Review

Traffic count data collected on Island Park Drive in March/April 2025 to support of the overall TIA process indicates that peak direction volumes on this north-south arterial road are in the order of 800 to 1,000 vehicles during the weekday morning peak hour from Kichi Zibi Mikan to Scott Street, as identified in **Appendix A**. Volumes of this magnitude are an indicator that this two-lane road is approaching its capacity during this most constrained weekday peak hour and that there is an increased chance spillover traffic within adjacent neighbourhoods.

Existing traffic calming measures within Champlain Park consist of speed humps, curb extensions at select intersections, as well as 'flexible stakes' (seasonal). It is important to note that westbound right-turning vehicle prohibitions also exist at the intersections of Island Park with Clearview and Sunnymede on Monday to Friday from 3:30-6:00pm, while cycling movements are excepted.

Based on the configuration of the internal street pattern within Champlain Park and its connections to the arterial road network (i.e. Island Park Drive and Scott Street), the primary cut-through routes are most likely as follows:

- Northwestern Avenue and Clearview Avenue
- Carleton Avenue and Amanda Avenue
- Carleton Avenue and Sunnymede Avenue

Proposed Traffic Calming Plan for Champlain Park

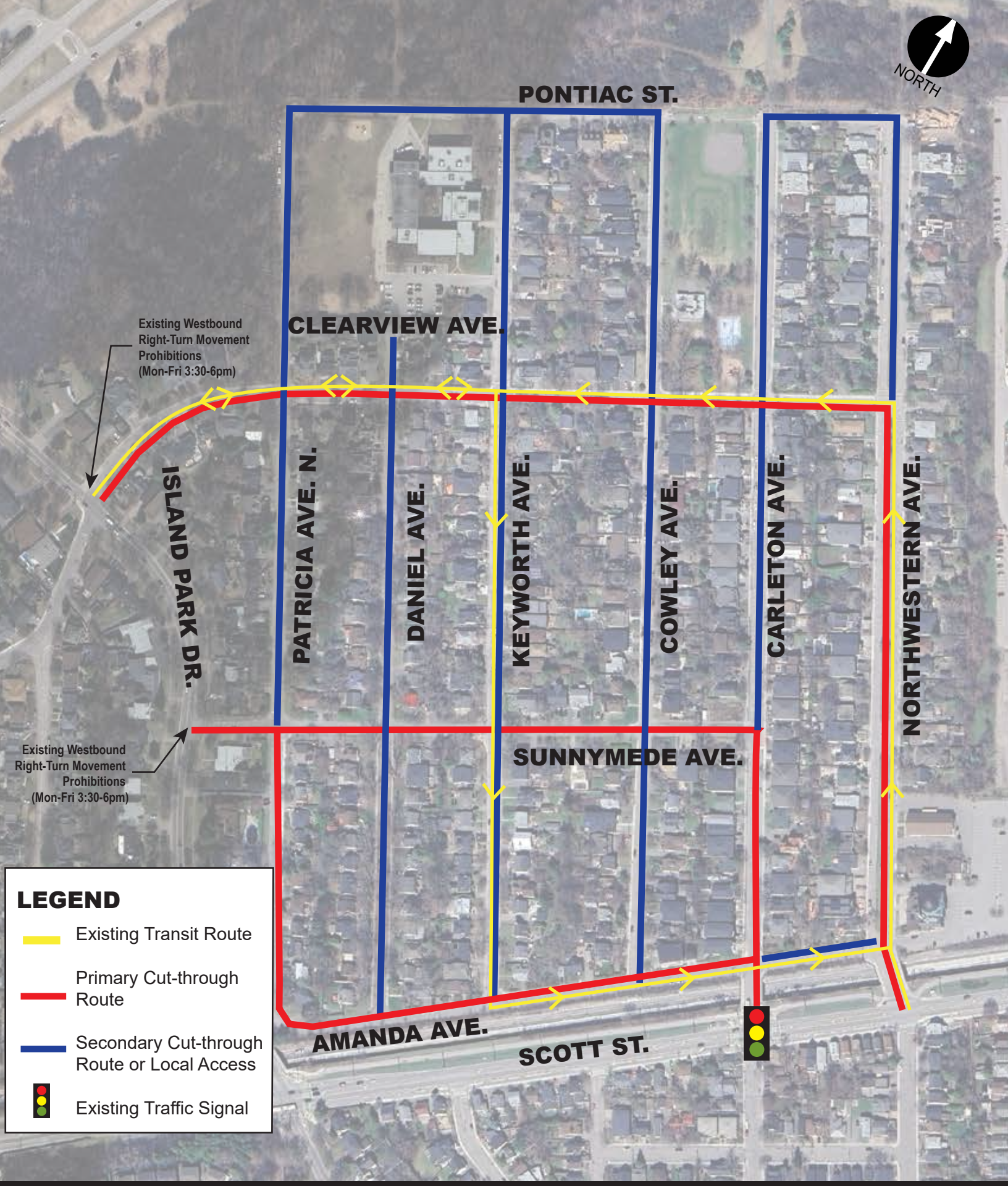
A proposed traffic calming solution was developed with input from community members to introduce vehicle directional measures or 'friction' on primary cut-through, as outlined below:

- Replace existing 'flexible stakes' and hatched paint (seasonal traffic calming measures) with more permanent measures in the form of speed cushions on transit routes to create vertical 'friction' for passenger cars, without impeding local bus service travel times within the Champlain Park community;
- Introduce vehicle directional measures on key cut-through routes within the community on streets that continue to accommodate existing OC Transpo routes, including Clearview Avenue, Amanda Avenue and Keyworth Avenue, as well as permitting cyclists and pedestrian to travel in both directions; and
- More widespread and regularly-spaced use of speed humps about every 50 to 60 metres, as well as intersection and mid-block bulb-outs within the City-owned street network in Champlain Park, in accordance with the Local Residential Streets Traffic Calming Toolbox (2021).

The proposed traffic calming solutions outlined above leverage a full spectrum of measures which would complement the existing traffic calming infrastructure within the Champlain Park community and offer varying degrees of effectiveness and cost structures. In the event that more intrusive traffic calming solutions outlined above, including vehicle directional measures are not implemented, the remaining solutions would still offer improvements with respect to traffic calming measures across the neighbourhood over existing conditions.

The proposed measures would allow existing OC Transpo bus service routes to be maintained through the Champlain Park community and continue to promote bi-directional travel on all streets by active users.

The potential traffic calming solution developed for Champlain Park is illustrated in **Exhibit 9** below.



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Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 8 – Existing Primary and Secondary Cut-through Routes (Champlain Park)

PROJECT No. 139833

SCALE: 0m 15m

PONTIAC ST.

CLEARVIEW AVE.

PATRICIA AVE. N.

DANIEL AVE.

KEYWORTH AVE.

COWLEY AVE.

CARLETON AVE.

NORTHWESTERN AVE.

ISLAND PARK DR.

SUNNYMEDE AVE.

AMANDA AVE.

SCOTT ST.

NORTH

LEGEND

- Existing or Planned Speed Hump
- Potential Speed Hump
- Potential Speed Cushion
- Existing or Planned Bulb-out
- Potential Bulb-out
- Potential Changes to Vehicle Direction Flow
- Potential Contra-Flow Bike Lane
- Existing 'Flexible Post' (seasonal)
- Existing Traffic Signal

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Tunney's Pasture Site Servicing and Public Road Redevelopment

Exhibit 9 – Potential Traffic Calming Plan (Champlain Park)

PROJECT No.

SCALE: 0m 15m

Monitoring

Monitoring will take place at reoccurring intervals to determine the effectiveness of any traffic calming measures implemented by the City within adjacent neighbourhoods, as recommended by this Neighbourhood Traffic Calming (NTC) Strategy, to determine if these measures achieve the intended results.

Cut-through traffic generated by the proposed development will be tracked through regular traffic data collection at key study area intersections. If necessary, adjustments to the strategy will be made based on data analysis to ensure its continued effectiveness in addressing traffic infiltration concerns.

It is important to recognize that traffic calming solutions proposed within adjacent neighbourhoods are not intended to resolve existing cut-through traffic issues, but rather to ensure that the Tunney's Pasture redevelopment does not exacerbate these existing issues.

Further details are provided in the Monitoring Plan which is included in **Appendix M** of the Tunney's Pasture & Public Road Redevelopment Transportation Impact Assessment (Arcadis, March 2026).

The monitoring program will focus on evaluating potential cut-through traffic exacerbation as a consequence of the subject development for key intersections directly bordering the site where there is evidence of thru traffic or where changes in intersection control could potentially result in increased traffic within adjacent neighbourhoods. The locations that will be monitored through the reoccurring collection of traffic count data are as follows:

- Parkdale & Burnside
  - Southbound left-turn & Westbound right-turn
- Scott & Goldenrod/Smirle
  - All movements to/from Smirle Avenue
- Scott & Sir Frederick Banting/Ross
  - All movements to/from Ross Avenue*

**It is expected that some of these movements will be restricted as a result of the 'protected intersection' configuration and modal filter proposed on the south leg of the intersection.*

More detailed investigations, such as license plate surveys, may be required at any of the above noted locations if significant increases sidestreet activity are identified through a comparison of baseline traffic data collected at reoccurring intervals within the build-out timeframe of the subject site to verify whether these increases are in fact attributable to site-generated traffic. Generally in keeping with the Neighbourhood Traffic Calming component of the 2023 TIA Guideline Update, 'significant infiltration' will be generally defined as increases in sidestreet traffic of 50% or more relative to baseline conditions.

Traffic associated with the build-out of adjacent developments of significance will be determined with reference to site-generated traffic volumes projections from their respective TIAs so that these increases are not misinterpreted as cut-through traffic impacts.

Any recommended mitigation measures to address increases in cut-through traffic directly associated with the site will be limited to the boundary street segments or intersections directly bordering Tunney's Pasture and will not include the implementation of any additional traffic calming measures within adjacent neighbourhoods which are outside the scope of this Draft Plan of Subdivision application.

In general, nominal increases in thru traffic in the order of 10-20 vehicles per hour may warrant consideration of prohibitive signage or lower-cost seasonal traffic calming measures. More substantial increases in hourly thru traffic on any of the identified 'primary routes' may result in the need to investigate more robust and permanent physical measures and will be determined on a case-by-case basis.

Conclusion

The Neighborhood Traffic Calming (NTC) Strategy for the Tunney's Pasture redevelopment provides potential solutions for mitigating cut-through traffic concerns in Mechanicsville, Hintonburg, Wellington Village and Champlain Park to complement measures being proposed within and on the periphery of the subject site, while promoting safer and more sustainable transportation options. Although the purpose of this strategy is not to resolve pre-existing traffic issues, its focus is instead on preventing the redevelopment of the subject site from exacerbating these patterns within adjacent neighborhoods. Through a combination of physical infrastructure modifications, regulatory changes, and active transportation enhancements, the strategy aims to preserve the integrity of local neighborhoods, while supporting the city's broader transportation goals. A robust monitoring plan and continued community engagement will support its success over the duration of the phased redevelopment process.

The proposed solutions and mitigation strategies investigated in the Neighbourhood Traffic Calming (NTC) Strategy will serve to limit the amount of cut-through traffic through a range of measures with varying degrees of intensity to suit the context, including high-friction, traffic-calmed streets and turning movement restrictions at the site's boundary street intersections. It is also noteworthy that in the near-term (Phase 1), the introduction of residential land uses within Tunney's Pasture will generate traffic opposite the existing peak flow of traffic which is less likely to utilize neighbourhood shortcuts and just 80 additional peak hour vehicular trips dispersed across the broader transportation network relative to pre-COVID-19 pandemic traffic levels. At full build-out, the site will ultimately generate far fewer automobile trips in comparison with pre-pandemic volumes, thereby significantly reducing opportunities for cut-through traffic.

Monitoring of key intersections along the site's boundary streets, including Parkdale & Burnside, Scott & Sir Frederick Banting/Ross and Scott & Goldenrod/Smirle, at reoccurring 5-year intervals will help to determine whether the off-site road modifications proposed through the Roadway Modification Application (RMA) drawings (see Appendix O of the TIA) are sufficient to mitigate any cut-through traffic impacts or whether more robust measures are required.

Prepared By:

Ben Pascolo-Neveu, P.Eng.
Transportation Engineer

Appendix A

Existing Traffic Volumes

NORTH

Island Park Drive
Kichi Zibi Mikan
Remic Rapids
Parkdale Avenue
IC
Remic Rapids Access
Tunney's Pasture
Goldenrod Driveway
Emmerson Avenue
Colombine Driveway
Slidell Street
Burnside Avenue
Lyndale Avenue
Carruthers Avenue
Bayview Station Road
Sir Frederick Banting Driveway
Ross Avenue
Goldenrod Driveway
Smirle Avenue
Holland Avenue
Spencer Street
Scott Street
Albert Street

1,017 (509)

Peak direction volumes on Island Park Drive are shown to slightly exceed 800-1,000 vehicles per Weekday AM Peak Hour and therefore have an increased likelihood of contributing to cut-through traffic within Champlain Park.

567 (254)
114 (738)

Peak direction volumes on Parkdale Avenue of 738 vehicles per hour are approaching 800-1,000 vehicles per weekday AM peak hour and therefore may contribute to cut-through traffic within Mechanicsville.

Left- and right-turning volumes at the Parkdale & Emmerson intersection are nominal (No evidence of cut-through traffic).

Peak Direction Volumes of Similar Magnitude through Mechanicsville during Weekday Peak Hours Provide Evidence of Cut-Through Traffic Pattern
Action: Monitor this intersection for evidence of future cut-through traffic.

Nominal Southbound left-turn and westbound left-turn traffic volumes during both Weekday Peak Hours (No Indication of Cut-Through Traffic)

Nominal Southbound Thru volumes during both Weekday Peak Hours (No Indication of Cut-Through Traffic)

Legend

- Traffic Signal
- Stop Sign
- IC — Interchange
- Roundabout
- xxx (xxx) — Weekday AM (PM) Peak Hour Volume
- xxx (xxx) — Pedestrian Volume
- xxx (xxx) — Cyclist Volume
- Permitted Movements
- xxx (xxx) — Vehicular Volume

Notes:
*Eastbound left-turn, northbound through and southbound through movements are prohibited at Scott & Sir Frederick Banting/Ross intersection. North leg of Scott & Goldenrod intersection presently serves as a transit-only link and it is understood that this location will continue to serve as such in the future.

Peak direction volumes on Island Park Drive fall just below 800-1,000 vehicles per Weekday AM Peak Hour and therefore may contribute to cut-through traffic within Champlain Park.

789 (467)

365 (370)
284 (386)

Peak direction volumes on Parkdale Avenue south of Scott Street range from about 300-400 vehicles per hour. Closely-spaced intersections with high pedestrian crossing volumes and numerous driveways result in a low throughput along this corridor which may contribute to cut-through traffic within Hintonburg, despite being well below 800-1,000 vehicles per hour.

Traffic volumes to/from Ross Avenue are currently nominal and do not provide any indication of existing cut-through issues, but will be monitored for potential increases in the future as result of its direct vehicular connection to the site and proposed signalization.
Action: Monitor this intersection for evidence of future cut-through traffic.

Some potential evidence of traffic calming during both weekday peak hours, as volumes are generally higher than would be anticipated for traffic generation by existing residential uses on Smirle Avenue
Action: Monitor this intersection for evidence of future cut-through traffic.

Legend

- (179) — Nominal volumes and no evidence of existing cut-through traffic patterns under Existing conditions
- Yellow Highlight - Existing cut-through evidence (Weekday AM Peak Hour)
- 179 (280) — Orange Highlight - Existing cut-through evidence (Weekday PM Peak Hour)

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Tunney's Pasture Site Servicing & Public Road Redevelopment Neighbourhood Traffic Calming Strategy

Appendix A
Existing Traffic Volume Evaluation of Cut-through Traffic Patterns

PROJECT No. 139833

SCALE: N.T.S.

Appendix L – 2018 Community Transportation Study Extracts

with the 57% balance of travel occurring in a private auto (47% driver and 10% passenger). The corresponding number of person trips is estimated in approximately 4,300 during each peak hour.

