WEST HANTS REGIONAL MUNICIPALITY
Planning and Heritage Advisory Committee (PAC/HAC) Agenda
November 13, 2025 – 6:00pm
Sanford Council Chambers and Zoom / YouTube Live

West Hants
something inspiring awaits

1.0 Call to Order and Attendance

2.0 Election of Chair and Vice Chair

3.0 Announcements

4.0 Approval of Agenda and Additions

5.0 Declaration of Conflict of Interest

6.0 Approval of Minutes (October 9, 2025)

7.0 New Business

7.1 File #25-22 Rezoning: 5988 Highway 215, Kempt Shore (Will Hong) - Pg. 2

7.2 File #25-07/11/12 Development Agreement and Rezoning: PIDs 45055241, 45190386, and 45366457, Wentworth Rd, Windsor (Will Hong & Alex Dunphy) - Pg. 14

7.3 File #25-21 Rezoning: PID 45038510, Highway 14, Windsor Forks (Alex Dunphy) - Pg. 277

8.0 Business Arising from the Minutes

9.0 Business Arising from the Public Information Meetings

10.0 File Updates - Pg. 288

10.1 File #24-22 Development Agreement: 411 King Street, Windsor Phase 2 (Alex Dunphy)

10.2 File #25-20 Rezoning: PID 45285103, Old Walton Rd, Upper Burlington (Will Hong)

10.3 File #25-23 Development Agreement: PID 45003266, Three Mile Plains (Alex Dunphy)

10.4 File #25-15 Development Agreement: PID 45053220 King St, Windsor (Will Hong)

10.5 File #25-18 Development Agreement: Bear Lake Wind Farm Revised (Kari Fougere)

11.0 Building and Development Activity Reports (October 2025) - Pg. 290

12.0 Notices from Adjacent Municipal Units

13.0 Public Comments

14.0 Next Meeting Date (December 11, 2025) / Adjournment

WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation X	Decision Request ☐	Councillor Activity ☐

To: Members of Planning and Heritage Advisory Committee (PAC/HAC)

Submitted by: _____
Will Hong, Planner

Date: November 13, 2025

Subject: WHLUB Map Amendment: 5988 Highway 215, Kempt Shore (PID 45179462); File # 25-22

LEGISLATIVE AUTHORITY

Municipal Government Act Section 210

RECOMMENDATION

Staff recommend that the PAC/HAC forward a positive recommendation by passing the following motion:

…that PAC/HAC recommends that Council give First Reading and hold a Public Hearing to consider amending Schedule A of the West Hants Land Use By-law to rezone PID 45179462 at 5988 Highway 215 in Kempt Shore from Rural Commercial (RC) to General Resource (GR) zone as shown in the report #25-22 to the Planning and Heritage Advisory Committee dated November 13, 2025.

BACKGROUND

Property X	Public Opinion ☐	Environment ☐	Social ☐	Economic ☐	Councillor Activity ☐

A completed application was received from Renee Redden on August 18, 2025. The application was to rezone the subject lot from Rural Commercial (RC) to General Resource (GR) in order to build a single unit dwelling.

The subject lot was previously used by a credit union, and the structure was later demolished in 2023. Under the current Rural Commercial (RC) zone, residential uses are only permitted in conjunction with another permitted commercial use. The applicant has indicated that there is no intention of operating any commercial business on the property in the future. Therefore, a rezoning request was made as the proposed General Resource zone would permit a single unit dwelling as-of-right.

DISCUSSION

The subject lot is a 0.5-acre of land with frontage on Highway 215. It is currently designated Resource under the Generalized Future Land Use Map (GFLUM) of the West Hants Municipal Planning Strategy (WHMPS) (Figure 1) and zoned Rural Commercial (RC) on the Schedule A of the West Hants Land Use By-law (WHLUB) (Figure 2). The lot currently contains a shed and a parked camper. All properties surrounding the subject lot are designated Resource and zoned General Resource (GR). Development in the general area of the subject property consists primarily of established low density residential uses.

Municipal Planning Strategy Review

Policy 16.1.3 is the primary enabling policy to be considered for this application. This policy provides Council with the ability to consider rezoning land to a zone permitted in an immediately adjacent designation. This policy allows the subject lot to rezone to General Resource (GR) as it is a zone permitted in the current designation of the property and the designation of the adjacent properties.

Policy 16.3.1 establishes the general criteria that must be considered for all amendments to the West Hants Land Use By-law. The full list of criteria is included in Attachment A. In summary, the proposal meets the criteria as:

- the proposal is not considered premature or inappropriate for the area;
- no municipal costs related to the proposal are anticipated; and
- the Fire Chief, Development Officer, Manager of Building and Fire Inspection Services, Area Manager of the Nova Scotia Department of Public Works, and Public Works Engineering Division have no concerns which have not been addressed in this report.

Public Comment Period

A Public Information Meeting was held on October 8, 2025. Staff did not receive any comments or correspondence during the meeting and within the 14-day comment period that followed.

MUNICIPAL CLIMATE CHANGE ACTION PLAN

The Municipal Climate Change Action Plan Costal Flooding map and Inland Flooding map do not show any risks of costal or inland flooding on the subject lot. It is advisable that property owners are responsible for ensuring that their property is suitable for the proposed use.

NEXT STEPS

As noted above, the proposed amendment has been considered within the context of the general policies of the WHMPS, and is consistent with the intent, objectives, policies and criteria of the WHMPS. As a result, it is reasonable to amend the zoning of PID 45179462 to the General Resource (GR) zone.

Process

Public Information Meeting – October 8, 2025

▼

Staff Review

▼

PAC/HAC receives staff report and PIM Notes
Review and Recommendation – November 13, 2025

▼

Council First Reading – November 25*

▼

Public Hearing & Second Reading – January Council*

▼

Notice of Approval in Local Paper

▼

14-Day Appeal Period

*anticipated dates; final dates set by Council

FINANCIAL IMPLICATIONS

There are no financial implications to the Municipality with regard to the filing of this report.

ALTERNATIVES

In response to this application, the PAC/HAC may recommend that Council:

- hold First Reading and authorize a Public Hearing to approve the amendment as drafted or as specifically revised by direction of PAC/HAC;
- provide alternative direction, such as requesting further information on a specific topic.

ATTACHMENTS

Figure 1	West Hants GFLUM Extract
Figure 2	West Hants Zoning Map Extract
Figure 3	West Hants Proposed Zoning Map Extract
Attachment A	Policy Summary for WHLUB Amendments
Attachment B	Public Information Meeting Notes

Report Prepared by: _____
Will Hong, Planner

Report Approved by: _____
Kari Fougere, Acting Director of Planning and Development

Figure 1 – West Hants GFLUM Extract

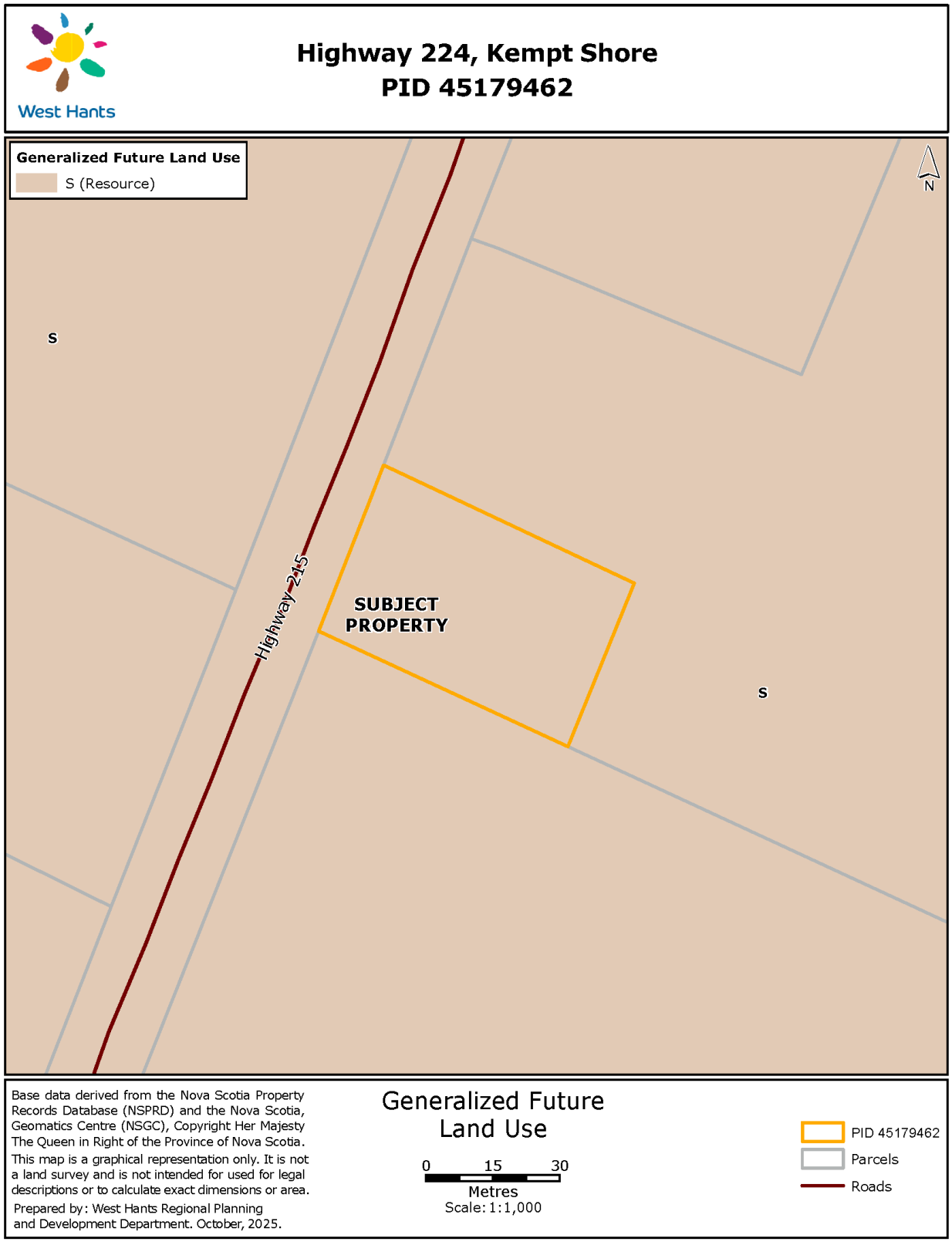


Figure 2 – West Hants Zoning Map Extract

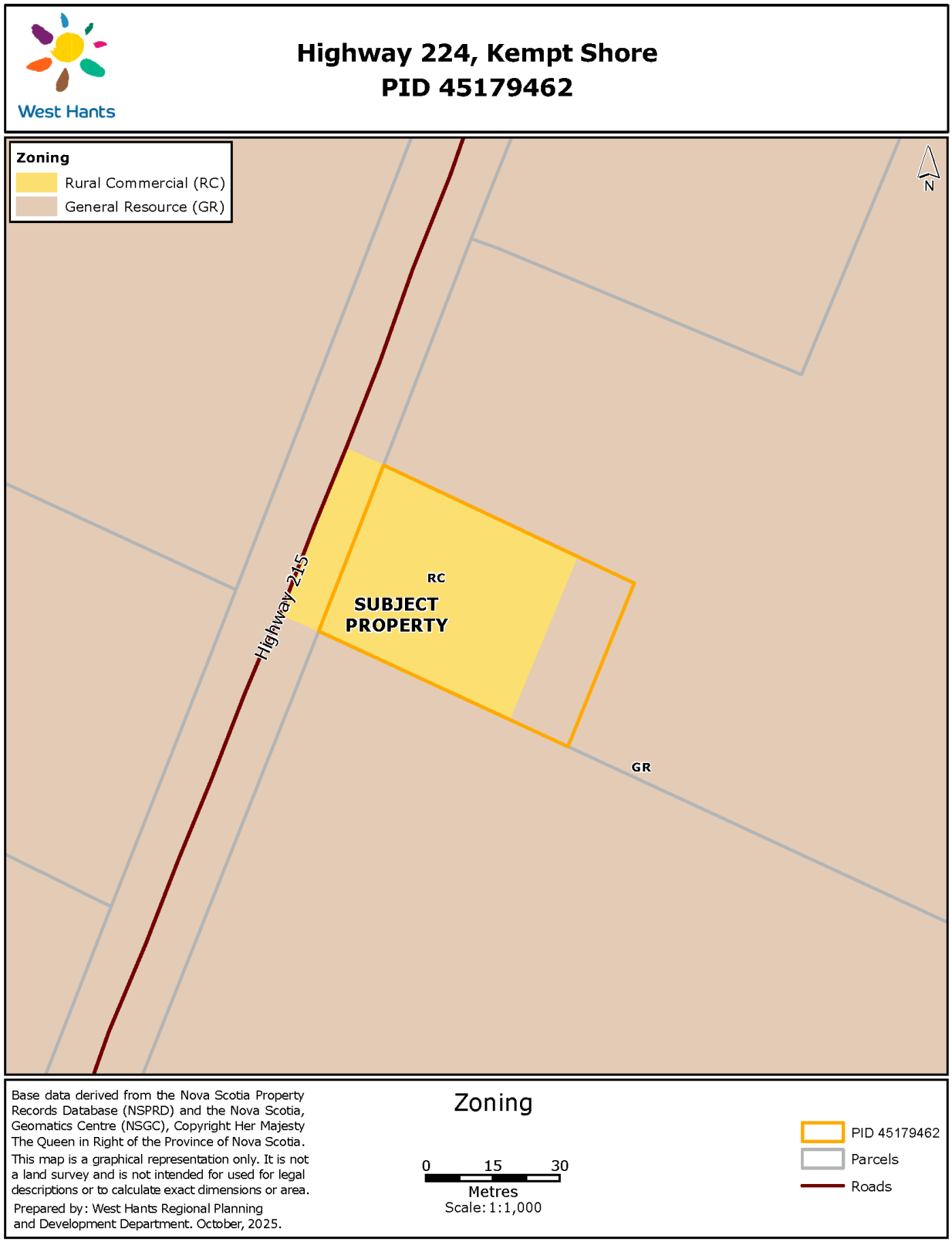
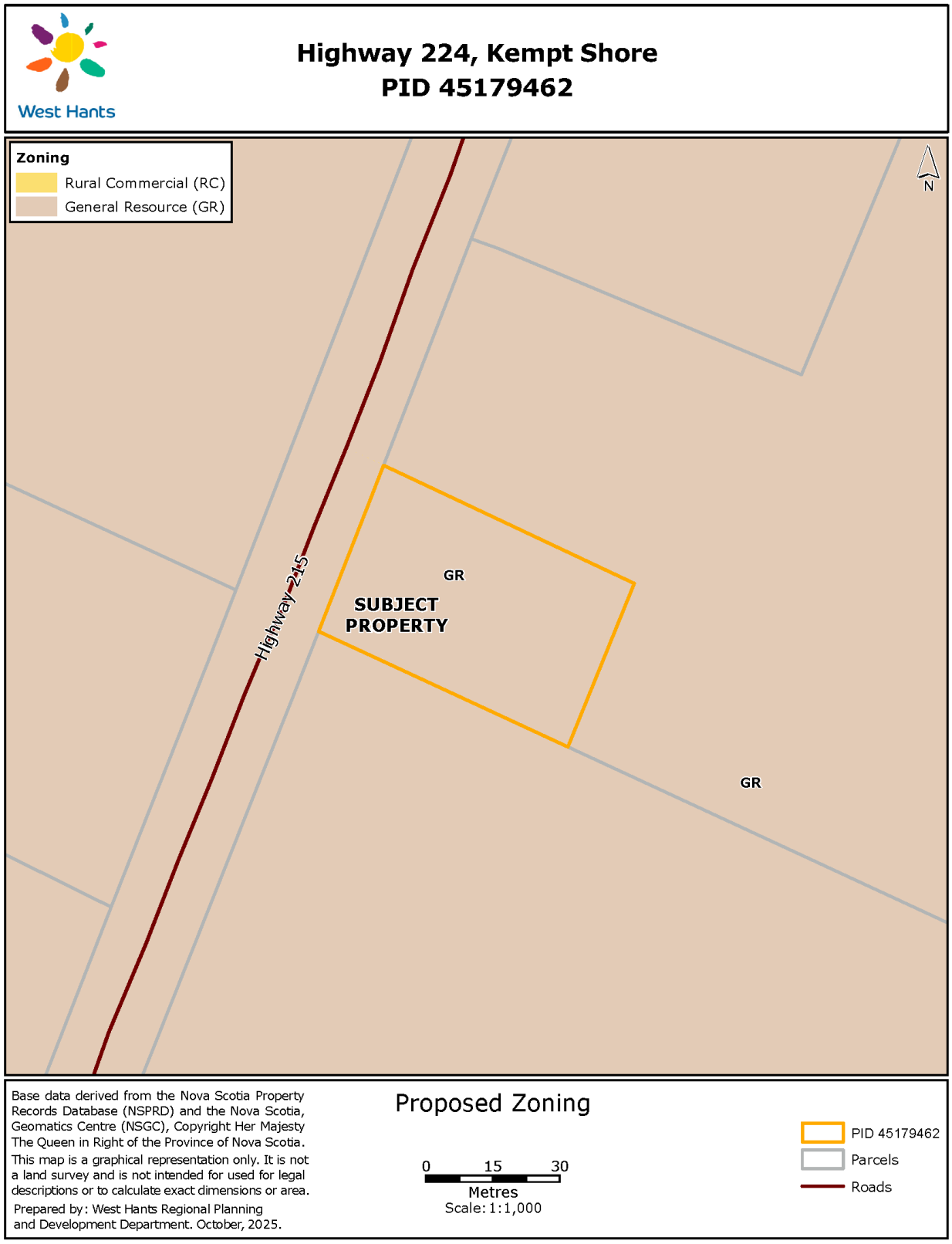


Figure 3 – West Hants Proposed Zoning Map Extract



Attachment A – Policy Summary for Amendments

Policy 16.1.3 *It shall be the intention of Council to consider a Land Use By law amendment to zone any area immediately adjacent to a given land use designation on the Generalized Future Land Use Map (Map 1) to a zone permitted in the adjacent designation without requiring a Strategy amendment, provided that all policies of the Strategy are satisfied.*	This policy enables the subject lot to rezone to General Resource (GR), which is a permitted zone applies to rural areas of West Hants in the Resource designation. Both the subject lot and the adjacent properties are designated as Resource under the Generalized Future Land Use Map (GFLUM) of the West Hants Municipal Planning Strategy (WHMPS) (Figure 1). The proposed rezoning will align the subject lot's zoning with that of the surrounding properties.

Policy 16.3.1 *In considering development agreements and amendments to the West Hants Land Use By-law, in addition to the criteria set out in various policies of this Strategy, Council shall consider:*	
(a) whether the proposal is considered premature or inappropriate in terms of:	
(i) the adequacy of sewer and water services;	The Public Works Engineering Division commented that no central sewer or water services are available in the area. Therefore, property owner is responsible for ensuring that adequate well and septic system is available to meet the requirements of NSECC during the permitting stage.
(ii) the adequacy of school facilities;	Minimal impact on school facilities is anticipated since the proposal is for a single unit dwelling. The Regional Executive Director of the Annapolis Valley Regional Centre for Education previously stated that "We have a responsibility to provide public

	education for students living in the catchment areas served by these schools. We therefore expect our facilities to accommodate any new development."
(iii) the adequacy of fire protection and other emergency services;	The Manager of Building and Fire Inspection Services commented that they had no concerns regarding the adequacy of fire protection. Summerville Fire Chief commented that they also had no concerns.
(iv) the adequacy of road networks adjacent to, or leading to the development; and	The Area Manager of the Nova Scotia Department of Public Works commented that they had no concerns regarding the adjacent road network or the traffic generation from the proposal.
(v) the financial capacity of the Municipality to absorb any costs relating to the development.	There are no anticipated costs to the Municipality regarding this development.
(b) whether the development is serviced, or capable of being serviced, by a potable water supply and either central sewer or an approved on-site sewage disposal system;	The subject property was previously occupied by the credit union. The previous on-site systems may be adequate or may require upgrades, but these details are determined at the time of permitting, with the approval coming from Nova Scotia Department of Environment and Climate Change who has jurisdiction over septic systems and wells.
(c) the suitability with any aspect relative to the movement of auto, rail and pedestrian traffic;	No concerns around the suitability were identified. The Area Manager did advise that "the condition of existing commercial access will need to be

	assessed prior to construction. The driveway may need to be narrowed for residential use and the paved parking area within the 5 meters setback from the Highway 215 right-of-way, will need to be removed. A Work Within Highway Right-of-Way Permit application will be required for the above noted work". Staff note that this matter will be dealt with at the time of permitting stage.
(d) the adequacy of the dimensions and shape of the lot for the intended use;	The Development Officer commented that the subject lot doesn't meet the minimum lot area and minimum road frontage requirement for the General Resource (GR) zone development standard. However, Section 5.13 of the current West Hants Land Use By-law would allow a new building to be erected on an existing undersized lot provided that all other applicable provisions of the LUB are satisfied. Therefore, the Development Officer had no concerns on this matter.
(e) the pattern of development which the proposal might create;	The Development Officer commented that they had no concerns regarding the pattern of development which the proposal might create. Development in the general area of the subject property consists primarily of established low density residential uses, which are consistent with the proposed development.
(f) the suitability of the area in terms of steepness of grade, soil and geological conditions, location of water courses, wetlands, and susceptibility of flooding;	The majority of the subject lot appears to be flat. No waterbodies or wetlands appear to be present on the mapping for the subject lot.

(g) whether the proposal meets the requirements of the appropriate provincial or federal agencies as well as whether it conforms to all other relevant municipal by-laws and regulations; and	All Municipal, Provincial, and Federal regulations will have to be met.
(h) any other matter required by relevant policies of this Strategy.	All relevant matters have been addressed in this report.

Attachment B – Public Information Meeting Notes

October 8, 2025

WHLUB Map Amendment: 5988 Highway 215, Kempt Shore (PID 45179462); File # 25-22

Meeting date and time	A Public Information Meeting was held on October 8, 2025 beginning at 6:00 p.m. The meeting was broadcast live on the Municipal YouTube Channel.
Attending	In attendance for the meeting: One (1) Chair: • Councillor Jannasch Six (6) members of Councillors: • Mayor Zebian • Deputy Mayor Francis • Councillor Ivey • Councillor B. Smith • Councillor B. Morton • Councillor Wheadon Four (4) members of staff: • CAO Phillips • Senior Planner Dunphy • Planner Hong • Planning Assistant Lake 1 members of the public.
Applicant Renee Redden **Property** 5988 Highway 215, Kempt Shore (PID 45179462)	Planner Hong outlined the application to rezone the lot from Rural Commercial (RC) to General Resource (GR) in order to build a single unit dwelling.
Comments	Comments from the public could be submitted by mail, e-mail and telephone between October 8-22, 2025. Staff did not receive any phone calls or written submissions during the comment period.
Adjournment	The Public Information Meeting was adjourned at approximately 7:30 p.m.

WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation X	Decision Request ☐	Councillor Activity ☐

To: Members of Planning and Heritage Advisory Committee (PAC/HAC)

Submitted by: _____
Alex Dunphy, Senior Planner

Date: November 13, 2025

Subject: Development Agreement: Irving Lands (PIDs 45190386, 45055241, 45055282, and 45366457), Windsor; File # 25-07

LEGISLATIVE AUTHORITY

Municipal Government Act Section 230

RECOMMENDATION

Staff recommends that the PAC/HAC forward a positive recommendation by passing the following motion:

…that PAC/HAC recommends that Council give First Reading and hold a Public Hearing to consider entering into a development agreement to allow a large-format retail store and several smaller retail stores on Cole Drive (PIDs PIDs 45190386, 45055241, 45055282, and 45366457) in Windsor by development agreement, which is substantively the same as the draft set out in Attachment B of the report File #25-07 to the Planning and Heritage Advisory Committee dated November 13, 2025.

…that PAC/HAC recommends that Council require that the development agreement with J. D. Irving, Limited which permits a large-format retail store and several smaller retail stores on Cole Drive (PIDs PIDs 45190386, 45055241, 45055282, and 45366457) in Windsor be signed within 120 days from the date of final approval by Council or the date that any appeals have been disposed of; otherwise this approval will be void and obligations arising hereunder shall be at an end.

…that PAC/HAC recommends that Council approves the necessary land transfer of a portion of PID 45055282 to the Owner and a portion of PID 45190386 to the Municipality, as well as an

easement across a portion of PID 45055282 in favour of the Municipality and two easements across PID 45190386 in favour of the Municipality, as part of this Development Agreement.

BACKGROUND

Property X	Public Opinion ☐	Environment ☐	Social ☐	Economic ☐	Councillor Activity ☐

A completed application was received from Chrystal Fuller of Brighter Community Planning on behalf of the landowner, J. D. Irving, Limited, on March 13, 2025. The application is to allow a large-format retail store and several smaller retail stores by development agreement.

This application also included a rezoning component which is considered in a separate report under File # 25-11 and 25-12. The development agreement portion of this application is not contingent on the rezoning portion of the application.

DISCUSSION

While some of the subject lots extend past the boundary of the Windsor planning area, the proposed development area all takes place within the Windsor planning area. In considering this application, staff have only considered the portion of the subject lots within the Windsor planning area and the applicable policies within the Windsor planning documents.

The subject lots vary in designation. PIDs 45190386 and 45055241 are included entirely in the Wentworth Road Gateway District as well as being split designated Commercial on the portions fronting Wentworth Road and designated Residential on the rear portions. PID 45055282 is designated Joint Industrial and PID 45055282 is designated Residential. The designation of each property is based on the Generalized Future Land Use Map (GFLUM) of the Windsor Municipal Planning Strategy (WMPS) (Figure 1). PID 45055241 and the front portion of PID 45190386 are zoned Wentworth Road Commercial (WR-C). The rear portion of PID 45190386 is zoned Agriculture (AG). PID 45055282 is zoned Light Industrial Type Three (LI-3). And PID 45055282 is zoned Medium Density Residential (R-2). The zoning of each property is based on Schedule A of the Windsor Land Use By-law (WLUB) (Figure 2).

The subject lots are all primarily undeveloped land. Uses surrounding the proposed development include newly established residential development, fast food restaurants, a gas station, a grocery store, hotel, and the exhibition grounds.

Windsor Land Use By-law

Section 6.0 of the WLUB, *Development Agreements*, states that: *The following developments may be considered only by development agreement in accordance with the Municipal Government Act and the Municipal Planning Strategy*:

(j) development proposals in the Wentworth Road Gateway District in accordance with Policy 8.6.15 of the Municipal Planning Strategy for: comprehensively designed developments of grouped dwellings with three or more dwelling units which may include townhouse dwellings, triplex dwellings and mixed use apartment dwellings, large format retail stores exceeding 50,000 ft2 (4,645 m2) in commercial floor area; regional shopping centres; institutional uses; mixed use; multiple unit residential; or light industrial development;

Development Agreement

A development agreement is a contract between an owner of land and the Municipality to allow Council to consider a use that is not a listed permitted use within a zone on a specific lot. The ability for Council to consider a development agreement must be stated in the Land Use By-law and the Municipal Planning Strategy must identify the kinds of uses Council may consider in each area. Uses which Council may consider are those which Council has determined may have sufficient impact on an area that a negotiated process is required to ensure the potential impact is minimized. A proposal being considered must be measured against only the specific and general criteria for the proposal in the MPS and not any other criteria.

Municipal Planning Strategy Review

Policy 8.5.1 of the WMPS is the primary enabling policy to be considered for this application. This policy provides Council with the ability to consider the permitting of large format retail stores and expansions to existing large format retail stores by development agreement. The full list of criteria is included within this report in Attachment A. In summary, the proposal meets the criteria since the proposed development is for a large format retail store.

Policy 8.5.2 of the WMPS provides the criteria to consider development agreements applications enabled by Policy 8.5.1. The full list of criteria is included with this report in Attachment A. In summary, the proposal meets the criteria as:

- the proposal included an acceptable traffic impact study and meets all parking, access, and pedestrian safety concerns;
- the proposed development agreement meets all architectural, setback, landscaping, and buffering requirements;
- the proposed development agreement will not conflict with neighbouring uses; and
- the Development Officer and Municipal Traffic Authority have no concerns which have not been addressed in this report.

Policy 8.6.16 of the WMPS provides additional criteria to consider when reviewing proposals for development agreements applications in the Wentworth Road Gateway District. The full list of

criteria is included with this report in Attachment A. In summary, the proposal meets the criteria as:

- the proposed development agreement will not conflict with neighbouring uses;
- the proposed development agreement meets all architectural requirements and includes landscaping along the road frontage of the proposed development;
- the proposal included an acceptable traffic impact study; and
- the Development Officer and Municipal Traffic Authority have no concerns which have not been addressed in this report.

Policy 8.6.4 of the WMPS provides justification to require additional landscaping requirements on the road frontage of developments in the Wentworth Road Gateway District. The draft development agreement requires landscaping and buffering which meet the requirements set out in this policy. Neither the Development Officer or the Traffic Authority had any concerns regarding the streetscape, pedestrian movement, or vehicle traffic.

Policy 8.6.8 of the WMPS provides certain provisions to be included within development agreement applications for proposals within the Wentworth Road Gateway District. The full list of criteria is included with this report in Attachment A. In summary, the proposal meets the criteria as:

- the proposed development agreement includes a natural buffer along the road frontage of the proposed development as well as a provision to require landscaping within the parking areas;
- the proposal does not raise any pedestrian safety concerns; and
- the Development Officer and Municipal Traffic Authority have no concerns which have not been addressed in this report.

Policy 16.3.1 of the WMPS establishes the general criteria that must be considered for all development agreements applications. The full list of criteria is included with this report in Attachment A. In summary, the proposal meets the criteria as:

- the proposal is not considered premature or inappropriate for the area;
- no municipal costs related to the proposal are anticipated; and
- the Fire Chief, Development Officer, Manager of Building and Fire Inspection Services, Public Works Engineering Division, and Municipal Traffic Authority have no concerns which have not been addressed in this report.

MUNICIPAL CLIMATE CHANGE ACTION PLAN

The Municipal Climate Change Action Plan (MCCAP) for Windsor (2014) highlights two simulated flooding scenarios. The first scenario is based on a storm surge that occurred in 1997,

which shows the expected damage is to occur along the coastline. The second scenario shows the simulated flooding extent for probable maximum flood due to climate change. Under this scenario most of the community of Windsor will experience extensive flooding. However, only a small portion of the subject lots fronting on Wentworth Road would be at risk based on the mapping. The subject lots do not contain any identified watercourses. The Municipal Public Works department has already received a stormwater management plan that has been deemed acceptable to address any issues regarding runoff.

Property owners are responsible for ensuring that the lot is suitable for the proposed uses.

NEXT STEPS

As noted above, the draft development agreement is consistent with the intent, objectives, policies and criteria of the WMPS. As a result, it is reasonable to consider permitting large-format retail store and several smaller retail stores on Cole Drive (PIDs PIDs 45190386, 45055241, 45055282, and 45366457) in Windsor by development agreement.

Additionally, note that the process has been accelerated based on a request received from the applicant for a Special Council Meeting to take place the same day as the Planning and Heritage Advisory Committee Meeting, which was subsequently approved by Council on July 22nd, 2025.

Process

Public Information Meeting – March 5

▼

Staff Review

▼

PAC/HAC Review and Recommendation – November 13

▼

Regional Council First Reading – November 25

▼

Public Hearing & Second Reading – January 27

▼

Notice of Approval in Local Paper

▼

14-Day Appeal Period

FINANCIAL IMPLICATIONS

There are no financial implications to the Municipality or residents with regard to the filing of this report.

ALTERNATIVES

In response to this application, PAC/HAC may recommend that Council:

- hold First Reading and authorize a Public Hearing to approve the development agreement as drafted or as specifically revised by direction of PAC/HAC;
- hold First Reading and authorize a Public Hearing to refuse the development agreement as drafted, citing the criteria that PAC/HAC consider not to be met; or
- provide alternative direction such as requesting further information on a specific topic.