Table 1: Trip Generation Summary - Existing Land Use

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Existing Auto Trips (from observed ground counts)	1,495	570	2,065	542	1,473	2,015
Existing Person Trips (derived from ground counts)	3,181	1,213	4,394	1,153	3,134	4,287

By way of comparison, the number of auto trips reflecting the existing land use at Tunney's Pasture was also estimated using rates obtained from the 9th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. The ITE Manual is considered the industry-wide standard in North America for estimating site vehicular traffic for proposed development. As shown in Table 2, the estimated number of vehicle trips to/from the existing Tunney's Pasture site based on ITE rates is approximately 50% greater than the number actually observed for the site using ground counts (2,000 vs 3,000 veh/h). The discrepancy could be explained by different non-auto modal share characteristics, and/or could be an indication that the ITE trip generation rates for the General Office land use are not truly reflective of the subject Tunney's Pasture site. In short, the ITE rates are considered to be conservative in nature (i.e., over-estimate projected vehicle traffic).

Table 2: Vehicle Trip Generation Summary - Existing Land Use

	AM Peak (veh/h)			PM Peak (veh/h)		
	In	Out	Total	In	Out	Total
Existing Auto Trips (from observed ground counts)	1,495	570	2,065	542	1,473	2,015
Existing Auto Trips (estimated from ITE rates)	2,724	383	3,107	503	2,474	2,977

As ITE trip generation surveys often record vehicle trips and typically reflect highly suburban locations (with little to no access by travel modes other than private automobiles), adjustment factors appropriate to the more connected suburban study area context were applied to attain estimates of person trips. To convert ITE vehicle trip rates to person trips, an auto occupancy factor and a non-auto trip factor were applied to the ITE vehicle trip rates. Our review of available literature suggests that a combined factor of approximately 1.3 is considered reasonable to account for typical North American auto occupancy values of approximately 1.15 and combined transit and non-motorized modal shares of less than 10%. As such, the person trip generation for the existing site land use is summarized in Table 3.

Table 3: Person Trip Generation Summary - Existing Land Use

	AM Peak (persons/h)			PM Peak (persons/h)		
	In	Out	Total	In	Out	Total
Existing Person Trips (derived from ground counts)	3,181	1,213	4,394	1,153	3,134	4,287
Existing Person Trips (derived from ITE rates)	4,311	610	4,921	885	4,374	5,259

Comparing the existing person trips summarized in Table 3, the derivation based on the assumptions within the ITE Trip Generation Manual is considered slightly more aggressive (approximately 10% to 20% more trips) with respect to trip generation than what exists today for Tunney's Pasture based on ground counts. The ensuing analyses of the proposed land use will be based on the more conservative ITE trip generation rates.

Appendix M – Traffic Signal Warrants

Traffic Signal Warrants

OTM BOOK 12* - TRAFFIC SIGNAL WARRANT

Project: Public Rd Redevelopment Tunney's Pasture **Date:** March 02, 2026

Project #: 139833

Location: Parkdale *(Major Roadway)* at Colombine *(Minor Roadway)*

Orientation: North/South East/West

Municipality: Ontario **Scenario:** Future Total 2038

Justification 1 - Minimum Vehicle Volume

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, all approaches	480	720	480	**720**	1524 100%	762 100%	762 100%	762 100%	1821 100%	911 100%	911 100%	911 100%	100%
B. Vehicle volume along minor roads	120	170	180	**255**	124 49%	62 24%	62 24%	62 24%	358 100%	179 70%	179 70%	179 70%	54%

Justification 2 - Delay to Cross Traffic

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, along artery	480	720	480	**720**	1400 100%	700 97%	700 97%	700 97%	1463 100%	732 100%	732 100%	732 100%	99%
B. Combined vehicle and pedestrian volume crossing artery from minor roads	50	70	50	**70**	134 100%	35 49%	35 49%	35 49%	239 100%	120 100%	120 100%	120 100%	81%

Justification 3 - Volume/Delay Combination

JUSTIFICATION	SATISFIED TO 80% OR MORE?	BOTH SATISFIED TO 80% OR MORE?
Justification 1 - Minimum Vehicular Volume	NO	NO
Justification 2 - Delay to Cross Traffic	YES	

Justification 7 - Projected Volumes

WARRANT	DESCRIPTION	MINIMUM REQUIREMENT				COMPLIANCE		
		FREE FLOW	RESTRICTED FLOW	ADJUSTED FREE FLOW	ADJUSTED RESTRICTED FLOW	SECTIONAL AHV	SECTIONAL %	ENTIRE %
1. MINIMUM VEHICULAR VOLUME	A. Vehicle volumes, all approaches (Average Hour)	480	720	576	**864**	1171	100%	55%
	B. Vehicle volume along minor roads (Average Hour)	120	170	216	**306**	169	55%	
2. DELAY TO CROSS TRAFFIC	A. Vehicle volumes, along artery (Average Hour)	480	720	576	**864**	1002	100%	100%
	B. Combined vehicle and pedestrian volume crossing artery from minor roads (Average Hour)	50	75	60	**90**	106	100%	

Projected Traffic Volumes:

Average Hourly Volume (AHV) Equation: AHV = (amPHV + pmPHV)/4

AM Peak Hour Volumes

			↖	↑	0
98	878	0	←		0
↙	↓	↘	↙		0
	62	↗	↖	↑	↗
	0	→	130	294	0
	62	↘			

PM Peak Hour Volumes

			↖	↑	0
87	529	0	←		0
↙	↓	↘	↙		0
	223	↗	↖	↑	↗
	0	→	102	745	0
	135	↘			

Average Hourly Volumes (AHV)

			↖	↑	0
65	492	0	←		0
↙	↓	↘	↙		0
	100	↗	↖	↑	↗
	0	→	81	364	0
	69	↘			

Eight Hour Traffic Volumes:**

Hour	Major Road						Minor Road						Ped*
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	
7:00 AM	130	294	0	0	878	98	62	0	62	0	0	0	7
8:00 AM	65	147	0	0	439	49	31	0	31	0	0	0	4
9:00 AM	65	147	0	0	439	49	31	0	31	0	0	0	4
10:00 AM	65	147	0	0	439	49	31	0	31	0	0	0	4
3:00 PM	102	745	0	0	529	87	223	0	135	0	0	0	16
4:00 PM	51	373	0	0	265	44	112	0	68	0	0	0	8
5:00 PM	51	373	0	0	265	44	112	0	68	0	0	0	8
6:00 PM	51	373	0	0	265	44	112	0	68	0	0	0	8

** Number of pedestrians crossing the major road*
*** These are projected 8-hour traffic volumes.*

Notes:

1. Vehicle volume warrant (1A) and (2A) for intersections of roadways having two or more moving lanes in one direction should be 25% higher than the values given above.

1 Lane per Direction

2. Warrant values for free flow apply when the 85th percentile speed of artery traffic equals or exceeds 70 km/h or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000. Warrant values for restricted flow apply to large urban communities when the 85th percentile speed of artery traffic does not exceed 70 km/h.

Restricted Flow

3. The lowest sectional percentage governs the entire warrant.

4. For "T" intersections the warrant values for the minor road should be increased by 50% (Warrant 1B only).

3-legged Intersection

5. All flow values for Justification 1 and 2 are to be increased by 20% in the case of new intersections, Justification 3 is to only be used for existing intersections and all flow values for Warrant 1 and Warrant 2 of Justification 7 are to be increased by 20% for existing intersections and by 50% in the case of new intersections.

Existing Intersection

6. The crossing volumes are defined as the sum of:
   (a) Left-turns from both minor road approaches.
   (b) The heaviest through volume from the minor road.
   (c) 50% of the heavier left turn movement from major road when both of the following are met:
      (i) the left-turn volume >120 vph
      (ii) the left-turn volume plus the opposing volume >720 vph
   (d) Pedestrians crossing the main road.

CONCLUSION: Based on Justification 7, the intersection meets the minimum warrants for traffic control signals.

* "Ontario Traffic Manual, Book 12 (March 2012)", Ontario Ministry of Transportation.

OTM BOOK 12* - TRAFFIC SIGNAL WARRANT

Project: Tunney's Pasture **Date:** March 02, 2026

Project #: 139833

Location: Parkdale *(Major Roadway)* at Colombine *(Minor Roadway)*

Orientation: East/West North/South

Municipality: City of Ottawa **Scenario:** Future (2038) Total Traffic

Justification 1 - Minimum Vehicle Volume

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, all approaches	480	720	480	**720**	1142 100%	571 79%	571 79%	571 79%	1756 100%	878 100%	878 100%	878 100%	92%
B. Vehicle volume along minor roads	120	170	120	**170**	141 83%	71 41%	71 41%	71 41%	351 100%	176 100%	176 100%	176 100%	76%

Justification 2 - Delay to Cross Traffic

WARRANT	MINIMUM REQUIREMENT				COMPLIANCE								SECTIONAL PERCENT
	FREE FLOW	RESTR. FLOW	ADJUST. FREE FLOW	ADJUST. RESTR. FLOW	7:00 AM	8:00 AM	9:00 AM	10:00 AM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	
A. Vehicle volumes, along artery	480	720	480	**720**	1001 100%	501 70%	501 70%	501 70%	1405 100%	703 98%	703 98%	703 98%	88%
B. Combined vehicle and pedestrian volume crossing artery from minor roads	50	70	50	**70**	268 100%	134 100%	134 100%	134 100%	372 100%	186 100%	186 100%	186 100%	100%

Justification 3 - Volume/Delay Combination

JUSTIFICATION	SATISFIED TO 80% OR MORE?	BOTH SATISFIED TO 80% OR MORE?
Justification 1 - Minimum Vehicular Volume	NO	NO
Justification 2 - Delay to Cross Traffic	YES	

Justification 7 - Projected Volumes

WARRANT	DESCRIPTION	MINIMUM REQUIREMENT				COMPLIANCE		
		FREE FLOW	RESTRICTED FLOW	ADJUSTED FREE FLOW	ADJUSTED RESTRICTED FLOW	SECTIONAL AHV	SECTIONAL %	ENTIRE %
1. MINIMUM VEHICULAR VOLUME	A. Vehicle volumes, all approaches (Average Hour)	480	720	576	**864**	708	82%	47%
	B. Vehicle volume along minor roads (Average Hour)	120	170	144	**204**	96	47%	
2. DELAY TO CROSS TRAFFIC	A. Vehicle volumes, along artery (Average Hour)	480	720	576	**864**	612	71%	54%
	B. Combined vehicle and pedestrian volume crossing artery from minor roads (Average Hour)	50	75	60	**90**	49	54%	

Projected Traffic Volumes:

Average Hourly Volume (AHV) Equation: AHV = (amPHV + pmPHV)/4

AM Peak Hour Volumes

			↖	↑	151
48	0	48	←		262
↙	↓	↘	↙		0
	133	↗	↖	↑	↗
	480	→	1	0	12
	0	↘			

PM Peak Hour Volumes

			↖	↑	113
128	0	127	←		565
↙	↓	↘	↙		0
	91	↗	↖	↑	↗
	652	→	4	0	13
	0	↘			

Average Hourly Volumes (AHV)

			↖	↑	66
44	0	44	←		207
↙	↓	↘	↙		0
	56	↗	↖	↑	↗
	283	→	1	0	6
	0	↘			

Eight Hour Traffic Volumes:**

Hour	Major Road						Minor Road						Ped*
	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
7:00 AM	128	480	5	4	246	138	1	0	12	67	0	61	200
8:00 AM	64	240	3	2	123	69	1	0	6	34	0	31	100
9:00 AM	64	240	3	2	123	69	1	0	6	34	0	31	100
10:00 AM	64	240	3	2	123	69	1	0	6	34	0	31	100
3:00 PM	81	652	10	5	555	102	4	0	13	168	0	166	200
4:00 PM	41	326	5	3	278	51	2	0	7	84	0	83	100
5:00 PM	41	326	5	3	278	51	2	0	7	84	0	83	100
6:00 PM	41	326	5	3	278	51	2	0	7	84	0	83	100

** Number of pedestrians crossing the major road*
*** These are projected 8-hour traffic volumes.*

Notes:

1. Vehicle volume warrant (1A) and (2A) for intersections of roadways having two or more moving lanes in one direction should be 25% higher than the values given above.

1 Lane per Direction

2. Warrant values for free flow apply when the 85th percentile speed of artery traffic equals or exceeds 70 km/h or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000. Warrant values for restricted flow apply to large urban communities when the 85th percentile speed of artery traffic does not exceed 70 km/h.

Restricted Flow

3. The lowest sectional percentage governs the entire warrant.

4. For "T" intersections the warrant values for the minor road should be increased by 50% (Warrant 1B only).

4-legged Intersection

5. All flow values for Justification 1 and 2 are to be increased by 20% in the case of new intersections, Justification 3 is to only be used for existing intersections and all flow values for Warrant 1 and Warrant 2 of Justification 7 are to be increased by 20% for existing intersections and by 50% in the case of new intersections.

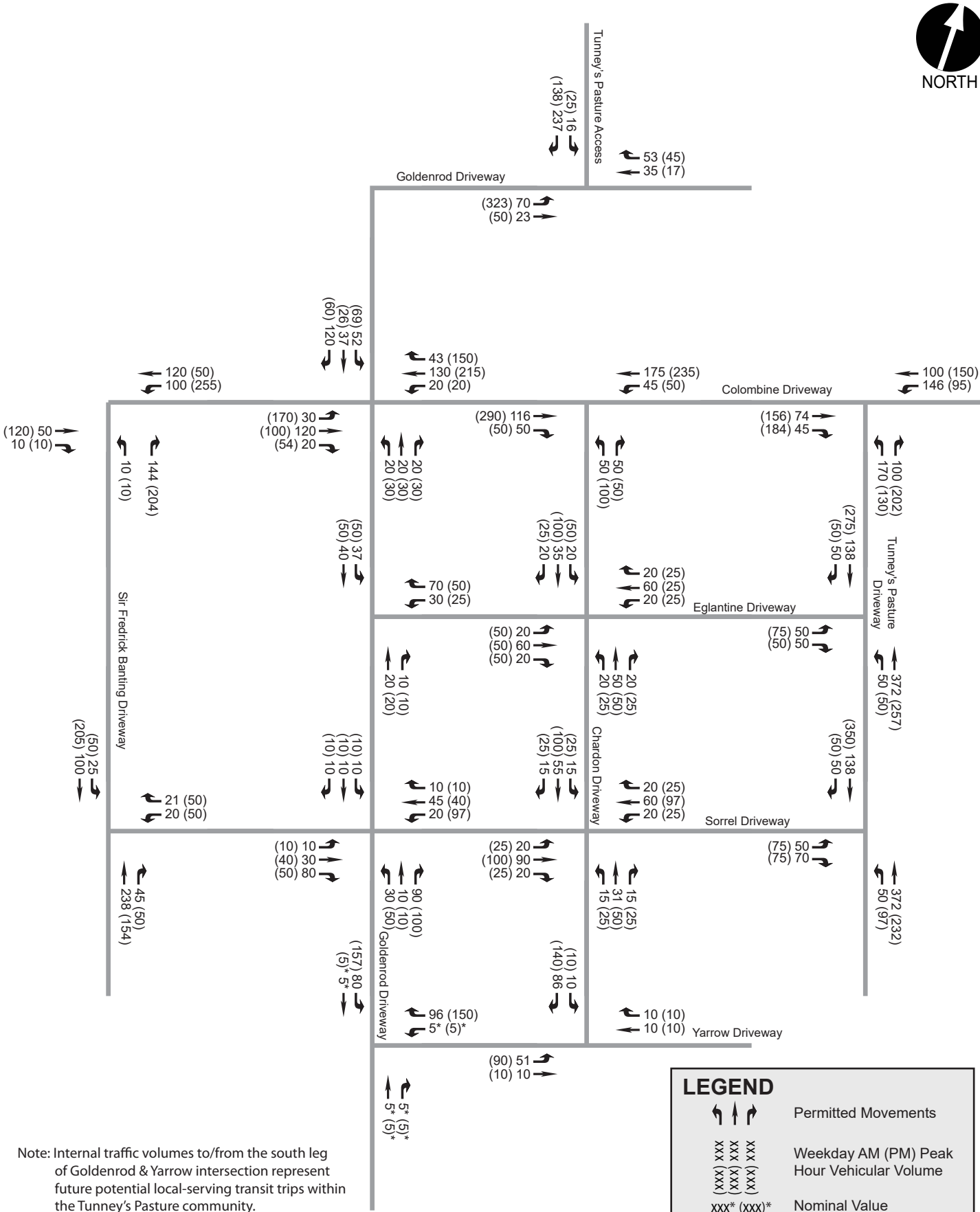
Existing Intersection

6. The crossing volumes are defined as the sum of:
   (a) Left-turns from both minor road approaches.
   (b) The heaviest through volume from the minor road.
   (c) 50% of the heavier left turn movement from major road when both of the following are met:
      (i) the left-turn volume >120 vph
      (ii) the left-turn volume plus the opposing volume >720 vph
   (d) Pedestrians crossing the main road.