ATTACHMENTS

Figure 1	Windsor GFLUM Extract
Figure 2	Windsor Zoning Map Extract
Attachment A	Policy Summary for Development Agreement
Attachment B	Draft Development Agreement
Attachment C	Traffic Impact Study
Attachment D	Public Information Meeting Notes

Report Prepared by: _____

Alex Dunphy, Senior Planner

Report Approved by: _____

Kari Fougere, Acting Director of Planning and Development

Figure 1 – Windsor GFLUM Extract

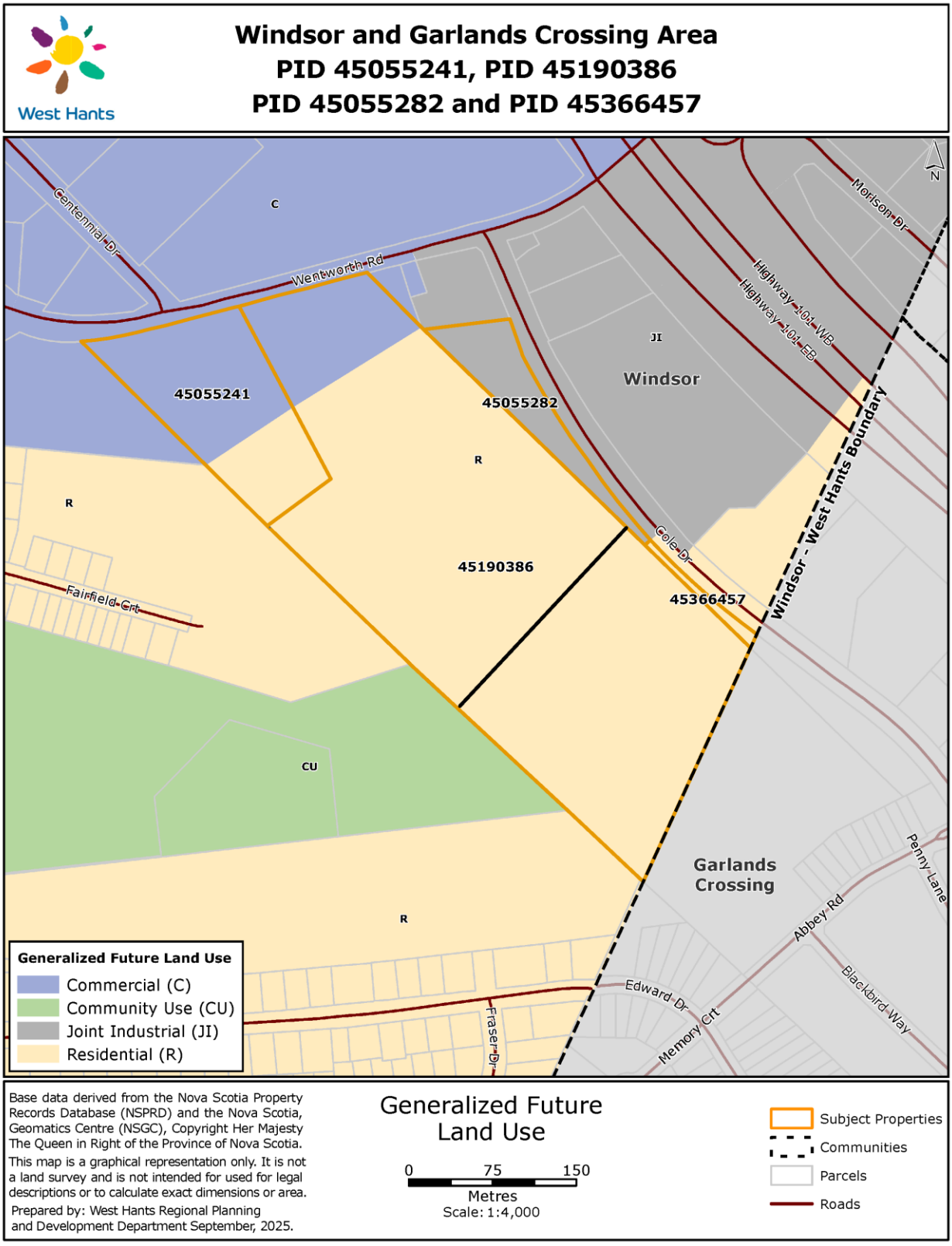
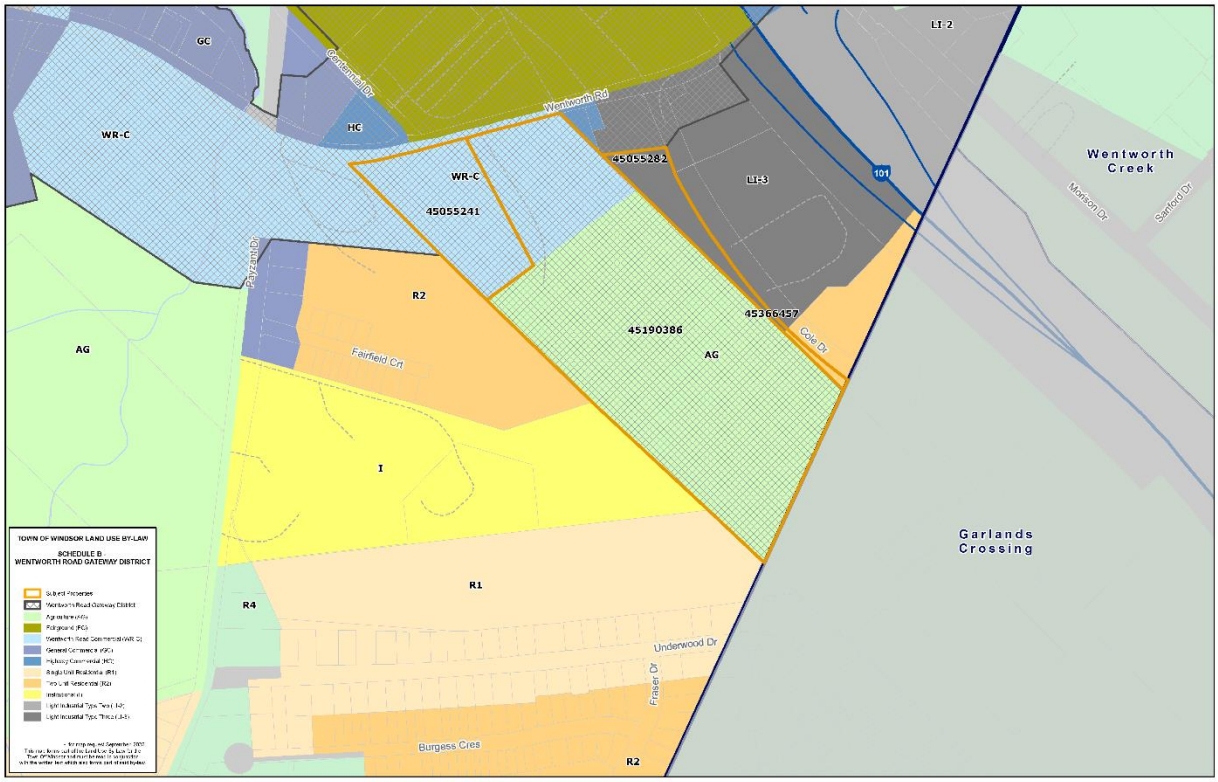


Figure 2 – Windsor Zoning Map Extract



Attachment A – Policy Summary for Development Agreement

Policy 8.5.1 *It shall be the policy of Council to consider the following categories of large format retail stores by development agreement: (Amendment WMPS 09-02 Effective September 3, 2009)*	
(a) new large format retail stores exceeding 50,000 ft2 (4,645 m2) in commercial floor area in the Wentworth Road Gateway District;	The proposed development is to allow for a new large format retail store exceeding 50,000 sq. ft. in commercial floor area.
(b) new large format retail stores in the Joint Industrial Type Three (LI-3) zone; and	Not applicable.
(c) expansions greater than 5,000 ft2 (464.5 m2) to existing large format retail stores.	Not applicable.

Policy 8.5.2 *In considering a development agreement pursuant to Policy 8.5.1, Council shall have due regard to the following criteria: (Amendment WMPS 09-02 Effective September 3, 2009)*	
(a) adequate provision is made for parking and access;	The draft development agreement requires one parking space per 300 sq. ft. of commercial floor area and must be landscaped to avoid the appearance of large, uninterrupted expanses of asphalt. The Development Officer did not have any concerns regarding parking provided by the proposed development. As part of the development agreement negotiations, the Municipality will be providing additional access to Cole Drive through an easement and a conveyed parcel of land to construct two driveways. The Traffic Authority had no concerns regarding access, based on the negotiated terms.
(b) pedestrian access and safety are addressed;	The draft development agreement requires a defined pedestrian access to the primary building entrance. The Traffic Authority had no concerns regarding pedestrian access and safety.

(c) adequate setbacks and yards shall be provided;	The setbacks within the draft development agreement meet the requirements of the Land Use By-law. The Development Officer had no concerns regarding setbacks.
(d) adequate provision, including screening and buffering, is made to minimize conflict between the proposed development and neighbouring uses with respect to access, parking, noise and hours of operation;	The draft development agreement has provisions which require buffering of the proposed development from neighbouring residential properties. The Development Officer had no concerns regarding the proposed buffering.
(e) the proposed use will not conflict with neighbouring uses;	The proposed development is similar in nature to the existing uses in the area. Surrounding properties are either commercial or undeveloped for the majority of the area abutting the subject property.
(f) the architectural design and scale of the proposed development is compatible with surrounding buildings;	The intent of the Wentworth Road Commercial (WR-C) zone is to host large scale commercial uses. The proposed development will match the design and scale of the surrounding commercial buildings.
(g) the building design incorporates windows and other elements in the street level façade to avoid the appearance of solid blank walls;	The draft development agreement has provisions to prevent the appearance of an uninteresting street level façade.
(h) landscaping is provided which reduces the visual impact of the development on neighbouring properties, particularly with respect to large parking lots;	The draft development agreement has provisions which require the parking areas to be buffered from neighbouring residential properties. Additionally, there is a provision to require landscaping within the parking areas to avoid the appearance of large, uninterrupted expanses of asphalt.
(i) the developer provides a traffic study conducted by a qualified person which demonstrates that the surrounding street network will efficiently accommodate the	A Traffic Impact Study was completed by DesignPoint on behalf of the applicant on January 24, 2025. There are a few recommendations stemming

anticipated traffic flows and that the development will not necessitate major infrastructure improvements such as traffic lights at the expense of the municipal unit;	from the report including upgrading Payzant Drive intersection, installing a turning lane on Wentworth Road and Cole Drive, driveway alignment with the Exhibition Grounds entrance, and exploring the feasibility of upgrading the Cole Drive intersection. The Traffic Authority acknowledged this report and did not have any concerns with it.
(j) if the proposed development is located in the Wentworth Road Gateway District, the specific provisions for development as contained in Policy 8.6.16;	See Policy 8.6.16 below.
(k) any other matter which may be addressed by development agreement; and	All relevant matters have been addressed in this report.
(l) the provisions of Policy 16.3.1.	See Policy 16.3.1 below.

Policy 8.6.16 *It shall be the policy of Council to have due regard to the following in reviewing proposals in the Wentworth Road Gateway District for rezoning to the WR-C zone pursuant to Policy 8.6.14 or development agreements pursuant to Policy 8.6.15:*	
(a) the proposed use will not conflict with neighbouring uses;	See Criteria (e) of Policy 8.5.2 above.
(b) the architectural design and scale of the proposed development is compatible with surrounding commercial and/or residential buildings and enhances the appearance of the streetscape, consistent with the objectives of the Wentworth Road Gateway District;	See Criteria (f) of Policy 8.5.2 above. Additionally, the proposed development aligns with the objectives of the Wentworth Road Gateway district through conformance to the commercial nature of the area as well as the inclusion of landscaping and pedestrian walkway on the subject property.
(c) the building design incorporates windows and other elements in the street level façade to avoid the appearance of solid blank walls;	See Criteria (g) of Policy 8.5.2 above.
(d) the developer provides a traffic study, acceptable to the Town and conducted by a qualified person, which demonstrates that the surrounding street network will efficiently	See Criteria (i) of Policy 8.5.2 above.

accommodate the anticipated traffic flows and that the development will not necessitate major infrastructure improvements such as traffic lights at the expense of the Town;	
(e) the provisions of Policies 8.6.4 and 8.6.8;	See Policies 8.6.4 and 8.6.8 below.
(f) any other matter which may be addressed in a development agreement or land use by-law; and	All relevant matters have been addressed in this report.
(g) the provisions of Policy 16.3.1	See Policy 16.3.1 below.

***Policy 8.6.4** It shall be the policy of Council to treat the Wentworth Road Gateway District as a special development area where new developments shall be required to provide landscaping and other features that contribute to the overall attractiveness of the streetscape and create a safe and pleasant pedestrian environment, as well as allowing for efficient traffic movement.*	All such matters are dealt with in the draft development agreement. Neither the Development Officer or the Traffic Authority had any concerns regarding the streetscape, pedestrian movement, or vehicle traffic.

***Policy 8.6.8** It shall be the intention of Council that, within the Wentworth Road Gateway District, the following matters will be addressed through Land Use By-law requirements and development agreement provisions:*	
(a) landscaping along the street frontage to enhance the overall attractiveness of the streetscape and provide a buffer between the sidewalk and commercial or other development;	The development agreement portion of the proposed development does not have street frontage on Wentworth Road. However, the draft development agreement does include provisions regarding landscaping along the street frontage on Cole Drive. A large portion of this street frontage is proposed as two stormwater retention ponds, which will help to provide a buffer between the streetscape and the proposed development.
(b) landscaping within parking lots to avoid the appearance of large, uninterrupted expanses of asphalt;	The draft development agreement includes a provision to require landscaping within the parking areas to

	avoid the appearance of large, uninterrupted expanses of asphalt.
(c) safe pedestrian access from the sidewalk to new developments by means of walkways or clearly defined trails;	See Criteria (b) of Policy 8.5.2 above.
(d) other similar provisions.	All relevant matters have been addressed in this report.

Policy 16.3.1 *In considering development agreements and amendments to the Town of Windsor Land Use By-law, in addition to the criteria set out in various policies of this Strategy, Council shall consider:*	
(a) whether the proposal is considered premature or inappropriate in terms of:	
(i) the adequacy of sewer and water services;	The Public Works Engineering Division commented that they do not have any concerns regarding the adequacy of sanitary sewer and water services for the proposed development.
(ii) the adequacy of school facilities;	Not applicable for a commercial development.
(iii) the adequacy of fire protection;	The local Fire Chief commented that an additional hydrant on the premises would be ideal. This has been relayed to the applicant and has been accepted. The draft development agreement includes a provision to require consultation with the Fire Chief, prior to development permits being issued. Otherwise, both the local fire Chief and the Manager of Building and Fire Inspection Services commented they had no concerns regarding the adequacy of fire protection for the proposed development.

(iv) the adequacy of road networks adjacent to, or leading to the development; and	The Traffic Authority has no concerns regarding the adequacy of road networks to or surrounding the proposed development.
(v) the financial capacity of the Town to absorb any costs relating to the development.	Part of the negotiations of the draft development agreement include the conveyance of real property through easements or land transfer. The reason for this was to allow road access to the development and to ensure that stormwater could be managed properly. This negotiation was conducted by the Planning and Public Works departments with the applicant. No financial issues were raised based on the agreed upon terms of the negotiations between all parties.
(b) the suitability with any aspect relative to the movement of auto, rail and pedestrian traffic;	The Traffic Authority commented that they have no concerns regarding pedestrian or vehicle traffic. There is no active rail line in the vicinity.
(c) the adequacy of the dimensions and shape of the lot for the intended use;	The proposed development will meet the general lot requirements of the Land Use By-law. The Development Officer did not have any concerns regarding the dimensions and shape of the lot.
(d) the pattern of development which the proposal might create;	The proposed development aligns with the pattern of development in the area. The Development Officer had no concerns regarding the pattern of development.
(e) the suitability of the area in terms of steepness of grade, soil and geological conditions, location of water courses, wetlands, and susceptibility of flooding;	The Environmental constraints (Dykeland) overlay covers a small portion of the front of the PID 45055241 and 45190386. Otherwise, the majority of the subject lot appears to be gently sloped. No waterbodies or

	wetlands appear to be present on the mapping for the subject lot. Regarding the environmental constraint overlay, the applicant stated that "Irving will leave this area as open green space, except for constructing two driveways to Wentworth Road". Plus, a stormwater management plan has been provided and accepted by the Public Works Department.
(f) whether the proposal meets the requirements of the appropriate provincial or federal agencies as well as whether it conforms to all other relevant municipal by-laws and regulations; and	All Municipal, Provincial, and Federal regulations will have to be met.
(g) any other matter required by relevant policies of this Strategy.	All relevant matters have been addressed in this report.

Attachment B – Draft Development Agreement

DEVELOPMENT AGREEMENT

THIS AGREEMENT made this day of , YEAR.

BETWEEN:

WEST HANTS REGIONAL MUNICIPALITY, a body corporate pursuant to the *Municipal Government Act*, having its chief place of business at 76 Morison Drive, Wentworth Creek, in the County of Hants, Province of Nova Scotia,

(Hereinafter referred to as the "Municipality")

OF THE FIRST PART

- and -

J.D. IRVING, LTD., a body corporate with a head office at 300 Union Street, Saint John, Province of New Brunswick,

(Hereinafter referred to as the "Owner")

OF THE SECOND PART

WHEREAS the Owner is the registered owner of the parcels of land located at a portion of PID 45190386 and PID 45366457, and has been authorized by the owner of PID 45055282 located on Wentworth Road in Windsor, NS, hereinafter referred to as the "Properties", which are lands more particularly described in Schedule B attached hereto bound with a dashed black line; and

WHEREAS the Properties are partially designated Commercial and included in the Wentworth Road Gateway District and partially designated Residential on the Generalized Future Land Use Map of the Municipal Planning Strategy and partially zoned Wentworth Road Commercial (WR-

C) and partially zoned High Density Residential (R-3) on the Zoning Map of the Land Use By-law; and

WHEREAS the Owner has requested that the Municipality enter into a development agreement to permit a large-scale commercial development consisting of multiple retail buildings on the Property (the "Development"); and

WHEREAS Policy 8.6.15 of the Municipal Planning Strategy and Section 6.1 (j) of the Land Use By-law enables Council to consider large format retail stores exceeding 50,000 sq. ft. (4,645 sq. m.) in commercial floor area by development agreement; and

WHEREAS the Council of the Municipality, at a meeting held on MONTH DAY, YEAR, approved this request and adopted this Agreement by policy, subject to the execution of this development agreement by the parties hereto and the other conditions herein;

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the mutual covenants and agreements herein contained, the parties agree as follows:

PART 1 AGREEMENT CONTEXT

1.1 Definitions

In this Agreement, all words or phrases used shall carry their customary meaning unless otherwise set out in the Land Use By-law, except those defined as follows:

(a) "Active Construction" means that the Owner has active development and building permits for the construction of the building(s), and that construction activity including but not limited to equipment, machinery, and employees, are on-site working towards the necessary building inspections leading to an occupancy permit;

(b) "Ceased Operation" means the stopping of work on the Development once active construction has commenced for an extended period of time, but shall not apply to stoppages of a seasonal nature or resulting from Force Majeure; and

(c) "Commencement" means the date the Owner begins Active Construction on the buildings within this Agreement as permitted by an issued development and building permit.

1.2 Schedules

The following attached schedules shall form part of this agreement:

Schedule A - Legal Description

Schedule B - Site Layout

Schedule C – Stormwater and Access Layout

1.3 Municipal Planning Strategy, Land Use By-law and Subdivision By-law

(a) Municipal Planning Strategy means the Windsor Municipal Planning Strategy, effective on September 21, 2005, as amended, or successor by-laws;

(b) Land Use By-law means the Windsor Land Use By-law, effective on September 21, 2005, as amended, or successor by-laws;

(c) Subdivision By-law means the Windsor Subdivision By-law, effective on March 21, 2012, as amended, or successor by-laws.

PART 2 DEVELOPMENT REQUIREMENTS

2.1 Use

The Parties agree that uses on the Properties shall be limited to the following:

(a) those uses permitted by the underlying zoning in the Land Use By-law; and

(b) one large format retail store not permitted by underlying zoning expect through this agreement, up to and exceeding 50,000 sq. ft. (4,645 sq. m.) in commercial floor area.

Except as otherwise provided in this Agreement, the provisions of the Land Use By-law and the Subdivision By-law apply to any development undertaken pursuant to this Agreement.

2.2 Development Location and Design

(a) The Development location and design shall be generally consistent with the Site Plan shown in Schedule B.

(b) The Development Officer may approve changes to the Site Plan in accordance with reports generated in Section 2.9, *Site Drainage*, of this Agreement.

(c) The Development shall conform to the following site requirements:

Minimum front yard	25 ft. (7.62 m.)
Minimum side yard	25 ft. (7.62 m.)
Minimum rear yard	25 ft. (7.62 m.)
Maximum storey of main building	3 storeys
Maximum height of accessory building	20 ft. (4.57 m.)

(d) Accessory buildings are permitted in accordance with Section 5.1 of the Land Use By-law, Accessory Buildings and Structures.

(e) The Owner shall keep all undeveloped areas of the Property landscaped with the exception where it is not practical to do so such as areas of excessive slope or areas used for drainage. Landscaping may include grass, shrubs, trees or other appropriate vegetative cover.

(f) The Development shall incorporate architectural treatments on the front façades to provide visual interest and avoid the appearance of solid blank walls. Such treatments may include, but are not limited to, windows, variations in building materials, changes in plane, or other design features.

2.3 Access and Egress

(a) The Owner shall develop, construct, and maintain the driveways in the Development in general conformance with the driveways shown on Schedule B.

(b) WHRM shall grant Easement A (shown on Schedule C) to the Owner, allowing a driveway to connect to Cole Drive.

(c) WHRM shall convey Parcel A (shown on Schedule C) to the Owner, thereby providing additional frontage for the Development on Cole Drive and access for a second driveway through Parcel A. This parcel shall be subject to a storm drainage easement in favour of West Hants.

(d) A safe, continuous and clearly defined pedestrian walkway shall be provided from the street and the parking areas to the primary building entrance; the walkways may be a combination of crosswalks, sidewalks and trails.

2.4 Parking

(a) All parking spaces shall be located on the lot and shall be generally located as shown in Schedule B.

(b) A minimum of one parking space per 300 sq. ft. of commercial floor area shall be provided for the Development.

(c) Outside parking aisles and spaces shall be constructed to create a stable surface for vehicle traffic and be clearly demarcated and lined by the Owner. At the Owners option, they may be constructed using permeable construction materials to assist with stormwater retention.

(d) Each parking space shall be a minimum of 9 ft. by 20 ft. (2.7 m. by 6.1 m.) exclusive of driveways and maneuvering aisles. Parking aisles shall be a minimum of 20 ft. (6.1 m.) wide.

(e) Landscaped islands must be provided within parking areas to avoid the appearance of large, unbroken expanses of asphalt; islands may be located at the end of banks of parking stalls or separating banks of stalls.

(f) The number of parking spaces may be varied by the Development Officer if requested by the Owner.

2.5 Buffering

Outdoor parking shall be screened on the southwest and southeast sides of the Development Site, as shown on Schedule B, through the use of:

(a) a mix of local species of coniferous trees. At planting, each tree shall have a diameter of at least 2 in. measured at 4.5 ft. above the surrounding grade and a minimum height of 5 ft.; or

(b) a hedge of a variety of coniferous shrubs each of which will reach over 6 ft. in height at maturity; or

(c) a wall or an opaque fence which is a minimum of 5 ft. in height and of sufficient height to provide a visual buffer to the abutting property; or

any combination of the above, all arranged to form a dense or opaque screen, and maintained for as long as the buffer is required.

2.6 Signs and Lighting

Signage and illumination shall be regulated under Sections 5.18 and 7.0 of the Land Use By-law, *Illumination* and *Signs*, which controls lighting, size, location, and number of signs. Notwithstanding the Land Use By-law, one pylon sign shall be permitted on Cole Drive within the area impacted by this agreement. The Owner shall take reasonable steps to ensure exterior lighting for driveways, parking areas, signs or structures are shielded and directed downward to ensure there is no light spilling, glare or light cast over neighbouring properties or the street.

2.7 Maintenance

(a) The Owner shall keep the Property and building and any portion thereof in a reasonably clean and in good repair. Any driveways, fences, lawns, trees, shrubs, walkways and other landscaping elements shall be regularly maintained and kept in a tidy state and free from unkempt materials.

(b) The Owner shall maintain the driveways to a level adequate to allow for access by emergency services vehicles.

2.8 Servicing

(a) Waste Collection

The Owner shall have sole responsibility for waste collection within the Development.

(b) Water and Sewer Services

(i) The building shall be serviced with water and sewer services provided by West Hants Regional Municipality and authorized by the Municipal Engineer. Detailed design plans of the water and sewer servicing connections and layout shall be in accordance with the Municipal Services Specifications Manual and shall be submitted to the Municipal Engineer for approval prior to construction.

(ii) The Owner shall be responsible for constructing, installing and maintaining the water and sewer services on the Property.

(c) Snow Plowing

The Owner shall have sole responsibility for snow plowing within the Development.

2.9 Site Drainage

(a) No development permit shall be issued until the Owner provides to the Development Officer a stormwater management plan (Plan) in accordance with the WHRM Municipal Service Systems Specifications Manual. The Plan must satisfy the Municipal Engineer that historical flooding patterns and area drainage systems have been considered and that storm water discharge will balance pre- and post-construction flows on the private parcels being developed to ensure there is no negative impact on downstream properties. Following construction, if the Municipal Engineer determines that the pre-and post-construction flows on the private parcels being developed have not been sufficiently balanced through the implementation of the Plan (or for any other performance issues related to the implementation of the Plan), the Owner shall undertake such remediation as the Municipal Engineer may reasonably require. The Owner will be responsible for future adherence to the Plan on the private parcels being developed, including ongoing maintenance of the stormwater management features included in the Plan. Nothing in this development agreement relieves the Owner or their stormwater engineer from any liability they would otherwise have to owners or occupants of other properties for post-construction stormwater flows, and neither the Municipality or the Municipal Engineer is liable in any way for acceptance of stormwater management plans stamped by a professional engineer accredited with Engineers Nova Scotia.

(b) The pre/post construction flows from the private parcels being developed may be balanced through a combination of stormwater management features on the

private parcels being developed, on lands currently owned by WHRM and on lands which will be deeded to WHRM through this DA.

(c) Except as may be varied by the Municipal Engineer in writing:

(i) In addition to the requirement of 2.9 (a) for balancing flow rates on the private parcels being developed, the stormwater management plan shall include new flow control structures for Ponds 2-3 and an additional stormwater detention pond ("Pond 4") upstream of Pond 3 to mitigate existing flooding at the intersection of Cole Drive and Wentworth Road during high intensity rainfall events. The parties acknowledge and accept that the improvements to Ponds 2-3 and construction of Pond 4 will be completed by the Owner. Upon completion and transfer, Ponds 2-4 will be owned and operated by WHRM. WHRM be responsible for ongoing maintenance and future adherence to the Stormwater Management Plan related to these ponds.

(ii) Upon substantial completion of Ponds 2, 3 and 4 as verified by the Owner's engineer and Municipal Engineer, WHRM shall pay for 25% of the cost for Ponds 2-3 and 65% of the cost for Pond 4, up to a maximum of $281,821.88 + HST.

(iii) The Owner shall convey Parcel B (shown on Schedule C) to WHRM. Upon conveyance, Parcel B shall no longer be subject to this Agreement but shall continue to satisfy the pre/post requirements as if the pond was on the Owner's lands.

(iv) The Owner shall grant Easement B and C (shown on Schedule C) to WHRM, allowing access to Pond 4 and allowing municipal storm drainage to flow from Abbey Road to Pond 4, and from Pond 4 to Cole Drive.

2.10 Fire Safety

(a) No development permit shall be issued until the location and connection design of any fire hydrant(s) to the Municipal water supply has been approved by the water utility, in consultation with the district Fire Chief.

(b) All curbs shall be designed to be mountable by emergency services vehicles.

(c) All access routes shall be kept clear of overhead obstructions and wires that could impede emergency vehicles and be maintained by the Owner, unless otherwise agreed to in writing by the Fire Chief.

2.11 Subdivision

Subdivision of the Properties shall be permitted in accordance with the applicable Subdivision By-law, with the exception that the Subdivision shall be permitted using the

Easements shown in Schedule C under the terms of this agreement.

PART 3 CHANGES and DISCHARGE

3.1 The Owner shall not vary or change the use of the Property from that provided for in Section 2.1 of this Agreement, *Use*, unless a new agreement is entered into with the Municipality or this Agreement is amended.

3.2 Any matters in this Agreement which are not specified in Subsection 3.3 below are not substantive matters and may be approved in writing by the Development Officer without a public hearing, in accordance with Section 230 of the *Municipal Government Act*, provided that the Development Officer determines that the changes do not significantly alter the intended effect of this Agreement.

3.3 The following matters are substantive matters:

(a) the uses permitted on the Property as listed in Section 2.1, *Use*;

(b) the site drainage requirements listed in Section 2.9, *Site Drainage*, and

(c) the fire safety requirements listed in Section 2.10, *Fire Safety*.

3.4 Notwithstanding the foregoing, discharge of this Agreement is not a substantive matter, and this Agreement may be discharged by the Chief Administrative Officer in accordance with Section 229 of the *Municipal Government Act.*

3.5 Notice of Intent to Discharge this Agreement may be given by the Municipality to the Owner following a resolution of Council to give such Notice:

(a) as provided for in Section 4.1, *Commencement of Development,* of this Agreement; or

(b) at the discretion of the Municipality, with or without the concurrence of the Owner, where the Development has, in the reasonable opinion of Council on advice from the Development Officer, ceased operation for a period of at least twenty-four (24) months; or

(c) at any time upon the written request of the Owner, provided the use of the Properties is in accordance with the Land Use By-law or a new Agreement has been entered into.

3.6 This agreement may be discharged this Agreement thirty (30) days after a Notice of Intent to Discharge has been given.

PART 4 IMPLEMENTATION

4.1 Commencement of Development

(a) The Owner may not commence any construction (except civil grading) or use on the Property until the Municipality has issued any development permit, building permit and/or occupancy permit, if required. The date of commencement will be determined as the date the Owner begins Active Construction on the building within this Agreement as permitted by an issued development and building permit.

(b) Active Construction shall commence not later than forty-eight (48) months from the date this Agreement is signed. If, in the opinion of the Development Officer, this time limit has not been met, this Agreement may be discharged at the option of the Municipality's Chief Administrative Officer in accordance with Section 229 of the *Municipal Government Act* 30 days after giving Notice of Intent to Discharge to the Owner. Upon the written request of the Owner, the Municipality, may grant an extension to the date of commencement of Development without such an extension being deemed to be an amendment to this Agreement.

(c) If the Owner is bona fide delayed from commencing the Development for reasons which are beyond the Owner's control, the determination of which shall be at the sole discretion of the Development Officer, then performance by the Owner is excused for the period of the delay and the time period for the Owner to perform their obligations shall be extended by the Development Officer in writing for an equivalent period, without such an extension being deemed to be an amendment to this Agreement.

4.2 Material to be Provided

(a) The Owner shall provide record drawings to the Development Officer for any portion of the development for which an engineered design is required, within ten (10) days of completion of any work which requires the engineered design.

(b) The Owner shall, upon written request, provide the Municipality with copies of any documentation, permits or approvals required by Provincial or Federal governments or agencies.

PART 5 ADMINISTRATION and COMPLIANCE

5.1 Compliance with Other Bylaws and Regulations

(a) Nothing in this Agreement shall exempt the Owner from complying with Federal, Provincial and Municipal laws, by-laws and regulations in force or from obtaining any Federal, Provincial, or Municipal license, permission, permit, authority, or approval required thereunder.

(b) Where the provisions of this Agreement conflict with those of any by-law of the Municipality applicable to the Property (other than the Land Use By-law to the extent varied by this Agreement) or any statute or regulation, the higher or more stringent requirements shall prevail.

5.2 Severability of Provisions

The provisions of this Agreement are severable from one another and the invalidity or unenforceability of one provision shall not affect the validity or enforceability of any other provision.

5.3 Interpretation

(a) Where the context requires, the singular shall include the plural and the neutral gender shall include the masculine and feminine.

(b) Where the written text of this Agreement conflicts with information provided in the Schedules attached to this Agreement, the written text of this Agreement shall prevail.

(c) References to particular sections of statutes and bylaws shall be deemed to be references to any successor legislation and bylaws even if the content has been amended, unless the context otherwise requires.

5.4 Municipal Responsibility

(a) The Municipality does not make any representations to the Owner about the suitability of the Property for the development proposed by this agreement. The Owner assumes all risks and must ensure that any proposed development complies with this Agreement and all other laws pertaining to the Development.

(b) Any failure of the Municipality to insist upon a strict performance of any requirements or conditions contained in this Agreement shall not be deemed a waiver of any rights or remedies that the Municipality may have and shall not be deemed a waiver of any subsequent breach or default in the conditions or requirements contained in this Agreement.

5.5 Breach of Terms or Conditions

Upon breach of any term or condition of this Agreement, the Municipality may notify the Owner in writing. In the event that the Owner has not cured any such breach or entered into arrangements with the Municipality related to such breach to the Municipality's satisfaction, acting reasonably, within six (6) months of such notice then the Municipality may rely upon the remedies contained in Section 264 of the *Municipal Government Act* and may enter the land and perform any of the terms contained in the Development Agreement, or take such remedial action as is considered necessary to

correct a breach of the Agreement, including the removal or destruction of anything that contravenes the terms of the Agreement and including decommissioning the site. It is agreed that all reasonable expenses, whether arising out of the entry on the land or from the performance of the terms, are a first lien on the land that is the subject of the Development Agreement.

5.6 Costs

The Owner shall pay all costs associated with registering this Agreement and all costs associated with any amendment thereof.

5.7 Development Agreement Bound to Land

This Agreement shall be binding upon the parties hereto and their heirs, executors, administrators, successors and assigns, and shall run with the land which is the subject of this Agreement until such time as it is discharged by the Municipality in accordance with Section 229 of the *Municipal Government Act*. Assignment of Agreement

The Owner may, at any time and from time to time, transfer or assign this Agreement and its rights hereunder and may delegate its obligations hereunder to an assign, successor, heir, or purchaser of the land bound by this Agreement.

5.8 Written Notice

(a) The Municipality may serve notice on the Owner personally or by ordinary mail which shall be deemed to have been received within three (3) business days of mailing, addressed to J.D. IRVING, LTD., 300 Union Street, Saint John, New Brunswick, E2L 4M3, or at any other address provided by the Owner in writing.

(b) The Owner may serve notice on the Municipality by registered mail addressed to the Chief Administrative Officer, West Hants Regional Municipality, 76 Morison Drive, P.O. Box 3000, Windsor, NS, B0N 2T0, or at any successor address provided by the Municipality to the Owner in writing.

5.9 Full Agreement

This Agreement constitutes the entire agreement and contract entered into by the Municipality and the Owner. No other agreement or representation, oral or written, shall be binding.

IN WITNESS WHEREOF this Agreement was properly executed by the respective parties hereto on the day and year first above written.

SIGNED, SEALED AND DELIVERED	**) WEST HANTS REGIONAL**
In the presence of:	) **MUNICIPALITY**
	)
	)
	)
_____	Per: _____
Witness	) Abraham Zebian, Mayor
	)
	)
_____	) Per: _____
Witness	) Deanna Snair, Municipal Clerk
	)
	)
	) **J.D. IRVING, LTD.**
	)
	)
_____	Per: _____
Witness	) Signing Authority, Title

PROVINCE OF NOVA SCOTIA
COUNTY OF HANTS

ON THIS day of , A.D. YEAR, before me, the subscriber, personally came and appeared , a subscribing witness to the foregoing Indenture, who, having been by me duly sworn, made oath and said that **THE WEST HANTS REGIONAL MUNICIPALITY,** one of the parties thereto, caused the same to be executed in its name and on its behalf and its corporate seal to be thereunto affixed in presence.

_____

A Commissioner of the Supreme Court of Nova Scotia

PROVINCE OF NOVA SCOTIA
COUNTY OF HANTS

ON THIS day of , A.D. YEAR, before me, the subscriber, personally came and appeared , a subscribing witness to the foregoing Indenture, who, having been by me duly sworn, made oath and said that, **Signing Authority**, one of the parties thereto, signed, sealed and delivered the same in presence.

_____

A Commissioner of the Supreme Court of Nova Scotia

AFFIDAVIT OF CLERK

WEST HANTS REGIONAL MUNICIPALITY

I, Deanna Snair of _____, Hants County, Nova Scotia make oath and swear that:

1. I am the Clerk of the West Hants Regional Municipality (the "Municipality") and I have personal knowledge of the matters to which I have sworn in this Affidavit.

2. The Municipality is a body corporate pursuant to the *Municipal Government Act*, S.N.S. 1988, c.18, as amended.

3. I acknowledge that the Municipality executed the attached Instrument by its proper designates duly authorized in that regard under seal on the date of this Affidavit pursuant to subsection 13(3) of the *Municipal Government Act*, S.N.S. 1988, c.18, as amended. This acknowledgement is made pursuant to subsection 31(a) of the Registry Act, R.S.N.S. 1989, c.392 and/or clause 79(1)(a) of the Land Registry Act, S.N.S. 2001, c.6, as amended, for the purpose of registering or recording the Instrument.

4. The Municipality is resident in Canada for the purposes of the Income Tax Act (Canada).

I certify that on this _____, YEAR
the Municipal Clerk, Deanna Snair came before me, made oath,
and swore the foregoing affidavit at
_____, Nova Scotia.

_____ _____

A BARRISTER/COMMISSIONER OF THE SUPREME COURT OF NOVA SCOTIA
Print name/affix seal

Deanna Snair, Clerk

Canada
Province of Nova Scotia

AFFIDAVIT & PROOF OF EXECUTION (CORPORATE)

I, Signing Authority, Nova Scotia, make oath and say that:

1. I, Signing Authority of **J.D. IRVING, LTD.**, the "Corporation". Except as otherwise stated I have personal knowledge of the matters to which I have sworn in this Affidavit.

2. I acknowledge that I executed the foregoing instrument on behalf of the Corporation on the date of this affidavit; this acknowledgment is made for the purpose of registering such instrument pursuant to s.31(a) of the Registry Act, R.S.N.S. 1989, c.392 or ss.79 and 83 of the Land Registration Act as the case may be.

3. I verify that I have the authority to execute the foregoing instrument on behalf of the corporation and thereby bind the Corporation.

4. The Corporation is a resident of Canada under the Income Tax Act (Canada).

5. The ownership of a share or an interest in a share of the Corporation does not entitle the owner of such share or interest in such share to occupy a dwelling owned by the Corporation.

I certify that on this _____, YEAR
the Deponents came before me, made oath,
and swore the foregoing affidavit at
_____, Nova Scotia.

_____ _____

A BARRISTER/COMMISSIONER OF THE SUPREME COURT OF NOVA SCOTIA

Signing Authority, Title

Schedule A
Legal Description – PID 45055241

Parcel Description
Registration County: Hants County
Street/Place Name: Wentworth Road/Windsor
Title of Plan: Plan of Subdivision Lot GL-1 Lands of Ralph G. Lawrence, Windsor, Hants County, Nova Scotia
Designation of Parcel on Plan: Lot GL-1
Registration Number of Plan: 6641
Registration Date of Plan: 1991-11-04

*** Municipal Government Act, Part IX Compliance ***

Compliance:

The parcel is created by a subdivision (details below) that has been filed under the Registry Act or registered under the Land Registration Act

Registration District: HANTS COUNTY
Registration Year: 1991
Plan or Document Number: 6641

Legal Description – PID 45190386

Parcel Description
ALL that certain parcel of land being at Cole Road, Windsor, in the County of Hants, Province of Nova Scotia, being LOT KL-22-R1 as shown on a plan entitled, Plan of Subdivision of LOTS 1 TO 47 and PARCELS AR, BW, PL and SWP being a Subdivision and Consolidation of LOT KL-21 and LOT KL-22 Lands of J.D. IRVING LIMITED. Prepared by DesignPoint Engineering & Surveying Ltd. being certified by Luke J. Sarginson, NSLS, dated the 16th day of April, 2024, being more particularly described as follows:

COMMENCING at a survey marker placed in the south road limit of Wentworth Road and at the Northeast corner of the lands of Kenneth Lawrence and Lucy G. Van Kippersluis, being PID 45055241 and Lot GL-1 as conveyed at Book 882 Page 830 and shown on Registry Plan Number 6641 registered at the Land Registration Office for Hants County at Windsor;

THENCE N 74 degrees 25 minutes 05 seconds E a distance of 386.62 feet to a survey marker;

THENCE southeasterly along the southwest sides of the lands formerly of Thomas and Ruth Davis now of Di Diao Real Estate, Lot 5 shown on a Plan of Survey recorded as Plan No. 8881, Windsor West Hants Industrial Commission and the remainder of Lot KL-21, lands of J.D. Irving limited shown as Lot 8 and remaining lands on Plan no. 87134277 to the west side of Lot 2 shown on the first mentioned plan of subdivision a distance of 2,163 feet more or less;

THENCE southwesterly along the northwest side of Lots 2, 3, 4, 5, and 6 to the survey marker at the north west corner of lot 6 shown on the said plan of subdivision of lands of J. D. Irving Limited;

THENCE south 42 degrees 43 minutes 22 seconds east 133.76 feet to at survey marker on the north west side of Abbey Road;

THENCE south 47 degrees 16 minutes 38 seconds west 316.87 feet to a survey marker on the north side of parcel RR-1 lands of 3229190 Nova Scotia Limited;

THENCE north 48 degrees 26 minutes 10 seconds west 411.26 feet to a survey marker at the northern most corner of Lot 19-A lands of John and Sandra Ritter;

THENCE northwesterly by the northeast line of lands of Robert P. And Mary A. Davidson, Hants Community Hospital, and Lot 2-W-1 shown on document number 107280720 a distance of 1,508 feet more or less to the said Lot GL-1;

THENCE N 53 degrees 44 minutes 18 seconds E a distance of 234.00 feet to a survey marker;

THENCE N 29 degrees 24 minutes 01 seconds W a distance of 578.21 feet to a survey marker at the point of commencement.

SUBJECT TO a right of way with Her Majesty the Queen recorded at the Hants County Registry of Deeds on February 4, 1970 in Book 278 at Page 240 as Document 66.

*** Municipal Government Act, Part IX Compliance ***

Compliance:

The parcel is created by a subdivision (details below) that has been filed under the Registry Act or registered under the Land Registration Act

Registration District: HANTS COUNTY
Registration Year: 2024
Plan or Document Number: 125174434

Legal Description – PID 45434164

ALL that certain parcel of land being at Cole Road, Windsor, in the County of Hants, Province of Nova Scotia, being LOT KL-22-R2 as shown on a plan entitled, Plan of Subdivision of LOTS 1 TO 47 and PARCELS AR, BW, PL and SWP being a Subdivision and Consolidation of LOT KL-21 and LOT KL-22 Lands of J.D. IRVING LIMITED. Prepared by Design Point Engineering & Surveying Ltd. being certified by Luke J. Sarginson, NSLS, dated the 16th day of April, 2024, being more particularly described as follows:

Commencing at a survey marker at the southeasterly corner of Lot 8 shown on a plan of subdivision recorded in the Land Registry for Hants County as document number 87134277 where it intersects a road reserve shown as Parcel CD-4 on the said plan of subdivision;

THENCE south 46 degrees 53 minutes 58 seconds east 434.29 feet to a survey marker;

THENCE southeasterly by the southwestern line of lands of J.D. Irving Limited described in the second description of a deed conveyed to J.D. Irving Limited dated July 8, 2021, and registered as document number 118990093 on July 23, 2021, 1687 feet more or less to a survey marker at the northwestern corner of Parcel A shown on a plan of survey recorded in the Land Registration Office for Hants County as document number 84319913 on February 10, 2006;

THENCE southeasterly along the southwest side of the said Parcel A 808.69 feet more or less to a survey marker;

THENCE southwesterly along the northern boundary of lands of Jason and Krista Hart 354 feet more or less to Lot 5ABC shown on a plan of survey recorded in the Land Registration Office for Hants County as plan number 7730;

THENCE northwesterly by the northeastern line of the said Lot 5ABC, Lots 6-11 shown on Plan number 5518, Lot 12-13 shown on Plan number 5518, Lot 13A shown on Plan number 7404, Lots 28 to 32 including Parcel LL-2 shown on Plan document number 92673467, to a survey marker placed 34.20 feet from the northern most corner of Lot A-10 lands of Glenn Johnson, 2041feet more or less;

THENCE North 47 degrees 57 minutes 49 seconds West 710.75 feet to a survey marker placed at the south side of Abbey Road;

THENCE North 47degrees 16 minutes 38 seconds East 186.80 feet to a survey marker placed

THENCE south 87degrees 43 minutes 22 seconds East 21.19 feet to a survey marker placed

THENCE south easterly by the south side of Blackbird Way 711.5 feet to a survey marker placed

THENCE North 42 degrees 17 minutes 40 seconds East 52.50 feet to a survey marker placed;

THENCE northwesterly following the north side of Blackbird Way 706.94 feet to a survey marker placed;

THENCE North 2 degrees 16 minutes 38 seconds East 21.19 feet to a survey marker placed;

THENCE following the south side of Abbey Road North 47degrees 16 minutes 38 seconds East 139.02 feet to a point of curvature and a survey marker placed;

THENCE following the south side of Abbey Road the arc of a curve 78.41 feet to a survey marker placed;

THENCE following the south side of Abbey Road North 61 degrees 46 minutes 07 seconds East 91.79 feet to a survey marker placed;

THENCE south 73 degrees 16 minutes 39 seconds East 21.01 feet to a survey marker placed

THENCE southeasterly following the south side of Penny Lane 575.47 to a survey marker placed;

THENCE North 43 degrees 35 minutes 01seconds East 52.50 feet to a survey marker placed;

THENCE northwesterly following the north side of Penny Lane 558.84 feet to a survey marker placed;

THENCE North 16 degrees 43 minutes 21 seconds East 20.88 feet to a survey marker placed;

THENCE along the south side of Abbey Road to Lot 8 shown on a plan of subdivision recorded in the Land Registry for Hants County as document number 87134277 aforesaid;

THENCE south 46 degrees 53 minutes 57 seconds East 102.05 feet to the place of beginning.

THIS IS A NEW DESCRIPTION FOR REMAINDER LANDS CREATED BY PLAN.

*** Municipal Government Act, Part IX Compliance ***

Compliance:

The parcel is created by a subdivision (details below) that has been filed under the Registry Act or registered under the Land Registration Act

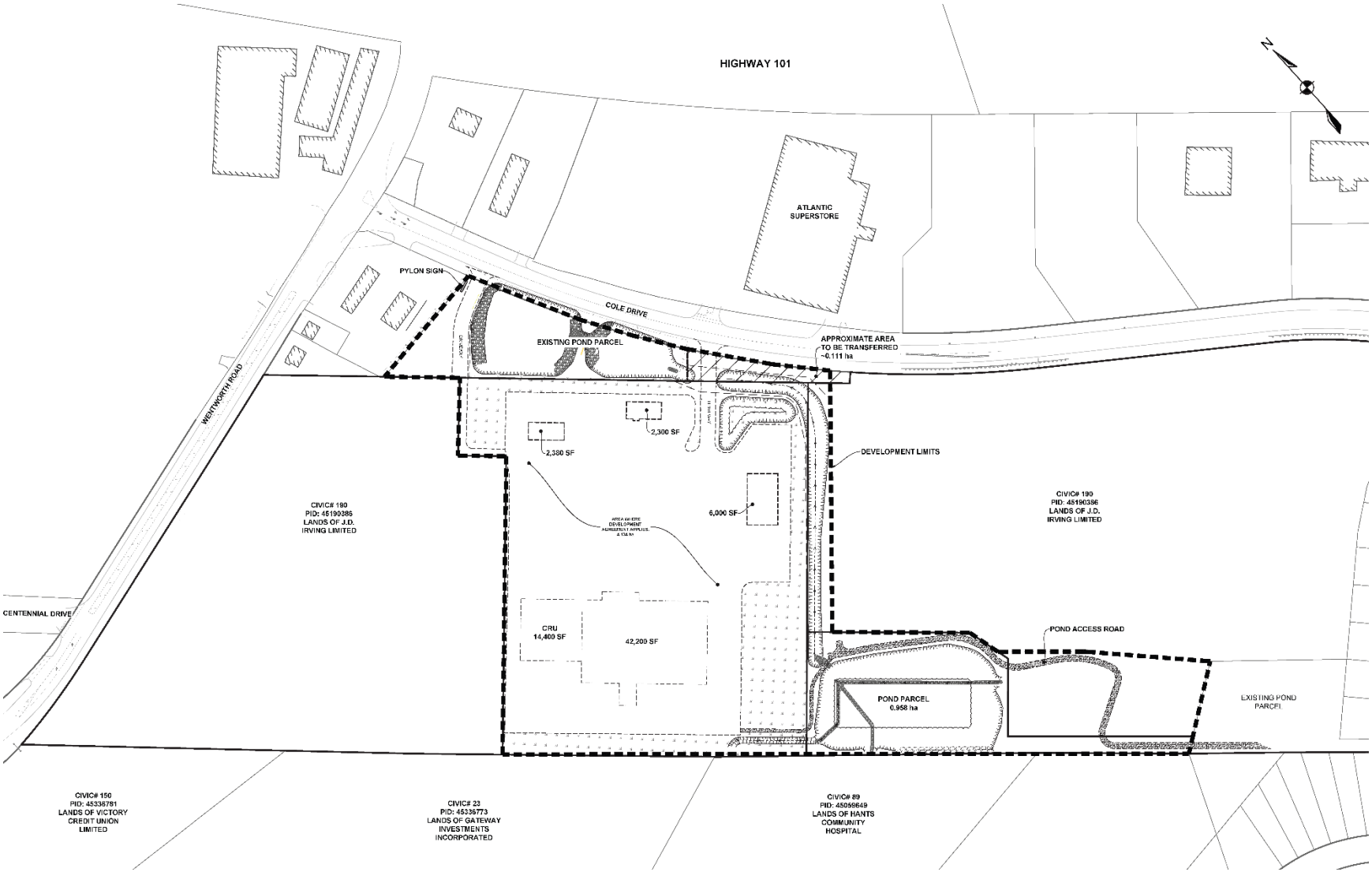
Registration District: HANTS COUNTY
Registration Year: 2024
Plan or Document Number: 125174434

DECRIPTION FOR REMAINDER LANDS

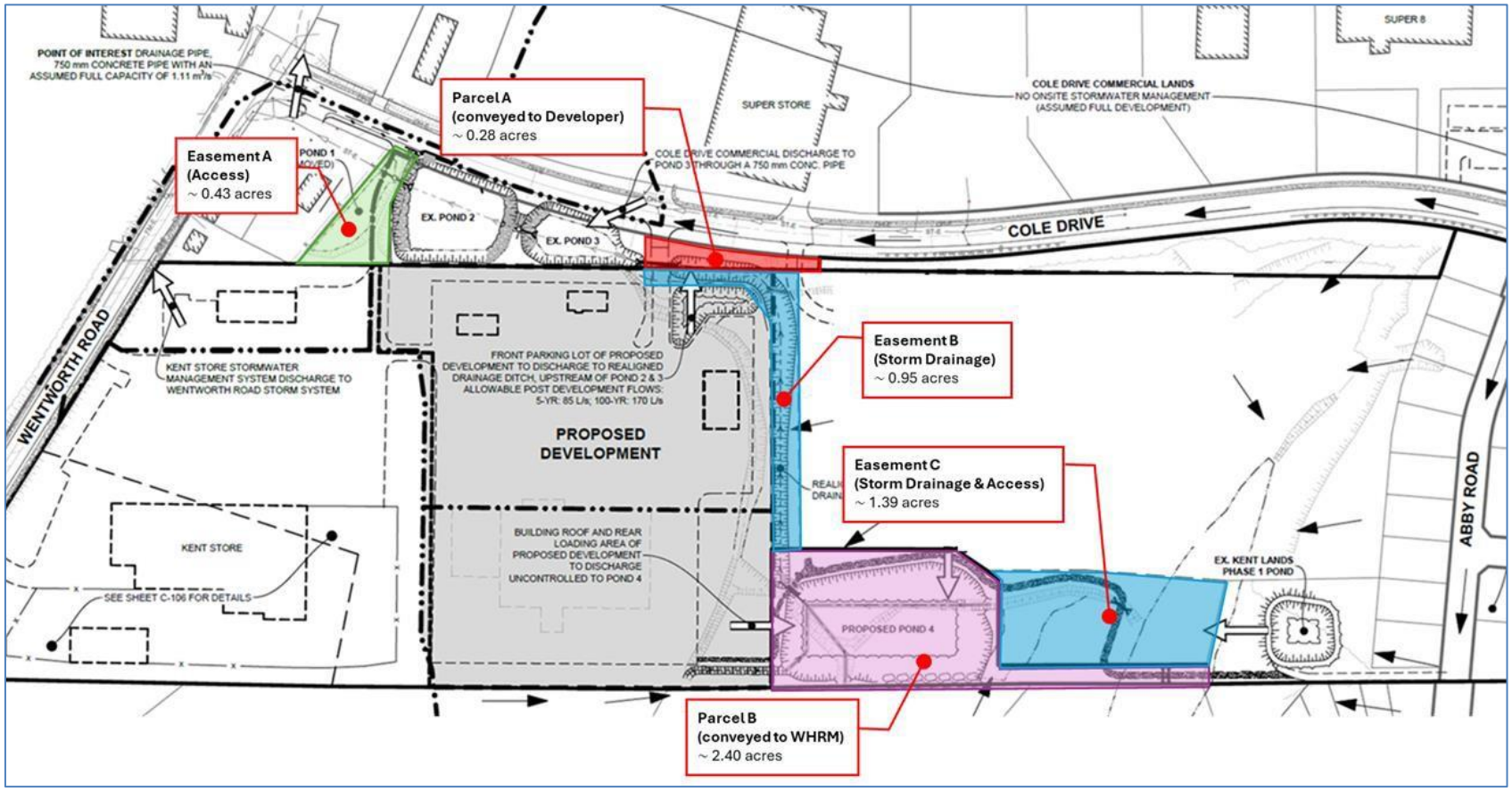
Legal Description – PID 45055282

Comments
LOC:ALS0 NO 101 HIGHWAY- REMAINDER OF PARCEL 1
MAP:0244980064100
MAP:0244990064100
MAP:05L0969
MAP:1044950064100

Schedule B Site Plan



Schedule C Stormwater and Access Layout



Attachment C – Traffic Impact Study

Traffic Impact Study

January 24, 2025

Kent Building Supplies- Windsor Traffic Impact Study

DP Project #23-512 Engineering Services

SUBMITTED BY:

DesignPoint Engineering & Surveying Ltd.

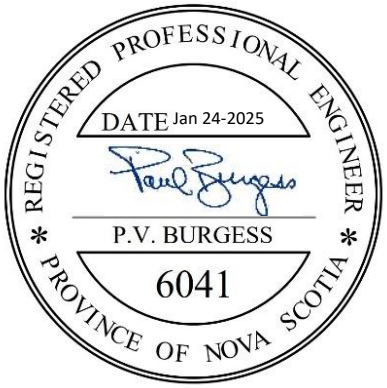
90 Western Parkway, Suite 500
Bedford, NS B4B 2J3

SUBMITTED TO:

Kent Building Supplies Limited

Issued For	By	Date
Draft Submission to Client	PVB	December 17, 2024
Final Report Submission to Client	PVB	January 24, 2025

Senior Transportation Engineer
Paul Burgess, M.Eng. P. Eng.



This report was prepared by DesignPoint Engineering & Surveying Ltd. for North American Development Group using the care and skill ordinarily exercised by members of the engineering profession currently practicing under similar circumstances on similar projects in Nova Scotia.

Any use of this report by third parties is done so at their own risk. DesignPoint accepts no responsibility for damages as the result of third party use of this document or any portion thereof.

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Project Overview

DesignPoint Engineering & Surveying has been engaged by Kent Building Supplies to prepare a traffic impact study for its development at the corner of Wentworth Road and Cole Drive in Windsor. The development will consist of a new Kent Building Supplies store and six commercial buildings. The general location of the site is shown in Figures 1 and 2 below.

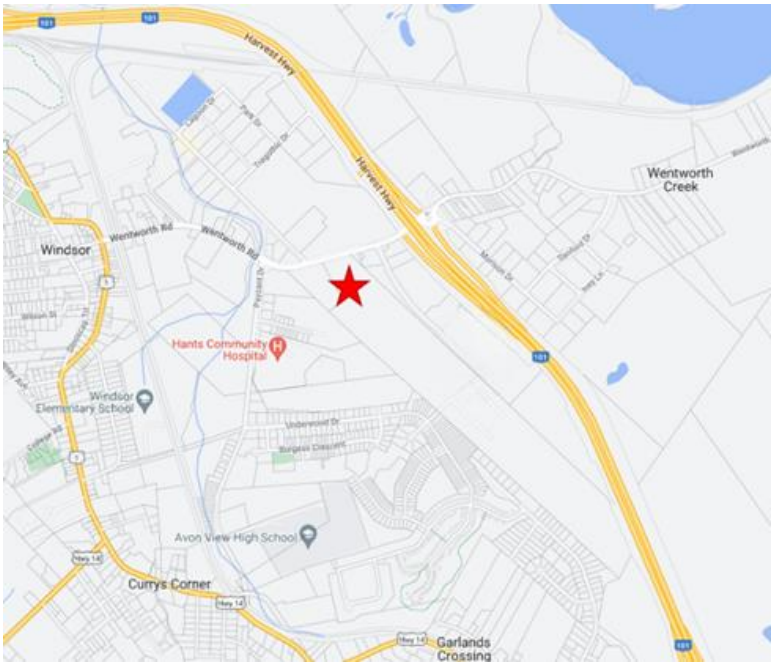


Figure 1 - Site Location

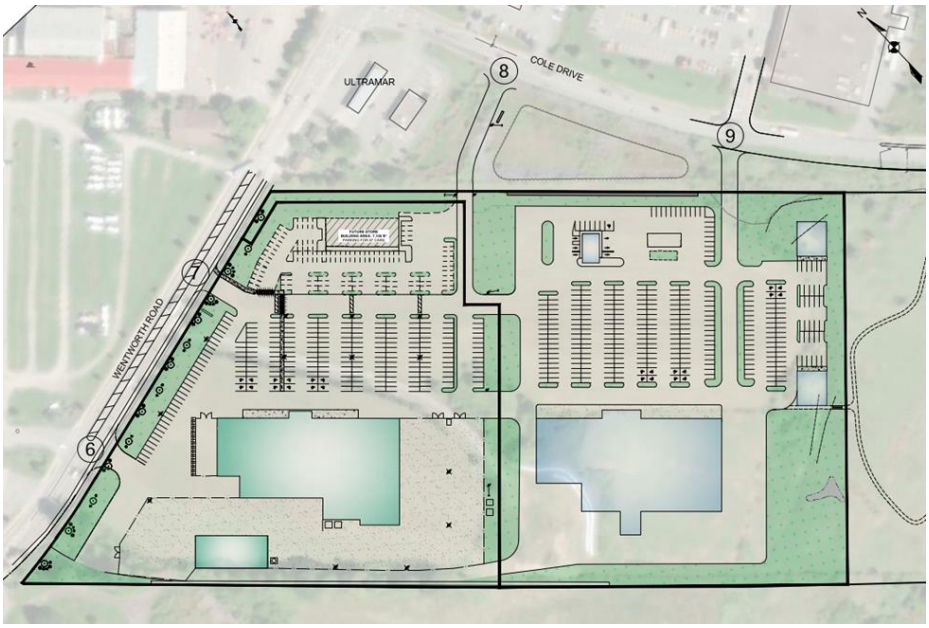


Figure 2 - Concept Plan

2.0 2024 EXISTING CONDITIONS

2.1 Study Area

The study area includes the signalized intersection at Cole Drive, the stop-controlled intersections at Payzant Drive, Centennial Drive, and Industrial Drive, and the roundabout at the Highway 101 northbound ramps terminal.

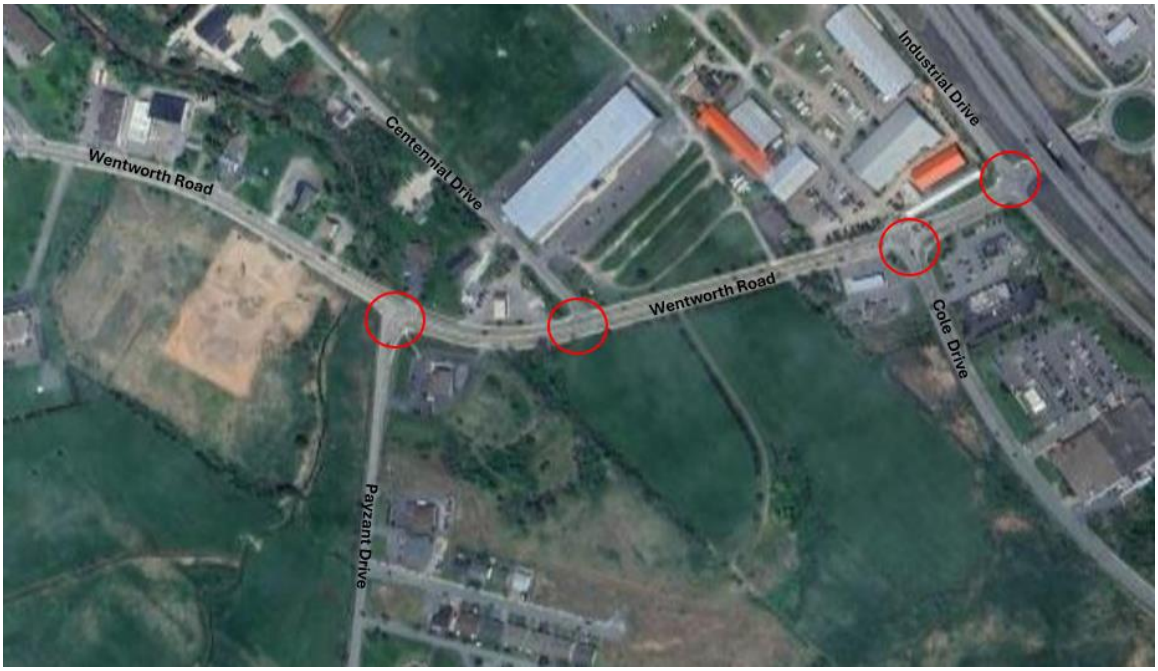


Figure 3: Study Intersection

Wentworth Road

Wentworth Road is a two-lane east-west major collector roadway that connects Highway 101 to King Street. There are sidewalks on both sides, and a painted median for left turning traffic.

The section from Highway 101 to Payzant Drive has a posted speed of 50 km/h and six commercial driveways

Payzant Drive

Payzant Drive is a north-south minor collector roadway that serves as a direct access point to commercial and residential properties. It has a posted speed of 50/h.

Payzant Drive is the main access to the Hospital and the High School.

Centennial Drive

Centennial Drive is a two-lane local roadway that provides access to the Industrial Park and the West Hants Sports Complex. It also has a posted speed of 50 km/h

Cole Drive

Cole Drive is a two-lane north-south minor collector that provides access to Tim Hortons, McDonalds, and the Real Atlantic Superstore. It also provides access to the Crossing residential subdivision.

Industrial Drive

Industrial Drive is a two-lane north-south minor collector that provides access to the Highway 101 southbound off ramp and the Industrial Park.

It has a posted speed of 50 km/h.

Intersection of Wentworth Road and Payzant Drive

The Wentworth Road and Payzant Drive intersection is a four-leg stop-controlled intersection. The northbound, eastbound and westbound approaches all have exclusive left turn lanes.

West Hants Municipality has plans to the upgrade this intersection with traffic signals and an eastbound right-turn lane.

The fourth-leg is a private driveway.

Intersection of Wentworth Road and Centennial Drive

The Wentworth Road and Centennial Drive intersection is a stop-controlled Tee intersection. The eastbound approach has an exclusive left turn lane.

Intersection of Wentworth Road and Cole Drive

The Wentworth Road and Cole Drive intersection is a four-way signalized intersection. The westbound approach has an exclusive left turn lane with a protected left turn phase. The eastbound approach has an exclusive right turn lane. The northbound approach has a right turn channel.

Intersection of Wentworth Road and Industrial Drive/ Highway 101 Eastbound Entrance 5A Ramp

The Wentworth Road at Industrial Drive intersection is a 4-leg stop-controlled intersection. The south leg is the Highway 101 southbound on ramp. The southbound approach is Industrial Drive which also serves as the Highway 101 southbound off ramp.

The westbound approach has a shared through-right turn lane and an exclusive left turn lane.

Wentworth Road Roundabout

The intersection of Wentworth Road and the northbound Highway 101 ramps is a five-leg single-lane roundabout with an internal circle diameter of approximately 55 metres. The south leg is the Highway 101 northbound off ramp. The north leg is the Highway 101 on ramp. Morrison Drive is the fifth-leg.

2.2 2024 Existing Traffic Conditions

A Miovision traffic counting device was set up to collect traffic volume data on the following dates:

- Wentworth Road at Centennial Drive : Thursday, November 14, 2024
- Wentworth Road at Cole Drive: Tuesday, November 19, 2024
- Wentworth Road at Industrial Drive: Thursday, November 21, 2024
- Wentworth Road at Payzant Drive: Thursday, November 14, 2024
- Wentworth Road Roundabout Tuesday, November 26,2024

The volumes were recorded for the AM, PM, and noon peak hour periods (7-9 am, 11-1 pm, and 4 -6 pm). The traffic volume data was adjusted by the average group factor of 1.04 taken from Provincial 2023 Count Program Factor for a class A roadway. The data indicates that traffic volumes in November tend to be lower than the average daily volume. A summary of the AM and PM Peak existing traffic volumes used in our analysis is shown in Figures 4 and 5.

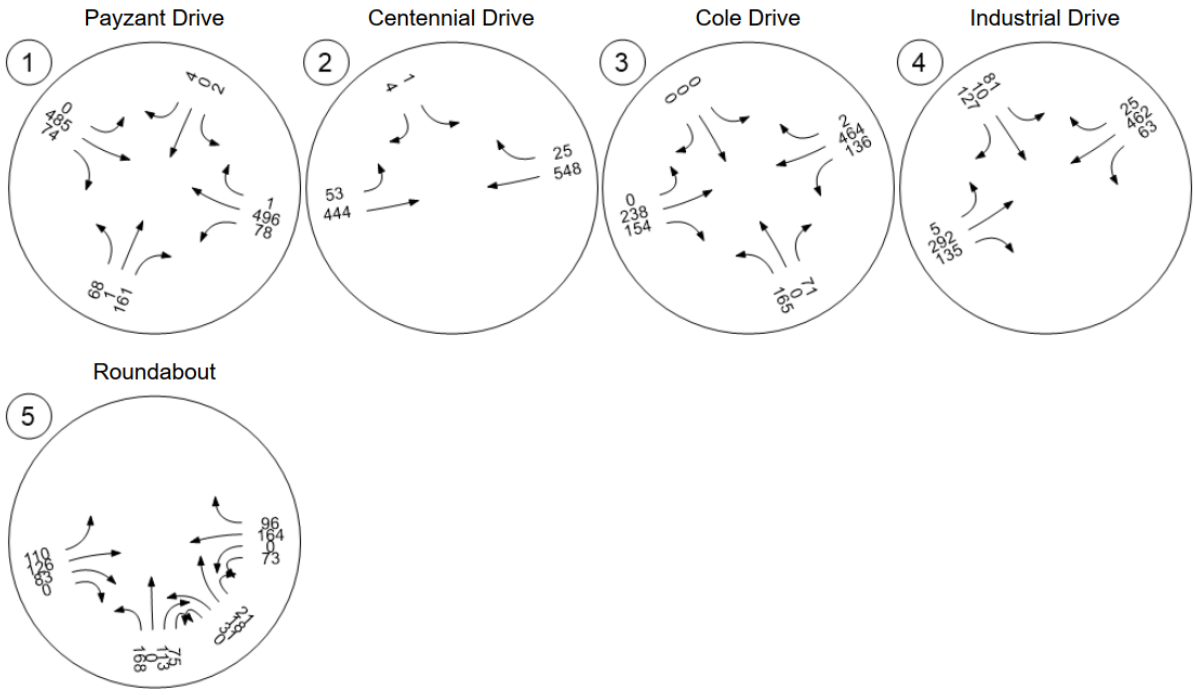


Figure 4 - Existing AM Peak Hour Volumes

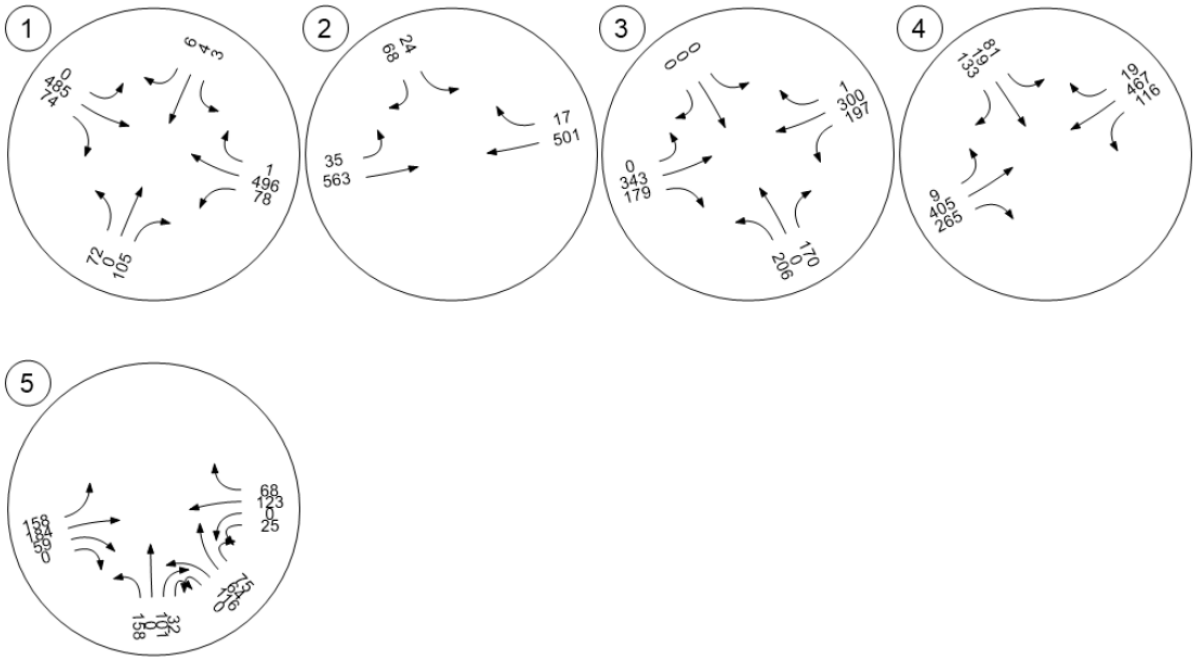


Figure 5 - Existing PM Peak Hour Volumes

2.3 Traffic Operations

The Highway Capacity Manual's (HCM) level of service (LOS) analysis is the most common method used to measure how well an intersection performs from a driver's perspective during a specific period. For urban roadways, the most common period studied is the weekday AM and PM peak hour. This usually occurs between 7 and 9 am, and between 4 and 6 pm.

The LOS is a measure of the average delay of each vehicle traveling through an intersection with grades ranging from 'A' to 'F'. 'A' is associated with minimal delay, and 'F' is associated with heavily congested conditions with unacceptable delays for drivers. Table 1 shows the LOS delay thresholds for a signalized intersection with a v/c ratio less than 1.00. If any intersection approach has a v/c > 1.00, the LOS is automatically designated as a LOS F.