CONCLUSION: The intersection does NOT meet the minimum warrants for traffic control signals.

* "Ontario Traffic Manual, Book 12 (March 2012)", Ontario Ministry of Transportation.

All-Way Stop Control Warrants



Note: Internal traffic volumes to/from the south leg of Goldenrod & Yarrow intersection represent future potential local-serving transit trips within the Tunney's Pasture community.

LEGEND

- Permitted Movements
- xxx (xxx) — Weekday AM (PM) Peak Hour Vehicular Volume
- xxx* (xxx)* — Nominal Value

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Tunney's Pasture Redevelopment
Transportation Impact Assessment

Internal Traffic Volume Projections
Future (2038) Total Traffic

PROJECT No. 139833

SCALE: N.T.S.

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Eglantine & Tunney's Pasture
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	610	100	100	**200**	**710**
Hour 2	305	50	100	**150**	**355**
Hour 3	305	50	100	**150**	**355**
Hour 4	305	50	100	**150**	**355**
Hour 5	610	100	100	**200**	**710**
Hour 6	305	50	100	**150**	**355**
Hour 7	305	50	100	**150**	**355**
Hour 8	305	50	100	**150**	**355**
TOTAL	**3050**	**500**	**800**	**1300**	**3550**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**4**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	135
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 85 / 15.	0
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	14.5/25pts - 58%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

All-Way Stop Control NOT warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.
Does NOT qualify.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

Note: Even though the stopping sight distance is met, the Intersection Sight Distance (ISD) for vehicles turning left from sidestreet to the mainstreet is likely not achievable due to the proposed 6-metre median on Tunney's Pasture Driveway. As such, all-way stop control is warranted on this basis.

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Sorrel & Goldenrod
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	195	160	100	**260**	**355**
Hour 2	97.5	80	100	**180**	**177.5**
Hour 3	97.5	80	100	**180**	**177.5**
Hour 4	97.5	80	100	**180**	**177.5**
Hour 5	247	160	100	**260**	**407**
Hour 6	123.5	80	100	**180**	**203.5**
Hour 7	123.5	80	100	**180**	**203.5**
Hour 8	123.5	80	100	**180**	**203.5**
TOTAL	**1105**	**800**	**800**	**1600**	**1905**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**4**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	85
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 58 / 42.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	19.5/25pts - 78%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Yarrow & Chardon
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	**Major Road Volume**	**Minor Road Volume**	**Total Peds Crossing Major**	**Minor Volume + Peds**	**Total Vehicle Volume**
Hour 1	96	81	100	**181**	**177**
Hour 2	48	40.5	100	**140.5**	**88.5**
Hour 3	48	40.5	100	**140.5**	**88.5**
Hour 4	48	40.5	100	**140.5**	**88.5**
Hour 5	150	120	100	**220**	**270**
Hour 6	75	60	100	**160**	**135**
Hour 7	125	60	100	**160**	**185**
Hour 8	125	60	100	**160**	**185**
TOTAL	**715**	**502.5**	**800**	**1302.5**	**1217.5**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	**Total Peds Crossing Leg 1**	**Crossing Distance Leg 1 (m)**	**Vehicle Conflict Leg 2 (if applicable)**	**Total Peds Crossing Leg 2 (if applicable)**	**Crossing Distance Leg 2 (m) (if applicable)**
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	80
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 76% met.	3
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 58 / 42.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	17.5/25pts - 70%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Colombine & Sir Frederick Bantin
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	181	253	100	**353**	**434**
Hour 2	90.5	126.5	100	**226.5**	**217**
Hour 3	90.5	126.5	100	**226.5**	**217**
Hour 4	90.5	126.5	100	**226.5**	**217**
Hour 5	435	163	100	**263**	**598**
Hour 6	217.5	81.5	100	**181.5**	**299**
Hour 7	217.5	81.5	100	**181.5**	**299**
Hour 8	217.5	81.5	100	**181.5**	**299**
TOTAL	**1540**	**1040**	**800**	**1840**	**2580**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**100**
Distance, in metres, to Nearest form of Intersection Control	60
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 59 / 41.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	19.5/25pts - 78%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Tunney's Pasture & Goldenrod
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	414	170	100	**270**	**584**
Hour 2	207	85	100	**185**	**292**
Hour 3	207	85	100	**185**	**292**
Hour 4	207	85	100	**185**	**292**
Hour 5	629	170	100	**270**	**799**
Hour 6	314.5	85	100	**185**	**399.5**
Hour 7	314.5	85	100	**185**	**399.5**
Hour 8	314.5	85	100	**185**	**399.5**
TOTAL	**2607.5**	**850**	**800**	**1650**	**3457.5**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	150
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 75 / 25.	3
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	17.5/25pts - 70%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Colombine & Goldenrod
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	363	269	100	**369**	**632**
Hour 2	181.5	134.5	100	**234.5**	**316**
Hour 3	181.5	134.5	100	**234.5**	**316**
Hour 4	181.5	134.5	100	**234.5**	**316**
Hour 5	709	245	100	**345**	**954**
Hour 6	354.5	122.5	100	**222.5**	**477**
Hour 7	354.5	122.5	100	**222.5**	**477**
Hour 8	354.5	122.5	100	**222.5**	**477**
TOTAL	**2680**	**1285**	**800**	**2085**	**3965**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**4**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	80
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 67 / 33.	3
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	17.5/25pts - 70%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Colombine & Chardon
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	386	100	100	**200**	**486**
Hour 2	193	50	100	**150**	**243**
Hour 3	193	50	100	**150**	**243**
Hour 4	193	50	100	**150**	**243**
Hour 5	625	150	100	**250**	**775**
Hour 6	312.5	75	100	**175**	**387.5**
Hour 7	312.5	75	100	**175**	**387.5**
Hour 8	312.5	75	100	**175**	**387.5**
TOTAL	**2527.5**	**625**	**800**	**1425**	**3152.5**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	80
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 80 / 20.	2
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	16.5/25pts - 66%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

All-Way Stop Control NOT warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.
Does NOT qualify.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Colombine & TP
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	365	270	100	**370**	**635**
Hour 2	182.5	135	100	**235**	**317.5**
Hour 3	182.5	135	100	**235**	**317.5**
Hour 4	182.5	135	100	**235**	**317.5**
Hour 5	585	332	100	**432**	**917**
Hour 6	292.5	166	100	**266**	**458.5**
Hour 7	292.5	166	100	**266**	**458.5**
Hour 8	292.5	166	100	**266**	**458.5**
TOTAL	**2375**	**1505**	**800**	**2305**	**3880**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	180
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 61 / 39.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	19.5/25pts - 78%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Eglantine & Goldenrod
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	107	100	100	**200**	**207**
Hour 2	53.5	50	100	**150**	**103.5**
Hour 3	53.5	50	100	**150**	**103.5**
Hour 4	53.5	50	100	**150**	**103.5**
Hour 5	130	75	100	**175**	**205**
Hour 6	100	37.5	100	**137.5**	**137.5**
Hour 7	100	37.5	100	**137.5**	**137.5**
Hour 8	100	37.5	100	**137.5**	**137.5**
TOTAL	**697.5**	**437.5**	**800**	**1237.5**	**1135**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	80
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 70% met.	2
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 61 / 39.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	16.5/25pts - 66%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

All-Way Stop Control NOT warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.
Does NOT qualify.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Englantine & Chardon
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	**Major Road Volume**	**Minor Road Volume**	**Total Peds Crossing Major**	**Minor Volume + Peds**	**Total Vehicle Volume**
Hour 1	200	165	100	**265**	**365**
Hour 2	100	82.5	100	**182.5**	**182.5**
Hour 3	100	82.5	100	**182.5**	**182.5**
Hour 4	100	82.5	100	**182.5**	**182.5**
Hour 5	225	100	100	**200**	**325**
Hour 6	112.5	50	100	**150**	**162.5**
Hour 7	112.5	50	100	**150**	**162.5**
Hour 8	112.5	50	100	**150**	**162.5**
TOTAL	**1062.5**	**662.5**	**800**	**1462.5**	**1725**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	**Total Peds Crossing Leg 1**	**Crossing Distance Leg 1 (m)**	**Vehicle Conflict Leg 2 (if applicable)**	**Total Peds Crossing Leg 2 (if applicable)**	**Crossing Distance Leg 2 (m) (if applicable)**
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**4**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	80
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 61 / 39.	4
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	18.5/25pts - 74%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Sorrel & Sir Frederick Banting
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	408	41	100	**141**	**449**
Hour 2	204	56	100	**156**	**260**
Hour 3	204	56	100	**156**	**260**
Hour 4	204	56	100	**156**	**260**
Hour 5	459	100	100	**200**	**559**
Hour 6	229.5	50	100	**150**	**279.5**
Hour 7	229.5	50	100	**150**	**279.5**
Hour 8	229.5	50	100	**150**	**279.5**
TOTAL	**2167.5**	**459**	**800**	**1259**	**2626.5**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	140
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 82 / 18.	2
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	16.5/25pts - 66%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Results

All-Way Stop Control NOT warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.
Does NOT qualify.

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Sorrel & Chardon
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	**Major Road Volume**	**Minor Road Volume**	**Total Peds Crossing Major**	**Minor Volume + Peds**	**Total Vehicle Volume**
Hour 1	230	146	100	**246**	**376**
Hour 2	110	73	100	**173**	**183**
Hour 3	110	78	100	**178**	**188**
Hour 4	110	78	100	**178**	**188**
Hour 5	297	250	100	**350**	**547**
Hour 6	149	125	100	**225**	**274**
Hour 7	149	125	100	**225**	**274**
Hour 8	149	125	100	**225**	**274**
TOTAL	**1304**	**1000**	**800**	**1800**	**2304**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	**Total Peds Crossing Leg 1**	**Crossing Distance Leg 1 (m)**	**Vehicle Conflict Leg 2 (if applicable)**	**Total Peds Crossing Leg 2 (if applicable)**	**Crossing Distance Leg 2 (m) (if applicable)**
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**4**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	85
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 56 / 44.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	19.5/25pts - 78%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Sorrel & Tunney's Pasture
Date of Review: 25-Jun-25

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	610	120	100	**220**	**730**
Hour 2	305	110	100	**210**	**415**
Hour 3	305	110	100	**210**	**415**
Hour 4	305	110	100	**210**	**415**
Hour 5	729	150	100	**250**	**879**
Hour 6	364.5	75	100	**175**	**439.5**
Hour 7	364.5	75	100	**175**	**439.5**
Hour 8	364.5	75	100	**175**	**439.5**
TOTAL	**3347.5**	**825**	**800**	**1625**	**4172.5**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	135
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 100% met.	5
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 80 / 20.	2
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	16.5/25pts - 66%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Results

All-Way Stop Control NOT warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.
Does NOT qualify.

Visibility

Stopping Sight distance	
Operating Speed (km/h)	40
Date of speed survey	
Posted Speed Limit (km/h)	40
Required stopping sight distance of 60m met?	y

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

Note: Even though the stopping sight distance is met, the Intersection Sight Distance (ISD) for vehicles turning left from sidestreet to the mainstreet is likely not achievable due to the proposed 6-metre median on Tunney's Pasture Driveway. As such, all-way stop control is warranted on this basis.

All-Way Stop Control Warrant (Local Residential/Collector Roadway)

For all local/collector, collector/collector in rural/urban areas, local/local near high pedestrian generator

Intersection: Yarrow & Goldenrod
Date of Review: 27-Feb-26

Date of Sightline Check: N/A
Date of Traffic Count: Future (2038) TT

TSM #:

Volume Data

Overall Volume					
Hour	Major Road Volume	Minor Road Volume	Total Peds Crossing Major	Minor Volume + Peds	Total Vehicle Volume
Hour 1	120	101	100	**201**	**221**
Hour 2	60	50.5	100	**150.5**	**110.5**
Hour 3	60	50.5	100	**150.5**	**110.5**
Hour 4	60	50.5	100	**150.5**	**110.5**
Hour 5	165	155	100	**255**	**320**
Hour 6	82.5	77.5	100	**177.5**	**160**
Hour 7	82.5	77.5	100	**177.5**	**160**
Hour 8	82.5	77.5	100	**177.5**	**160**
TOTAL	**712.5**	**640**	**800**	**1440**	**1352.5**

Pedestrian Exposure

Total Conflicts on Roadway with no Control					
Vehicle Conflict Leg 1	Total Peds Crossing Leg 1	Crossing Distance Leg 1 (m)	Vehicle Conflict Leg 2 (if applicable)	Total Peds Crossing Leg 2 (if applicable)	Crossing Distance Leg 2 (m) (if applicable)
100	100	7	100	100	7
Pedestrian Exposure (Leg 1)			**Pedestrian Exposure (Leg 2)**		
0.084			**0.084**		

Intersection Data

3 or 4 Way Intersection?	**3**
Proximity, in metres, to Pedestrian Generator (0 if it's adjacent)	**50**
Distance, in metres, to Nearest form of Intersection Control	80
Syncro Analysis Required and Completed? (if distance < than 250m)	Yes
Were there any operational issues?	No

Weighted Criteria

Criteria	Points
Total Intersection Volume is 84% met.	4
Minor Road Volume + Peds Crossing Major is 100% me	5
Directional Split is 52 / 48.	5
Pedestrian Exposure	1
Proximity to Pedestrian Generator	3.5
TOTAL POINTS (Requires 17.5 out of 25 - 70%)	18.5/25pts - 74%

Does intersection have an average of 3 or more right-angle and/or turning movement type collisions per year during the past 3 year period?	
Year 1 Total	0
Year 2 Total	0
Year 3 Total	0

Visibility

Stopping Sight distance	
Operating Speed (km/h)	30
Date of speed survey	
Posted Speed Limit (km/h)	30
Required stopping sight distance of 35m met?	y

Results

PASS. All-Way Stop Control warranted based on weighted criteria.
All-Way Stop Control NOT warranted based on collision condition.
All-Way Stop Control NOT warranted based on sight distance condition.

PASS. Qualifies for All-Way Stop Control.