Table 1 - Highway Capacity Manual LOS Thresholds

Level of Service Thresholds for Signalized Intersections with v/c ratio < 1.00		
Level of Service	Average Control Delay (seconds per vehicle)	General Description
A	≤ 10	Free flow
B	10 – 20	Stable flow (slight delays)
C	20 – 35	Stable flow (acceptable delays)
D	35 – 55	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	55 – 80	Unstable flow (intolerable delay)
F	> 80	Forced flow (congested and queues fail to clear)

The LOS criteria for stop-controlled intersections and roundabouts differs somewhat from the criteria for signalized intersections, primarily because user's perceptions differ among transportation facility types.[1] Table 2 shows the LOS delay thresholds for stop controlled intersections and roundabouts with a v/c ratio less than 1.00. If any intersection approach has a v/c > 1.00, the LOS is automatically designated as a LOS F.

Table 2 - Highway Capacity Manual LOS Threshold Requirements

Level of Service Thresholds for Stop-Controlled Intersections and Roundabouts with v/c ratio < 1.00		
Level of Service	Average Control Delay (seconds per vehicle)	General Description
A	≤ 10	Free flow
B	10 – 15	Stable flow (slight delays)
C	15-25	Stable flow (acceptable delays)
D	25-35	Approaching unstable flow (tolerable delay, occasionally wait through more than one signal cycle before proceeding)
E	35-50	Unstable flow (intolerable delay)
F	> 50	Forced flow (congested and queues fail to clear)

Since West Hants Municipality does not have its own published guidelines, we used the LOS criteria outlined in the NSPW Policy PO1018 (Traffic Impact Analysis) to identify level of service thresholds for the five-key intersections. For signalized and unsignalized intersections, all intersection approaches should have a LOS D or better, and a v/c ratio 0.90 or better. For roundabouts, we used the HCM7 and Kimber methods. The results are shown in Tables 3 and 4.

[1] Source: HCM7, Exhibit 20-2.

Table 3 - Existing AM Peak Hour LOS

Existing AM Peak Hour														
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Payzant	Vehicle Count		68	1	161	2	0	4	0	485	74	78	496	1	
	v/c		0.44	0.01	0.29	0.02	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.00	
	Delay (s)		46	28	14	43	27	12	8	0	0	9	0	0	45.7
	LOS		E	D	B	E	D	B	A	A	A	A	A	A	E
	95th% Queue (m)		15	9	9	1	1	1	0	0	0	2	0	0	
Wentworth at Centennial	Vehicle Count					1		4	53	444			548	25	
	v/c					0.00		0.01	0.05	0.00			0.01	0.00	
	Delay (s)					22		12	9	0			0	0	22
	LOS					C		B	A	A			A	A	C
	95th% Queue (m)					0		0	1	0			0	0	
Wentworth at Cole Dr	Vehicle Count		165	0	71	0	0	0	0	238	154	136	464	2	
	v/c		0.17		0.07	0.00	0.00	0.00		0.40	0.32	0.54	0.83		
	Delay (s)		8		7	0	0	0		26	25	37	33		26
	LOS		A		A	A	A	A		C	C	D	C		C
	95th% Queue (m)		19		7	0	0	0		55	35	40	111		
Wentworth at SB Ramps	Vehicle Count					81	10	127	5	292	135	63	462	25	
	v/c					0.37	0.05	0.22	0.00	0.00	0.00	0.06	0.00	0.00	
	Delay (s)					38	38	27	8	0	0	8	0	0	38
	LOS					E	E	D	A	A	A	A	A	A	
	95th% Queue (m)					31	31	31	0	0	0	1	0	0	

Existing AM Peak Hour - HCM7 Method									
Intersection	LOS Criteria	Intersection Control	Northbound	Eastbound	Westblound	Northwestbound	Intersection
Wentworth at Roundabout	Vehicle Count		356	-319	333	70	
	v/c		0.4	0.25	0.35	0.09	
	Delay (s)		9	5	7	5	7
	LOS		A	A	A	A	A
	95th% Queue (m)		15	8	12	2	

Existing AM Peak Hour - Kimber Method									
Intersection	LOS Criteria	Intersection Control	Northbound	Eastbound	Westblound	Northwestbound	Intersection
Wentworth at Roundabout	Approach Volume		356	319	333	70	
	Approach Capacity		1364	1540	1400	1295	
	v/c		0.26	0.21	0.24	0.05	
	Delay (s)		3	3	3	3	3.22
	LOS		A	A	A	A	A
	Avg Queue (veh)		0	0	0	0	

The LOS analysis indicates that for the AM peak hour, all five-study intersections operate well within the study guidelines.

Table 4 - Existing PM Peak Hour LOS

Existing PM Peak Hour															
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Payzant	Vehicle Count		72	0	105	3	4	6	0	485	74	78	496	1	
	v/c		0.48	0.00	0.19	0.03	0.02	0.01	0.00	0.00	0.00	0.08	0.00	0.00	
	Delay (s)		50	27	13	37	27	12	8	0	0	9	0	0	49.7
	LOS		E	D	B	E	D	B	A	A	A	A	A	A	E
	95th% Queue (m)		17	5	5	1	1	1	0	0	0	2	0	0	
Wentworth at Centennial	Vehicle Count					24		68	35	563			501	17	
	v/c					0.11		0.12	0.03	0.01			0.01	0.00	
	Delay (s)					25		14	9	0			0	0	25
	LOS					C		B	A	A			A	A	C
	95th% Queue (m)					7		7	1	0			0	0	
Wentworth at Cole Dr	Vehicle Count		206	0	170	0	0	0	0	343	179	197	300	1	
	v/c		0.35		0.34	0.00	0.00	0.00		0.32	0.20	0.41	0.29		
	Delay (s)		18		18	0	0	0		8	7	16	8		11.6
	LOS		B		B	A	A	A		A	A	B	A		B
	95th% Queue (m)		31		26	0	0	0		29	14	28	25		
Wentworth at SB Ramps	Vehicle Count					81	19	133	9	405	265	116	467	19	
	v/c					0.64	0.16	0.23	0.01	0.00	0.00	0.13	0.00	0.00	
	Delay (s)					125	126	102	8	0	0	9	0	0	125.9
	LOS					F	F	F	A	A	A	A	A	A	F
	95th% Queue (m)					74	74	74	0	0	0	3	0	0	

Existing PM Peak Hour - HCM7 Method									
Intersection	LOS Criteria	Intersection Control	Northbound	Eastbound	Westblound	Northwestbound	Intersection
Wentworth at Roundabout	Vehicle Count		284	401	216	255	
	v/c		0.34	0.3	0.27	0.35	
	Delay (s)		8	10	8	12	7.3
	LOS		A	A	A	A	A
	95th% Queue (m)		11	10	8	12	

Existing PM Peak Hour - Kimber Method									
Intersection	LOS Criteria	Intersection Control	Northbound	Eastbound	Westblound	Northwestbound	Intersection
Wentworth at Roundabout	Approach Volume		291	401	215	255	
	Approach Capacity		1346	1567	1306	1248	
	v/c		0.22	0.26	0.16	0.20	
	Delay (s)		3	3	3	4	3.26
	LOS		A	A	A	A	A
	Avg Queue (veh)		0	0	0	0	

For the existing PM peak hour period, the stop-controlled intersection at Industrial Drive operates at a LOS F. Even though the v/c ratio is less than 1.00, the southbound approach delay exceeds 50 seconds.

3.0 BACKGROUND TRAFFIC GROWTH

Background traffic growth is the general annual traffic growth in the study area that is estimated to occur with or without the development. It includes all movements through the study area and is influenced by residential development. For this study, the objective was to estimate a growth rate that could be applied to the existing traffic count data.

To estimate background growth, we consulted the West Hants Traffic Impact and Connectivity Study[2], West Hants Municipality building permit data, and the Statistics Canada Census data.

3.1 West Hants Traffic Impact and Connectivity Study

The main objectives of the West Hants Traffic Impact and Connectivity Study were to develop 2040 peak hour volumes at key intersections within the study area, and to evaluate the traffic impact of residential growth in the area. The Payzant Drive, Centennial Drive, and Cole Drive intersections were included in this study.

Ten development areas, totaling approximately 2100 residential units, were evaluated. The study estimated that future development would generate approximately 945 and 1100 two-way vehicle trips for the AM and PM peak hour periods respectively.

The study estimated that over the 16-year study period, peak hour traffic volumes on Wentworth Road would increase by 2.8 to 3.6 percent per year. Included in this analysis was a background traffic growth rate assumption of 1.0% per year. This seems high when compared to historical traffic volume growth rates on Highway 101.[3]

3.2 Building Permit and Census Data

West Hants building permit data was reviewed to gauge housing demand in the study area[4]. Over the past five years, there were building permits issued for 700 residential units.[5] This is an average of 140 units per year.

In 2021, the population of West Hants Municipality was 19,506[6]. The average annual population growth rate for the period 2016 – 2021 was 0.5% per year. The average household size in 2021 was 2.32 persons per household. If we assume a future household size of 2.0 persons per household[7], and a population growth rate of 0.5 % per year, total housing demand, for the period 2025 to 2040, would be 769 units or roughly 50 units per year.

To average 140 units per year, population growth would need to increase by 1.26% per year.

[2] WSP 2024

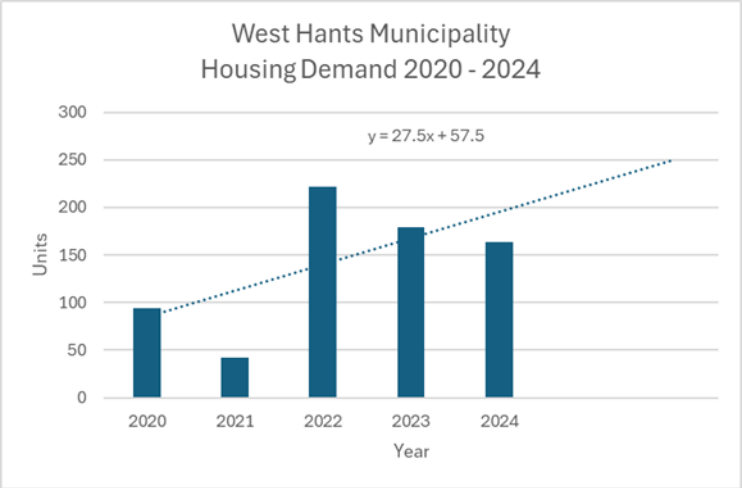
[3] Traffic data for Highway 101 Section 60 has been experiencing an annual growth rate of 1.76% Source: Hants County Exhibition TIS WSP 2021

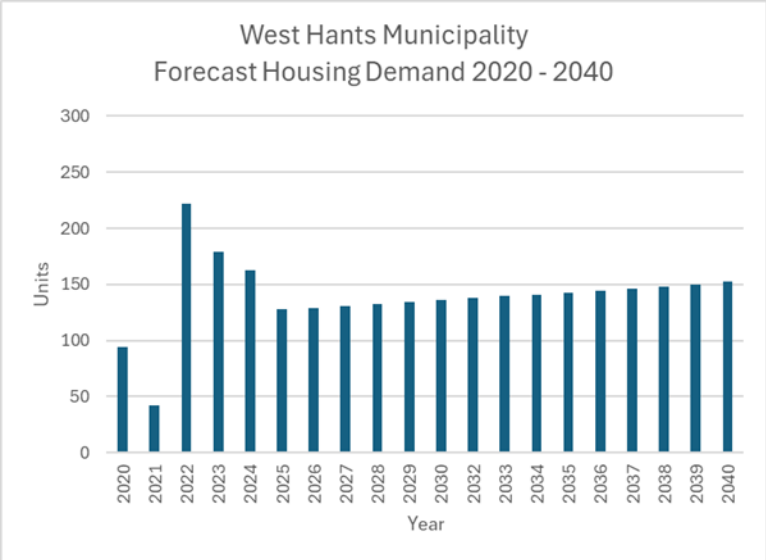
[4] https://www.westhants.ca/municipal-departments/planning/planning-documents-2.html

[5] Building permit estimates for 2024 was obtained by prorating the data from September to the end of the year

[6] Stats Canada

[7] Average household sizes have been decreasing. Given that approximately 25% of residents are over the age of 65, this is a reasonable assumption





Conclusion

It is highly unlikely that traffic volumes on Wentworth Road will exceed 2.6% per year. for the next 16 years. It is possible that population growth in West Hants will exceed historical rates. The Municipality is currently averaging 140 residential units per year. To maintain this rate, the population would need to grow by 1.26% per year.

Given that travel demand is directly related to population growth, we have used a background growth rate of **1.5 % per year**. This equates to a growth factor of 1.11 over the study period.. The estimated background traffic volumes are presented in Figures 6 and 7.

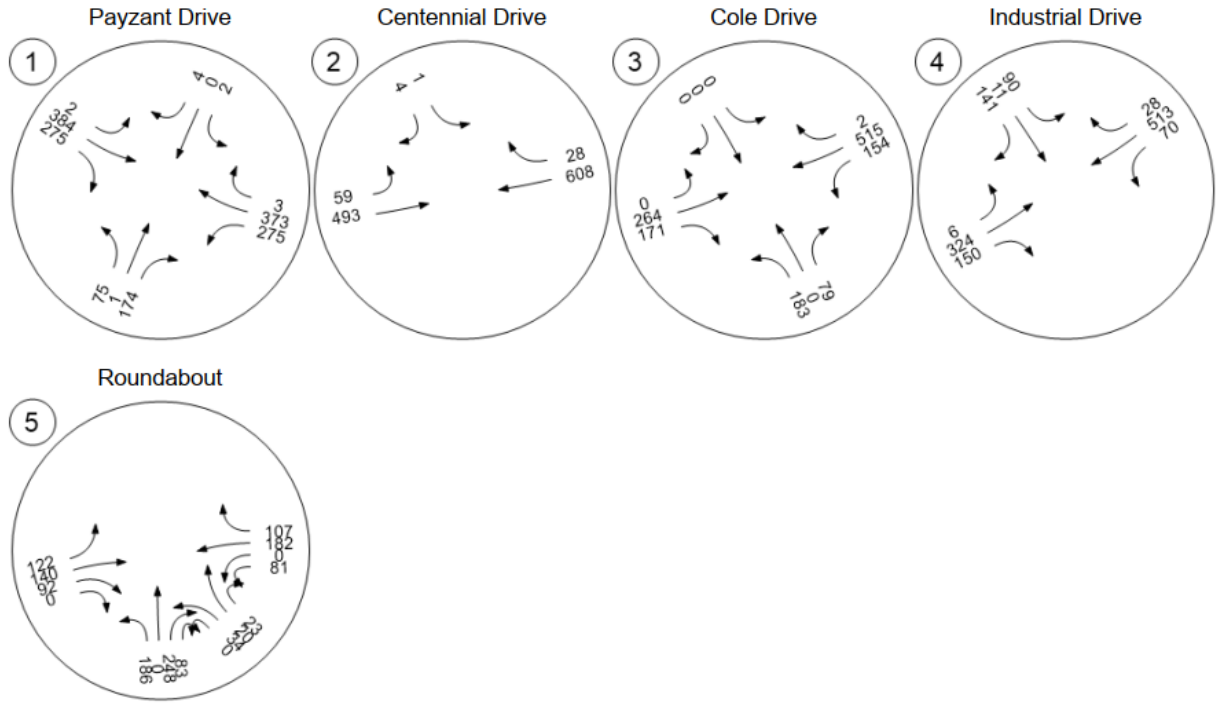


Figure 6 - Background AM Peak Traffic Volumes

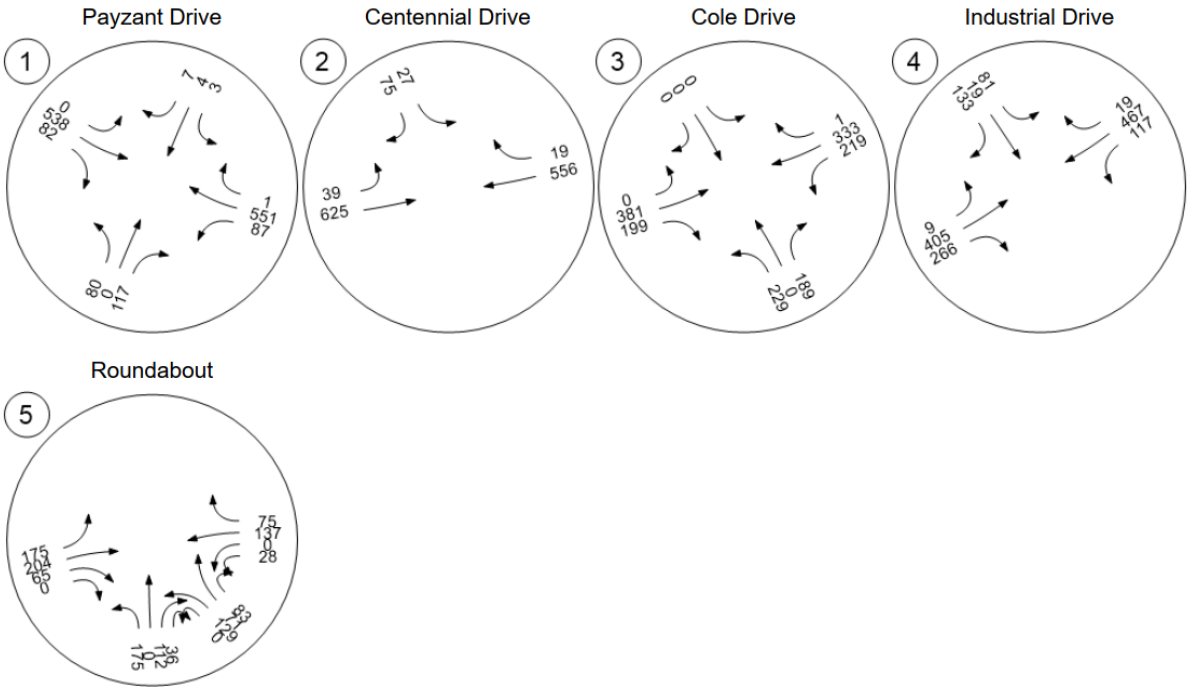


Figure 7 - Background PM Peak Hour Traffic Volumes

The LOS results for the Background AM and PM peak hour periods are presented in Tables 5 and 6.

Background AM Peak Hour															
Intersection	**LOS Criteria**	**Intersection**	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**	**Intersection**
Wentworth at Payzant	Vehicle Count		75	1	174	2	0	4	2	384	275	275	373	3	
	v/c		0.55		0.74	0.03				0.42	0.36	0.41	0.32		
	Delay (s)		27		28	21			11	10	9	5	4		10.4
	LOS		C	C	C	C	C	C	B	A	A	A	A		B
	95th% Queue (m)		15		34	1			0	37	26	11	17		
Wentworth at Centennial	Vehicle Count					1		4	59	493			608	28	
	v/c	STOP				0.01		0.01	0.06	0.00			0.01	0.00	
	Delay (s)					25		13	9	0			0	0	25
	LOS					C		B	A	A			A	A	C
	95th% Queue (m)					0		0	2	0			0	0	
Wentworth at Cole Dr	Vehicle Count		183		79	0	0	0	0	264	171	154	515	2	
	v/c		0.42	0.21		0.00		0.00	0.32	0.26		0.18	0.00	0.42	
	Delay (s)		29	26		0		0	17	16		6	7		14.2
	LOS		C	C		A		A	B	B	B	A	A	A	B
	95th% Queue (m)		45	18		0		0	46	29		12		50	
Wentworth at SB Ramps	Vehicle Count					90	11	141	6	324	150	70	513	28	
	v/c	STOP				0.49	0.06	0.26	0.01	0.00	0.00	0.06	0.01	0.00	
	Delay (s)					61	61	48	9	0	0	9	0	0	60.9
	LOS					F	F	E	A	A	A	A	A	A	F
	95th% Queue (m)					50	50	50	0	0	0	2	0	0	

Table 5 Background AM Peak Hour LOS

Background AM Peak Hour - HCM7 Method																	
Intersection	LOS Criteria	Intersection Control	Northbound			Eastbound			Westblound			Northwestbound			Intersection
Wentworth at Roundabout	Vehicle Count			517			354			370			77		
	v/c			0.6			0.28			0.4			0.12		
	Delay (s)			13			5			8			7		9.44
	LOS			B			A			A			A		A
	95th% Queue (m)			31			9			15			3		

Background AM Peak Hour - Kimber Method																	
Intersection	LOS Criteria	Intersection Control	Northbound			Eastbound			Westblound			Northwestbound			Intersection
Wentworth at Roundabout	Approach Volume			517			364			370			72		
	Approach Capacity			1346			1567			1306			1248		
	v/c			0.38			0.23			0.28			0.06		
	Delay (s)			4			3			3			4		3.63
	LOS			A			A			A			A		A
	Avg Queue (veh)			1			0			0			0		

For the Background study periods, it was assumed that the Payzant Drive intersection would be upgraded with signals and an eastbound right-turn-lane. The LOS analysis indicates that for the AM background peak hour, the Payzant, Centennial, Cole, and the Roundabout intersections operate within the study guidelines. For the Industrial Drive intersection, the southbound approach fails

Table 6 Background PM Peak Hour LOS

Background PM Peak Hour															
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Payzant	Vehicle Count		80	0	117	3	4	7	0	538	82	87	551	1	
	v/c		0.62		0.00	0.04				0.56	0.10	0.14	0.47		
	Delay (s)		26		0	21			0	11	6	5	5		10.2
	LOS		C	C	C	C	C	C	A	B	A	A	A		B
	95th% Queue (m)		37		0	2			0	55	6	3	29		
Wentworth at Centennial	Vehicle Count					27		75	39	625			556	19	
	v/c					0.15		0.14	0.04	0.01			0.01	0.00	
	Delay (s)					30		16	9	0			0	0	30
	LOS					D		C	A	A			A	A	D
	95th% Queue (m)					9		9	1	1			0	0	
Wentworth at Cole Dr	Vehicle Count		229		189	0	0	0	0	381	199	219	333	1	
	v/c		0.41	0.36		0.00		0.00	0.41	0.26		0.39	0.00	0.31	
	Delay (s)		26	25		0		0	17	15		12	11		16.8
	LOS		C	C		A		A	B	B	B	B	B	B	B
	95th% Queue (m)		56	44		0		0	68	34		30		46	
Wentworth at SB Ramps	Vehicle Count					81	19	133	9	405	266	117	467	19	
	v/c					0.65	0.16	0.23	0.01	0.00	0.00	0.13	0.00	0.00	
	Delay (s)					126	127	104	8	0	0	9	0	0	127.4
	LOS					F	F	F	A	A	A	A	A	A	F
	95th% Queue (m)					74	74	74	0	0	0	3	0	0	

Backgfround PM Peak Hour - HCM7 Method									
Intersection	LOS Criteria	Intersection Control	Northbound	Eastbound	Westblound	Northwestbound	Intersection
Wentworth at Roundabout	Vehicle Count		323	444	240	283	
	v/c		0.39	0.34	0.31	0.42	
	Delay (s)		9	6	8	11	8.29
	LOS		A	A	A	B	A
	95th% Queue (m)		14	12	10	16	

Background PM Peak Hour - Kimber Method									
Intersection	LOS Criteria	Intersection Control	Northbound	Eastbound	Westblound	Northwestbound	Intersection
Wentworth at Roundabout	Approach Volume		323	444	240	283	
	Approach Capacity		1346	1567	1306	1248	
	v/c		0.24	0.28	0.18	0.23	
	Delay (s)		4	3	3	4	3.4
	LOS		A	A	A	A	A
	Avg Queue (veh)		1	0	0	0	

For the existing PM peak hour period, the stop-controlled intersection at Industrial Drive operates at a LOS F. Even though the v/c ratio is less than 1.00, the southbound approach delay exceeds 50 seconds per vehicle.

4.0 DEVELOPMENT TRAFFIC

4.1 Access Review

The proposed site has four-access points, two driveways off Wentworth Road, and two driveways off Cole Drive. The driveways are labelled on the sketch below. It was assumed that Driveway #6 would be limited to truck deliveries. Driveway #7 would be a full access driveway with a westbound left turn lane on Wentworth Road. Driveways #8 and #9 would also be full access driveways.

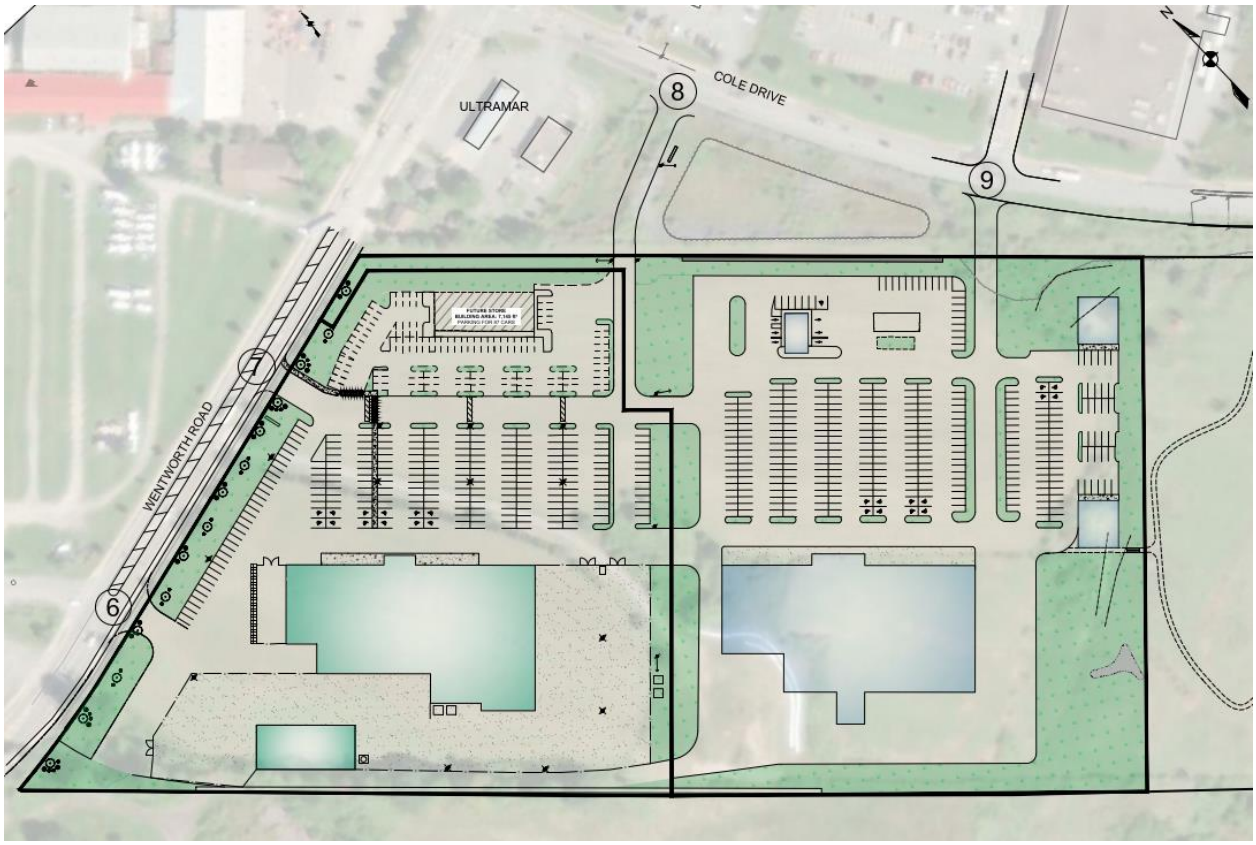


Figure 8 - Site Plan Concept

A field visit was carried out on December 9th, 2024 to review the proposed access points and measure available sight distance.

Stopping sight distance (SSD) is the minimum requirement for sight distances at driveways and intersections. SSD is the distance a vehicle takes to avoid encountering an obstacle at a relative speed. It is the combination of the distance traveled during the perception and reaction time, the time it takes a driver to determine the need to stop, and the braking distance, which is the distance traveled once the brakes are applied to when the vehicle comes to a stop.

The Transportation Association of Canada Geometric Design Guide for Canadian Roads provides a minimum SSD of 65 meters for a design speed of 50 km/h. Intersection sight distance (ISD) is based on the time gap the design vehicle needs to enter traffic safely; TAC provides a minimum intersection sight distance of 105 metres for left turn movements with a design speed 50 km/h, and 130 metres for left turn movements with a design speed of 60 km/h

For this study, it was assumed that the design speed for Wentworth Road was 60 km/h and the design speed for Cole Drive was 50 km/h. The sight distance estimates are shown in Figures 9 – 12.

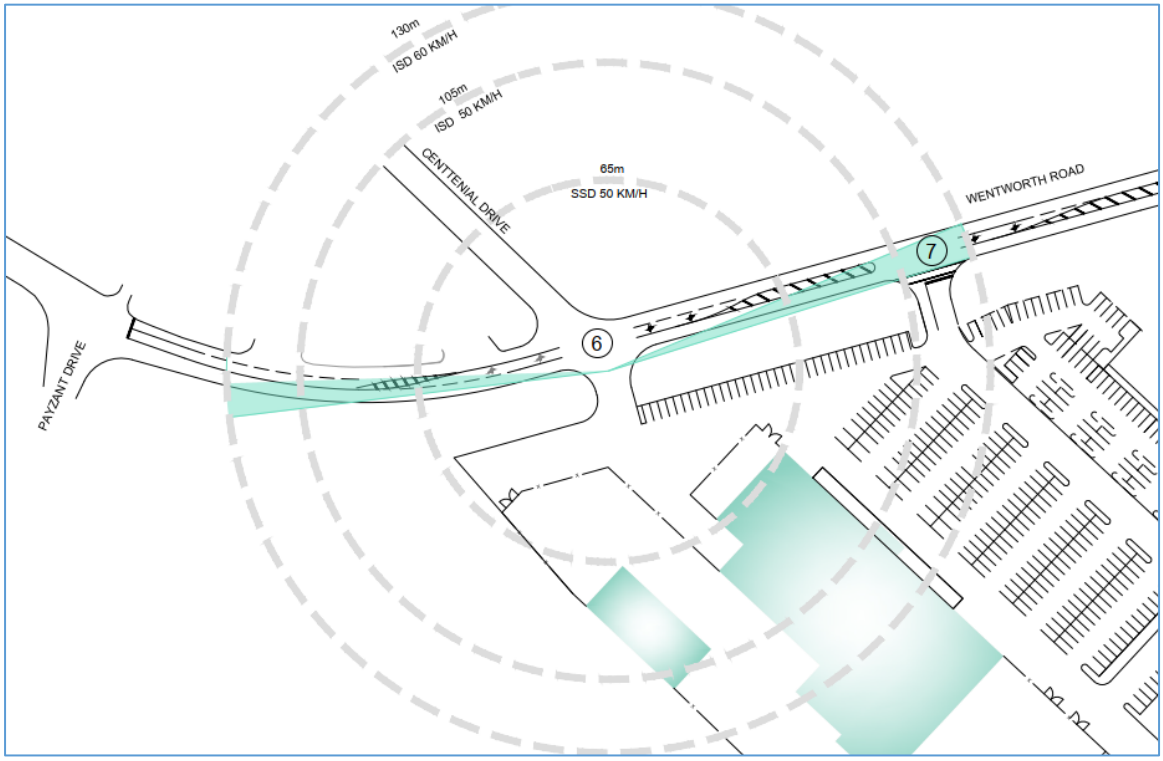


Figure 9 - Sight Distance for Driveway #6

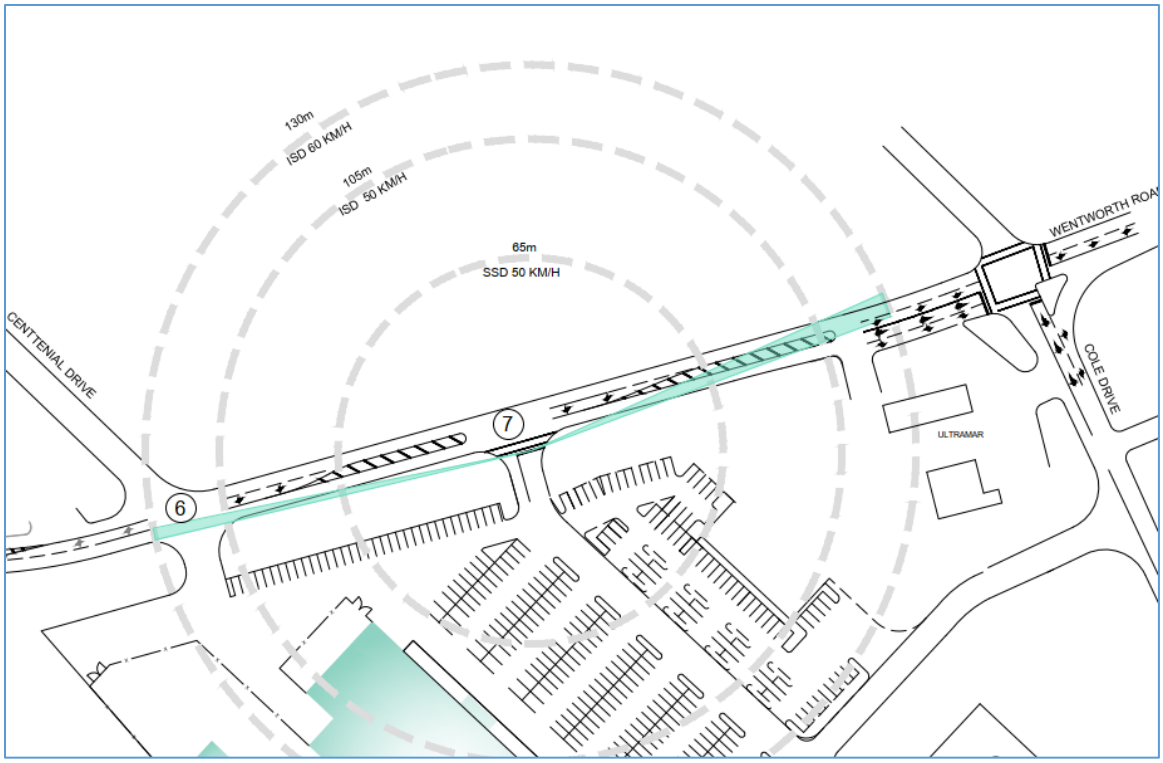


Figure 10 Sight Distance for Driveway #7

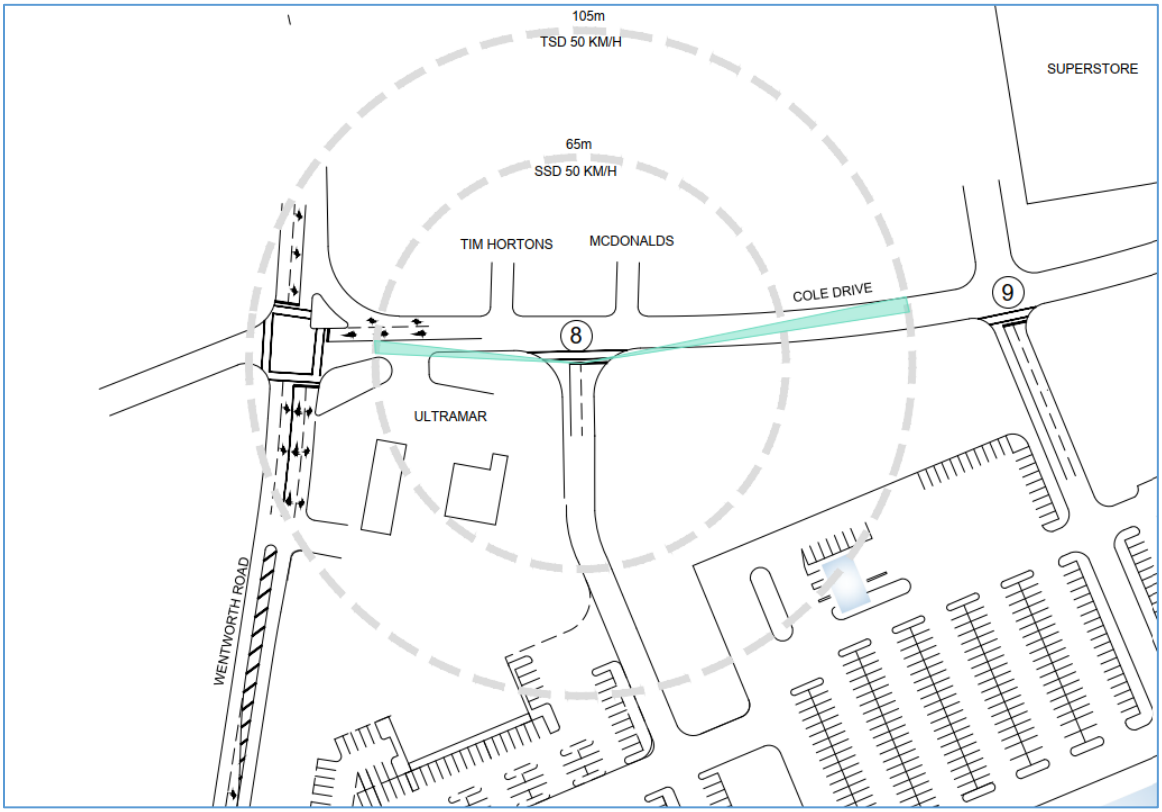


Figure 11 - Sight Distance for Driveway #8

Figure 12 - Sight Distance for Driveway #9

The SSD and ISD (TSD) requirements were checked in the field and all requirements were met

4.2 Site Generated Traffic

Site-generated traffic volumes for the proposed development have been determined using rates from the ITE Trip Generation Manual (TGM), 11th Edition. For this study, we have used Land Use Codes 812-Building Materials and Lumber Store, 823-Strip Mall Retail, 850-Supermarket, and 945-Convenience Store/Gas Station. For these land use codes, the TGM uses the number of dwelling units and sq. ft GFA as its independent variable.

Table 7: Trip Generation

Land Use	Code	Units	Variable	Trip Generation Rates[1]						Trips Generated			
				AM Peak			PM Peak			AM Peak		PM Peak	
				Rate	In	Out	Rate	In	Out	In	Out	In	Out
Building Materials and Lumber store	812	50.0	1000 Sq.Ft.GFA	1.59	62%	38%	2.25	46%	54%	49	30	52	61
Strip Mall Retail	822	22.5	1000 Sq.Ft.GFA	2.36	60%	40%	6.59	50%	50%	32	21	74	74
Supermarket	850	57.0	1000 Sq.Ft.GFA	2.86	59%	41%	8.95	50%	50%	96	67	255	255
Convenience Store / Gas Station	945	1.7	1000 Sq.Ft.GFA	16.00	50%	50%	18.40	50%	50%	14	14	16	16
Estimated Site Generated Trips										**191**	**132**	**397**	**406**
24% Pass-by Trip Reduction[2]												61	61
5% Internal Trip Capture[3]										10	7	13	13
Total Estimated Site Generated Trips										**181**	**125**	**323**	**332**

Notes:	1. Trip generation rates from ITE *Trip Generation Manual* , 11th Edition
	2 A 24% pass-by trip reduction has been applied to the Supermarket land use
	3 A 5% internal trip capture has been applied to all land uses
	4
	5

4.2.1 Pass by Trips

Pass-by trips are trips by vehicles already travelling along the route and will enter/exit the site and continue along the route. ITE provides a 24% pass-by trip for Supermarket trips during the PM peak hour. This has been applied in the trip generation trip calculations.

4.2.2 Internal Trips

To account for trips to and from existing land uses (McDonalds, Tim Hortons, Superstore), a 5% internal trip capture was applied to the Supermarket trip generation estimates.

4.2.3 Diverted Trips

The proposed Kent Building Supplies store will replace the store located at the Fort Edward Mall. To avoid double counting, trips were removed the roadway network. For example, a shopper travelling west on Wentworth Road just east of Highway 101, now would travel through the Cole Drive intersection to get to the Kent Store at the Fort Edward Mall. These trips would be replaced by the westbound left turn movement at the Cole Drive intersection.

4.3 Trip Distribution

The distribution of trips to the commercial properties was based on population distribution of the polling districts in the recent municipal election.

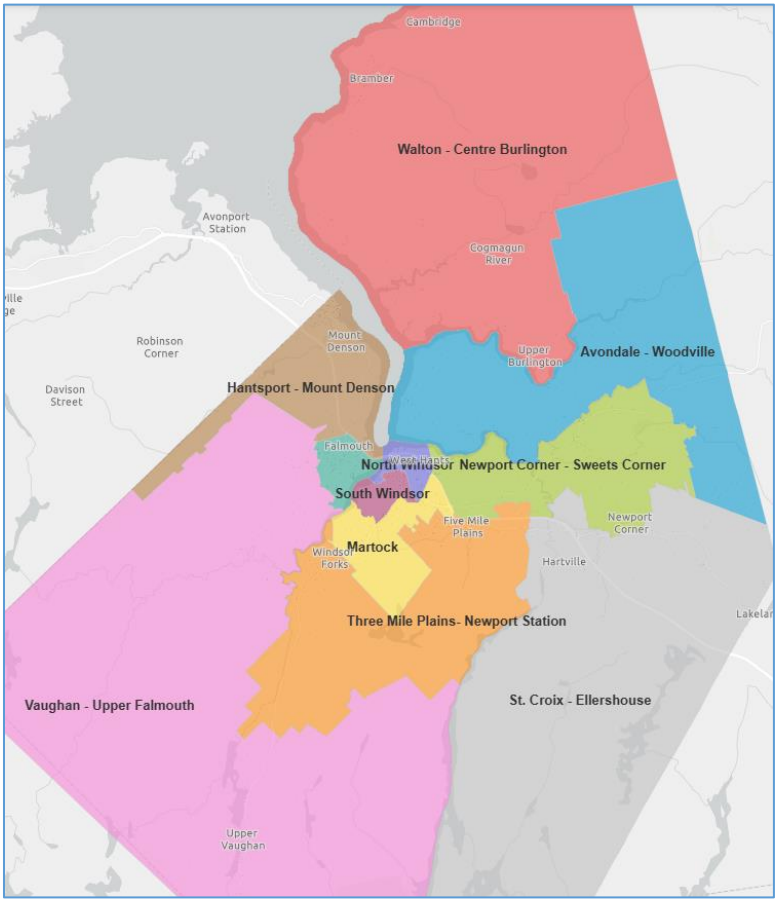
For each district, the most logical trip to and from the site was selected .

For example, residents from Walton-Centre Burlington were assumed to use Wentworth Road to access the site.

A resident from Hantsport was assumed to take Highway 101 to access the site.

The most logical route for a resident from Electoral District #5 would depend on where he/she lived. If you lived in Windsor Forks, you would most likely drive through Town. If you lived in Three Mile Plains, it was assumed that you would take the new Payzant Drive connection from King Street to Wentworth Road

The trip percentages were then added to the VISTRO traffic model. A summary of the trip distribution is shown below



Estimated Trip Distribution	
Wentworth Road West	22%
Payzant Drive	10%
Cole Drive	5%
Highway 101 S	13%
Wentworth Road East	20%
Highway 101 N	30%

5.0 FUTURE CONDITIONS

5.1 2031 Total Traffic Volumes

The 2031 total traffic volumes are the result of 2031 background volumes plus the site-generated traffic added by the completed development. Total traffic volumes for the intersections are provided in Figures 13 and 14.

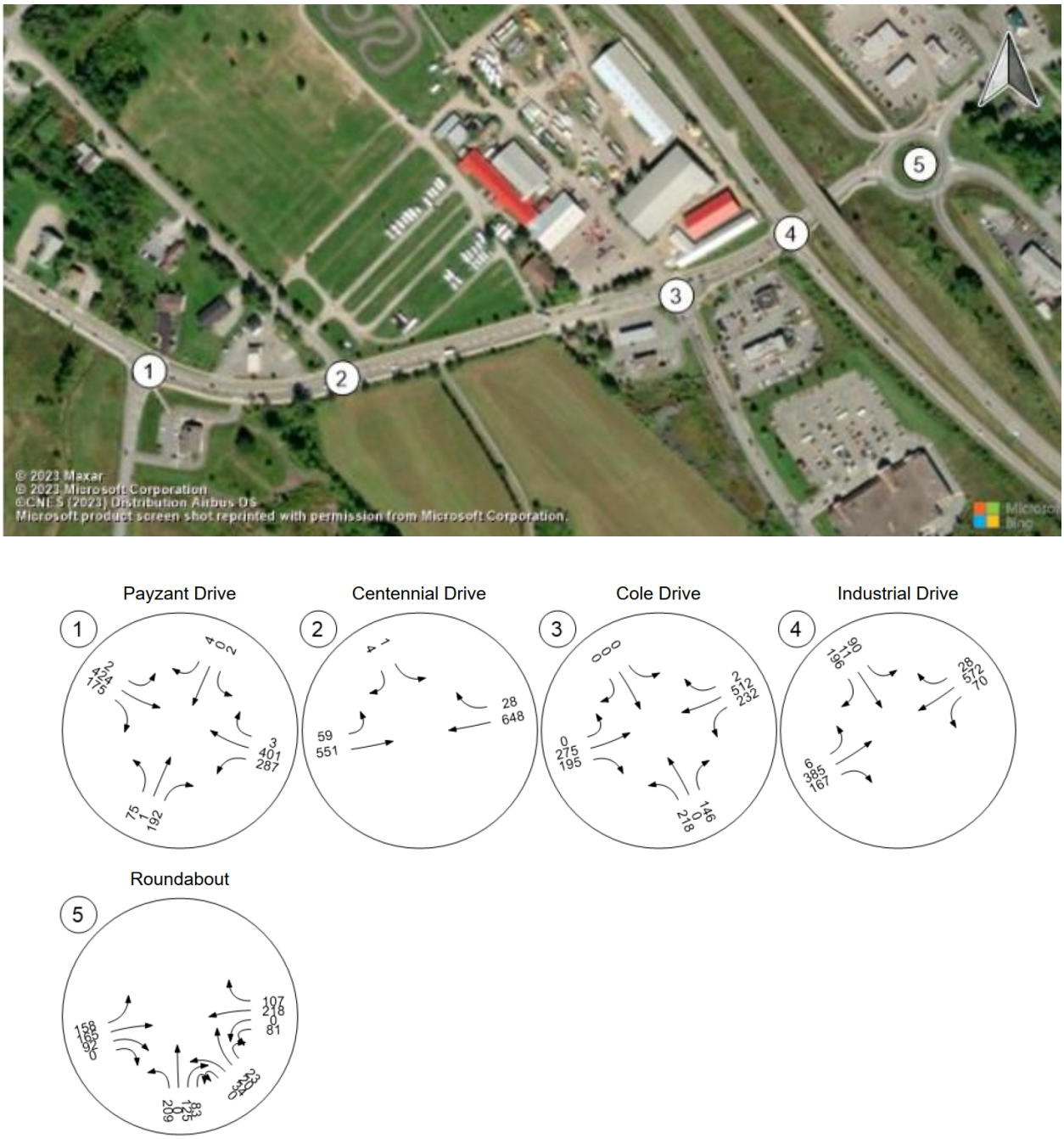


Figure 13 - 2031 Total AM Peak Hour Volumes

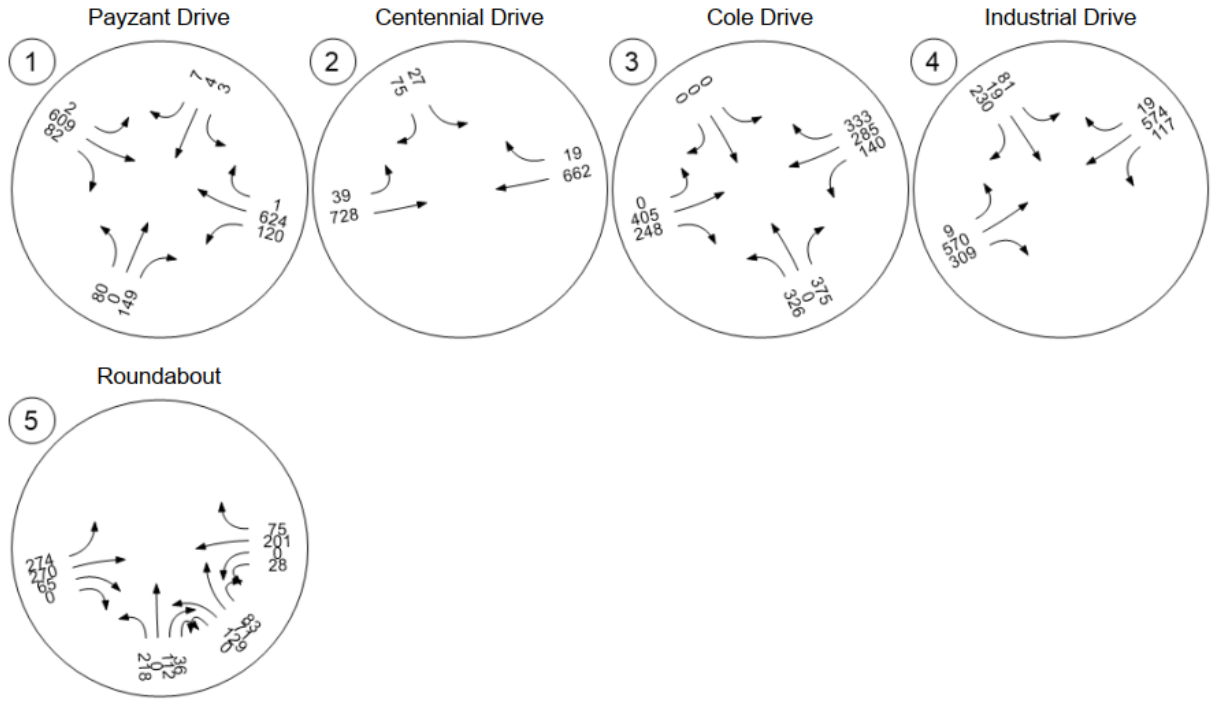


Figure 14 - 2031 Total PM Peak Hour Volumes

The LOS results for the Total AM and PM peak hour periods are presented in Tables 8 and 9.

Table 8 - Total AM Peak Hour LOS

Total AM Peak Hour														
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Payzant	Vehicle Count		75	1	192	2	0	4	2	424	175	287	401	3	
	v/c		0.48		0.78	0.03				0.48	0.23	0.43	0.35		
	Delay (s)		25		29	21			11	11	8	6	5		10.9
	LOS		C	C	C	C	C	C	B	B	A	A	A		B
	95th% Queue (m)		14		38	1			0	45	16	12	19		
Wentworth at Centennial	Vehicle Count					1		4	59	551			648	28	
	v/c					0.01		0.01	0.06	0.01			0.01	0.00	
	Delay (s)					28		13	9	0			0	0	28
	LOS					D		B	A	A			A	A	D
	95th% Queue (m)					0		0	2	0			0	0	
Wentworth at Cole Dr	Vehicle Count		218		146	0	0	0	0	275	195	232	512	2	
	v/c		0.40	0.29		0.00		0.00	0.40	0.36		0.31	0.00	0.47	
	Delay (s)		26	24		0		0	24	24		11	12		18.5
	LOS		C	C		A		A	C	C	C	B	B	B	B
	95th% Queue (m)		54	34		0		0	63	45		30		73	
Wentworth at SB Ramps	Vehicle Count					90	11	196	6	385	167	70	572	28	
	v/c					0.61	0.07	0.38	0.01	0.00	0.00	0.07	0.01	0.00	
	Delay (s)					124	124	107	9	0	0	9	0	0	124.2
	LOS					F	F	F	A	A	A	A	A	A	F
	95th% Queue (m)					90	90	90	0	0	0	2	0	0	

Total AM Peak Hour - HCM7 Method												
Intersection	LOS Criteria	Intersection Control	Northbound			Eastbound			Westblound			Northwestbound			Intersection
Wentworth at Roundabout	Vehicle Count			540			415			406			77		
	v/c			0.67			0.33			0.47			0.13		
	Delay (s)			16			6			10			8		11.08
	LOS			C			A			A			A		B
	95th% Queue (m)			40			11			19			3		

Total AM Peak Hour - Kimber Method												
Intersection	LOS Criteria	Intersection Control	Northbound			Eastbound			Westblound			Northwestbound			Intersection
Wentworth at Roundabout	Approach Volume			540			415			406			77		
	Approach Capacity			1346			1567			1306			1248		
	v/c			0.40			0.26			0.31			0.06		
	Delay (s)			4			3			3			4		3.84
	LOS			A			A			A			A		A
	Avg Queue (veh)			1			0			0			0		

For the Total study periods, it was assumed that the Payzant Drive intersection would be upgraded with signals and an eastbound right-turn-lane. The LOS analysis indicates that for the AM Total peak hour, only the Wentworth Road at Industrial Drive intersection fails.

Total PM Peak Hour															
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Payzant	Vehicle Count		80	0	149	3	4	7	2	609	82	120	624	1	
	v/c		0.66		0.56	0.06				0.58	0.09	0.22	0.51		
	Delay (s)		42		35	30			14	12	7	6	7		13.1
	LOS		D	D	D	C	C	C	B	B	A	A	A		B
	95th% Queue (m)		26		42	3			0	84	8	7	60		
Wentworth at Centennial	Vehicle Count					27		75	39	728			662	19	
	v/c					0.20		0.16	0.04	0.01			0.01	0.00	
	Delay (s)					39		20	9	0			0	0	40
	LOS					E		C	A	A			A	A	E
	95th% Queue (m)					12		12	1	0			0	0	
Wentworth at Cole Dr	Vehicle Count		326		375	0	0	0	0	405	248	140	285	333	
	v/c		0.54	0.64		0.00		0.00	0.46	0.35		0.28	0.00	0.66	
	Delay (s)		26	29		0		0	20	18		13	18		21.3
	LOS		C	C		A		A	B	B	B	B	B	B	C
	95th% Queue (m)		76	88		0		0	77	48		20		108	
Wentworth at SB Ramps	Vehicle Count					81	19	230	9	570	309	117	574	19	
	v/c					1.07	0.25	0.45	0.01	0.01	0.00	0.15	0.01	0.00	
	Delay (s)					439	440	399	9	0	0	11	0	0	440
	LOS					F	F	F	A	A	A	B	A	A	F
	95th% Queue (m)					177	177	177	0	0	0	4	0	0	

Total PM Peak Hour - HCM7 Method															
Intersection	LOS Criteria	Intersection Control	Northbound			Eastbound			Westblound			Northwestbound			Intersection
Wentworth at Roundabout	Vehicle Count			366			609			304			283		
	v/c			0.52			0.46			0.46			0.52		
	Delay (s)			13			7			12			16		11.34
	LOS			B			A			B			C		B
	95th% Queue (m)			24			19			19			23		

Total PM Peak Hour - Kimber Method															
Intersection	LOS Criteria	Intersection Control	Northbound			Eastbound			Westblound			Northwestbound			Intersection
Wentworth at Roundabout	Approach Volume			366			609			304			283		
	Approach Capacity			1346			1567			1306			1248		
	v/c			0.27			0.39			0.23			0.23		
	Delay (s)			4			3			3			4		3.9
	LOS			A			A			A			A		A
	Avg Queue (veh)			1			1			0			0		

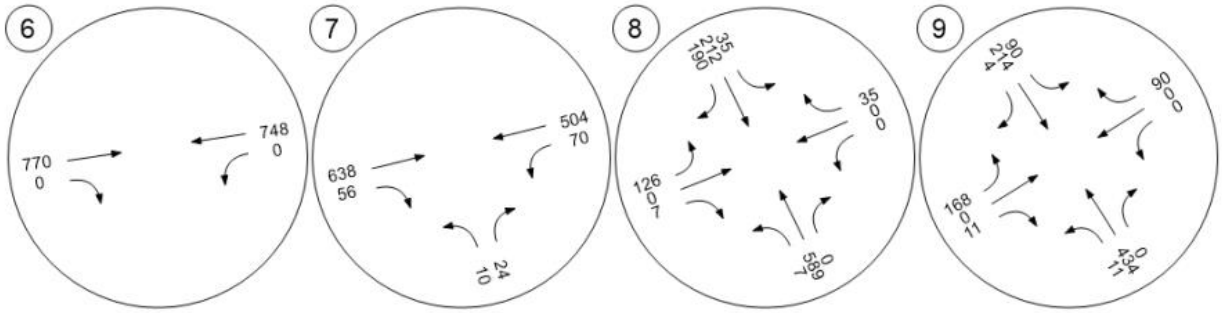
The LOS analysis indicates that for the PM Total peak hour, only the Wentworth Road at Industrial Drive intersection fails.

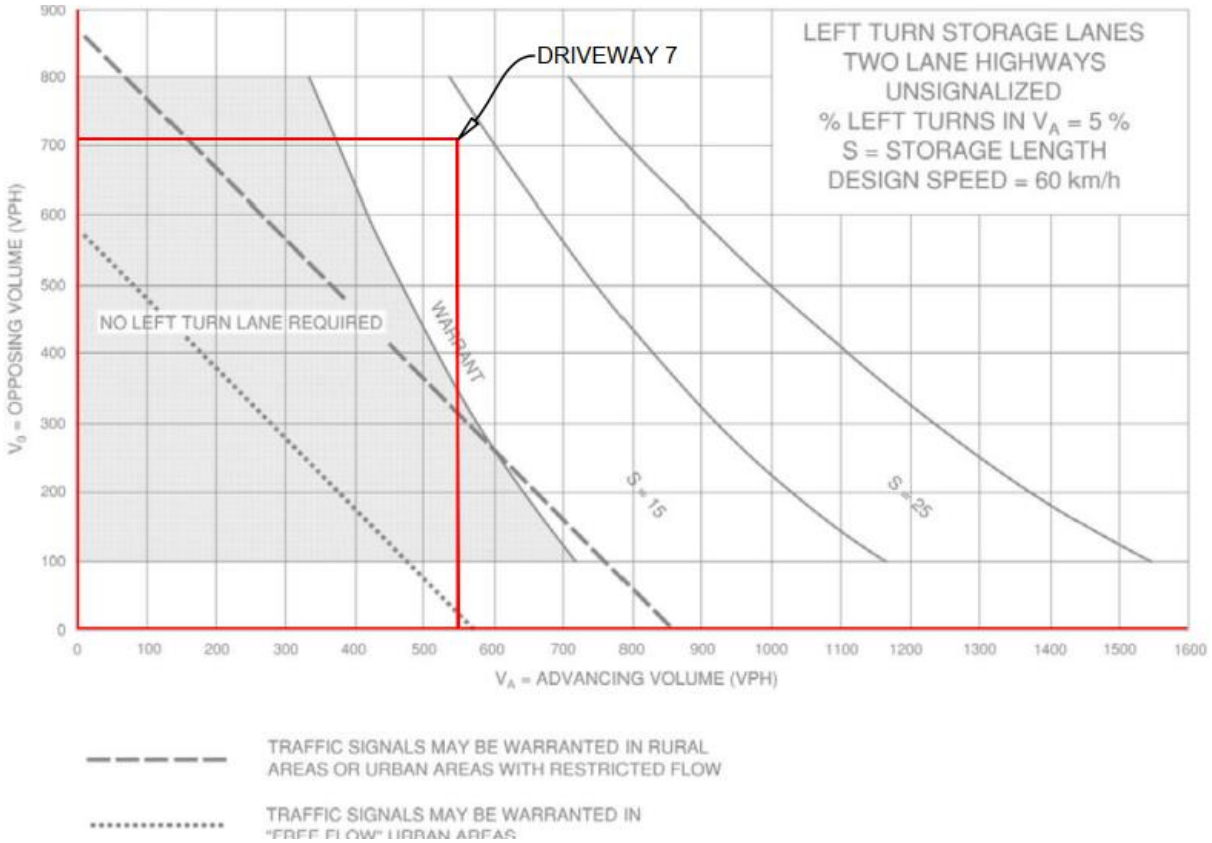
5.2 Auxiliary Lane Warrants

Left Turn Lane Warrants

The Ontario Ministry of Transportation (MTO) method was used to evaluate the need for left turn lanes for the four driveways, For the purposes of this assessment, PM peak hour volumes were used as the highest volume scenario to determine the warrant.

Left turn warrants were carried out for four-driveway intersections. Based on this analysis, only Driveway #7 warranted a left turn lane. While a left turn lane was not warranted ofr Driveway #6, one is reccomended for safety reasons given the percentage of truck traffic.





Right Turn Lane Warrants

In Nova Scotia, the most common method used to determine if a right turn lane is warranted is the method used by the Ohio Department of Transportation. Using this method, a southbound right turn lane at Intersection #8 is warranted

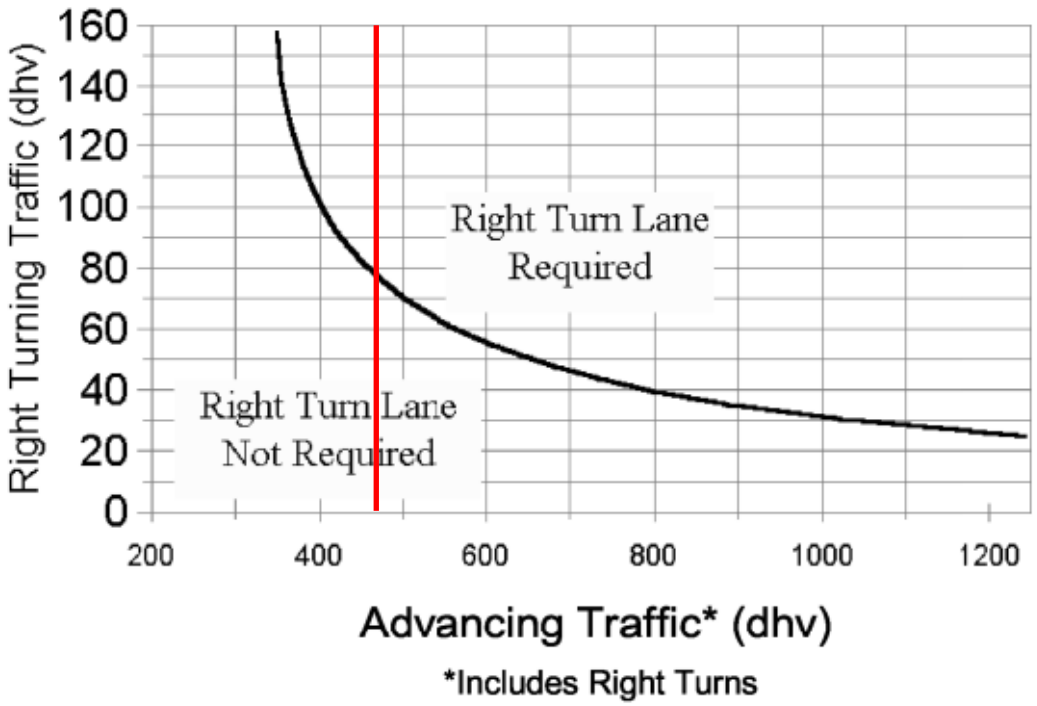


Figure 15 - Ohio DOT Right Turn Lane Warrant

5.3 Cole Drive Roundabout

For the Total 2031 Traffic Volume scenario, only the Wentworth Road at Industrial Drive intersection exceeds the level of service (LOS) threshold. One option that has been considered by NSPW is to upgrade the Cole Drive intersection to a roundabout, and to convert the Industrial Drive approach to an exit ramp only. This option is illustrated below:

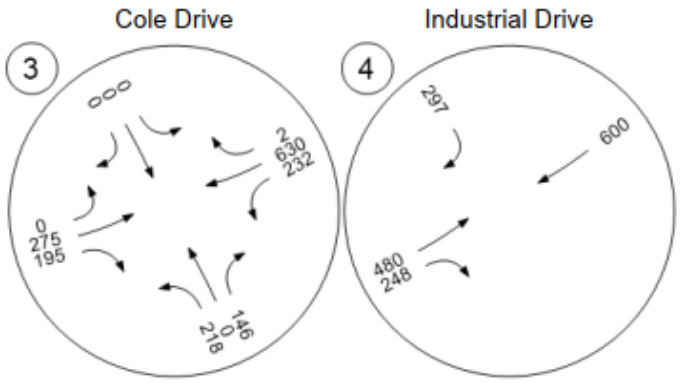


Figure 16 - Cole Drive Roundabout - Total AM Peak Hour Volumes

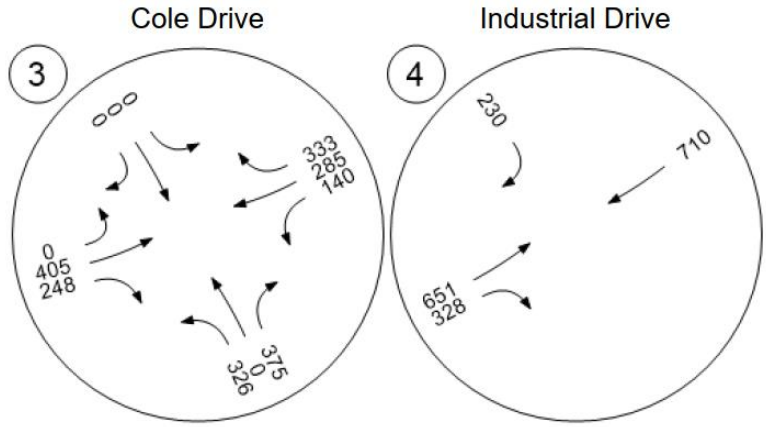


Figure 17 - Cole Drive Roundabout - Total PM Peak Hour Volumes

Table 9 - Total 2031 AM Peak with Cole Roundabout

Total 2031 AM Peak Hour - HCM 7 - Cole Roundabout															
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Cole Dr	Vehicle Count			364			0			470			864		
	v/c			N/A			N/A			N/A			N/A		
	Delay (s)			7			8			8			19		13.36
	LOS			A			A			A			C		B
	95th% Queue (m)			0			0			1			2		
Wentworth at SB Ramps	Vehicle Count	STOP						297		N/A			N/A		
	v/c							0.59		N/A			N/A		
	Delay (s)							22		N/A			N/A		4.04
	LOS							C		N/A			N/A		C
	95th% Queue (m)							29		0			0		

Total 2031 AM Peak Hour - Kimber Method - Cole Roundabout															
Intersection	LOS Criteria	Intersection Control	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Cole Dr	Approach Volume			364			0			470			864		
	Capacity			1260			773			1287			1295		
	v/c			0.29			0.00			0.37			0.67		5.9
	LOS			A			A			A			A		A
	Avg Queue (m)			0			0			1			2		

The results indicate that with the Cole Drive roundabout and the turn restrictions at Industrial Drive, the AM Peak LOS threshold is met.

Total 2031 PM Peak Hour - HCM 7 - Cole Roundabout															
Intersection	LOS Criteria	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Cole Dr	Vehicle Count			701						653			758		
	v/c			0.79			0.00			0.56			0.79		
	Delay (s)			21			6			10			20		17.21
	LOS			C			A			A			C		C
	95th% Queue (m)			63			0			27			64		
Wentworth at SB Ramps	Vehicle Count							230		N/A			N/A		
	v/c							0.53		N/A			N/A		
	Delay (s)							22		N/A			N/A		4.04
	LOS							C		N/A			N/A		C
	95th% Queue (m)							23		0			0		

Total 2031 PM Peak Hour - Kimber Method - Cole Roundabout															
Intersection	LOS Criteria	Intersection Control	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	Intersection
Wentworth at Cole Dr	Approach Volume			701			0			653			758		
	Capacity			1182			972			1342			1230		
	v/c			0.59			0.00			0.49			0.62		6.39
	LOS			A			A			A			A		A
	Avg Queue (m)			1			0			1			1		

The results indicate that with the Cole Drive roundabout and the turn restrictions at Industrial Drive, the PM Peak LOS threshold is met.

6.0 SUMMARY

- Kent Building Supplies is planning to replace its Fort Edward Mall store with a new store at the corner of Wentworth Road and Cole Drive in Windsor. In addition to the Kent Building Supplies store, the new development will include six new commercial buildings.

- Peak hour traffic counts were obtained along the Wentworth Road corridor during the last two weeks of November 2024 at five key intersections: Payzant Drive, Centennial Drive, Cole Drive, Industrial Drive, and the Highway 101 roundabout. These counts were adjusted using the Nova Scotia Department of Public Works count group factors.

- The new store is expected to be completed by 2026, and the horizon year selected for the study was 2031. The 2031 Background traffic volumes were estimated by applying a traffic growth factor of 1.11 to the five key intersections. This equates to an annual background growth rate of approximately 1.5% per year.

- A level of service analysis for the existing traffic conditions indicates that the Payzant Drive intersection fails during both the AM and PM weekday peak hour periods. This will be mitigated when the Municipality upgrades this intersection either with signals or a roundabout.

- A LOS service analysis for existing traffic conditions indicates that the Industrial Drive intersection fails during both the AM and PM weekday peak hour periods. This intersection also fails during the background peak hour periods.

- The new site is expected to generate 306 and 655 weekday AM and PM peak hour trips respectively. When added to the background traffic volumes, only the Industrial Drive intersection fails.

- The proposed site will have four-driveways, two off Wentworth Road, and two off Cole Drive. A warrant analysis indicates that westbound left turn lanes are needed for the two Wentworth Road driveways. While left turn lanes are not needed on Cole Drive, the two driveways could experience long delays during the PM peak hour period. This will depend on through traffic on Cole Drive and how many shoppers will use the Wentworth Road driveways.