Volume Criteria:

-Total vehicle volume for all approaches is equal to or greater than an AVERAGE of 200 vehicles per hour over heaviest 8-hour period (between 7am and 6pm)

- Total minor street volume (including pedestrians crossing the major) is equal to or greater than 80 each hour over same 8-hr period

Directional Split:

- Four-Legged Intersection: 65/35
- Three-Legged Intersection: 75/25

Intersection Capacity Analysis

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	70	23	35	53	16	237
Future Vol, veh/h	70	23	35	53	16	237
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	70	23	35	53	16	237
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8.4	7.7	8.2
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	75%	0%	6%
Vol Thru, %	25%	40%	0%
Vol Right, %	0%	60%	94%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	93	88	253
LT Vol	70	0	16
Through Vol	23	35	0
RT Vol	0	53	237
Lane Flow Rate	93	88	253
Geometry Grp	1	1	1
Degree of Util (X)	0.122	0.103	0.267
Departure Headway (Hd)	4.71	4.196	3.802
Convergence, Y/N	Yes	Yes	Yes
Cap	765	856	949
Service Time	2.71	2.213	1.814
HCM Lane V/C Ratio	0.122	0.103	0.267
HCM Control Delay	8.4	7.7	8.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.3	1.1

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	10	100	120	10	144
Future Vol, veh/h	50	10	100	120	10	144
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	10	100	120	10	144
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.8	9	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	6%	0%	45%
Vol Thru, %	0%	83%	55%
Vol Right, %	94%	17%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	154	60	220
LT Vol	10	0	100
Through Vol	0	50	120
RT Vol	144	10	0
Lane Flow Rate	154	60	220
Geometry Grp	1	1	1
Degree of Util (X)	0.172	0.073	0.265
Departure Headway (Hd)	4.027	4.398	4.343
Convergence, Y/N	Yes	Yes	Yes
Cap	896	817	816
Service Time	2.03	2.413	2.431
HCM Lane V/C Ratio	0.172	0.073	0.27
HCM Control Delay	7.9	7.8	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.6	0.2	1.1

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	120	20	20	130	43	20	20	20	52	37	120
Future Vol, veh/h	30	120	20	20	130	43	20	20	20	52	37	120
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	120	20	20	130	43	20	20	20	52	37	120
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.2	9.3	8.4	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	18%	10%	25%
Vol Thru, %	33%	71%	67%	18%
Vol Right, %	33%	12%	22%	57%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	170	193	209
LT Vol	20	30	20	52
Through Vol	20	120	130	37
RT Vol	20	20	43	120
Lane Flow Rate	60	170	193	209
Geometry Grp	1	1	1	1
Degree of Util (X)	0.082	0.225	0.25	0.265
Departure Headway (Hd)	4.918	4.762	4.661	4.569
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	724	750	766	782
Service Time	2.982	2.815	2.712	2.619
HCM Lane V/C Ratio	0.083	0.227	0.252	0.267
HCM Control Delay	8.4	9.2	9.3	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.9	1	1.1

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	116	50	45	175	50	50
Future Vol, veh/h	116	50	45	175	50	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	50	45	175	50	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	9	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	50%	0%	20%
Vol Thru, %	0%	70%	80%
Vol Right, %	50%	30%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	100	166	220
LT Vol	50	0	45
Through Vol	0	116	175
RT Vol	50	50	0
Lane Flow Rate	100	166	220
Geometry Grp	1	1	1
Degree of Util (X)	0.127	0.195	0.268
Departure Headway (Hd)	4.578	4.224	4.383
Convergence, Y/N	Yes	Yes	Yes
Cap	784	852	821
Service Time	2.601	2.241	2.399
HCM Lane V/C Ratio	0.128	0.195	0.268
HCM Control Delay	8.3	8.3	9
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.7	1.1

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	74	45	146	100	170	100
Future Vol, veh/h	74	45	146	100	170	100
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	74	45	146	100	170	100
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.6	10.3	10.3
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	63%	0%	59%
Vol Thru, %	0%	62%	41%
Vol Right, %	37%	38%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	270	119	246
LT Vol	170	0	146
Through Vol	0	74	100
RT Vol	100	45	0
Lane Flow Rate	270	119	246
Geometry Grp	1	1	1
Degree of Util (X)	0.353	0.154	0.332
Departure Headway (Hd)	4.706	4.672	4.854
Convergence, Y/N	Yes	Yes	Yes
Cap	761	763	738
Service Time	2.751	2.728	2.902
HCM Lane V/C Ratio	0.355	0.156	0.333
HCM Control Delay	10.3	8.6	10.3
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.6	0.5	1.5

Intersection	
Intersection Delay, s/veh	7.4
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	70	20	10	37	40
Future Vol, veh/h	30	70	20	10	37	40
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	70	20	10	37	40
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.3	7.2	7.7
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	30%	48%
Vol Thru, %	67%	0%	52%
Vol Right, %	33%	70%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	100	77
LT Vol	0	30	37
Through Vol	20	0	40
RT Vol	10	70	0
Lane Flow Rate	30	100	77
Geometry Grp	1	1	1
Degree of Util (X)	0.033	0.104	0.09
Departure Headway (Hd)	3.968	3.758	4.229
Convergence, Y/N	Yes	Yes	Yes
Cap	896	946	845
Service Time	2.018	1.812	2.264
HCM Lane V/C Ratio	0.033	0.106	0.091
HCM Control Delay	7.2	7.3	7.7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.3	0.3

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	60	20	20	60	20	20	50	20	20	35	20
Future Vol, veh/h	20	60	20	20	60	20	20	50	20	20	35	20
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	60	20	20	60	20	20	50	20	20	35	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.9	7.9	7.9	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	20%	20%	27%
Vol Thru, %	56%	60%	60%	47%
Vol Right, %	22%	20%	20%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	100	100	75
LT Vol	20	20	20	20
Through Vol	50	60	60	35
RT Vol	20	20	20	20
Lane Flow Rate	90	100	100	75
Geometry Grp	1	1	1	1
Degree of Util (X)	0.109	0.12	0.12	0.091
Departure Headway (Hd)	4.377	4.336	4.336	4.377
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	821	829	829	821
Service Time	2.392	2.35	2.35	2.391
HCM Lane V/C Ratio	0.11	0.121	0.121	0.091
HCM Control Delay	7.9	7.9	7.9	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.4	0.4	0.3

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	50	50	372	138	50
Future Vol, veh/h	50	50	50	372	138	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	50	50	372	138	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9	12.1	8.9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	50%	0%
Vol Thru, %	88%	0%	73%
Vol Right, %	0%	50%	27%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	422	100	188
LT Vol	50	50	0
Through Vol	372	0	138
RT Vol	0	50	50
Lane Flow Rate	422	100	188
Geometry Grp	1	1	1
Degree of Util (X)	0.518	0.141	0.234
Departure Headway (Hd)	4.416	5.072	4.48
Convergence, Y/N	Yes	Yes	Yes
Cap	814	705	801
Service Time	2.445	3.118	2.514
HCM Lane V/C Ratio	0.518	0.142	0.235
HCM Control Delay	12.1	9	8.9
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3	0.5	0.9

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	21	238	45	25	100
Future Vol, veh/h	20	21	238	45	25	100
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	21	238	45	25	100
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.8	8.9	8.1
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	49%	20%
Vol Thru, %	84%	0%	80%
Vol Right, %	16%	51%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	283	41	125
LT Vol	0	20	25
Through Vol	238	0	100
RT Vol	45	21	0
Lane Flow Rate	283	41	125
Geometry Grp	1	1	1
Degree of Util (X)	0.315	0.052	0.148
Departure Headway (Hd)	4.004	4.595	4.259
Convergence, Y/N	Yes	Yes	Yes
Cap	889	784	830
Service Time	2.067	2.595	2.346
HCM Lane V/C Ratio	0.318	0.052	0.151
HCM Control Delay	8.9	7.8	8.1
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1.4	0.2	0.5

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	30	80	20	45	10	30	10	90	10	10	10
Future Vol, veh/h	10	30	80	20	45	10	30	10	90	10	10	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	30	80	20	45	10	30	10	90	10	10	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.6	7.8	7.7	7.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	23%	8%	27%	33%
Vol Thru, %	8%	25%	60%	33%
Vol Right, %	69%	67%	13%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	120	75	30
LT Vol	30	10	20	10
Through Vol	10	30	45	10
RT Vol	90	80	10	10
Lane Flow Rate	130	120	75	30
Geometry Grp	1	1	1	1
Degree of Util (X)	0.142	0.13	0.089	0.036
Departure Headway (Hd)	3.924	3.888	4.282	4.355
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	898	907	824	827
Service Time	2.018	1.976	2.372	2.355
HCM Lane V/C Ratio	0.145	0.132	0.091	0.036
HCM Control Delay	7.7	7.6	7.8	7.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.4	0.3	0.1

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	90	20	20	60	20	15	31	15	15	55	15
Future Vol, veh/h	20	90	20	20	60	20	15	31	15	15	55	15
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	90	20	20	60	20	15	31	15	15	55	15
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.1	7.9	7.8	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	15%	20%	18%
Vol Thru, %	51%	69%	60%	65%
Vol Right, %	25%	15%	20%	18%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	61	130	100	85
LT Vol	15	20	20	15
Through Vol	31	90	60	55
RT Vol	15	20	20	15
Lane Flow Rate	61	130	100	85
Geometry Grp	1	1	1	1
Degree of Util (X)	0.075	0.156	0.12	0.105
Departure Headway (Hd)	4.449	4.317	4.331	4.449
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	807	833	830	808
Service Time	2.465	2.33	2.344	2.464
HCM Lane V/C Ratio	0.076	0.156	0.12	0.105
HCM Control Delay	7.8	8.1	7.9	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.6	0.4	0.4

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	50	70	50	372	138	50
Future Vol, veh/h	50	70	50	372	138	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	70	50	372	138	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.1	12.3	9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	42%	0%
Vol Thru, %	88%	0%	73%
Vol Right, %	0%	58%	27%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	422	120	188
LT Vol	50	50	0
Through Vol	372	0	138
RT Vol	0	70	50
Lane Flow Rate	422	120	188
Geometry Grp	1	1	1
Degree of Util (X)	0.524	0.167	0.237
Departure Headway (Hd)	4.468	5.015	4.536
Convergence, Y/N	Yes	Yes	Yes
Cap	806	713	790
Service Time	2.502	3.066	2.576
HCM Lane V/C Ratio	0.524	0.168	0.238
HCM Control Delay	12.3	9.1	9
HCM Lane LOS	B	A	A
HCM 95th-tile Q	3.1	0.6	0.9

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	96	5	5	80	5
Future Vol, veh/h	5	96	5	5	80	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	96	5	5	80	5
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7	7	7.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	5%	94%
Vol Thru, %	50%	0%	6%
Vol Right, %	50%	95%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	101	85
LT Vol	0	5	80
Through Vol	5	0	5
RT Vol	5	96	0
Lane Flow Rate	10	101	85
Geometry Grp	1	1	1
Degree of Util (X)	0.011	0.099	0.102
Departure Headway (Hd)	3.877	3.538	4.308
Convergence, Y/N	Yes	Yes	Yes
Cap	919	1004	833
Service Time	1.918	1.593	2.328
HCM Lane V/C Ratio	0.011	0.101	0.102
HCM Control Delay	7	7	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.3	0.3

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	10	10	10	10	86
Future Vol, veh/h	51	10	10	10	10	86
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	10	10	10	10	86
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	7.6	7	7
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	84%	0%	10%
Vol Thru, %	16%	50%	0%
Vol Right, %	0%	50%	90%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	61	20	96
LT Vol	51	0	10
Through Vol	10	10	0
RT Vol	0	10	86
Lane Flow Rate	61	20	96
Geometry Grp	1	1	1
Degree of Util (X)	0.073	0.021	0.095
Departure Headway (Hd)	4.285	3.848	3.557
Convergence, Y/N	Yes	Yes	Yes
Cap	837	927	1001
Service Time	2.307	1.884	1.599
HCM Lane V/C Ratio	0.073	0.022	0.096
HCM Control Delay	7.6	7	7
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	0.1	0.3

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	323	50	17	45	25	138
Future Vol, veh/h	323	50	17	45	25	138
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	323	50	17	45	25	138
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	11.6	7.7	8.6
HCM LOS	B	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	87%	0%	15%
Vol Thru, %	13%	27%	0%
Vol Right, %	0%	73%	85%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	373	62	163
LT Vol	323	0	25
Through Vol	50	17	0
RT Vol	0	45	138
Lane Flow Rate	373	62	163
Geometry Grp	1	1	1
Degree of Util (X)	0.471	0.074	0.202
Departure Headway (Hd)	4.547	4.29	4.466
Convergence, Y/N	Yes	Yes	Yes
Cap	791	833	804
Service Time	2.575	2.326	2.494
HCM Lane V/C Ratio	0.472	0.074	0.203
HCM Control Delay	11.6	7.7	8.6
HCM Lane LOS	B	A	A
HCM 95th-tile Q	2.5	0.2	0.8

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	10	255	50	10	204
Future Vol, veh/h	120	10	255	50	10	204
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	10	255	50	10	204
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.8	10.9	9
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	5%	0%	84%
Vol Thru, %	0%	92%	16%
Vol Right, %	95%	8%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	214	130	305
LT Vol	10	0	255
Through Vol	0	120	50
RT Vol	204	10	0
Lane Flow Rate	214	130	305
Geometry Grp	1	1	1
Degree of Util (X)	0.262	0.171	0.401
Departure Headway (Hd)	4.4	4.732	4.736
Convergence, Y/N	Yes	Yes	Yes
Cap	815	754	756
Service Time	2.437	2.783	2.781
HCM Lane V/C Ratio	0.263	0.172	0.403
HCM Control Delay	9	8.8	10.9
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.6	1.9

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	170	100	54	20	215	150	30	30	30	69	26	60
Future Vol, veh/h	170	100	54	20	215	150	30	30	30	69	26	60
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	170	100	54	20	215	150	30	30	30	69	26	60
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.7	13.3	10	10.7
HCM LOS	B	B	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	52%	5%	45%
Vol Thru, %	33%	31%	56%	17%
Vol Right, %	33%	17%	39%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	324	385	155
LT Vol	30	170	20	69
Through Vol	30	100	215	26
RT Vol	30	54	150	60
Lane Flow Rate	90	324	385	155
Geometry Grp	1	1	1	1
Degree of Util (X)	0.147	0.468	0.525	0.247
Departure Headway (Hd)	5.893	5.196	4.907	5.74
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	607	693	735	625
Service Time	3.946	3.232	2.942	3.786
HCM Lane V/C Ratio	0.148	0.468	0.524	0.248
HCM Control Delay	10	12.7	13.3	10.7
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.5	2.5	3.1	1

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	290	50	50	235	100	50
Future Vol, veh/h	290	50	50	235	100	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	50	50	235	100	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	11.1	10.7	9.8
HCM LOS	B	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	67%	0%	18%
Vol Thru, %	0%	85%	82%
Vol Right, %	33%	15%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	150	340	285
LT Vol	100	0	50
Through Vol	0	290	235
RT Vol	50	50	0
Lane Flow Rate	150	340	285
Geometry Grp	1	1	1
Degree of Util (X)	0.219	0.432	0.376
Departure Headway (Hd)	5.262	4.575	4.748
Convergence, Y/N	Yes	Yes	Yes
Cap	677	782	755
Service Time	3.334	2.625	2.802
HCM Lane V/C Ratio	0.222	0.435	0.377
HCM Control Delay	9.8	11.1	10.7
HCM Lane LOS	A	B	B
HCM 95th-tile Q	0.8	2.2	1.8

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	156	184	95	150	130	202
Future Vol, veh/h	156	184	95	150	130	202
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	156	184	95	150	130	202
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	12.1	11.5	12.7
HCM LOS	B	B	B

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	39%	0%	39%
Vol Thru, %	0%	46%	61%
Vol Right, %	61%	54%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	332	340	245
LT Vol	130	0	95
Through Vol	0	156	150
RT Vol	202	184	0
Lane Flow Rate	332	340	245
Geometry Grp	1	1	1
Degree of Util (X)	0.472	0.461	0.367
Departure Headway (Hd)	5.117	4.886	5.39
Convergence, Y/N	Yes	Yes	Yes
Cap	704	738	669
Service Time	3.145	2.916	3.421
HCM Lane V/C Ratio	0.472	0.461	0.366
HCM Control Delay	12.7	12.1	11.5
HCM Lane LOS	B	B	B
HCM 95th-tile Q	2.5	2.4	1.7

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	50	20	10	50	50
Future Vol, veh/h	25	50	20	10	50	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	50	20	10	50	50
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.2	7.1	7.8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	33%	50%
Vol Thru, %	67%	0%	50%
Vol Right, %	33%	67%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	30	75	100
LT Vol	0	25	50
Through Vol	20	0	50
RT Vol	10	50	0
Lane Flow Rate	30	75	100
Geometry Grp	1	1	1
Degree of Util (X)	0.033	0.08	0.116
Departure Headway (Hd)	3.942	3.825	4.19
Convergence, Y/N	Yes	Yes	Yes
Cap	902	927	854
Service Time	1.992	1.888	2.221
HCM Lane V/C Ratio	0.033	0.081	0.117
HCM Control Delay	7.1	7.2	7.8
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0.3	0.4

Intersection	
Intersection Delay, s/veh	8.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	50	50	50	25	25	25	25	50	25	50	100	25
Future Vol, veh/h	50	50	50	25	25	25	25	50	25	50	100	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	50	50	50	25	25	25	25	50	25	50	100	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	8.1	8.3	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	33%	33%	29%
Vol Thru, %	50%	33%	33%	57%
Vol Right, %	25%	33%	33%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	150	75	175
LT Vol	25	50	25	50
Through Vol	50	50	25	100
RT Vol	25	50	25	25
Lane Flow Rate	100	150	75	175
Geometry Grp	1	1	1	1
Degree of Util (X)	0.127	0.189	0.096	0.221
Departure Headway (Hd)	4.563	4.529	4.618	4.546
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	785	792	775	789
Service Time	2.595	2.56	2.654	2.575
HCM Lane V/C Ratio	0.127	0.189	0.097	0.222
HCM Control Delay	8.3	8.6	8.1	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.7	0.3	0.8

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	50	50	257	275	50
Future Vol, veh/h	75	50	50	257	275	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	50	50	257	275	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.4	10.8	10.7
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	16%	60%	0%
Vol Thru, %	84%	0%	85%
Vol Right, %	0%	40%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	307	125	325
LT Vol	50	75	0
Through Vol	257	0	275
RT Vol	0	50	50
Lane Flow Rate	307	125	325
Geometry Grp	1	1	1
Degree of Util (X)	0.397	0.181	0.408
Departure Headway (Hd)	4.651	5.21	4.517
Convergence, Y/N	Yes	Yes	Yes
Cap	771	685	793
Service Time	2.695	3.274	2.559
HCM Lane V/C Ratio	0.398	0.182	0.41
HCM Control Delay	10.8	9.4	10.7
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.9	0.7	2

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	50	154	50	50	205
Future Vol, veh/h	50	50	154	50	50	205
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	50	50	154	50	50	205
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.5	8.7	9.5
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	50%	20%
Vol Thru, %	75%	0%	80%
Vol Right, %	25%	50%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	204	100	255
LT Vol	0	50	50
Through Vol	154	0	205
RT Vol	50	50	0
Lane Flow Rate	204	100	255
Geometry Grp	1	1	1
Degree of Util (X)	0.244	0.132	0.314
Departure Headway (Hd)	4.303	4.74	4.429
Convergence, Y/N	Yes	Yes	Yes
Cap	834	756	813
Service Time	2.326	2.77	2.451
HCM Lane V/C Ratio	0.245	0.132	0.314
HCM Control Delay	8.7	8.5	9.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	1	0.5	1.3

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	40	50	97	40	10	50	10	100	10	10	10
Future Vol, veh/h	10	40	50	97	40	10	50	10	100	10	10	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	40	50	97	40	10	50	10	100	10	10	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.8	8.6	8.2	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	31%	10%	66%	33%
Vol Thru, %	6%	40%	27%	33%
Vol Right, %	62%	50%	7%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	160	100	147	30
LT Vol	50	10	97	10
Through Vol	10	40	40	10
RT Vol	100	50	10	10
Lane Flow Rate	160	100	147	30
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.118	0.186	0.038
Departure Headway (Hd)	4.219	4.242	4.553	4.541
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	851	846	789	789
Service Time	2.238	2.265	2.574	2.566
HCM Lane V/C Ratio	0.188	0.118	0.186	0.038
HCM Control Delay	8.2	7.8	8.6	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.4	0.7	0.1

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	100	25	25	97	25	25	50	25	25	100	25
Future Vol, veh/h	25	100	25	25	97	25	25	50	25	25	100	25
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	25	100	25	25	97	25	25	50	25	25	100	25
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.8	8.5	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	17%	17%	17%
Vol Thru, %	50%	67%	66%	67%
Vol Right, %	25%	17%	17%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	150	147	150
LT Vol	25	25	25	25
Through Vol	50	100	97	100
RT Vol	25	25	25	25
Lane Flow Rate	100	150	147	150
Geometry Grp	1	1	1	1
Degree of Util (X)	0.131	0.193	0.189	0.195
Departure Headway (Hd)	4.714	4.637	4.64	4.685
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	758	773	772	764
Service Time	2.759	2.677	2.68	2.726
HCM Lane V/C Ratio	0.132	0.194	0.19	0.196
HCM Control Delay	8.5	8.8	8.8	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.7	0.7	0.7

Intersection	
Intersection Delay, s/veh	11.9
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	75	97	232	350	50
Future Vol, veh/h	75	75	97	232	350	50
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	75	75	97	232	350	50
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10	11.8	12.6
HCM LOS	A	B	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	29%	50%	0%
Vol Thru, %	71%	0%	88%
Vol Right, %	0%	50%	12%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	329	150	400
LT Vol	97	75	0
Through Vol	232	0	350
RT Vol	0	75	50
Lane Flow Rate	329	150	400
Geometry Grp	1	1	1
Degree of Util (X)	0.443	0.223	0.516
Departure Headway (Hd)	4.846	5.36	4.647
Convergence, Y/N	Yes	Yes	Yes
Cap	737	663	772
Service Time	2.912	3.448	2.709
HCM Lane V/C Ratio	0.446	0.226	0.518
HCM Control Delay	11.8	10	12.6
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.3	0.8	3

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	150	5	5	157	5
Future Vol, veh/h	5	150	5	5	157	5
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	150	5	5	157	5
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	7.5	7.2	8.6
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	3%	97%
Vol Thru, %	50%	0%	3%
Vol Right, %	50%	97%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	155	162
LT Vol	0	5	157
Through Vol	5	0	5
RT Vol	5	150	0
Lane Flow Rate	10	155	162
Geometry Grp	1	1	1
Degree of Util (X)	0.011	0.162	0.198
Departure Headway (Hd)	4.033	3.765	4.409
Convergence, Y/N	Yes	Yes	Yes
Cap	872	958	810
Service Time	2.131	1.765	2.458
HCM Lane V/C Ratio	0.011	0.162	0.2
HCM Control Delay	7.2	7.5	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0.6	0.7

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	90	10	10	10	10	140
Future Vol, veh/h	90	10	10	10	10	140
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	90	10	10	10	10	140
Number of Lanes	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	1
HCM Control Delay	8	7.1	7.3
HCM LOS	A	A	A

Lane	EBLn1	WBLn1	SBLn1
Vol Left, %	90%	0%	7%
Vol Thru, %	10%	50%	0%
Vol Right, %	0%	50%	93%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	100	20	150
LT Vol	90	0	10
Through Vol	10	10	0
RT Vol	0	10	140
Lane Flow Rate	100	20	150
Geometry Grp	1	1	1
Degree of Util (X)	0.122	0.022	0.15
Departure Headway (Hd)	4.393	3.975	3.594
Convergence, Y/N	Yes	Yes	Yes
Cap	814	892	984
Service Time	2.43	2.038	1.666
HCM Lane V/C Ratio	0.123	0.022	0.152
HCM Control Delay	8	7.1	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.4	0.1	0.5

Appendix N – Monitoring Plan

Memo

SUBJECT
Monitoring Plan
Tunney's Pasture – Site Servicing and Public Road Redevelopment

DATE
March 5, 2026

DEPARTMENT
Transportation Engineering

COPIES TO
Katherine Constantine (CLC)
Mikaela Coon (CLC)

TO
Wally Dubyk, Transportation Project Manager, City of Ottawa

OUR REF
139833 Public Rd Redevelopment Tunney's Pasture - Internal Documents(1)\6.0_Technical\6.23_Traffic\03_Reports\TIA\Monitoring Plan

PROJECT NUMBER
139833

NAME
Ben Pascolo-Neveu – Transportation Engineer

Introduction

This Monitoring Plan was prepared to support the Transportation Impact Assessment (TIA) Step 4 submission for the Tunney's Pasture Site Servicing and Public Road Redevelopment.

Canada Land Company's Role

Although a Monitoring Plan was not specifically required by the City through the Pre-Consultation Process and was identified by staff as an 'if required' study, Canada Lands Company (CLC) took the initiative to prepare this strategic long-term planning document to support various aspects of the Tunney's Pasture redevelopment which may require review at reoccurring intervals, including trip generation, mode share targets, cut-through traffic and parking.

CLC reserves the right to download the responsibility of the Monitoring Plan execution, reporting of results and implementation of suggested mitigation strategies to private developers and will work with the City to impose this as a condition of Site Plan Control (SPC) approval for subsequent development parcels, as necessary.

It is important to note as well that the scope of work does not include the execution of this plan (i.e. data collection, survey, or analysis) which will be determined at a later date through discussion with City technical staff. Any mitigation measures recommended through the execution of the monitoring plan which fall outside of the site limits or site access intersections are considered to be outside the scope of CLC's work.

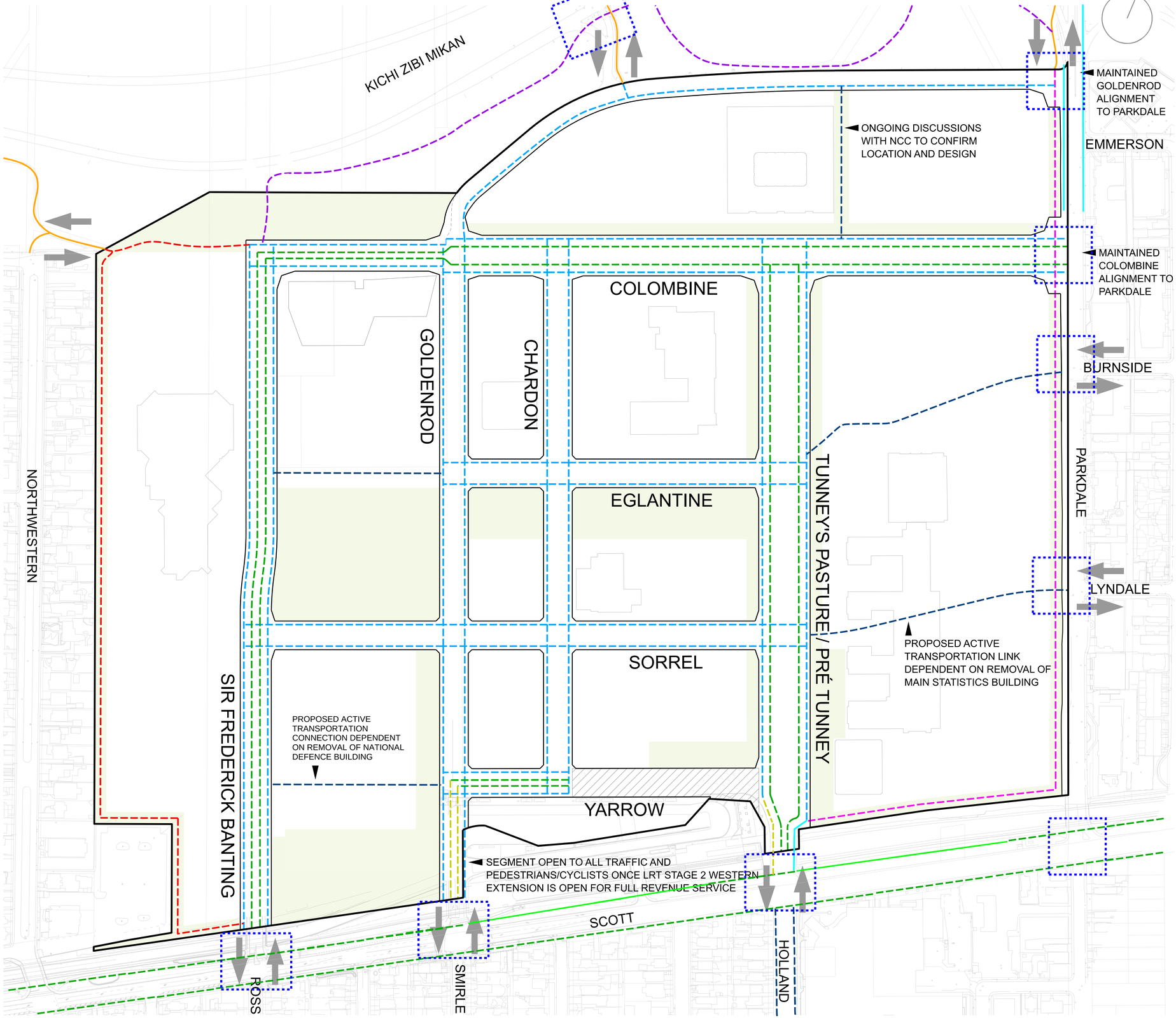
Objectives

This document is intended to track various transportation-related aspects as the site is built out, such as verifying timelines to implement mitigation strategies, confirming whether mode share targets are being met, reviewing the effectiveness of traffic calming measures to support the site's redevelopment, as well as evaluating the loss of parking. If there is a disconnect between key TIA study parameters or foundational assumptions and observed data collected as part of the Monitoring Plan, this process provides opportunities to correct course at regular intervals throughout redevelopment of the site.

This Monitoring Plan identifies the requirements for monitoring conditions every 5 years until 2046 when full build-out/occupancy of the Tunney's Pasture redevelopment is expected to be achieved.

Monitoring Plan Study Area

The monitoring plan study area will consist of the key study area intersections analysed in the TIA, as shown in **Exhibit 1** below. These locations will capture the key activity across all modes in and out of the site.



Active Transportation Plan

- Site Boundary
- Yarrow Woonerf
- Monitoring Plan Study Area

Active Transportation

- Open Space
- Future Parkdale & Transitway Greenway (City Initiative) - includes In-Boulevard Cycle Tracks
- Proposed Sidewalks
- Proposed In-Boulevard Cycle Tracks
- Proposed On-Road Cycling Facilities
- Proposed Kichi Sibi Winter Trail Formalization to All-Season Facility
- Proposed Active Transportation Link
- Proposed Pedestrian Transportation Link
- Existing Sidewalk
- Existing NCC Pathway
- Existing On-Road Cycling Facilities
- Existing Multi-Use Pathway (MUP)
- External Connection Point for Active Users

Notes:
- Proposed road pattern by Arcadis IBI Group, July 2024.
- Plans are subject to change following NCC Board approvals.

Location

TUNNEY'S PASTURE

Date: 2025-06-02

Drafted By: SD

Scale: 0 100m, 1:1500

North

ARCADIS

Exhibit 1 - Monitoring Plan Screenlines

Survey Procedure

This section outlines the data collection process that will need to be undertaken at reoccurring intervals to support the execution of the monitoring plan as Tunney's Pasture is built out.

Turning Movement Data Collection

Turning movement counts will be conducted at the site access intersections to coincide with the City's standard weekday morning (7:00-10:00am) and weekday afternoon (3:00-6:00pm) peak periods at 5-year intervals until 2046 when the Tunney's Pasture redevelopment is expected to be fully built out/occupied:

- Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture
- Parkdale & Goldenrod (right-in/right-out)
- Parkdale & Colombine
- Parkdale & Burnside
- Parkdale & Lyndale
- Parkdale & Scott
- Scott & Holland/Tunney's Pasture
- Scott & Goldenrod/Smirle
- Scott & Sir Frederick Banting/Ross

One (1) traffic count survey at each location will be undertaken on a core weekday (i.e. Tuesday, Wednesday, or Thursday) to capture the weekday peak hour traffic volumes in the same relative season as the base condition data.

The purpose of collecting this traffic count data is to monitor the potential exacerbation or occurrence of issues such as cut-through traffic, traffic operational or queue spillback constraints at the above noted intersections. If notable operational changes or delays are observed in comparison to previous data, these findings will be reviewed with the City to determine if additional measures or refinements are warranted.

It should be noted that traffic count data may also be supplemented with other data collection methods, such as license plate surveys, to track site-generated traffic travel patterns immediately prior to accessing or after egressing Tunney's Pasture and may be useful for isolating site-generated traffic from background traffic, where required.

Survey of Select Newly-Occupied Buildings

It is proposed that multi-modal traffic data collection at newly-constructed and occupied buildings be undertaken at the same reoccurring five-year intervals proposed for the traffic count data discussed in the preceding section, following the City's standard data collection periods of 7:00-10:00am and 3:00-6:00pm and on core weekdays (i.e. Tuesday, Wednesday or Thursday). This data will be collected in 15-minute increments at the primary entrances to track both active users and vehicular activity, and whether the trips are 'inbound' or 'outbound'. Results that show greater auto-reliance or lower active mode use than anticipated will be flagged for review under the Mode Share component of this Monitoring Plan.

Parking Data Collection

Parking data collection will be undertaken using drones to capture imagery of remaining surface parking lots within Tunney's Pasture at five-year intervals. This imagery will be shot at 10:00am and 2:00pm on a core weekday (i.e. Tuesday, Wednesday or Thursday) to coincide with the peak parking demand associated with existing office uses still on-site and will be used to calculate the overall parking utilization at 5-year increments as Tunney's Pasture is redeveloped. If parking occupancy trends indicate sustained pressure on available supply or a shift of parking demand to adjacent areas, these outcomes will be addressed through the Parking Management Strategy.

Travel Surveys

An additional method of collecting transportation data could occur through the development and distribution of travel surveys to individuals living, working or visiting Tunney's Pasture. This method would serve as an indicator of how individuals typically travel to/from and within the site and affords the surveyor more in-depth information pertaining to specific users to help highlight 'pinchpoints', constraints or successful measures with respect to the ongoing build-out of the internal transportation network. These surveys could also potentially allow users to suggest possible improvements to help encourage a shift towards more sustainable modes of travel. Findings that indicate barriers to sustainable travel (e.g., insufficient transit access or limited active transportation facilities) will inform the need for corrective measures as redevelopment progresses.

Monitoring Plan Components

This Monitoring Plan will consider four (4) main components for review and analysis:

- Site-Generated Traffic Impacts
- Mode Share Target Review
- Potential for Cut-through Traffic
- Loss of Parking for Existing Office Uses On-site

Site-Generated Traffic Impacts

Based on the traffic count data collected at the six external access intersections, inbound/outbound traffic data will be used to calculate an approximate generation rate for comparison against traffic volume projections developed as part of TIA Step 2 at each phase of development.