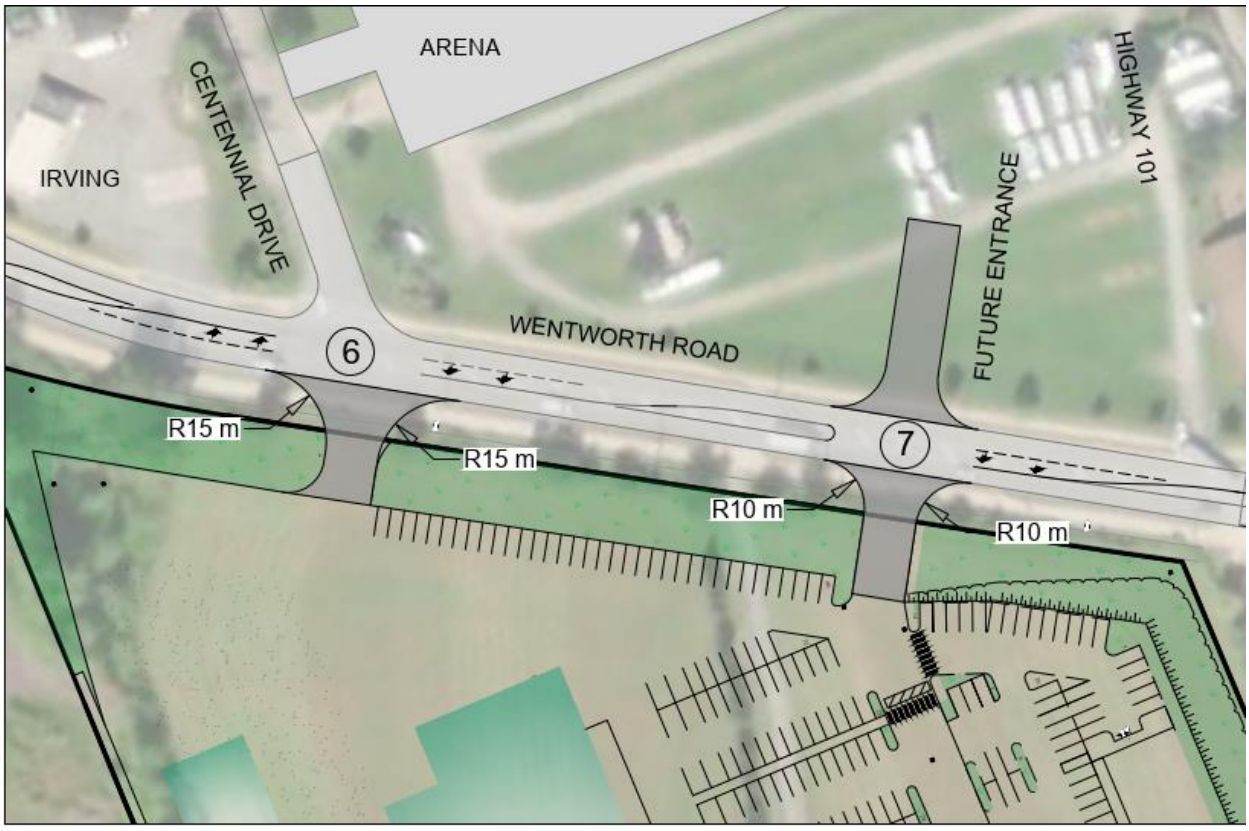
- The proximity of the Industrial Drive intersection to the roundabout (roughly 140 metres) and to the signals at Cole Drive (roughly 100 metres) makes it difficult to upgrade the intersection. One option is to upgrade the Cole Drive intersection to a roundabout and convert the Industrial Drive intersection to a Highway 101 southbound off ramp.

.

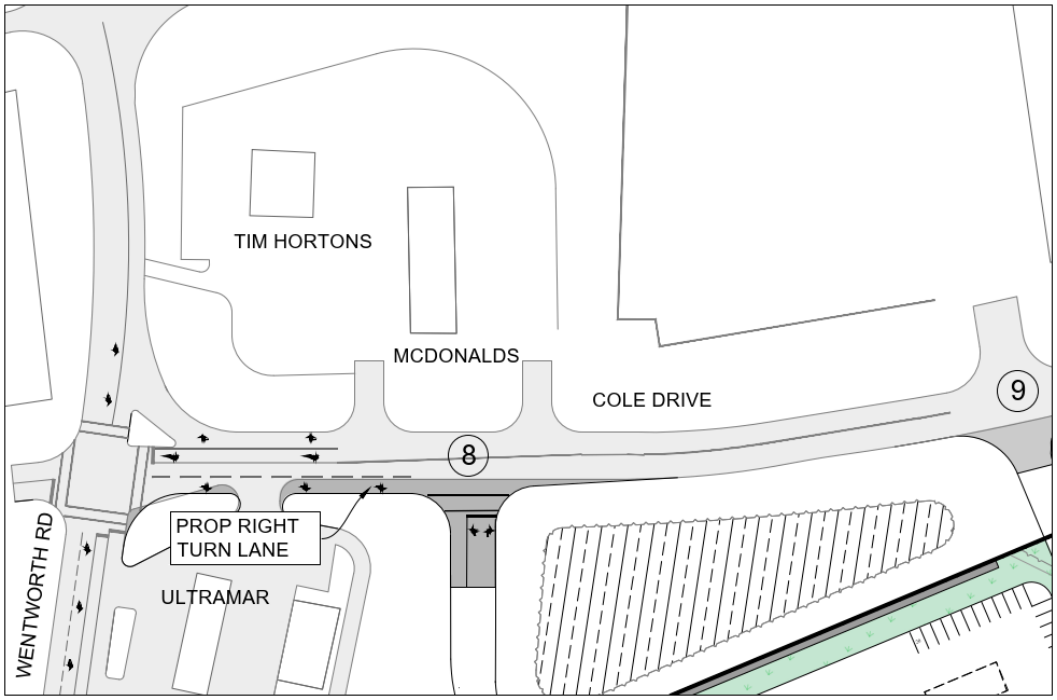
7.0 RECCOMENDATIONS

1. The Municipality should proceed with upgrading the Payzant Drive intersection. This could take the form of signals with an eastbound right turn lane or a roundabout.

2. The developer should install westbound left turn lanes at the two driveway locations located on Wentworth Road. A concept is shown below.



3. The developer should install a southbound right turn lane at Intersection No. 8. A concept is shown below.



4. If possible, Driveway 7 should align with the proposed entrance into the Exhibition Grounds

5. The Municipality and NSPW should explore the feasibility of upgrading the Cole Drive intersection to a roundabout and the Industrial Drive intersection to a southbound off ramp.

Windsor Roundabout - TMC

Tue Nov 26, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

DESIGNPOINT
engineering • surveying • solutions
Provided by: DesignPoint Engineering & Surveying Ltd.
90 Western Parkway, Suite 500,
Bedford, NS, B4B 2J3, CA

Leg	Wentworth Road					Morison Dr						Hwy 101 off-ramp						
Direction	Southbound					Southwestbound						Westbound						
Time	R	T	BL	**App**	Ped*	HR	BR	BL	L	**App**	Ped*	HR	R	T	L	HL	**App**	Ped*
2024-11-26 7:00AM	107	146	20	**273**	0	9	5	24	0	**38**	0	38	85	0	148	0	**271**	0
8:00AM	82	215	24	**321**	0	14	17	37	0	**68**	0	41	114	17	172	2	**346**	0
4:00PM	66	134	7	**207**	0	27	70	150	1	**248**	0	28	75	3	179	0	**285**	0
5:00PM	64	127	15	**206**	0	24	23	70	0	**117**	0	25	51	5	154	0	**235**	0
Total	319	622	66	**1007**	0	74	115	281	1	**471**	0	132	325	25	653	2	**1137**	0
% Approach	31.7%	61.8%	6.6%	**-**	-	15.7%	24.4%	59.7%	0.2%	**-**	-	11.6%	28.6%	2.2%	57.4%	0.2%	**-**	-
% Total	6.1%	11.8%	1.3%	**19.2%**	-	1.4%	2.2%	5.4%	0%	**9.0%**	-	2.5%	6.2%	0.5%	12.4%	0%	**21.6%**	-
Lights	302	607	64	**973**	-	73	114	268	1	**456**	-	127	309	25	608	2	**1071**	-
% Lights	94.7%	97.6%	97.0%	**96.6%**	-	98.6%	99.1%	95.4%	100%	**96.8%**	-	96.2%	95.1%	100%	93.1%	100%	**94.2%**	-
Single-Unit Trucks	14	12	0	**26**	-	1	1	8	0	**10**	-	3	10	0	23	0	**36**	-
% Single-Unit Trucks	4.4%	1.9%	0%	**2.6%**	-	1.4%	0.9%	2.8%	0%	**2.1%**	-	2.3%	3.1%	0%	3.5%	0%	**3.2%**	-
Articulated Trucks	3	1	0	**4**	-	0	0	0	0	**0**	-	0	4	0	12	0	**16**	-
% Articulated Trucks	0.9%	0.2%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	1.2%	0%	1.8%	0%	**1.4%**	-
Buses	0	2	2	**4**	-	0	0	5	0	**5**	-	2	2	0	10	0	**14**	-
% Buses	0%	0.3%	3.0%	**0.4%**	-	0%	0%	1.8%	0%	**1.1%**	-	1.5%	0.6%	0%	1.5%	0%	**1.2%**	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*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

Windsor Roundabout - TMC

Tue Nov 26, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

DESIGNPOINT
engineering • surveying • solutions
Provided by: DesignPoint Engineering & Surveying Ltd.
90 Western Parkway, Suite 500,
Bedford, NS, B4B 2J3, CA

Leg Direction	Southeast Northwestbound							Wentworth Road Northbound			Hwy 101 on-ramp Eastbound		
Time	R	BR	BL	HL	U	**App**	Ped*	HR	**App**	Ped*	**App**	Ped*	**Int**
2024-11-26 7:00AM	124	82	58	11	0	**275**	-	240	**240**	0	**0**	1	**1097**
8:00AM	111	111	84	6	0	**312**	-	317	**317**	0	**0**	1	**1364**
4:00PM	70	216	124	14	0	**424**	-	393	**393**	1	**0**	2	**1557**
5:00PM	75	167	98	10	0	**350**	-	326	**326**	0	**0**	0	**1234**
Total	380	576	364	41	0	**1361**	-	1276	**1276**	1	**0**	4	**5252**
% Approach	27.9%	42.3%	26.7%	3.0%	0%	**-**	-	100%	**-**	-	**-**	-	**-**
% Total	7.2%	11.0%	6.9%	0.8%	0%	**25.9%**	-	24.3%	**24.3%**	-	**0%**	-	**-**
Lights	371	559	345	41	0	**1316**	-	1233	**1233**	-	**0**	-	5049
% Lights	97.6%	97.0%	94.8%	100%	0%	**96.7%**	-	96.6%	**96.6%**	-	**-**	-	96.1%
Single-Unit Trucks	6	9	9	0	0	**24**	-	24	**24**	-	**0**	-	120
% Single-Unit Trucks	1.6%	1.6%	2.5%	0%	0%	**1.8%**	-	1.9%	**1.9%**	-	**-**	-	2.3%
Articulated Trucks	0	1	9	0	0	**10**	-	9	**9**	-	**0**	-	39
% Articulated Trucks	0%	0.2%	2.5%	0%	0%	**0.7%**	-	0.7%	**0.7%**	-	**-**	-	0.7%
Buses	3	7	1	0	0	**11**	-	10	**10**	-	**0**	-	44
% Buses	0.8%	1.2%	0.3%	0%	0%	**0.8%**	-	0.8%	**0.8%**	-	**-**	-	0.8%
Pedestrians	-	-	-	-	-	-	0	-	-	1	-	4	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	100%	-

*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

Windsor Roundabout - TMC
Tue Nov 26, 2024
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

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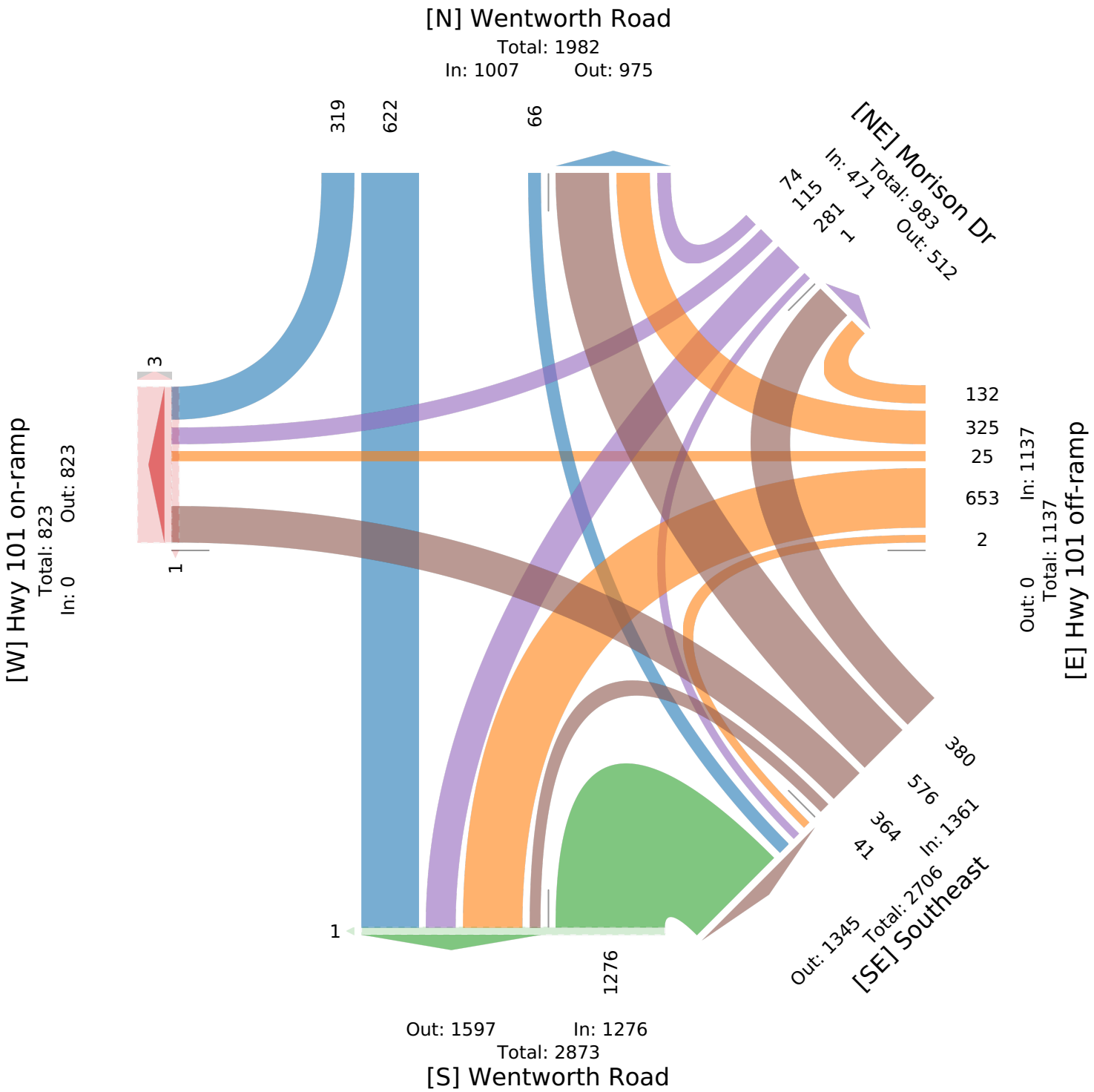

Windsor Roundabout - TMC

Tue Nov 26, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

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Bedford, NS, B4B 2J3, CA

Leg	Wentworth Road					Morison Dr						Hwy 101 off-ramp						
Direction	Southbound					Southwestbound						Westbound						
Time	R	T	BL	**App**	Ped*	HR	BR	BL	L	**App**	Ped*	HR	R	T	L	HL	**App**	Ped*
2024-11-26 8:00AM	14	42	5	**61**	0	3	5	6	0	**14**	0	20	27	6	46	2	**101**	0
8:15AM	24	57	5	**86**	0	3	5	8	0	**16**	0	8	28	4	37	0	**77**	0
8:30AM	23	60	7	**90**	0	4	2	11	0	**17**	0	6	34	4	41	0	**85**	0
8:45AM	21	56	7	**84**	0	4	5	12	0	**21**	0	7	25	3	48	0	**83**	0
Total	82	215	24	**321**	0	14	17	37	0	**68**	0	41	114	17	172	2	**346**	0
% Approach	25.5%	67.0%	7.5%	**-**	-	20.6%	25.0%	54.4%	0%	**-**	-	11.8%	32.9%	4.9%	49.7%	0.6%	**-**	-
% Total	6.0%	15.8%	1.8%	**23.5%**	-	1.0%	1.2%	2.7%	0%	**5.0%**	-	3.0%	8.4%	1.2%	12.6%	0.1%	**25.4%**	-
PHF	0.854	0.896	0.857	**0.892**	-	0.875	0.850	0.771	-	**0.810**	-	0.513	0.838	0.708	0.896	0.250	**0.856**	-
Lights	76	208	23	**307**	-	13	16	34	0	**63**	-	39	110	17	153	2	**321**	-
% Lights	92.7%	96.7%	95.8%	**95.6%**	-	92.9%	94.1%	91.9%	0%	**92.6%**	-	95.1%	96.5%	100%	89.0%	100%	**92.8%**	-
Single-Unit Trucks	5	4	0	**9**	-	1	1	3	0	**5**	-	2	2	0	6	0	**10**	-
% Single-Unit Trucks	6.1%	1.9%	0%	**2.8%**	-	7.1%	5.9%	8.1%	0%	**7.4%**	-	4.9%	1.8%	0%	3.5%	0%	**2.9%**	-
Articulated Trucks	1	1	0	**2**	-	0	0	0	0	**0**	-	0	0	0	4	0	**4**	-
% Articulated Trucks	1.2%	0.5%	0%	**0.6%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	2.3%	0%	**1.2%**	-
Buses	0	2	1	**3**	-	0	0	0	0	**0**	-	0	2	0	9	0	**11**	-
% Buses	0%	0.9%	4.2%	**0.9%**	-	0%	0%	0%	0%	**0%**	-	0%	1.8%	0%	5.2%	0%	**3.2%**	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*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

Windsor Roundabout - TMC

Tue Nov 26, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

DESIGNPOINT
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Provided by: DesignPoint Engineering & Surveying Ltd.
90 Western Parkway, Suite 500,
Bedford, NS, B4B 2J3, CA

Leg Direction	Southeast Northwestbound							Wentworth Road Northbound			Hwy 101 on-ramp Eastbound		
Time	R	BR	BL	HL	U	**App**	Ped*	HR	**App**	Ped*	**App**	Ped*	**Int**
2024-11-26 8:00AM	26	20	16	1	0	**63**	-	69	**69**	0	**0**	0	**308**
8:15AM	33	27	18	2	0	**80**	-	75	**75**	0	**0**	0	**334**
8:30AM	25	34	21	1	0	**81**	-	82	**82**	0	**0**	1	**355**
8:45AM	27	30	29	2	0	**88**	-	91	**91**	0	**0**	0	**367**
Total	111	111	84	6	0	**312**	-	317	**317**	0	**0**	1	**1364**
% Approach	35.6%	35.6%	26.9%	1.9%	0%	**-**	-	100%	**-**	-	**-**	-	**-**
% Total	8.1%	8.1%	6.2%	0.4%	0%	**22.9%**	-	23.2%	**23.2%**	-	**0%**	-	**-**
PHF	0.841	0.816	0.724	0.750	-	**0.886**	-	0.871	**0.871**	-	**-**	-	0.929
Lights	105	103	73	6	0	**287**	-	293	**293**	-	**0**	-	1271
% Lights	94.6%	92.8%	86.9%	100%	0%	**92.0%**	-	92.4%	**92.4%**	-	**-**	-	93.2%
Single-Unit Trucks	4	3	2	0	0	**9**	-	8	**8**	-	**0**	-	41
% Single-Unit Trucks	3.6%	2.7%	2.4%	0%	0%	**2.9%**	-	2.5%	**2.5%**	-	**-**	-	3.0%
Articulated Trucks	0	0	8	0	0	**8**	-	8	**8**	-	**0**	-	22
% Articulated Trucks	0%	0%	9.5%	0%	0%	**2.6%**	-	2.5%	**2.5%**	-	**-**	-	1.6%
Buses	2	5	1	0	0	**8**	-	8	**8**	-	**0**	-	30
% Buses	1.8%	4.5%	1.2%	0%	0%	**2.6%**	-	2.5%	**2.5%**	-	**-**	-	2.2%
Pedestrians	-	-	-	-	-	-	0	-	-	0	-	1	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-

*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

Windsor Roundabout - TMC
Tue Nov 26, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

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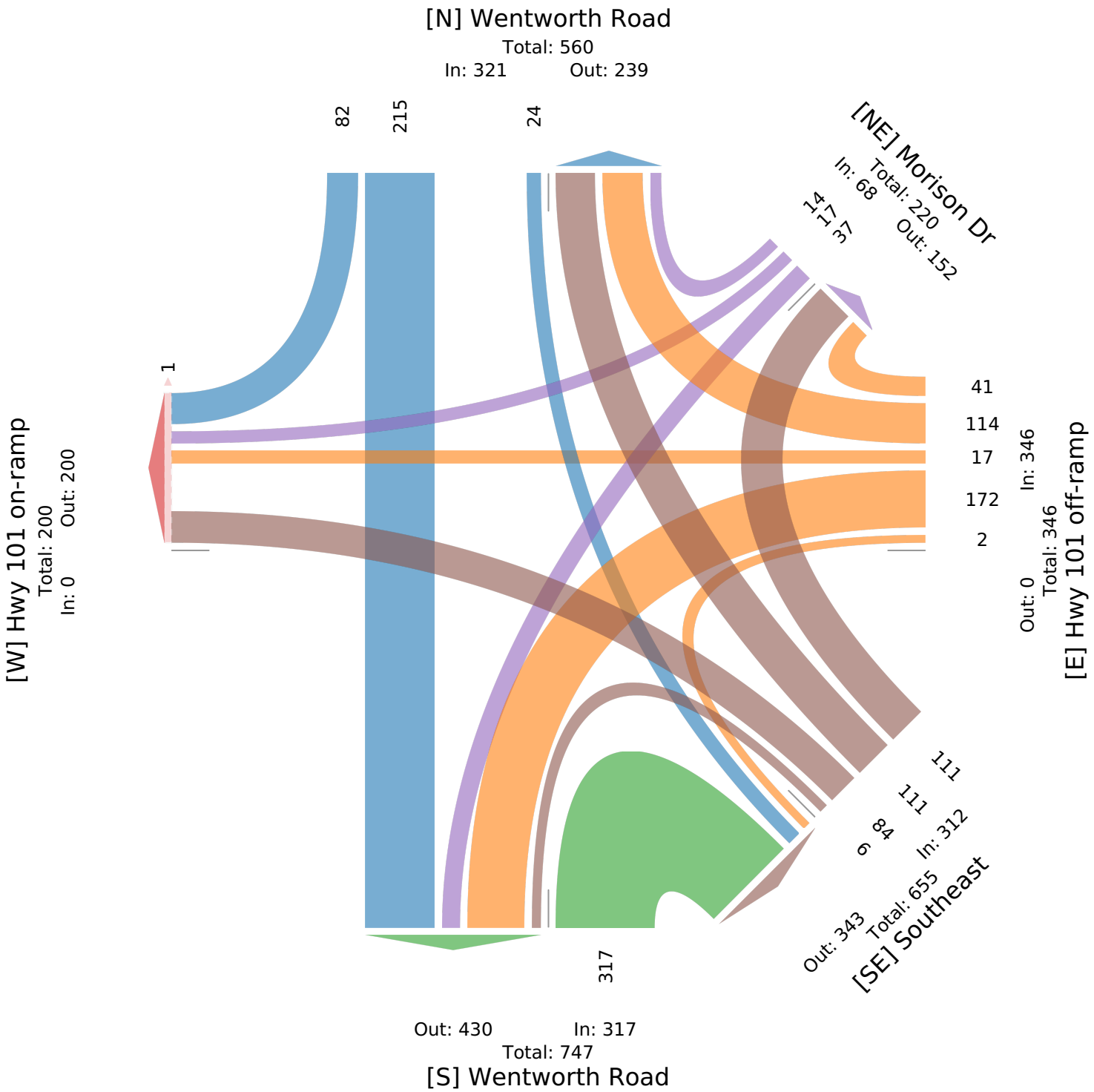

Windsor Roundabout - TMC

Tue Nov 26, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

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Provided by: DesignPoint Engineering & Surveying Ltd.
90 Western Parkway, Suite 500,
Bedford, NS, B4B 2J3, CA

Leg	Wentworth Road					Morison Dr						Hwy 101 off-ramp						
Direction	Southbound					Southwestbound						Westbound						
Time	R	T	BL	**App**	Ped*	HR	BR	BL	L	**App**	Ped*	HR	R	T	L	HL	**App**	Ped*
2024-11-26 4:00PM	11	35	2	**48**	0	7	16	31	0	**54**	0	7	16	2	39	0	**64**	0
4:15PM	16	26	2	**44**	0	3	14	20	0	**37**	0	7	23	1	46	0	**77**	0
4:30PM	18	35	1	**54**	0	8	32	63	1	**104**	0	8	21	0	44	0	**73**	0
4:45PM	21	38	2	**61**	0	9	8	36	0	**53**	0	6	15	0	50	0	**71**	0
Total	66	134	7	**207**	0	27	70	150	1	**248**	0	28	75	3	179	0	**285**	0
% Approach	31.9%	64.7%	3.4%	**-**	-	10.9%	28.2%	60.5%	0.4%	**-**	-	9.8%	26.3%	1.1%	62.8%	0%	**-**	-
% Total	4.2%	8.6%	0.4%	**13.3%**	-	1.7%	4.5%	9.6%	0.1%	**15.9%**	-	1.8%	4.8%	0.2%	11.5%	0%	**18.3%**	-
PHF	0.786	0.882	0.875	**0.848**	-	0.750	0.547	0.595	0.250	**0.596**	-	0.875	0.815	0.375	0.895	-	**0.925**	-
Lights	64	133	7	**204**	-	27	70	146	1	**244**	-	25	72	3	168	0	**268**	-
% Lights	97.0%	99.3%	100%	**98.6%**	-	100%	100%	97.3%	100%	**98.4%**	-	89.3%	96.0%	100%	93.9%	0%	**94.0%**	-
Single-Unit Trucks	1	1	0	**2**	-	0	0	4	0	**4**	-	1	1	0	8	0	**10**	-
% Single-Unit Trucks	1.5%	0.7%	0%	**1.0%**	-	0%	0%	2.7%	0%	**1.6%**	-	3.6%	1.3%	0%	4.5%	0%	**3.5%**	-
Articulated Trucks	1	0	0	**1**	-	0	0	0	0	**0**	-	0	2	0	2	0	**4**	-
% Articulated Trucks	1.5%	0%	0%	**0.5%**	-	0%	0%	0%	0%	**0%**	-	0%	2.7%	0%	1.1%	0%	**1.4%**	-
Buses	0	0	0	**0**	-	0	0	0	0	**0**	-	2	0	0	1	0	**3**	-
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	7.1%	0%	0%	0.6%	0%	**1.1%**	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*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

Windsor Roundabout - TMC

Tue Nov 26, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

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Leg Direction	Southeast Northwestbound							Wentworth Road Northbound			Hwy 101 on-ramp Eastbound		
Time	R	BR	BL	HL	U	**App**	Ped*	HR	**App**	Ped*	**App**	Ped*	**Int**
2024-11-26 4:00PM	10	67	39	0	0	**116**	-	111	**111**	1	**0**	1	**393**
4:15PM	12	50	32	3	0	**97**	-	94	**94**	0	**0**	0	**349**
4:30PM	18	54	22	5	0	**99**	-	89	**89**	0	**0**	1	**419**
4:45PM	30	45	31	6	0	**112**	-	99	**99**	0	**0**	0	**396**
Total	70	216	124	14	0	**424**	-	393	**393**	1	**0**	2	**1557**
% Approach	16.5%	50.9%	29.2%	3.3%	0%	**-**	-	100%	**-**	-	**-**	-	**-**
% Total	4.5%	13.9%	8.0%	0.9%	0%	**27.2%**	-	25.2%	**25.2%**	-	**0%**	-	**-**
PHF	0.583	0.806	0.795	0.583	-	**0.914**	-	0.885	**0.885**	-	**-**	-	0.929
Lights	69	216	122	14	0	**421**	-	390	**390**	-	**0**	-	1527
% Lights	98.6%	100%	98.4%	100%	0%	**99.3%**	-	99.2%	**99.2%**	-	**-**	-	98.1%
Single-Unit Trucks	1	0	2	0	0	**3**	-	3	**3**	-	**0**	-	22
% Single-Unit Trucks	1.4%	0%	1.6%	0%	0%	**0.7%**	-	0.8%	**0.8%**	-	**-**	-	1.4%
Articulated Trucks	0	0	0	0	0	**0**	-	0	**0**	-	**0**	-	5
% Articulated Trucks	0%	0%	0%	0%	0%	**0%**	-	0%	**0%**	-	**-**	-	0.3%
Buses	0	0	0	0	0	**0**	-	0	**0**	-	**0**	-	3
% Buses	0%	0%	0%	0%	0%	**0%**	-	0%	**0%**	-	**-**	-	0.2%
Pedestrians	-	-	-	-	-	-	0	-	-	1	-	2	
% Pedestrians	-	-	-	-	-	-	-	-	-	100%	-	100%	-

*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

Windsor Roundabout - TMC
Tue Nov 26, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1252530, Location: 44.99146, -64.112593

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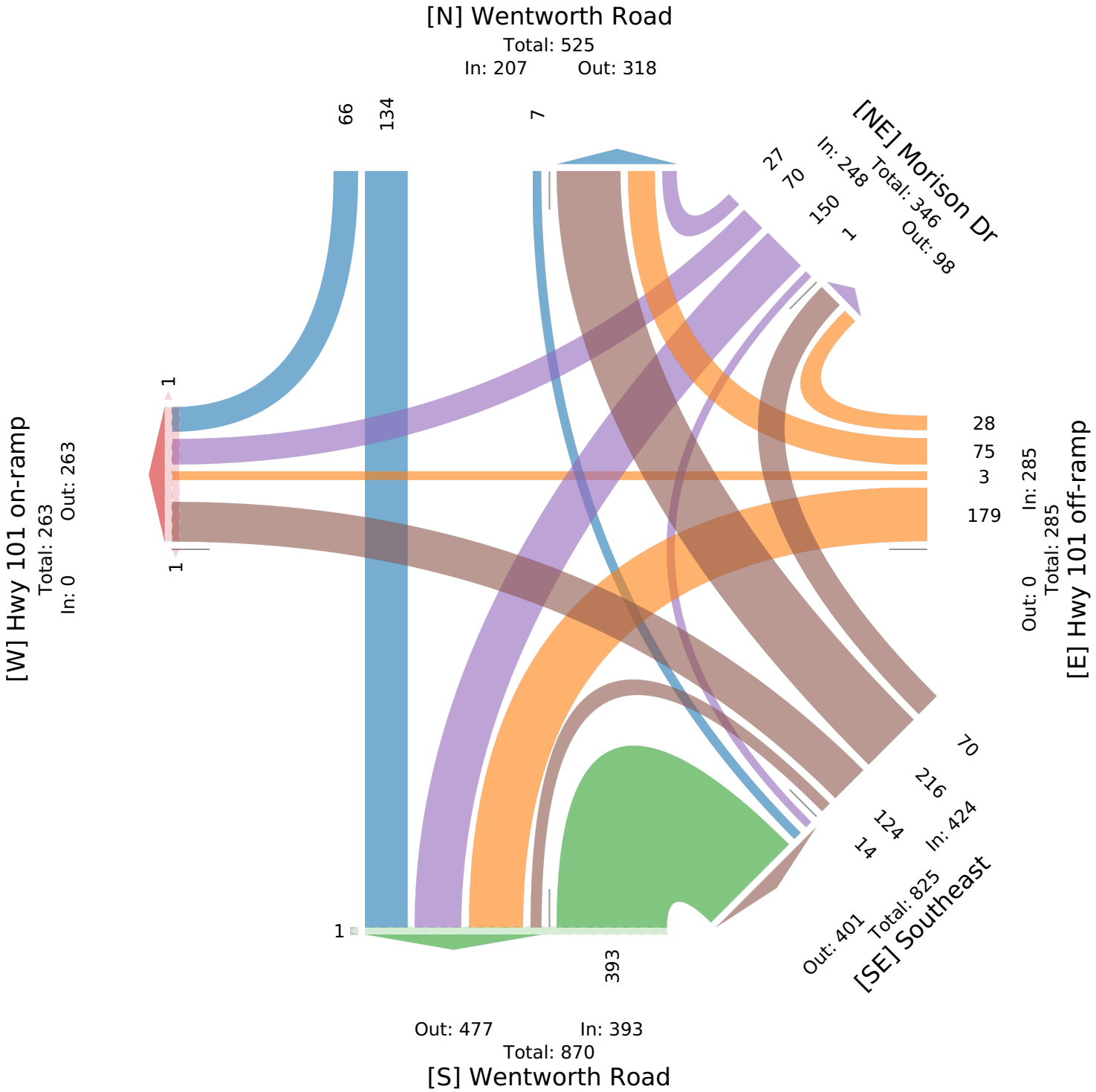

Wentworth / Industrial - TMC

Thu Nov 21, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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Leg	Industrial Drive						Wentworth Road						Exit 5A ramp						Wentworth Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-21 7:00AM	84	3	78	0	**165**	3	11	259	50	0	**320**	0	0	0	0	0	**0**	0	114	177	12	0	**303**	0	**788**
8:00AM	122	10	78	0	**210**	2	24	444	61	0	**529**	0	0	0	0	0	**0**	0	130	281	5	0	**416**	0	**1155**
11:00AM	77	8	56	0	**141**	8	17	299	43	0	**359**	0	0	0	0	0	**0**	0	144	261	6	0	**411**	0	**911**
12:00PM	111	20	68	0	**199**	1	30	334	59	0	**423**	0	0	0	0	0	**0**	0	158	288	17	0	**463**	0	**1085**
4:00PM	115	16	70	0	**201**	1	16	405	101	0	**522**	0	0	0	0	0	**0**	1	231	351	8	0	**590**	0	**1313**
5:00PM	108	18	68	0	**194**	0	11	348	75	0	**434**	0	0	0	0	0	**0**	0	192	273	1	0	**466**	0	**1094**
Total	617	75	418	0	**1110**	15	109	2089	389	0	**2587**	0	0	0	0	0	**0**	1	969	1631	49	0	**2649**	0	**6346**
% Approach	55.6%	6.8%	37.7%	0%	**-**	-	4.2%	80.7%	15.0%	0%	**-**	-	0%	0%	0%	0%	**-**	-	36.6%	61.6%	1.8%	0%	**-**	-	-
% Total	9.7%	1.2%	6.6%	0%	**17.5%**	-	1.7%	32.9%	6.1%	0%	**40.8%**	-	0%	0%	0%	0%	**0%**	-	15.3%	25.7%	0.8%	0%	**41.7%**	-	-
Lights	601	58	390	0	**1049**	-	85	2042	358	0	**2485**	-	0	0	0	0	**0**	-	944	1590	49	0	**2583**	-	6117
% Lights	97.4%	77.3%	93.3%	0%	**94.5%**	-	78.0%	97.8%	92.0%	0%	**96.1%**	-	0%	0%	0%	0%	**-**	-	97.4%	97.5%	100%	0%	**97.5%**	-	96.4%
Single-Unit Trucks	12	13	18	0	**43**	-	20	20	20	0	**60**	-	0	0	0	0	**0**	-	13	25	0	0	**38**	-	141
% Single-Unit Trucks	1.9%	17.3%	4.3%	0%	**3.9%**	-	18.3%	1.0%	5.1%	0%	**2.3%**	-	0%	0%	0%	0%	**-**	-	1.3%	1.5%	0%	0%	**1.4%**	-	2.2%
Articulated Trucks	2	3	8	0	**13**	-	3	10	5	0	**18**	-	0	0	0	0	**0**	-	5	6	0	0	**11**	-	42
% Articulated Trucks	0.3%	4.0%	1.9%	0%	**1.2%**	-	2.8%	0.5%	1.3%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0.5%	0.4%	0%	0%	**0.4%**	-	0.7%
Buses	2	1	2	0	**5**	-	1	17	6	0	**24**	-	0	0	0	0	**0**	-	7	10	0	0	**17**	-	46
% Buses	0.3%	1.3%	0.5%	0%	**0.5%**	-	0.9%	0.8%	1.5%	0%	**0.9%**	-	0%	0%	0%	0%	**-**	-	0.7%	0.6%	0%	0%	**0.6%**	-	0.7%
Pedestrians	-	-	-	-	-	15	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Industrial - TMC
Thu Nov 21, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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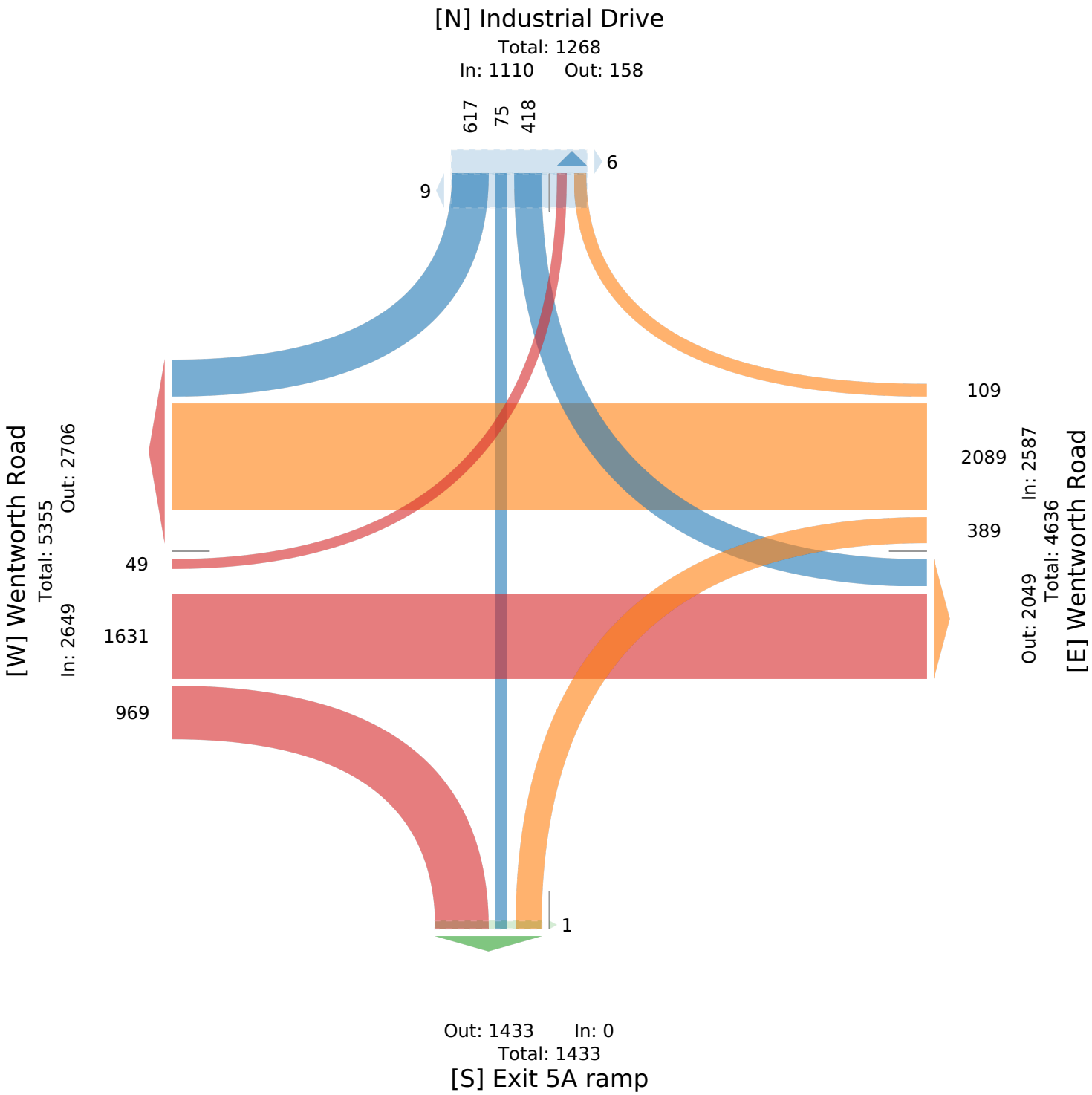

Wentworth / Industrial - TMC

Thu Nov 21, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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Leg / Direction	Industrial Drive Southbound						Wentworth Road Westbound						Exit 5A ramp Northbound						Wentworth Road Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-21 8:00AM	29	4	22	0	**55**	1	6	84	19	0	**109**	0	0	0	0	0	**0**	0	33	52	0	0	**85**	0	**249**
8:15AM	38	1	20	0	**59**	1	4	93	10	0	**107**	0	0	0	0	0	**0**	0	35	62	3	0	**100**	0	**266**
8:30AM	24	0	21	0	**45**	0	7	120	12	0	**139**	0	0	0	0	0	**0**	0	35	88	1	0	**124**	0	**308**
8:45AM	31	5	15	0	**51**	0	7	147	20	0	**174**	0	0	0	0	0	**0**	0	27	79	1	0	**107**	0	**332**
Total	122	10	78	0	**210**	2	24	444	61	0	**529**	0	0	0	0	0	**0**	0	130	281	5	0	**416**	0	**1155**
% Approach	58.1%	4.8%	37.1%	0%	**-**	-	4.5%	83.9%	11.5%	0%	**-**	-	0%	0%	0%	0%	**-**	-	31.3%	67.5%	1.2%	0%	**-**	-	-
% Total	10.6%	0.9%	6.8%	0%	**18.2%**	-	2.1%	38.4%	5.3%	0%	**45.8%**	-	0%	0%	0%	0%	**0%**	-	11.3%	24.3%	0.4%	0%	**36.0%**	-	-
PHF	0.803	0.500	0.886	-	**0.890**	-	0.857	0.755	0.763	-	**0.760**	-	-	-	-	-	**-**	-	0.929	0.798	0.417	-	**0.839**	-	0.870
Lights	119	7	73	0	**199**	-	20	419	51	0	**490**	-	0	0	0	0	**0**	-	122	262	5	0	**389**	-	1078
% Lights	97.5%	70.0%	93.6%	0%	**94.8%**	-	83.3%	94.4%	83.6%	0%	**92.6%**	-	0%	0%	0%	0%	**-**	-	93.8%	93.2%	100%	0%	**93.5%**	-	93.3%
Single-Unit Trucks	1	2	3	0	**6**	-	4	9	8	0	**21**	-	0	0	0	0	**0**	-	1	9	0	0	**10**	-	37
% Single-Unit Trucks	0.8%	20.0%	3.8%	0%	**2.9%**	-	16.7%	2.0%	13.1%	0%	**4.0%**	-	0%	0%	0%	0%	**-**	-	0.8%	3.2%	0%	0%	**2.4%**	-	3.2%
Articulated Trucks	0	1	2	0	**3**	-	0	3	1	0	**4**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	8
% Articulated Trucks	0%	10.0%	2.6%	0%	**1.4%**	-	0%	0.7%	1.6%	0%	**0.8%**	-	0%	0%	0%	0%	**-**	-	0%	0.4%	0%	0%	**0.2%**	-	0.7%
Buses	2	0	0	0	**2**	-	0	13	1	0	**14**	-	0	0	0	0	**0**	-	7	9	0	0	**16**	-	32
% Buses	1.6%	0%	0%	0%	**1.0%**	-	0%	2.9%	1.6%	0%	**2.6%**	-	0%	0%	0%	0%	**-**	-	5.4%	3.2%	0%	0%	**3.8%**	-	2.8%
Pedestrians	-	-	-	-	-	2	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Industrial - TMC
Thu Nov 21, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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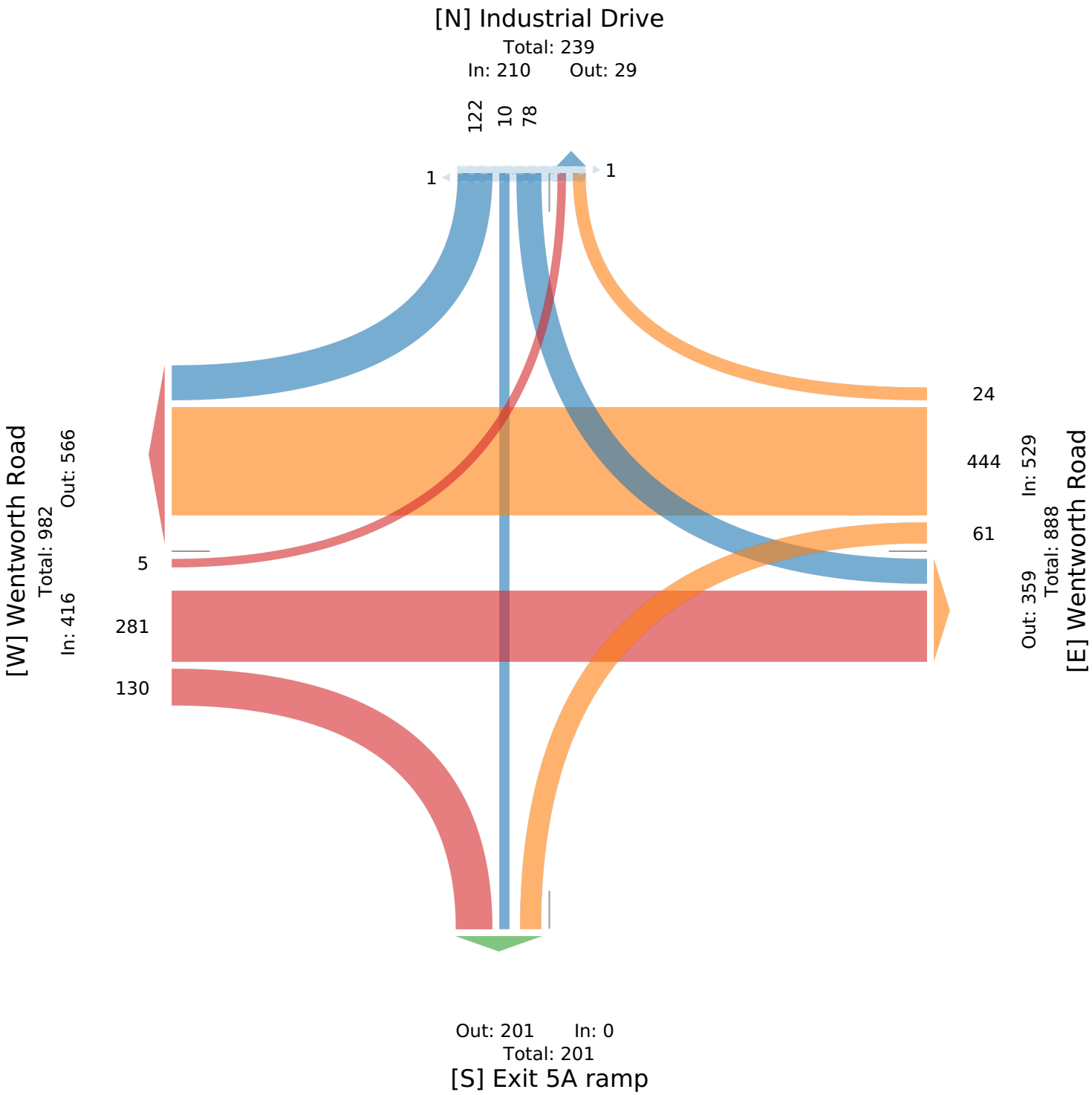

Wentworth / Industrial - TMC

Thu Nov 21, 2024
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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Leg / Direction	Industrial Drive Southbound						Wentworth Road Westbound						Exit 5A ramp Northbound						Wentworth Road Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-21 12:00PM	28	1	14	0	**43**	0	11	103	9	0	**123**	0	0	0	0	0	**0**	0	38	68	7	0	**113**	0	**279**
12:15PM	26	11	15	0	**52**	1	5	69	15	0	**89**	0	0	0	0	0	**0**	0	41	80	4	0	**125**	0	**266**
12:30PM	29	6	19	0	**54**	0	5	95	13	0	**113**	0	0	0	0	0	**0**	0	29	69	2	0	**100**	0	**267**
12:45PM	28	2	20	0	**50**	0	9	67	22	0	**98**	0	0	0	0	0	**0**	0	50	71	4	0	**125**	0	**273**
Total	111	20	68	0	**199**	1	30	334	59	0	**423**	0	0	0	0	0	**0**	0	158	288	17	0	**463**	0	**1085**
% Approach	55.8%	10.1%	34.2%	0%	**-**	-	7.1%	79.0%	13.9%	0%	**-**	-	0%	0%	0%	0%	**-**	-	34.1%	62.2%	3.7%	0%	**-**	-	-
% Total	10.2%	1.8%	6.3%	0%	**18.3%**	-	2.8%	30.8%	5.4%	0%	**39.0%**	-	0%	0%	0%	0%	**0%**	-	14.6%	26.5%	1.6%	0%	**42.7%**	-	-
PHF	0.957	0.455	0.850	-	**0.921**	-	0.682	0.811	0.670	-	**0.860**	-	-	-	-	-	**-**	-	0.790	0.900	0.607	-	**0.926**	-	0.972
Lights	109	12	66	0	**187**	-	22	331	57	0	**410**	-	0	0	0	0	**0**	-	154	286	17	0	**457**	-	1054
% Lights	98.2%	60.0%	97.1%	0%	**94.0%**	-	73.3%	99.1%	96.6%	0%	**96.9%**	-	0%	0%	0%	0%	**-**	-	97.5%	99.3%	100%	0%	**98.7%**	-	97.1%
Single-Unit Trucks	2	6	0	0	**8**	-	6	2	1	0	**9**	-	0	0	0	0	**0**	-	3	1	0	0	**4**	-	21
% Single-Unit Trucks	1.8%	30.0%	0%	0%	**4.0%**	-	20.0%	0.6%	1.7%	0%	**2.1%**	-	0%	0%	0%	0%	**-**	-	1.9%	0.3%	0%	0%	**0.9%**	-	1.9%
Articulated Trucks	0	1	2	0	**3**	-	2	0	1	0	**3**	-	0	0	0	0	**0**	-	1	1	0	0	**2**	-	8
% Articulated Trucks	0%	5.0%	2.9%	0%	**1.5%**	-	6.7%	0%	1.7%	0%	**0.7%**	-	0%	0%	0%	0%	**-**	-	0.6%	0.3%	0%	0%	**0.4%**	-	0.7%
Buses	0	1	0	0	**1**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	2
% Buses	0%	5.0%	0%	0%	**0.5%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0.2%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Industrial - TMC
Thu Nov 21, 2024
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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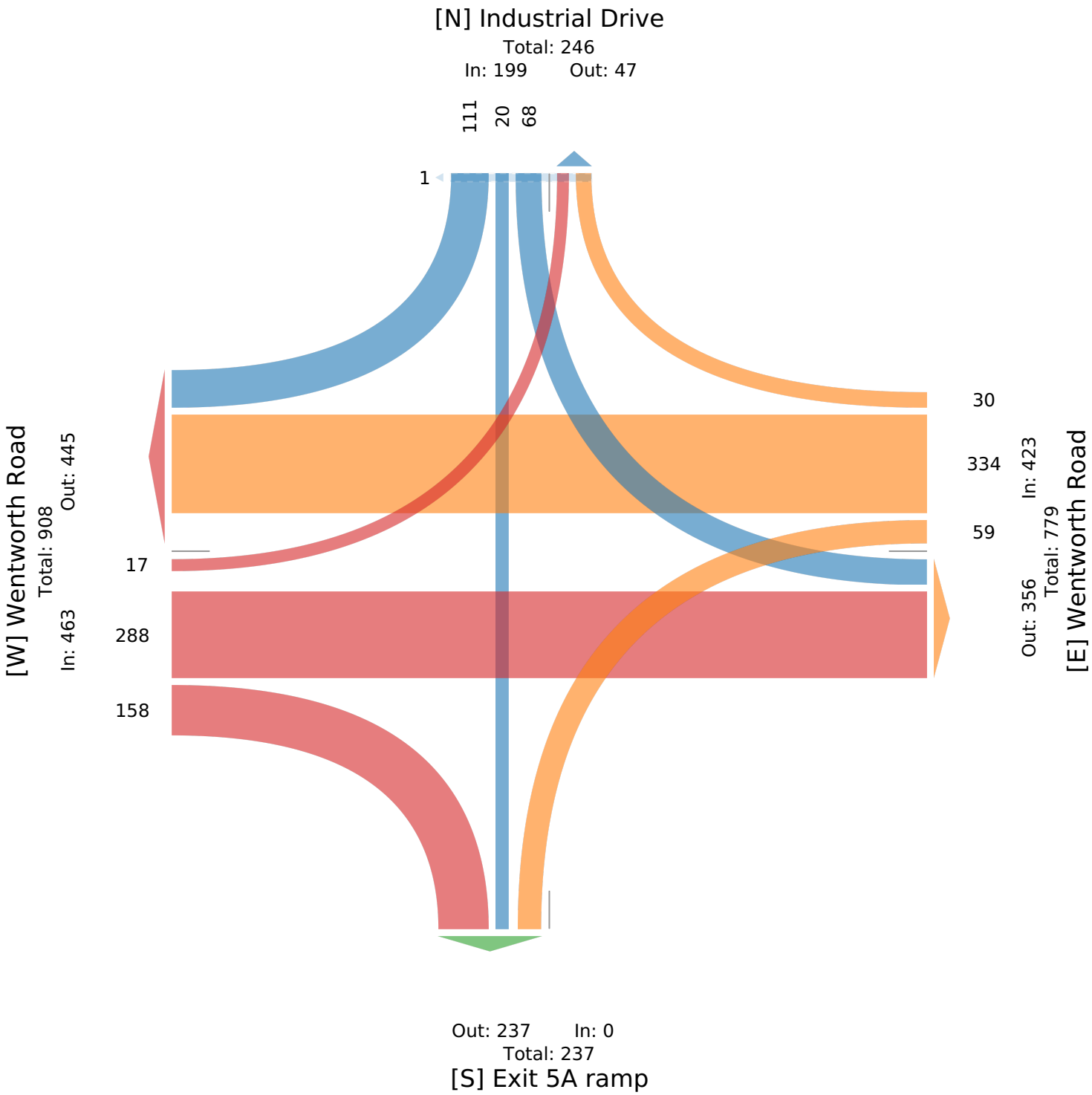

Wentworth / Industrial - TMC

Thu Nov 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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Leg / Direction	Industrial Drive Southbound						Wentworth Road Westbound						Exit 5A ramp Northbound						Wentworth Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-21 4:00PM	26	4	20	0	**50**	0	4	98	30	0	**132**	0	0	0	0	0	**0**	0	65	84	2	0	**151**	0	**333**
4:15PM	29	4	16	0	**49**	0	4	81	21	0	**106**	0	0	0	0	0	**0**	0	66	103	3	0	**172**	0	**327**
4:30PM	36	6	18	0	**60**	1	2	120	27	0	**149**	0	0	0	0	0	**0**	1	52	79	2	0	**133**	0	**342**
4:45PM	24	2	16	0	**42**	0	6	106	23	0	**135**	0	0	0	0	0	**0**	0	48	85	1	0	**134**	0	**311**
Total	115	16	70	0	**201**	1	16	405	101	0	**522**	0	0	0	0	0	**0**	1	231	351	8	0	**590**	0	**1313**
% Approach	57.2%	8.0%	34.8%	0%	**-**	-	3.1%	77.6%	19.3%	0%	**-**	-	0%	0%	0%	0%	**-**	-	39.2%	59.5%	1.4%	0%	**-**	-	-
% Total	8.8%	1.2%	5.3%	0%	**15.3%**	-	1.2%	30.8%	7.7%	0%	**39.8%**	-	0%	0%	0%	0%	**0%**	-	17.6%	26.7%	0.6%	0%	**44.9%**	-	-
PHF	0.799	0.667	0.875	-	**0.838**	-	0.667	0.844	0.842	-	**0.876**	-	-	-	-	-	**-**	-	0.875	0.852	0.667	-	**0.858**	-	0.960
Lights	113	16	66	0	**195**	-	11	402	96	0	**509**	-	0	0	0	0	**0**	-	228	346	8	0	**582**	-	1286
% Lights	98.3%	100%	94.3%	0%	**97.0%**	-	68.8%	99.3%	95.0%	0%	**97.5%**	-	0%	0%	0%	0%	**-**	-	98.7%	98.6%	100%	0%	**98.6%**	-	97.9%
Single-Unit Trucks	2	0	4	0	**6**	-	4	2	4	0	**10**	-	0	0	0	0	**0**	-	2	4	0	0	**6**	-	22
% Single-Unit Trucks	1.7%	0%	5.7%	0%	**3.0%**	-	25.0%	0.5%	4.0%	0%	**1.9%**	-	0%	0%	0%	0%	**-**	-	0.9%	1.1%	0%	0%	**1.0%**	-	1.7%
Articulated Trucks	0	0	0	0	**0**	-	1	1	0	0	**2**	-	0	0	0	0	**0**	-	1	1	0	0	**2**	-	4
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	6.3%	0.2%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**-**	-	0.4%	0.3%	0%	0%	**0.3%**	-	0.3%
Buses	0	0	0	0	**0**	-	0	0	1	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	1.0%	0%	**0.2%**	-	0%	0%	0%	0%	**-**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Industrial - TMC
Thu Nov 21, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250982, Location: 44.990955, -64.113989

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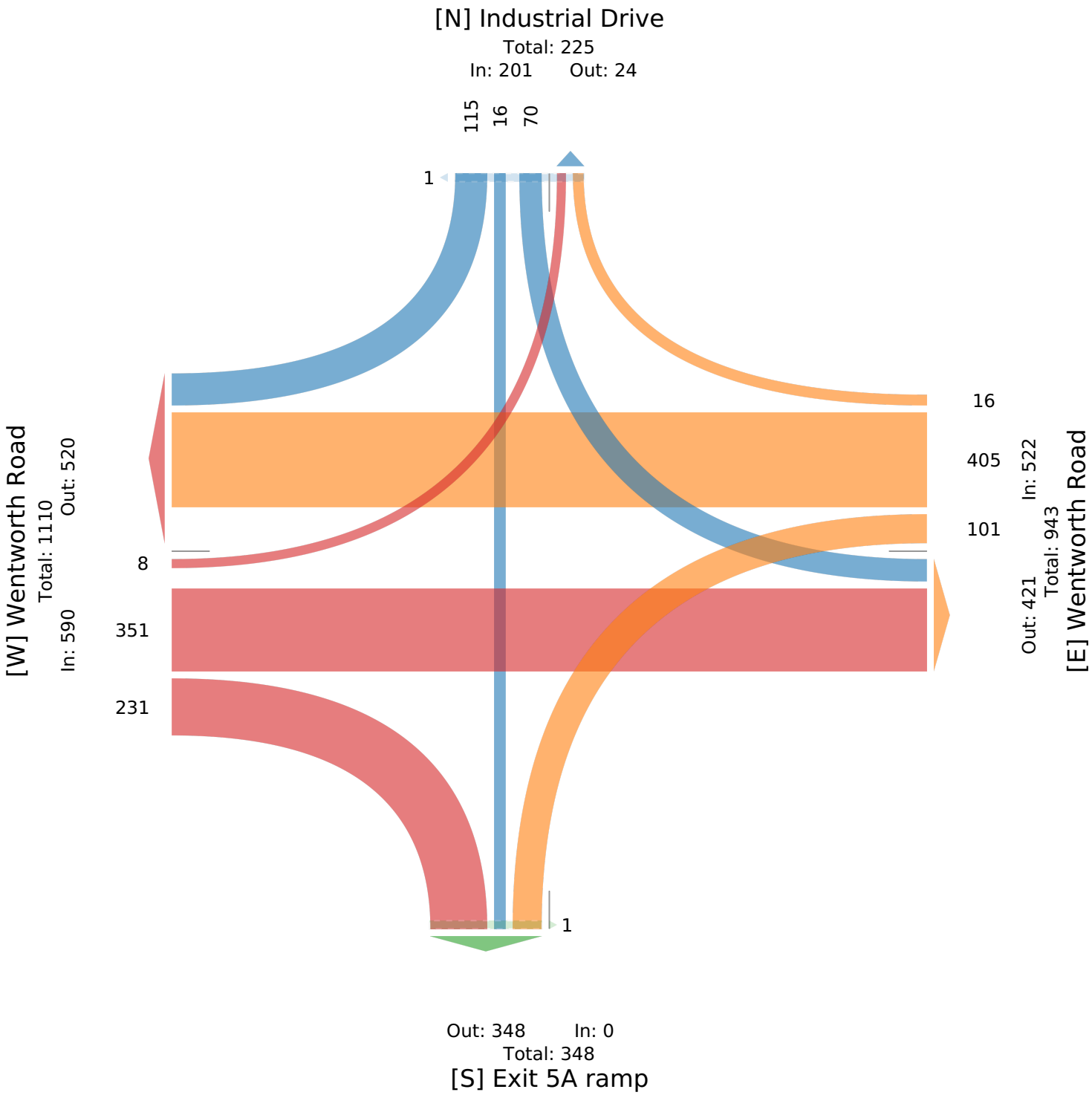

Wentworth / Cole - TMC

Tue Nov 19, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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Leg	Private Driveway						Wentworth Road						Cole Drive						Wentworth Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-19 7:00AM	0	0	0	0	**0**	2	0	194	124	0	**318**	3	54	0	91	0	**145**	1	118	157	0	0	**275**	0	**738**
8:00AM	0	0	0	0	**0**	1	2	446	134	0	**582**	0	68	0	159	0	**227**	0	148	229	0	0	**377**	0	**1186**
11:00AM	0	1	3	0	**4**	2	4	236	133	0	**373**	4	111	0	146	0	**257**	2	195	227	2	0	**424**	0	**1058**
12:00PM	0	0	1	0	**1**	0	0	288	130	0	**418**	4	116	0	185	0	**301**	2	204	266	0	0	**470**	0	**1190**
4:00PM	0	0	1	0	**1**	4	1	288	189	0	**478**	2	163	0	198	0	**361**	1	172	330	0	0	**502**	0	**1342**
5:00PM	0	0	1	0	**1**	1	2	237	144	1	**384**	0	149	0	143	0	**292**	0	153	190	0	0	**343**	0	**1020**
Total	0	1	6	0	**7**	10	9	1689	854	1	**2553**	13	661	0	922	0	**1583**	6	990	1399	2	0	**2391**	0	**6534**
% Approach	0%	14.3%	85.7%	0%	**-**	-	0.4%	66.2%	33.5%	0%	**-**	-	41.8%	0%	58.2%	0%	**-**	-	41.4%	58.5%	0.1%	0%	**-**	-	**-**
% Total	0%	0%	0.1%	0%	**0.1%**	-	0.1%	25.8%	13.1%	0%	**39.1%**	-	10.1%	0%	14.1%	0%	**24.2%**	-	15.2%	21.4%	0%	0%	**36.6%**	-	**-**
Lights	0	1	6	0	**7**	-	8	1630	834	1	**2473**	-	643	0	914	0	**1557**	-	983	1346	2	0	**2331**	-	6368
% Lights	0%	100%	100%	0%	**100%**	-	88.9%	96.5%	97.7%	100%	**96.9%**	-	97.3%	0%	99.1%	0%	**98.4%**	-	99.3%	96.2%	100%	0%	**97.5%**	-	97.5%
Single-Unit Trucks	0	0	0	0	**0**	-	1	35	16	0	**52**	-	11	0	7	0	**18**	-	7	30	0	0	**37**	-	107
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	11.1%	2.1%	1.9%	0%	**2.0%**	-	1.7%	0%	0.8%	0%	**1.1%**	-	0.7%	2.1%	0%	0%	**1.5%**	-	1.6%
Articulated Trucks	0	0	0	0	**0**	-	0	6	3	0	**9**	-	6	0	1	0	**7**	-	0	4	0	0	**4**	-	20
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.4%	0.4%	0%	**0.4%**	-	0.9%	0%	0.1%	0%	**0.4%**	-	0%	0.3%	0%	0%	**0.2%**	-	0.3%
Buses	0	0	0	0	**0**	-	0	18	1	0	**19**	-	1	0	0	0	**1**	-	0	19	0	0	**19**	-	39
% Buses	0%	0%	0%	0%	**0%**	-	0%	1.1%	0.1%	0%	**0.7%**	-	0.2%	0%	0%	0%	**0.1%**	-	0%	1.4%	0%	0%	**0.8%**	-	0.6%
Pedestrians	-	-	-	-	-	10	-	-	-	-	-	13	-	-	-	-	-	6	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Cole - TMC
Tue Nov 19, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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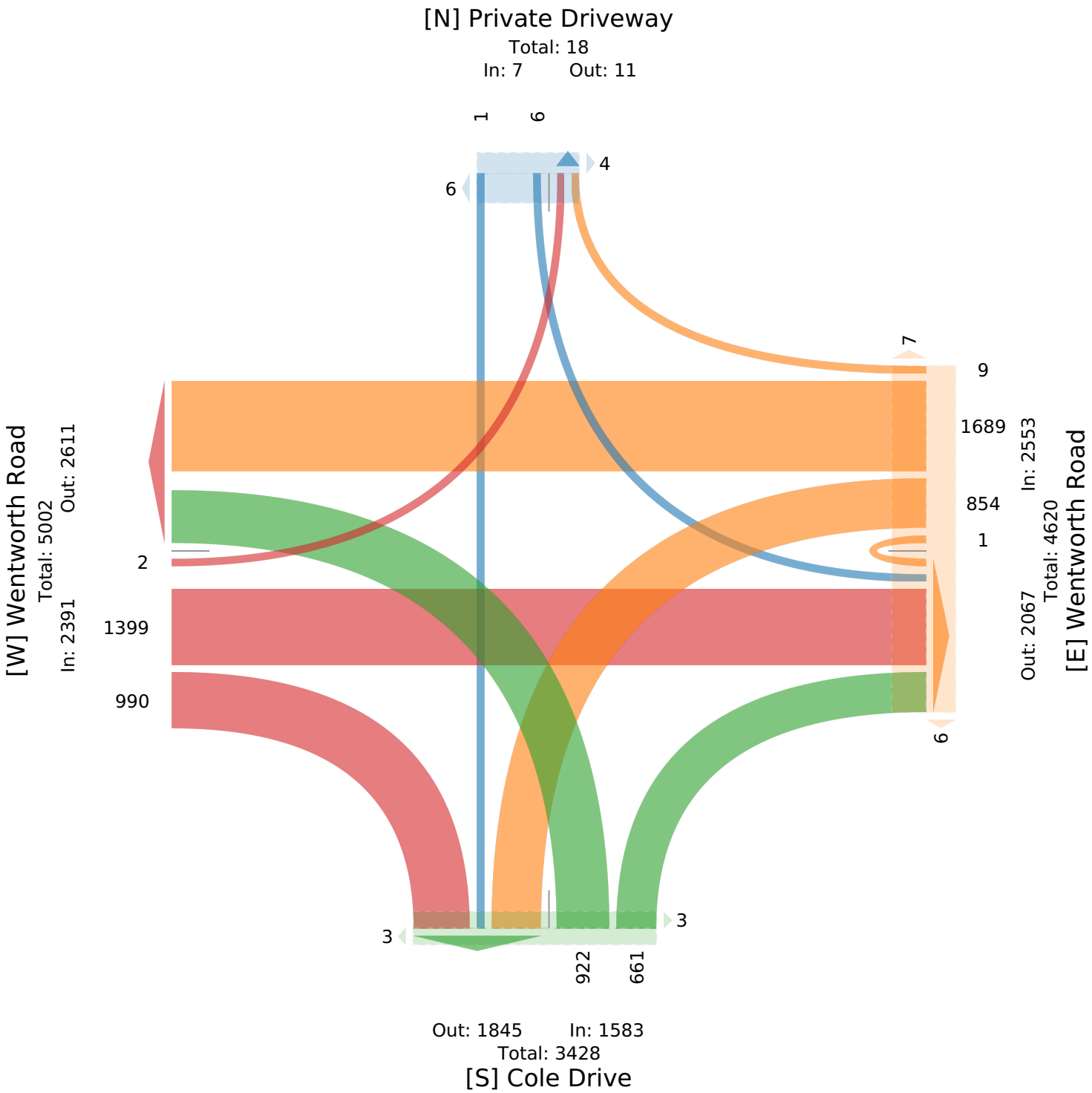