Consideration will also be given to the overall directional 'splits' of the trip generation results derived through the TIA exercise, as these travel characteristics will have a bearing on the transportation network constraints within the study area as well.

It is anticipated that the overall trip generation methodology employed in this TIA, which was developed using local rates specific to the subject site, relevant land uses from the 2020 TRANS Trip Generation Summary Report, Institute of Transportation Engineers' (ITE) Trip Generation Manual (11th Edition) and 'first principles' methodologies, will provide a conservative estimate of site-generated traffic impacts during the weekday morning and afternoon peak hours when compared against the travel demand observations collected as part of this monitoring exercise.

If subsequent monitoring demonstrates that site-generated traffic volumes or intersection operations exceed those anticipated in the TIA, CLC and the City will review whether adjustments to signal timing, turn lane configurations, or phasing of development are required to maintain acceptable network performance.

In addition to a comparison of observed and calculated site-generated traffic impacts, the following study area intersections will be reviewed through a supplemental Synchro traffic modelling exercise to determine impacts as part of the reoccurring monitoring strategy execution:

- **Kichi Zibi Mikan & Remic Rapids/Tunney's Pasture**
  - Track queue spillback and vehicle volumes on the northbound approach during the weekday afternoon peak hour through Synchro analysis to determine if queuing on this approach is being incrementally reduced over time, as expected. Investigate signal timing plan optimization as a mitigation strategy to lessen queuing impacts, as needed.
- **Parkdale & Colombine**
  - If this intersection has not yet been upgraded to a signalized intersection, continue to perform Synchro analysis with newly collected traffic data every 5 years and conduct signal warrant analysis.

- **Parkdale & Burnside**
  - Evaluate vehicular activity on the southbound left-turn and westbound right-turn auxiliary lanes to determine if any increases in traffic volumes on these movements that can be attributed to cut-through traffic associated with the site.
- **Scott & Holland/Tunney's Pasture**
  - Monitor queuing on the northbound right-turn auxiliary lane to determine appropriate increases in vehicle storage length. As these queuing deficiencies were identified under Existing and Future Background Traffic issues, any need for physical modifications to this dedicated right-turn lane should be considered in concert with City-led capital projects, including 'complete street' planned upgrades to Holland Avenue immediately south of Tunney's Pasture and are not the responsibility of the proponent.
- **Scott & Goldenrod/Smirle**
  - No potential queuing or capacity constraints were identified at this study area intersection through the TIA analysis; however, based on a review of existing traffic volumes, it is recommended that vehicular activity on the south leg of this intersection be monitored for increases in cut-through traffic activity.
- **Scott & Sir Frederick Banting/Ross**
  - If this intersection has not yet been upgraded to a signalized intersection, continue to perform Synchro analysis with newly collected traffic data every 5 years and conduct signal warrant analysis.
  - Evaluate north-south vehicular activity to determine whether any movement prohibitions implemented are effective in mitigating cut-through traffic.
- **Parkdale & Scott**
  The following geometric modifications identified through this TIA analysis were triggered by either Existing of Future Background Traffic and are therefore not a direct consequence of site-generated traffic contributions but may require monitoring, as these operational and queuing issues impact the overall performance of the intersection:
  - Perform Synchro analysis to evaluate queuing on the eastbound left-turn auxiliary lane and the need for any increases in vehicle storage. This evaluation should be completed in conjunction with the future redevelopment of properties on the south side of Scott Street, as it may impact vehicle access associated with these properties.
  - Assess queue spillback and capacity performance on the northbound approach to determine the appropriate timing for the re-introduction of a dedicated left-turn lane at the Parkdale & Scott intersection and appropriate vehicle storage length. The capacity analysis conducted as part of the TIA indicates that the need for this northbound left-turn auxiliary lane is triggered under Future Background Traffic conditions and therefore will be required with or without the redevelopment of the subject site.

Mode Share Target Review

Based on the survey results counted across the six site access intersections, the overall auto/non-auto proportions will be calculated to determine if these align with the mode share targets which were established through the TIA's trip generation process for residential uses.

It will not be practical or necessary to conduct a site-wide survey to validate the mode share for every existing and proposed land use across the site. To supplement traffic count data collected at the external site access intersections, it is proposed to undertake individual surveys of select new, fully-occupied buildings within the site to determine if the projected residential mode share is on track at each 5-year monitoring intervals to achieving the

targets set in the TIA. This sampling should provide sufficient data to determine if the residential mode share targets are being achieved.

If mode share monitoring indicates a discrepancy of 10% or more between mode share targets and actual mode share values based on observed data, CLC and the City may review the timing or scope of TDM measures and infrastructure improvements identified in this plan to support progress toward the adopted targets. Consideration should be given to the most effective or highest-ranking TDM measures deemed appropriate for the land use and site context, in order to have the highest positive impact on the mode share, if the targets are not being achieved.

Potential for Cut-through Traffic

Despite the subject site's multiple connections to the arterial and regional road network, there have been concerns expressed by Communities' Perspective Group (CPG) members regarding the potential exacerbation of any existing cut-through traffic patterns resulting from the Tunney's Pasture redevelopment. These concerns are based on the site's direct vehicular connections with adjacent neighborhoods and widely-known congestion issues on nearby key commuter routes, including Island Park Drive and Parkdale Avenue during the weekday peak periods. It is understood that there are longstanding concerns regarding the potential for the infiltration of site-generated traffic into the communities directly bordering Tunney's Pasture, including Mechanicsville, Hintonburg, Wellington Village and Champlain Park.

As such, a review of traffic count data will be conducted as part of this monitoring exercise to determine whether cut-through traffic movements are occurring and increasing, in comparison with the previous count period. This review would focus on key connection points with adjacent neighbourhoods, including Ross Avenue, Smirle Avenue and Burnside Avenue which either directly align or are slightly offset from site access intersections. Where observed trends show consistent increases in neighbourhood-bound traffic volumes that appear related to the site's build-out, CLC and the City will review whether further traffic calming, movement restrictions, or other local area management measures should be introduced.

If cut-through activity is shown to be increasing, then a mitigation strategy will be developed and its effectiveness will be observed at the next five-year interval.

The findings of these traffic count surveys every 5 years will help to determine whether more robust mitigation strategies need to be considered.

The Neighbourhood Traffic Calming Strategy (see Appendix K of the TIA) provides additional details regarding potential traffic calming solutions for each the four adjacent neighbourhoods surrounding Tunney's Pasture, including Mechanicsville, Hintonburg, Wellington Village and Champlain Park. This strategic document also discussed thresholds where additional traffic calming associated with site-generated traffic on key neighbourhood infiltration routes may need to be considered.

As discussed in the NTC Strategy, nominal increases in thru traffic in the order of 10 to 20 vehicles per hour may require consideration of prohibitive signage or lower-cost seasonal traffic calming measures. More substantial increases in hourly thru traffic on any of the identified 'primary routes' may result in the need to investigate more robust and permanent physical measures and will be determined on a case-by-case basis.

Loss of Parking

As discussed in Section 4.4 of the TIA, it is recognized that Phase 1 of the proposed development, in particular, will involve the loss of existing surface parking lots for office/employment uses which may remain on-site through the redevelopment timeframe of Tunney's Pasture. Communities' Perspective Group (CPG) Stream 1 members expressed concerns that this loss of parking may trigger parking infiltration within adjacent neighbourhoods.

To help document and monitor potential parking spillover impacts, parking utilization data collected for the remaining surface parking lots will be reviewed at five-year intervals to determine whether the demand remains within the 85% utilization threshold, or whether more robust mitigation strategies are required.

In parallel, a review of adjacent neighbourhood streets may be undertaken to identify signs of parking spillover associated with the redevelopment, if there are significant parking constraints identified on the site that cannot be otherwise resolved to the satisfaction of City technical staff. This assessment may include periodic curbside parking surveys during typical weekday morning daytime periods, review of resident parking permit data, or collaboration with City staff to evaluate parking complaints and enforcement trends. The extent of any additional parking surveys required in adjacent neighbourhoods will be limited to adjacent streets within a 200-metre walking distance of the most constrained areas identified on the site (i.e. those with parking demand consistently exceeding a 95% utilization threshold). These additional surveys on adjacent streets only be undertaken on as-needed basis and will not automatically follow the 5-year cycle prescribed for the remainder of the Monitoring Plan.

If sustained high utilization or reoccurring parking pressure within adjacent neighbourhoods is observed, the Parking Management Strategy will be revisited to identify suitable adjustments in coordination with City staff.

Mitigation Strategies

Site-Generated Traffic Impacts or Mode Share Targets

In the event that either the site-generated traffic demands are higher than anticipated or the non-auto mode share targets at each phase of development are determined to be unachievable through these field surveys, strategies to shift the overall modal share to more sustainable modes should focus on improvements to local transit service reinstatement and prioritize the implementation of active transportation initiatives identified by the City:

- Boundary Street 'Protected Intersections': It is recommended that each of the major intersections along the Scott Street and Parkdale Avenue frontages of the site be upgraded to 'protected intersections' to prioritize the safety and accessibility for pedestrians and cyclists, with 'right-turn on red' prohibitions and Leading Pedestrian/Bike (LPI/LBI) intervals, wherever feasible.
- Holland Avenue Cycling Infrastructure: The City should implement dedicated cycling infrastructure on Holland Avenue to provide a safe north-south active transportation corridor and divert cyclists from more congested parallel routes such as Parkdale Avenue and further encourage a shift away from automobile use for short trips.
- Transit: To ensure all residents of Tunney's Pasture are within an acceptable walking distance to public transit (particularly in the northwestern area of the site where the walking distance to Tunney's LRT station is in excess of 800 metres), OC Transpo should consider reinstating local bus service within Tunney's Pasture, which has been removed through the City's New Ways to Bus initiative. The reinstated routes should conform to the collector road hierarchy of the proposed internal street network, as well as seamlessly integrate within the bus loop for optimal customer experience.
- Parkdale Greenway: An active transportation corridor with separated space for cyclists and pedestrians on the west side of Parkdale Avenue and abutting the site, as envisioned in the 2014 Scott Street Community Design Plan (CDP), should be introduced to encourage the shift towards active modes among site-generated trips.

Encouraging office workers to either work remotely or shift hours, if feasible, to avoid travelling during the weekday peak hour periods could also be considered as long-term strategies to help reduce site-generated travel impacts coinciding with peak travel demand constraints, if the observations are higher than the TIA trip generation estimates. If remote work is not feasible as a result of the federal government's return to office policies in place that time, more robust site-specific TDM measures should be explored through Site Plan Control applications for adjacent property parcels within Tunney's Pasture. TDM measures that are being contemplated are referenced in Appendix I and Section 4.5 of the TIA.

The successful implementation of any required mitigation strategies would be expected to provide relief to long-standing existing transportation network constraints verified through the analysis conducted in this TIA, including the northbound queueing at the Kichi Zibi Mikan & Tunney's Pasture/Remic Rapids intersections, as well as future potential constraints such as the westbound left-turn at the Scott & Holland/Tunney's Pasture intersection.

Turning movement counts and traffic operational/queuing observations will also help inform whether these potential constraints identified through the TIA analysis are present following each five-year survey data collection cycle.

The project team will strive to implement any recommended mitigation measures in a timely manner and prior to the next 5-year data collection and review cycle, whenever possible. It is anticipated that CLC will oversee the introduction of any global mitigation strategies, while site-specific strategies will be introduced by private developers as part of subsequent Site Plan Control applications.

Cut-Through Traffic

As discussed in the Neighbourhood Traffic Calming Strategy (see Appendix K of the TIA), Communities' Perspective Group (CPG) Stream 1 members have expressed concerns regarding the potential exacerbation of any existing cut-through traffic issues within adjacent communities, including Mechanicsville, Hintonburg, Wellington Village and Champlain Park, as Tunney's Pasture is redeveloped.

Of particular concern for CPG Stream 1 members are Ross Avenue and Smirle Avenue within Wellington Village, as well as Burnside Avenue within Mechanicsville, all of which have direct or near direct vehicular connections with the Tunney's Pasture internal street network.

In the event that the Tunney's Pasture redevelopment is determined to be significantly exacerbating cut-through traffic levels at any of the above noted key locations, more robust traffic calming solutions will be investigated to mitigate these impacts. Any recommendations to include measures which are more intrusive should consider the continued need to maintain permeability for active modes between Tunney's Pasture and the above noted adjacent communities, as well as the circulation of City maintenance, transit and emergency vehicles. Consideration will be given to any new developments which were not in place during the traffic count data collected for the TIA as well.

Potential mitigation strategies will include a range of potential solutions and will be determined on a case-by-case, with reference to the guidelines and standards pertaining to traffic calming usage in force at that time. In general, prohibitive signage or lower-cost seasonal measures such as 'flexible posts' are considered appropriate in the context of minor cut-through traffic of 10 to 20 vehicles per hour, while physical measures such as curb extensions or modal filters will be reserved for more significant cut-through traffic patterns.

The mitigation strategies implemented to address any cut-through traffic issues identified through the reoccurring monitoring plan exercise will focus on specific improvements to relevant boundary street intersections, including Parkdale & Burnside, Scott & Goldenrod/Smirle or Scott & Sir Frederick Banting/Ross and will not include improvements within the internal street networks of adjacent neighbourhoods.

Loss of Parking

Canada Lands Company (CLC) is committed to working with the existing federal tenants at Tunney's Pasture to develop a Parking Management Strategy. This strategy will manage the remaining parking supply and work to satisfy the functional need of the office uses still existing on site without creating spillover demand to adjacent communities.

The Parking Management Strategy will review the implications of this loss of parking supply through reoccurring parking surveys collected as part of this monitoring exercise so that these effects can be better understood and mitigated accordingly, with consideration of the four (4) main strategies outlined below:

1) Determine if the remaining land outside the property parcel that is being disposed to public market can adequately fulfill the office parking demand;
2) Determine if the parking demand currently accommodated by the surface parking lot can be served by other parking lots on the remaining office lands across the Tunney's Pasture site;
3) Determine if additional parking (surface or structured) on the remaining office lands across the Tunney's Pasture site is required; and

4) Establish whether Transportation Demand Management (TDM) measures are required to reduce parking demand in alignment with the remaining parking supply.

A review of the parking utilization data collected as part of this monitoring exercise will help to determine whether the combination of strategies outlined above that were selected to address the loss of existing parking spaces were effective or whether further mitigation is required. The effectiveness of the parking mitigation strategy developed will be reviewed at the next five-year data collection interval of parking utilization data collection. If the parking occupancy data for the lots surveyed indicates that the 85% parking utilization threshold is exceeded, then a revised mitigation strategy should be developed and implemented for review at the next five-year interval. Similar to site-generated traffic impacts and mode share targets, it is expected that the implementation of City initiatives such as the Parkdale Greenway and Holland Avenue cycling infrastructure and on-site Transportation Demand Management (TDM) measures will help reduce auto-reliance and, in turn, overall parking demand across the site.

Conclusion

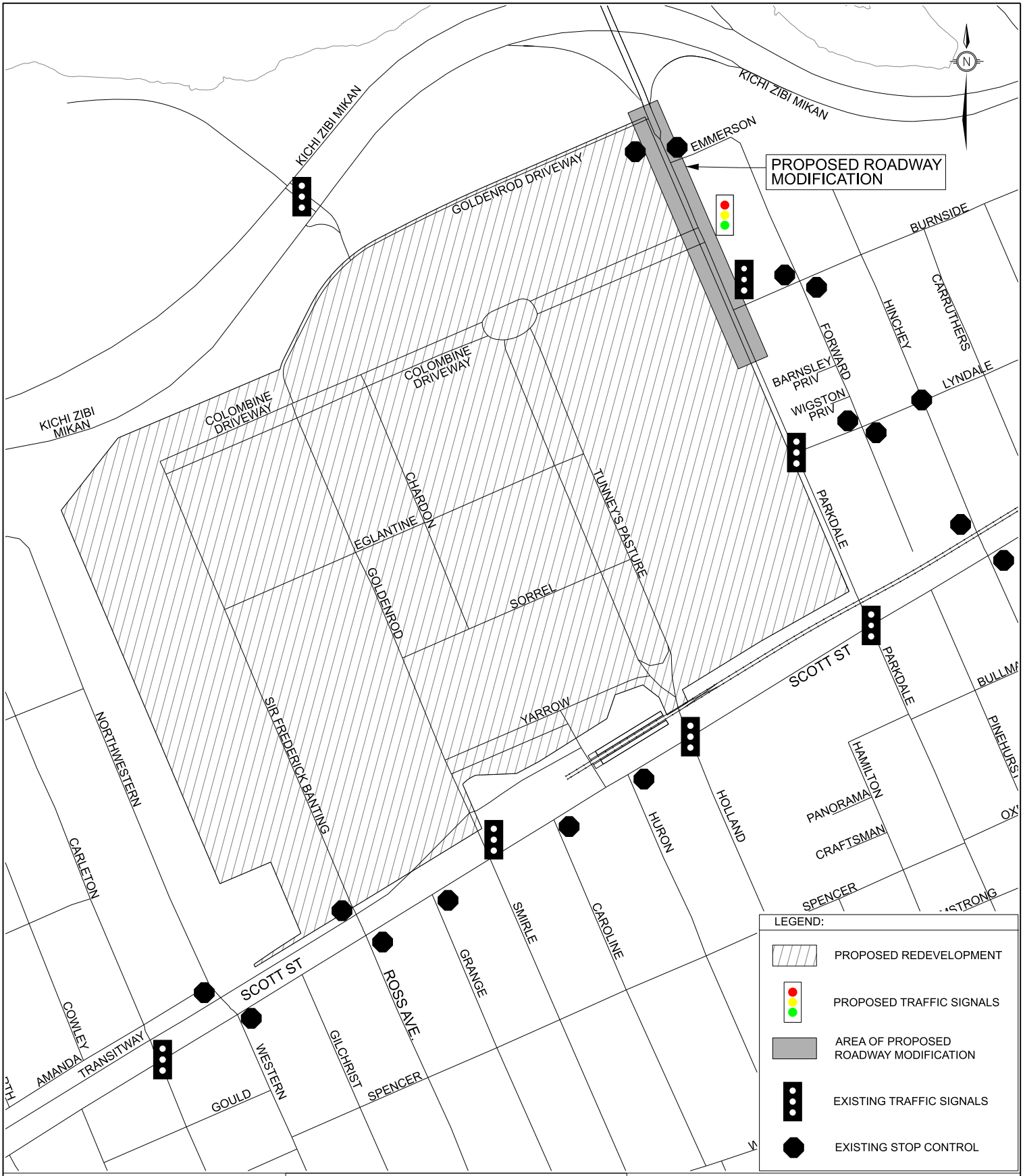
An overall Monitoring Program Memorandum will be prepared to document the analysis, results and findings of the surveys conducted as part of Monitoring Plan and will be circulated to the City technical staff for review.

Mitigation measures or strategies will be recommended, as required, based on the outcomes of the monitoring surveys.

Prepared By:

Ben Pascolo-Neveu, P.Eng.
Transportation Engineer

Appendix O – Roadway Modification Application (RMA) Drawings



PLANNING, DEVELOPMENT AND BUILDING SERVICES

KEY PLAN

PARKDALE AVENUE (GOLDENROD DRIVEWAY TO APPROX. 120m SOUTH OF BURNSIDE AVENUE)

TRANSPORTATION ENGINEERING SERVICES

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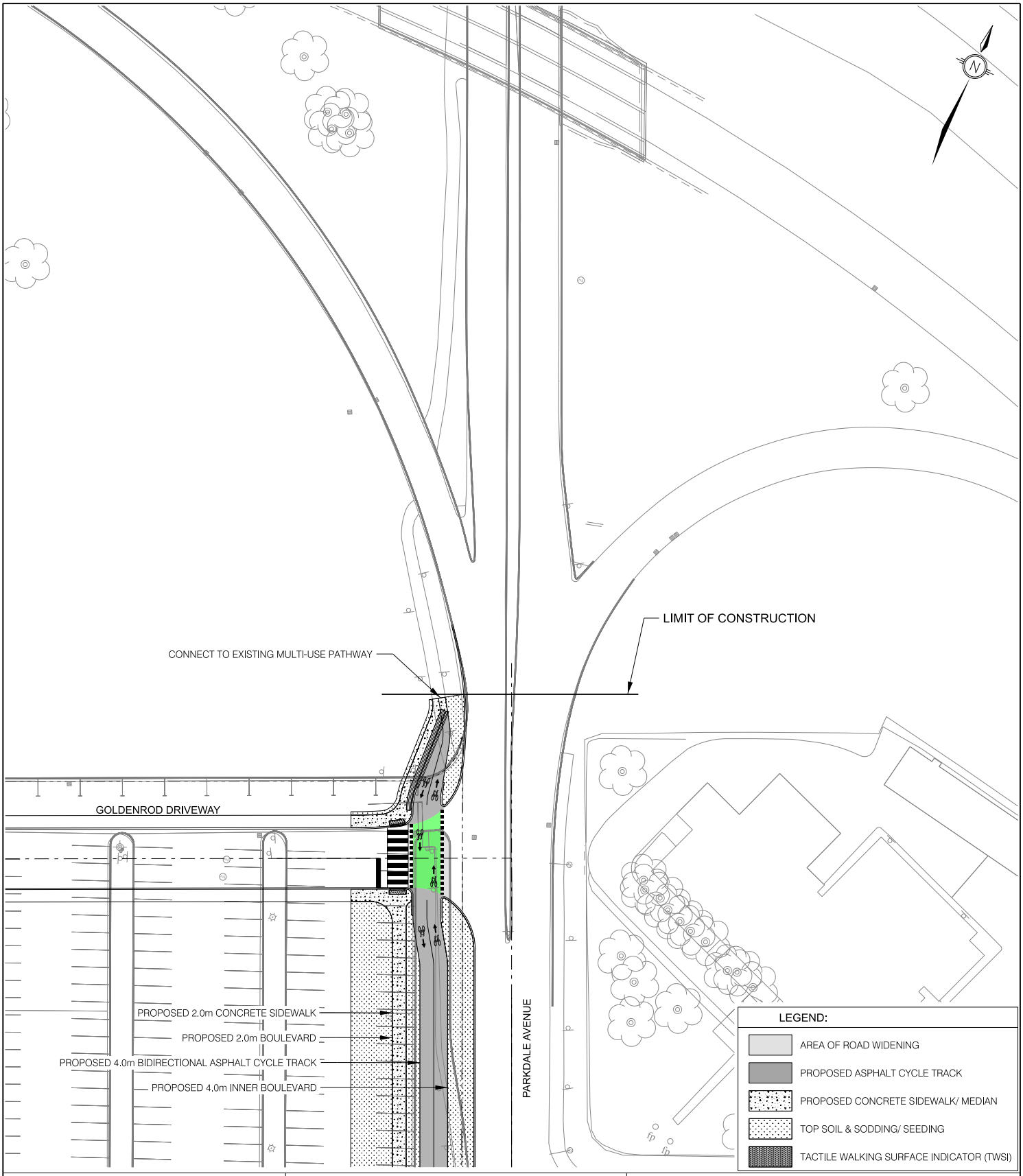
Completed By: ARCADIS	
Scale: N.T.S.	Date: MARCH 2026



Ottawa

PLANNING, DEVELOPMENT AND BUILDING SERVICES

PROPOSED ROADWAY MODIFICATIONS

PARKDALE AVENUE (GOLDENROD DRIVEWAY TO APPROX. 120m SOUTH OF BURNSIDE AVENUE)

TRANSPORTATION ENGINEERING SERVICES

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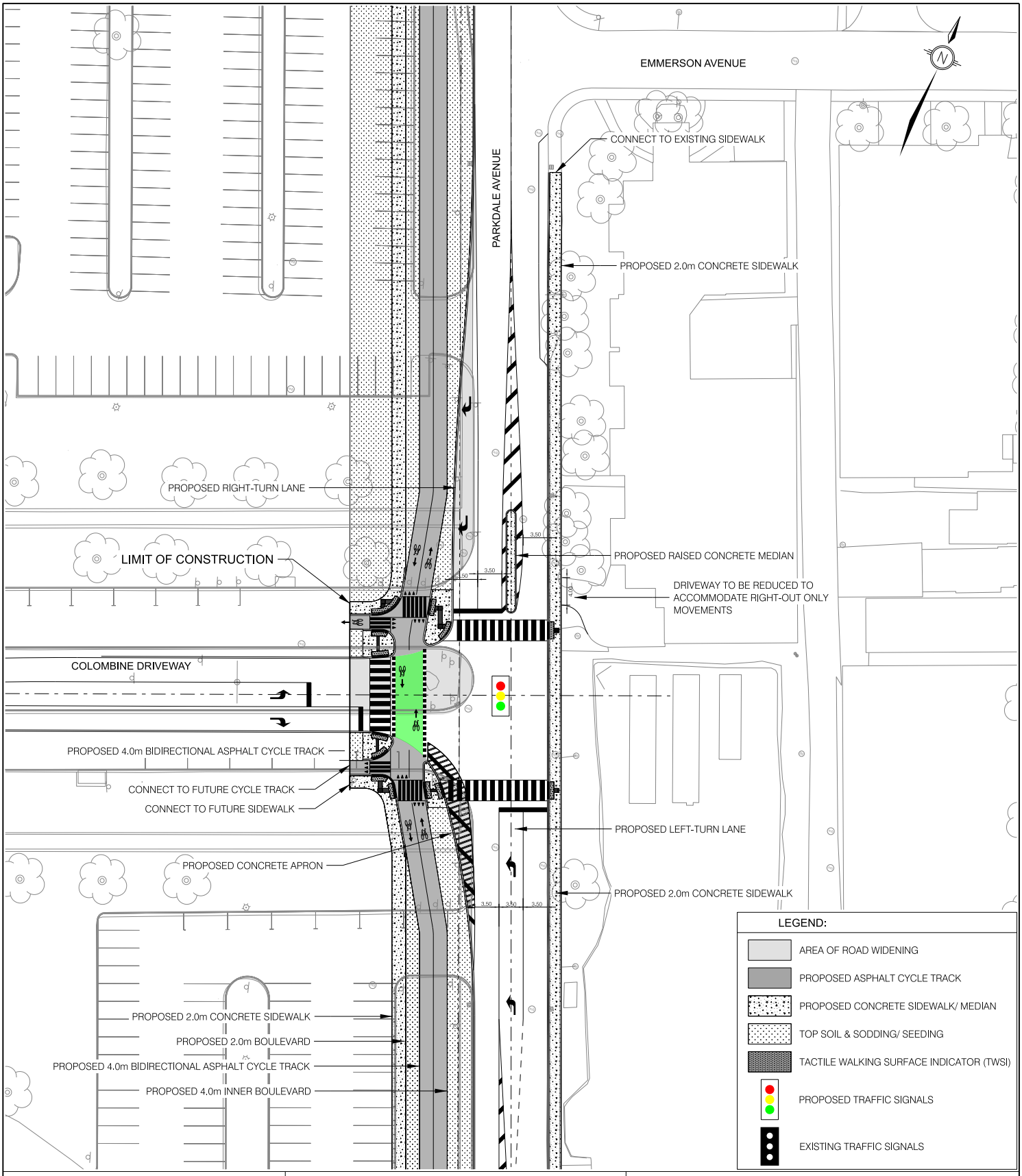

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PLANNING, DEVELOPMENT AND BUILDING SERVICES

PROPOSED ROADWAY MODIFICATIONS

PARKDALE AVENUE (GOLDENROD DRIVEWAY TO APPROX. 120m SOUTH OF BURNSIDE AVENUE)

TRANSPORTATION ENGINEERING SERVICES

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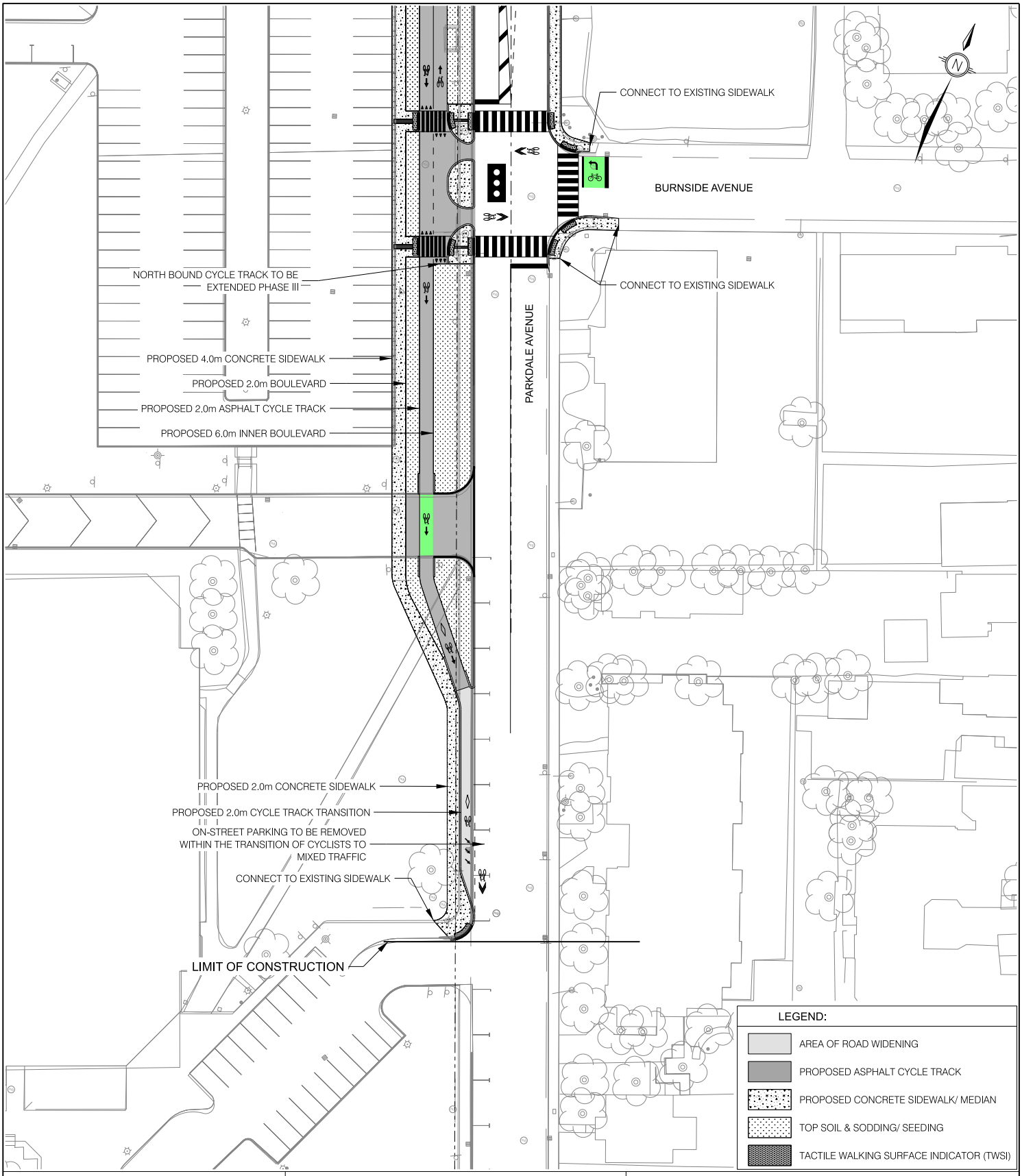

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PLANNING, DEVELOPMENT AND BUILDING SERVICES

PROPOSED ROADWAY MODIFICATIONS

PARKDALE AVENUE (GOLDENROD DRIVEWAY TO APPROX. 120m SOUTH OF BURNSIDE AVENUE)

TRANSPORTATION ENGINEERING SERVICES

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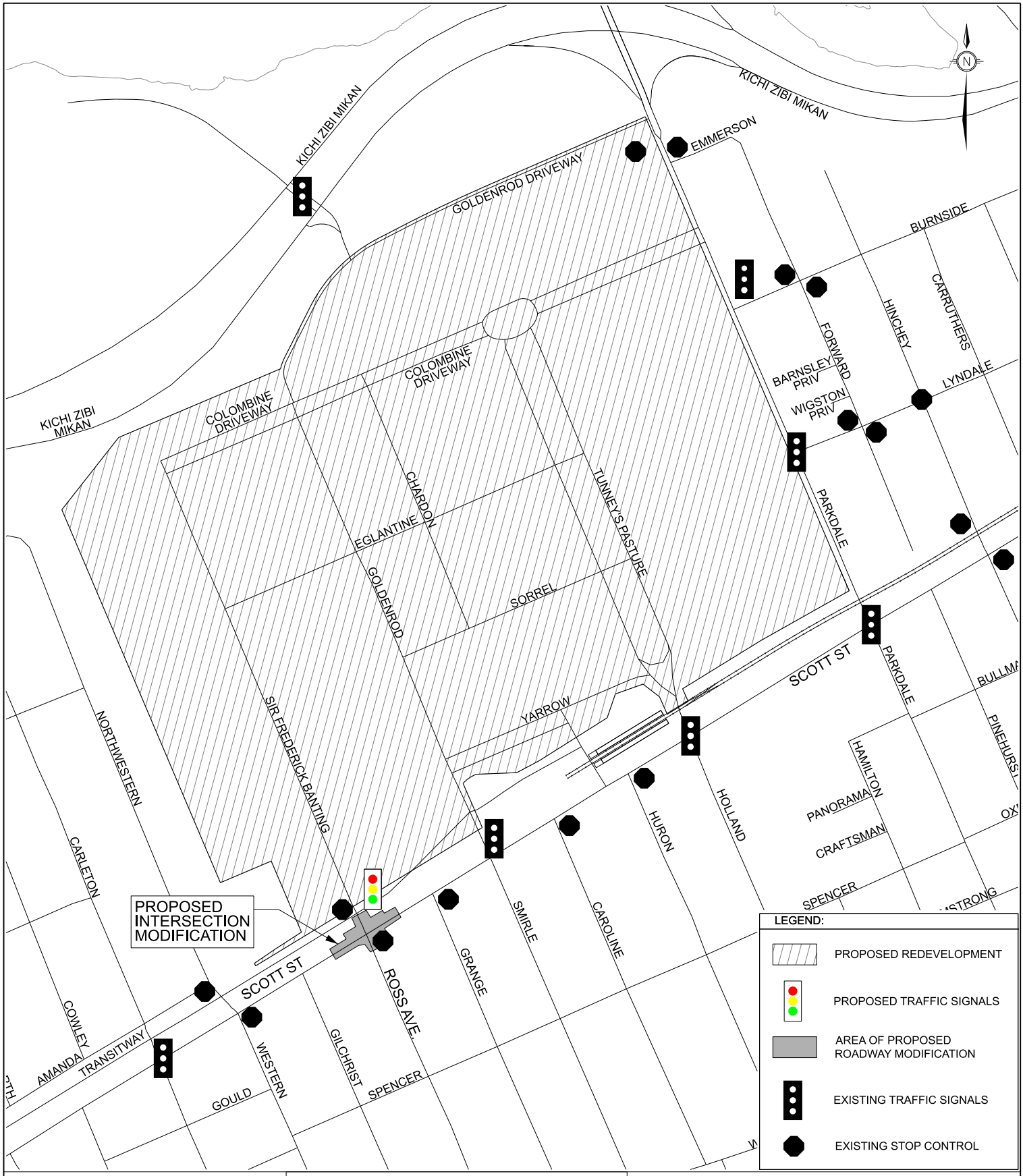

PLANNING, DEVELOPMENT AND BUILDING SERVICES

KEY PLAN

SIR FREDERICK BANTING DRIVEWAY/ ROSS AVENUE AND SCOTT STREET INTERSECTION

TRANSPORTATION ENGINEERING SERVICES

Approved By:	Drawing No.: RMA-2025-TPD-036A
Completed By: ARCADIS	
Scale: N.T.S.	Date: MARCH 2026

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PLANNING, DEVELOPMENT AND BUILDING SERVICES

PROPOSED ROADWAY MODIFICATIONS

SIR FREDERICK BANTING DRIVEWAY / ROSS AVENUE AND SCOTT STREET INTERSECTION

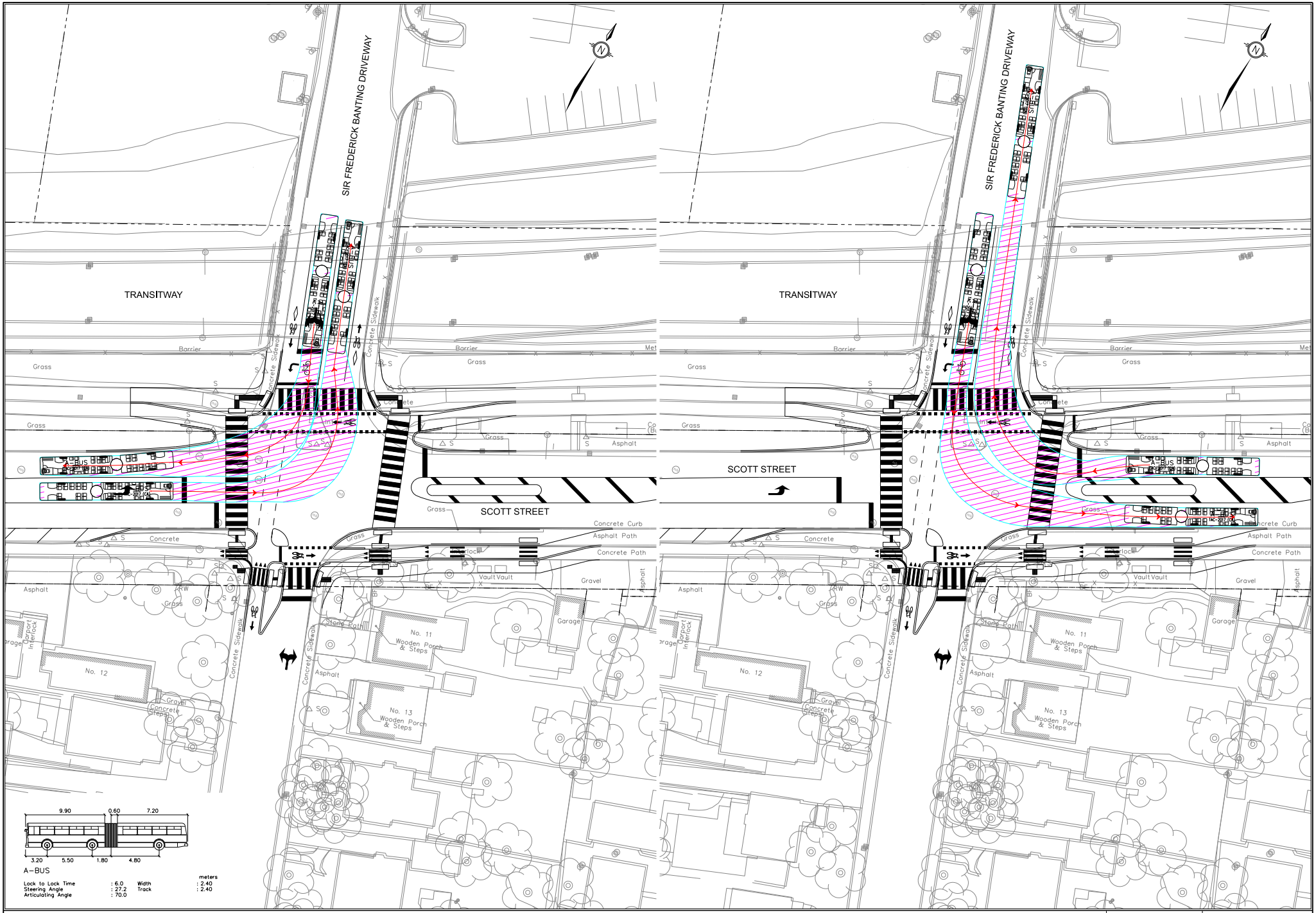
TRANSPORTATION ENGINEERING SERVICES

Approved By: -----	Drawing No.: RMA-2025-TPD-036B
Completed By: ARCADIS	
Scale: N.T.S.	Date: MARCH 2026

EXHIBIT I

SCOTT STREET & SIR FREDERICK BANTING DRIVEWAY INTERSECTION
TURNING MOVEMENT - B-12

PROJECT No.	139833
SCALE:	N.T.S.
DATE:	MARCH 2026



ARCADIS

EXHIBIT II

SCOTT STREET & SIR FREDERICK BANTING DRIVEWAY INTERSECTION
TURNING MOVEMENT - A-BUS

PROJECT No.	139833
SCALE:	N.T.S.
DATE:	MARCH 2026

ARCADIS

EXHIBIT III

SCOTT STREET & SIR FREDERICK BANTING DRIVEWAY INTERSECTION
TURNING MOVEMENT - MSU

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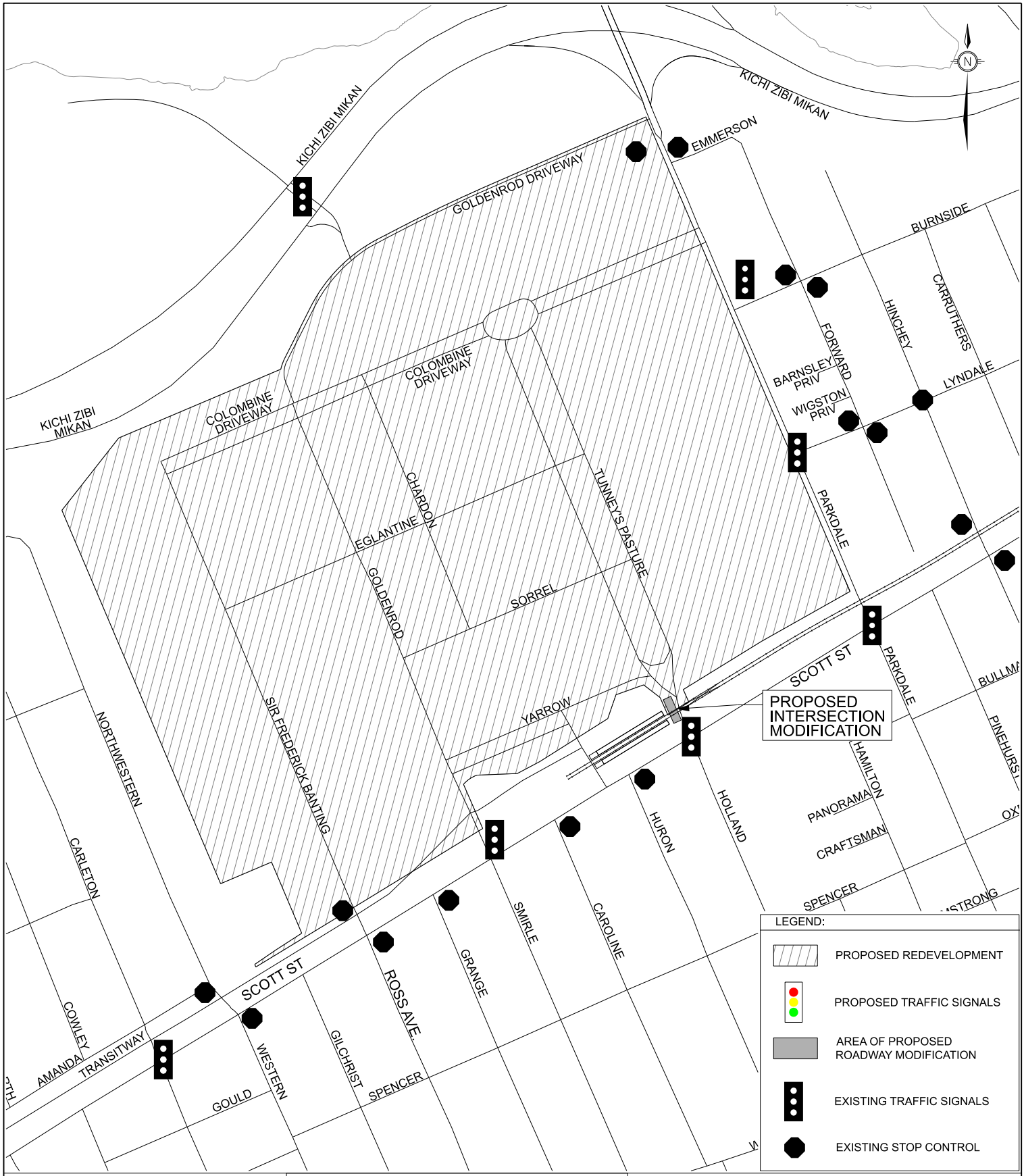

PLANNING, DEVELOPMENT AND BUILDING SERVICES

KEY PLAN

TUNNEY'S PASTURE DRIVEWAY AND SCOTT STREET INTERSECTION

TRANSPORTATION ENGINEERING SERVICES

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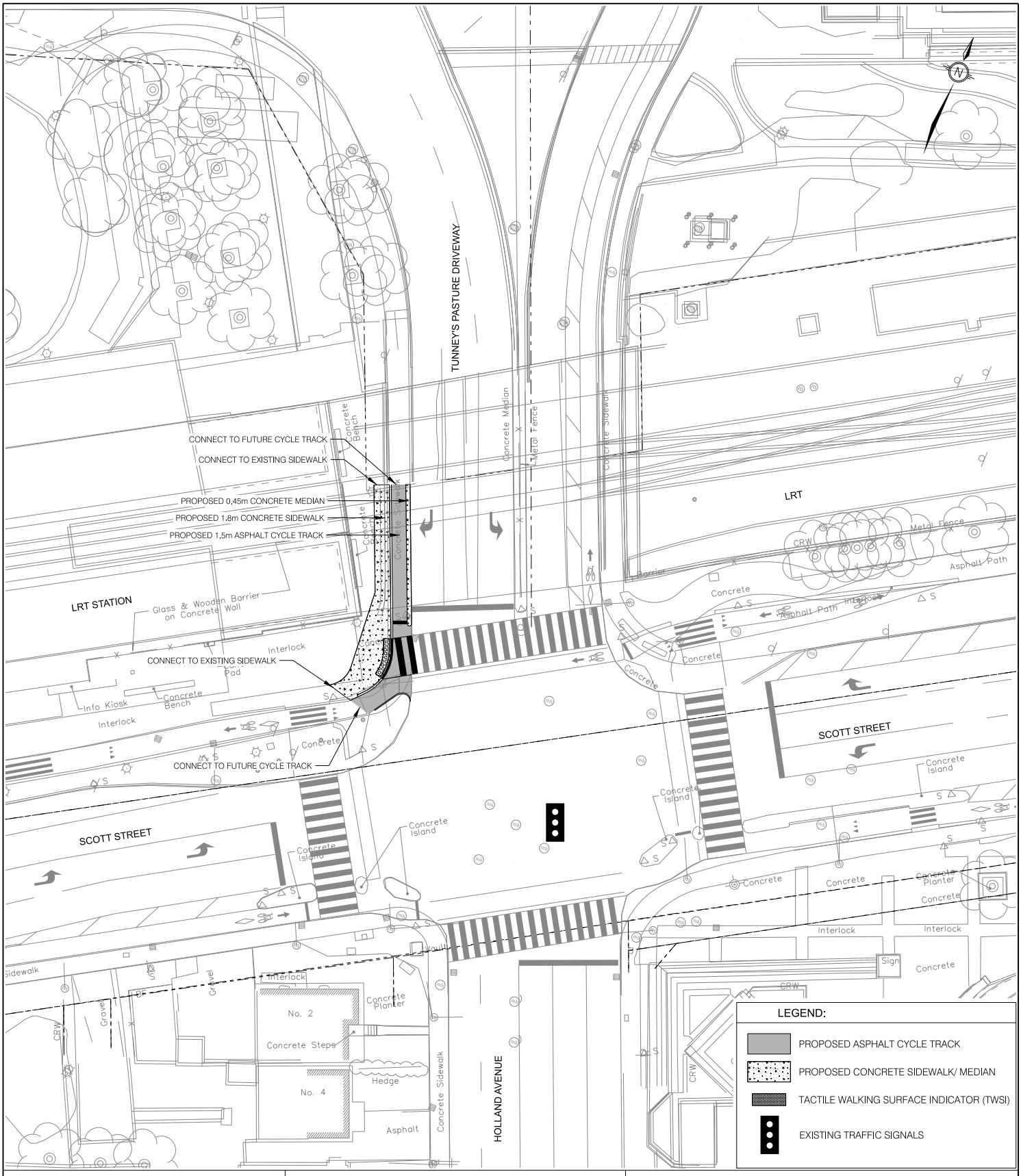

PLANNING, DEVELOPMENT AND BUILDING SERVICES

PROPOSED ROADWAY MODIFICATIONS

TUNNEY'S PASTURE DRIVEWAY AND SCOTT STREET INTERSECTION

TRANSPORTATION ENGINEERING SERVICES

Approved By: -----	Drawing No.: RMA-2025-TPD-XXXB
Completed By: ARCADIS	
Scale: N.T.S.	Date: MARCH 2026

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