Wentworth / Cole - TMC

Tue Nov 19, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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Leg	Private Driveway						Wentworth Road						Cole Drive						Wentworth Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-19 8:00AM	0	0	0	0	**0**	0	0	101	33	0	**134**	0	15	0	27	0	**42**	0	34	37	0	0	**71**	0	**247**
8:15AM	0	0	0	0	**0**	0	2	89	39	0	**130**	0	20	0	37	0	**57**	0	40	54	0	0	**94**	0	**281**
8:30AM	0	0	0	0	**0**	0	0	125	32	0	**157**	0	19	0	51	0	**70**	0	37	65	0	0	**102**	0	**329**
8:45AM	0	0	0	0	**0**	1	0	131	30	0	**161**	0	14	0	44	0	**58**	0	37	73	0	0	**110**	0	**329**
Total	0	0	0	0	**0**	1	2	446	134	0	**582**	0	68	0	159	0	**227**	0	148	229	0	0	**377**	0	**1186**
% Approach	0%	0%	0%	0%	**-**	-	0.3%	76.6%	23.0%	0%	**-**	-	30.0%	0%	70.0%	0%	**-**	-	39.3%	60.7%	0%	0%	**-**	-	**-**
% Total	0%	0%	0%	0%	**0%**	-	0.2%	37.6%	11.3%	0%	**49.1%**	-	5.7%	0%	13.4%	0%	**19.1%**	-	12.5%	19.3%	0%	0%	**31.8%**	-	**-**
PHF	-	-	-	-	**-**	-	0.250	0.851	0.859	-	**0.904**	-	0.850	-	0.779	-	**0.811**	-	0.925	0.784	-	-	**0.857**	-	0.901
Lights	0	0	0	0	**0**	-	1	414	129	0	**544**	-	65	0	158	0	**223**	-	147	203	0	0	**350**	-	1117
% Lights	0%	0%	0%	0%	**-**	-	50.0%	92.8%	96.3%	0%	**93.5%**	-	95.6%	0%	99.4%	0%	**98.2%**	-	99.3%	88.6%	0%	0%	**92.8%**	-	94.2%
Single-Unit Trucks	0	0	0	0	**0**	-	1	15	4	0	**20**	-	3	0	0	0	**3**	-	1	7	0	0	**8**	-	31
% Single-Unit Trucks	0%	0%	0%	0%	**-**	-	50.0%	3.4%	3.0%	0%	**3.4%**	-	4.4%	0%	0%	0%	**1.3%**	-	0.7%	3.1%	0%	0%	**2.1%**	-	2.6%
Articulated Trucks	0	0	0	0	**0**	-	0	2	1	0	**3**	-	0	0	1	0	**1**	-	0	3	0	0	**3**	-	7
% Articulated Trucks	0%	0%	0%	0%	**-**	-	0%	0.4%	0.7%	0%	**0.5%**	-	0%	0%	0.6%	0%	**0.4%**	-	0%	1.3%	0%	0%	**0.8%**	-	0.6%
Buses	0	0	0	0	**0**	-	0	15	0	0	**15**	-	0	0	0	0	**0**	-	0	16	0	0	**16**	-	31
% Buses	0%	0%	0%	0%	**-**	-	0%	3.4%	0%	0%	**2.6%**	-	0%	0%	0%	0%	**0%**	-	0%	7.0%	0%	0%	**4.2%**	-	2.6%
Pedestrians	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Cole - TMC
Tue Nov 19, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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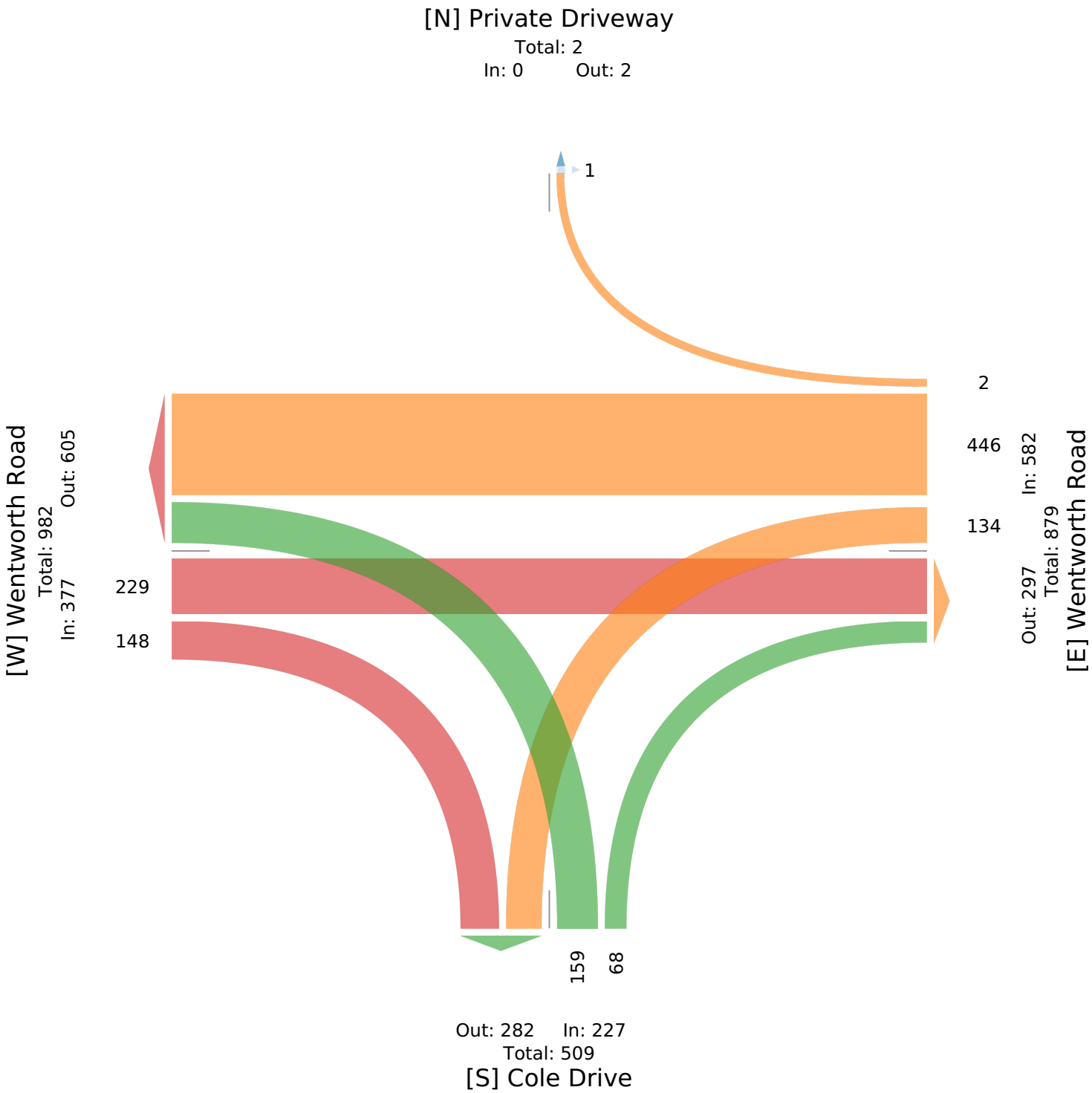

Wentworth / Cole - TMC

Tue Nov 19, 2024
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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Leg / Direction	Private Driveway Southbound						Wentworth Road Westbound						Cole Drive Northbound						Wentworth Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-19 12:00PM	0	0	0	0	**0**	0	0	76	36	0	**112**	0	28	0	47	0	**75**	1	58	59	0	0	**117**	0	**304**
12:15PM	0	0	0	0	**0**	0	0	76	24	0	**100**	2	28	0	46	0	**74**	1	45	73	0	0	**118**	0	**292**
12:30PM	0	0	1	0	**1**	0	0	67	40	0	**107**	2	32	0	35	0	**67**	0	49	68	0	0	**117**	0	**292**
12:45PM	0	0	0	0	**0**	0	0	69	30	0	**99**	0	28	0	57	0	**85**	0	52	66	0	0	**118**	0	**302**
Total	0	0	1	0	**1**	0	0	288	130	0	**418**	4	116	0	185	0	**301**	2	204	266	0	0	**470**	0	**1190**
% Approach	0%	0%	100%	0%	**-**	-	0%	68.9%	31.1%	0%	**-**	-	38.5%	0%	61.5%	0%	**-**	-	43.4%	56.6%	0%	0%	**-**	-	-
% Total	0%	0%	0.1%	0%	**0.1%**	-	0%	24.2%	10.9%	0%	**35.1%**	-	9.7%	0%	15.5%	0%	**25.3%**	-	17.1%	22.4%	0%	0%	**39.5%**	-	-
PHF	-	-	0.250	-	**0.250**	-	-	0.947	0.813	-	**0.933**	-	0.906	-	0.811	-	**0.885**	-	0.879	0.911	-	-	**0.996**	-	0.979
Lights	0	0	1	0	**1**	-	0	279	129	0	**408**	-	115	0	184	0	**299**	-	203	256	0	0	**459**	-	1167
% Lights	0%	0%	100%	0%	**100%**	-	0%	96.9%	99.2%	0%	**97.6%**	-	99.1%	0%	99.5%	0%	**99.3%**	-	99.5%	96.2%	0%	0%	**97.7%**	-	98.1%
Single-Unit Trucks	0	0	0	0	**0**	-	0	7	1	0	**8**	-	0	0	1	0	**1**	-	1	10	0	0	**11**	-	20
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	2.4%	0.8%	0%	**1.9%**	-	0%	0%	0.5%	0%	**0.3%**	-	0.5%	3.8%	0%	0%	**2.3%**	-	1.7%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1	0	0	0	**1**	-	0	0	0	0	**0**	-	2
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0.9%	0%	0%	0%	**0.3%**	-	0%	0%	0%	0%	**0%**	-	0.2%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Cole - TMC
Tue Nov 19, 2024
Midday Peak (12 PM - 1 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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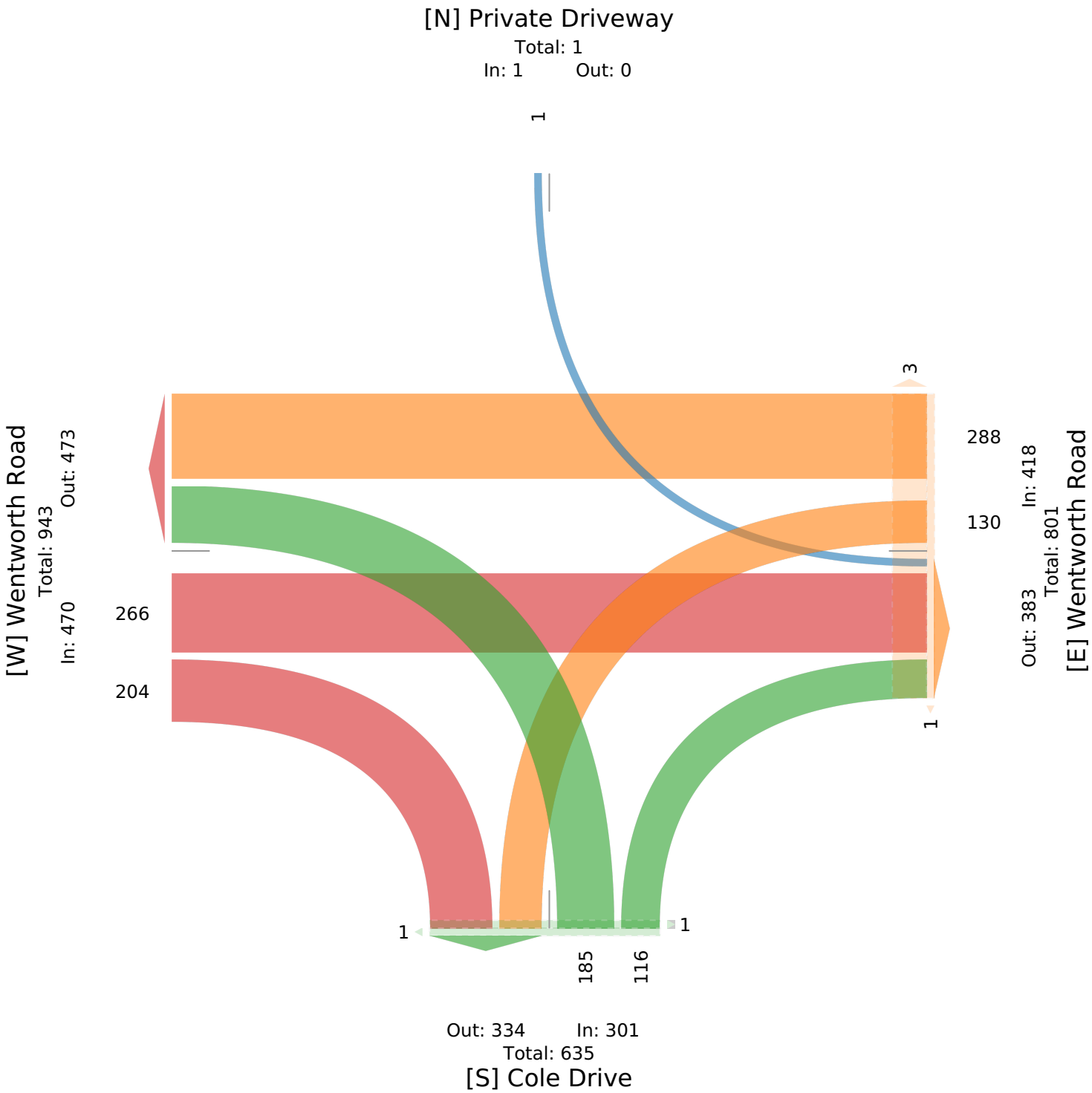

Wentworth / Cole - TMC

Tue Nov 19, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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Leg / Direction	Private Driveway Southbound						Wentworth Road Westbound						Cole Drive Northbound						Wentworth Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-19 4:00PM	0	0	0	0	**0**	1	1	60	63	0	**124**	0	39	0	52	0	**91**	0	44	96	0	0	**140**	0	**355**
4:15PM	0	0	1	0	**1**	0	0	63	39	0	**102**	0	45	0	50	0	**95**	1	40	72	0	0	**112**	0	**310**
4:30PM	0	0	0	0	**0**	0	0	84	40	0	**124**	0	42	0	44	0	**86**	0	52	87	0	0	**139**	0	**349**
4:45PM	0	0	0	0	**0**	3	0	81	47	0	**128**	2	37	0	52	0	**89**	0	36	75	0	0	**111**	0	**328**
Total	0	0	1	0	**1**	4	1	288	189	0	**478**	2	163	0	198	0	**361**	1	172	330	0	0	**502**	0	**1342**
% Approach	0%	0%	100%	0%	**-**	-	0.2%	60.3%	39.5%	0%	**-**	-	45.2%	0%	54.8%	0%	**-**	-	34.3%	65.7%	0%	0%	**-**	-	-
% Total	0%	0%	0.1%	0%	**0.1%**	-	0.1%	21.5%	14.1%	0%	**35.6%**	-	12.1%	0%	14.8%	0%	**26.9%**	-	12.8%	24.6%	0%	0%	**37.4%**	-	-
PHF	-	-	0.250	-	**0.250**	-	0.250	0.857	0.750	-	**0.934**	-	0.906	-	0.952	-	**0.950**	-	0.827	0.859	-	-	**0.896**	-	0.945
Lights	0	0	1	0	**1**	-	1	284	186	0	**471**	-	156	0	198	0	**354**	-	171	325	0	0	**496**	-	1322
% Lights	0%	0%	100%	0%	**100%**	-	100%	98.6%	98.4%	0%	**98.5%**	-	95.7%	0%	100%	0%	**98.1%**	-	99.4%	98.5%	0%	0%	**98.8%**	-	98.5%
Single-Unit Trucks	0	0	0	0	**0**	-	0	3	3	0	**6**	-	4	0	0	0	**4**	-	1	5	0	0	**6**	-	16
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.0%	1.6%	0%	**1.3%**	-	2.5%	0%	0%	0%	**1.1%**	-	0.6%	1.5%	0%	0%	**1.2%**	-	1.2%
Articulated Trucks	0	0	0	0	**0**	-	0	1	0	0	**1**	-	3	0	0	0	**3**	-	0	0	0	0	**0**	-	4
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	1.8%	0%	0%	0%	**0.8%**	-	0%	0%	0%	0%	**0%**	-	0.3%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Cole - TMC
Tue Nov 19, 2024
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1250981, Location: 44.990511, -64.11524

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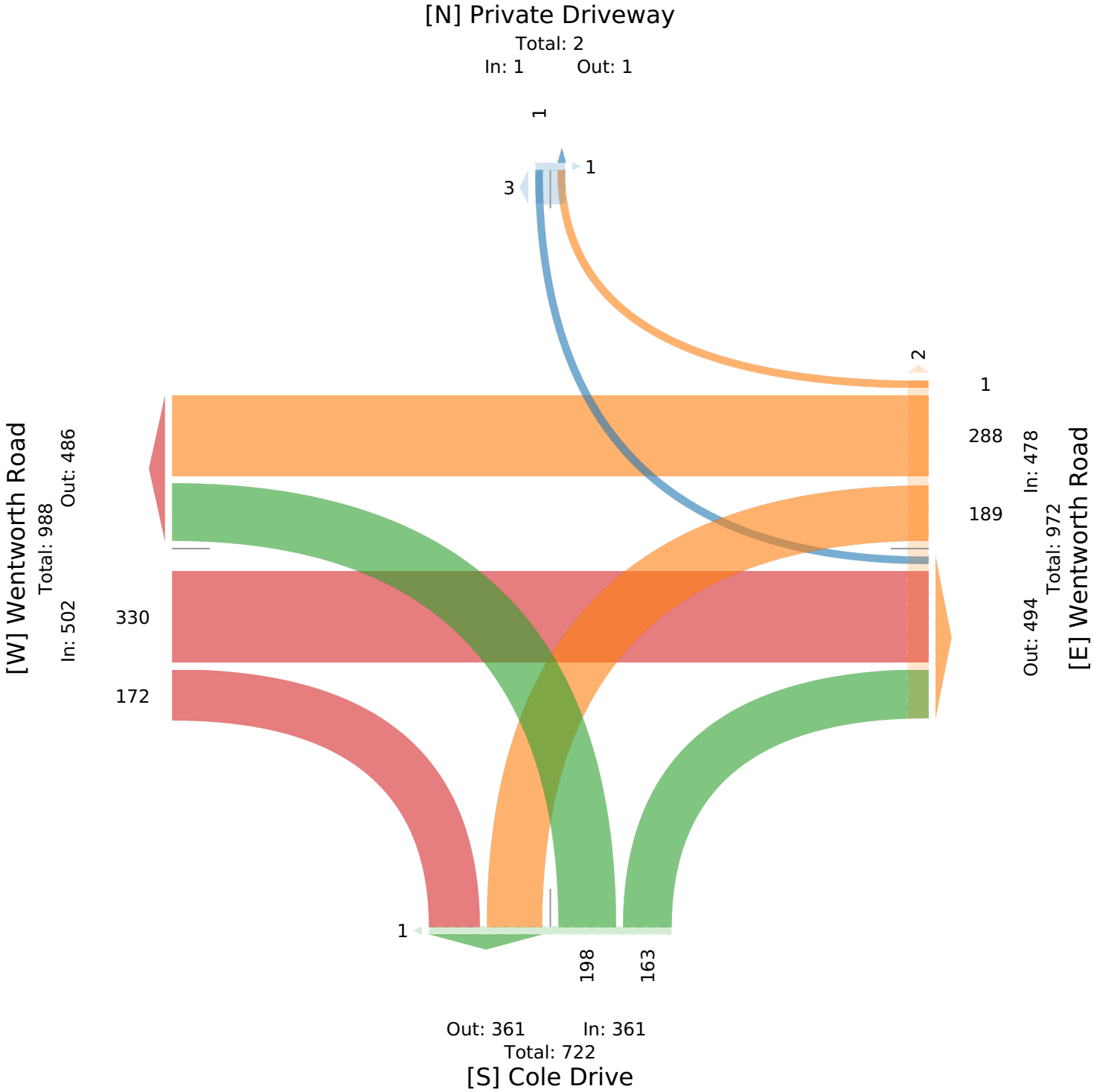

Wentworth / Centennial - TMC

Thu Nov 14, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

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Leg	Centennial Drive					Wentworth Road					Wentworth Road					
Direction	Southbound					Westbound					Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-14 7:00AM	22	2	0	**24**	2	8	310	0	**318**	0	287	22	0	**309**	0	**651**
8:00AM	34	10	0	**44**	5	24	527	0	**551**	0	427	51	0	**478**	0	**1073**
11:00AM	74	35	0	**109**	3	40	414	0	**454**	0	444	54	0	**498**	0	**1061**
12:00PM	79	42	0	**121**	1	44	476	0	**520**	0	509	67	0	**576**	0	**1217**
4:00PM	65	23	0	**88**	0	16	488	0	**504**	0	541	34	0	**575**	0	**1167**
5:00PM	58	19	0	**77**	2	46	395	0	**441**	0	402	33	0	**435**	0	**953**
6:00PM	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	**1**
Total	332	131	0	**463**	13	178	2611	0	**2789**	0	2610	261	0	**2871**	0	**6123**
% Approach	71.7%	28.3%	0%	**-**	-	6.4%	93.6%	0%	**-**	-	90.9%	9.1%	0%	**-**	-	-
% Total	5.4%	2.1%	0%	**7.6%**	-	2.9%	42.6%	0%	**45.5%**	-	42.6%	4.3%	0%	**46.9%**	-	-
Lights	317	129	0	**446**	-	176	2563	0	**2739**	-	2564	247	0	**2811**	-	5996
% Lights	95.5%	98.5%	0%	**96.3%**	-	98.9%	98.2%	0%	**98.2%**	-	98.2%	94.6%	0%	**97.9%**	-	97.9%
Single-Unit Trucks	12	1	0	**13**	-	2	23	0	**25**	-	26	10	0	**36**	-	74
% Single-Unit Trucks	3.6%	0.8%	0%	**2.8%**	-	1.1%	0.9%	0%	**0.9%**	-	1.0%	3.8%	0%	**1.3%**	-	1.2%
Articulated Trucks	1	0	0	**1**	-	0	5	0	**5**	-	4	4	0	**8**	-	14
% Articulated Trucks	0.3%	0%	0%	**0.2%**	-	0%	0.2%	0%	**0.2%**	-	0.2%	1.5%	0%	**0.3%**	-	0.2%
Buses	2	1	0	**3**	-	0	20	0	**20**	-	16	0	0	**16**	-	39
% Buses	0.6%	0.8%	0%	**0.6%**	-	0%	0.8%	0%	**0.7%**	-	0.6%	0%	0%	**0.6%**	-	0.6%
Pedestrians	-	-	-	-	13	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Centennial - TMC
Thu Nov 14, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

Provided by: DesignPoint Engineering & Surveying Ltd.
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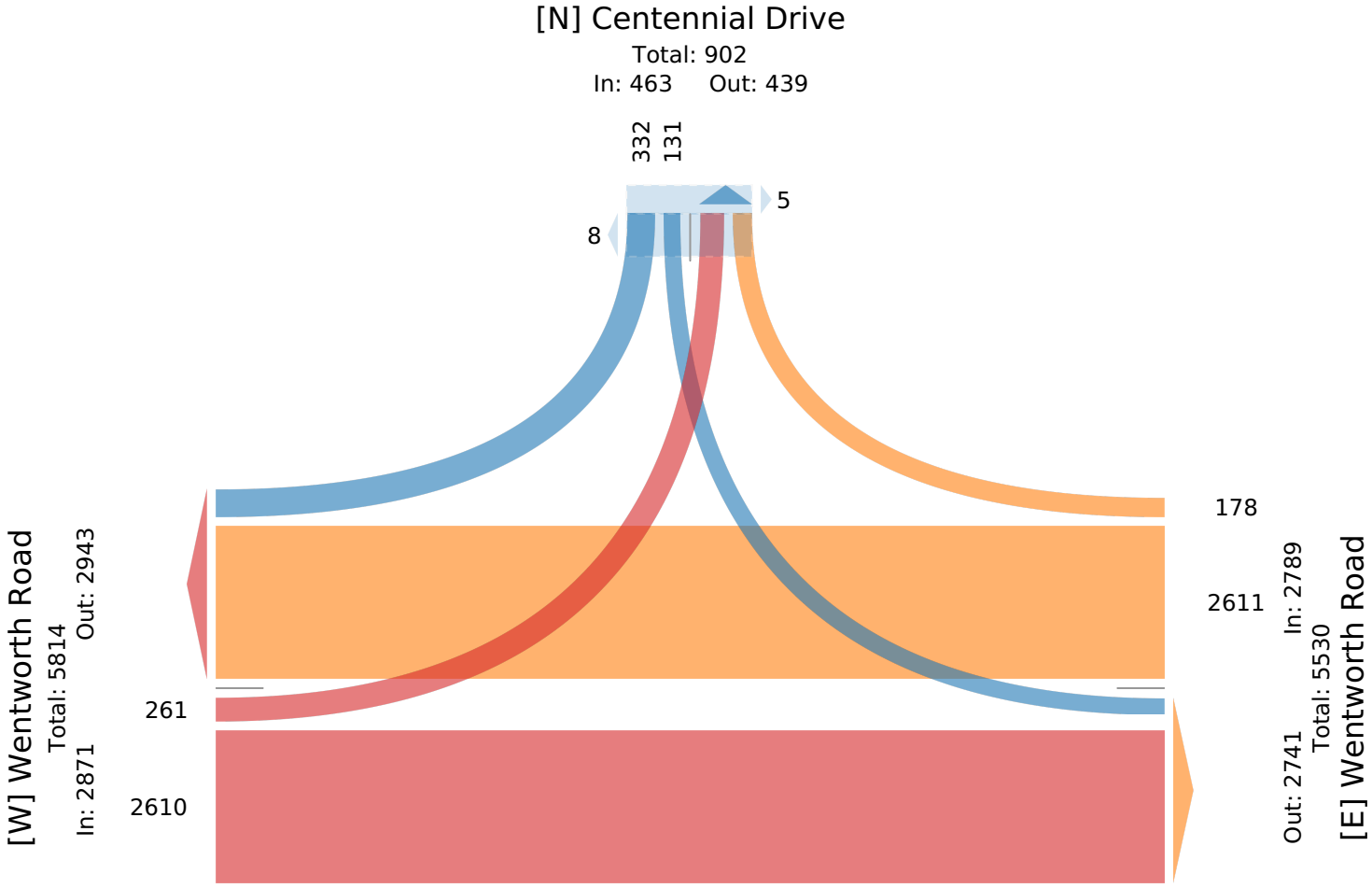

Wentworth / Centennial - TMC

Thu Nov 14, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

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Leg / Direction	Centennial Drive Southbound					Wentworth Road Westbound					Wentworth Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-14 8:00AM	12	5	0	**17**	1	3	96	0	**99**	0	93	4	0	**97**	0	**213**
8:15AM	4	1	0	**5**	1	5	129	0	**134**	0	94	16	0	**110**	0	**249**
8:30AM	7	4	0	**11**	2	8	141	0	**149**	0	110	15	0	**125**	0	**285**
8:45AM	11	0	0	**11**	1	8	161	0	**169**	0	130	16	0	**146**	0	**326**
Total	34	10	0	**44**	5	24	527	0	**551**	0	427	51	0	**478**	0	**1073**
% Approach	77.3%	22.7%	0%	**-**	-	4.4%	95.6%	0%	**-**	-	89.3%	10.7%	0%	**-**	-	**-**
% Total	3.2%	0.9%	0%	**4.1%**	-	2.2%	49.1%	0%	**51.4%**	-	39.8%	4.8%	0%	**44.5%**	-	**-**
PHF	0.708	0.500	-	**0.647**	-	0.750	0.818	-	**0.815**	-	0.821	0.797	-	**0.818**	-	0.823
Lights	32	10	0	**42**	-	24	504	0	**528**	-	403	48	0	**451**	-	1021
% Lights	94.1%	100%	0%	**95.5%**	-	100%	95.6%	0%	**95.8%**	-	94.4%	94.1%	0%	**94.4%**	-	95.2%
Single-Unit Trucks	1	0	0	**1**	-	0	5	0	**5**	-	9	1	0	**10**	-	16
% Single-Unit Trucks	2.9%	0%	0%	**2.3%**	-	0%	0.9%	0%	**0.9%**	-	2.1%	2.0%	0%	**2.1%**	-	1.5%
Articulated Trucks	1	0	0	**1**	-	0	2	0	**2**	-	1	2	0	**3**	-	6
% Articulated Trucks	2.9%	0%	0%	**2.3%**	-	0%	0.4%	0%	**0.4%**	-	0.2%	3.9%	0%	**0.6%**	-	0.6%
Buses	0	0	0	**0**	-	0	16	0	**16**	-	14	0	0	**14**	-	30
% Buses	0%	0%	0%	**0%**	-	0%	3.0%	0%	**2.9%**	-	3.3%	0%	0%	**2.9%**	-	2.8%
Pedestrians	-	-	-	-	5	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Centennial - TMC
Thu Nov 14, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

DESIGNPOINT
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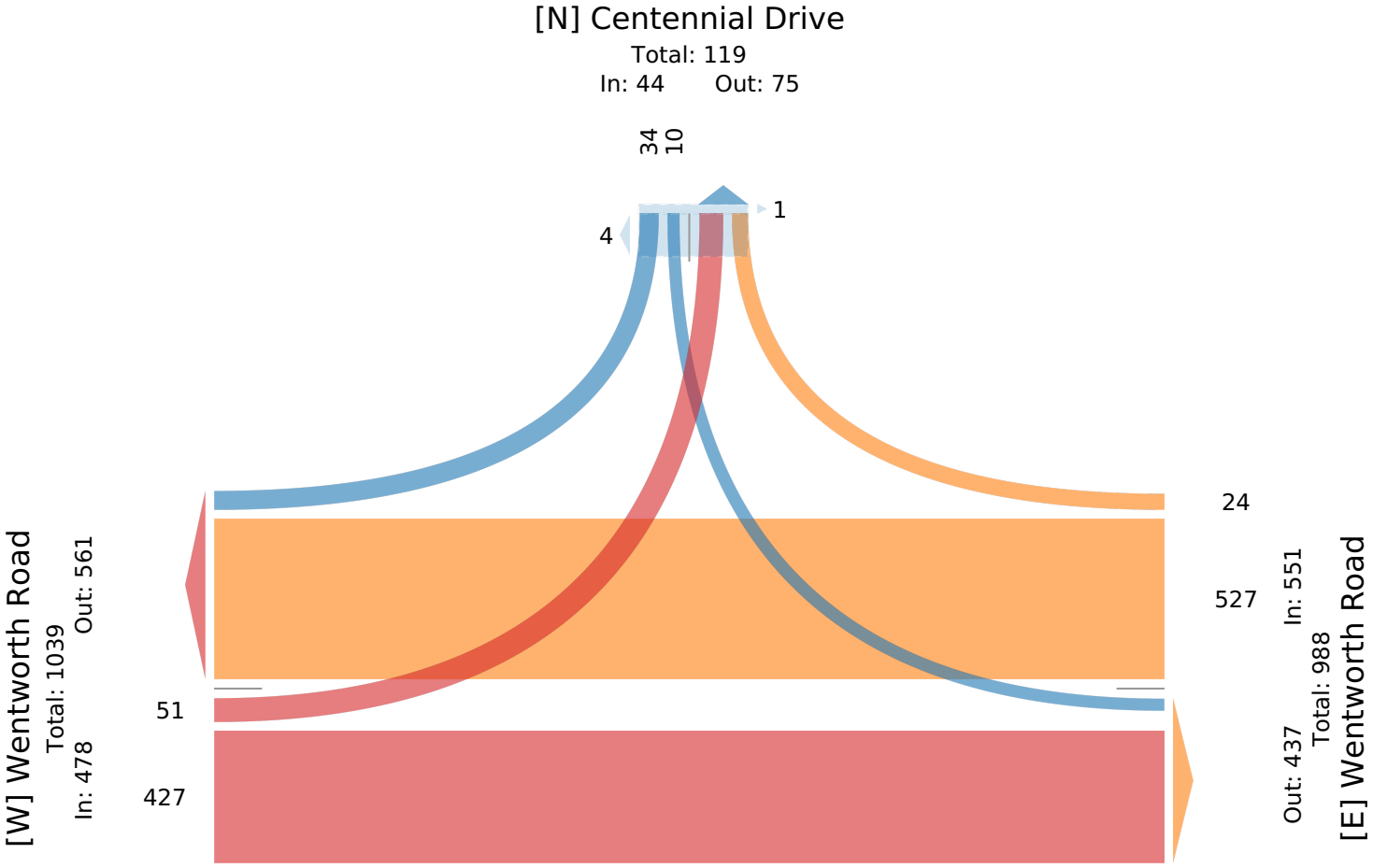

Wentworth / Centennial - TMC

Thu Nov 14, 2024
Midday Peak (11:45 AM - 12:45 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

DESIGNPOINT
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Leg Direction	Centennial Drive Southbound					Wentworth Road Westbound					Wentworth Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-14 11:45AM	25	10	0	**35**	0	11	116	0	**127**	0	119	16	0	**135**	0	**297**
12:00PM	28	17	0	**45**	1	16	110	0	**126**	0	127	21	0	**148**	0	**319**
12:15PM	16	10	0	**26**	0	12	120	0	**132**	0	135	21	0	**156**	0	**314**
12:30PM	19	6	0	**25**	0	9	136	0	**145**	0	124	14	0	**138**	0	**308**
Total	88	43	0	**131**	1	48	482	0	**530**	0	505	72	0	**577**	0	**1238**
% Approach	67.2%	32.8%	0%	**-**	-	9.1%	90.9%	0%	**-**	-	87.5%	12.5%	0%	**-**	-	**-**
% Total	7.1%	3.5%	0%	**10.6%**	-	3.9%	38.9%	0%	**42.8%**	-	40.8%	5.8%	0%	**46.6%**	-	**-**
PHF	0.786	0.632	-	**0.728**	-	0.750	0.886	-	**0.914**	-	0.935	0.857	-	**0.925**	-	0.970
Lights	86	43	0	**129**	-	48	479	0	**527**	-	503	68	0	**571**	-	1227
% Lights	97.7%	100%	0%	**98.5%**	-	100%	99.4%	0%	**99.4%**	-	99.6%	94.4%	0%	**99.0%**	-	99.1%
Single-Unit Trucks	2	0	0	**2**	-	0	2	0	**2**	-	2	3	0	**5**	-	9
% Single-Unit Trucks	2.3%	0%	0%	**1.5%**	-	0%	0.4%	0%	**0.4%**	-	0.4%	4.2%	0%	**0.9%**	-	0.7%
Articulated Trucks	0	0	0	**0**	-	0	0	0	**0**	-	0	1	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	1.4%	0%	**0.2%**	-	0.1%
Buses	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Buses	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	1	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Centennial - TMC
Thu Nov 14, 2024
Midday Peak (11:45 AM - 12:45 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

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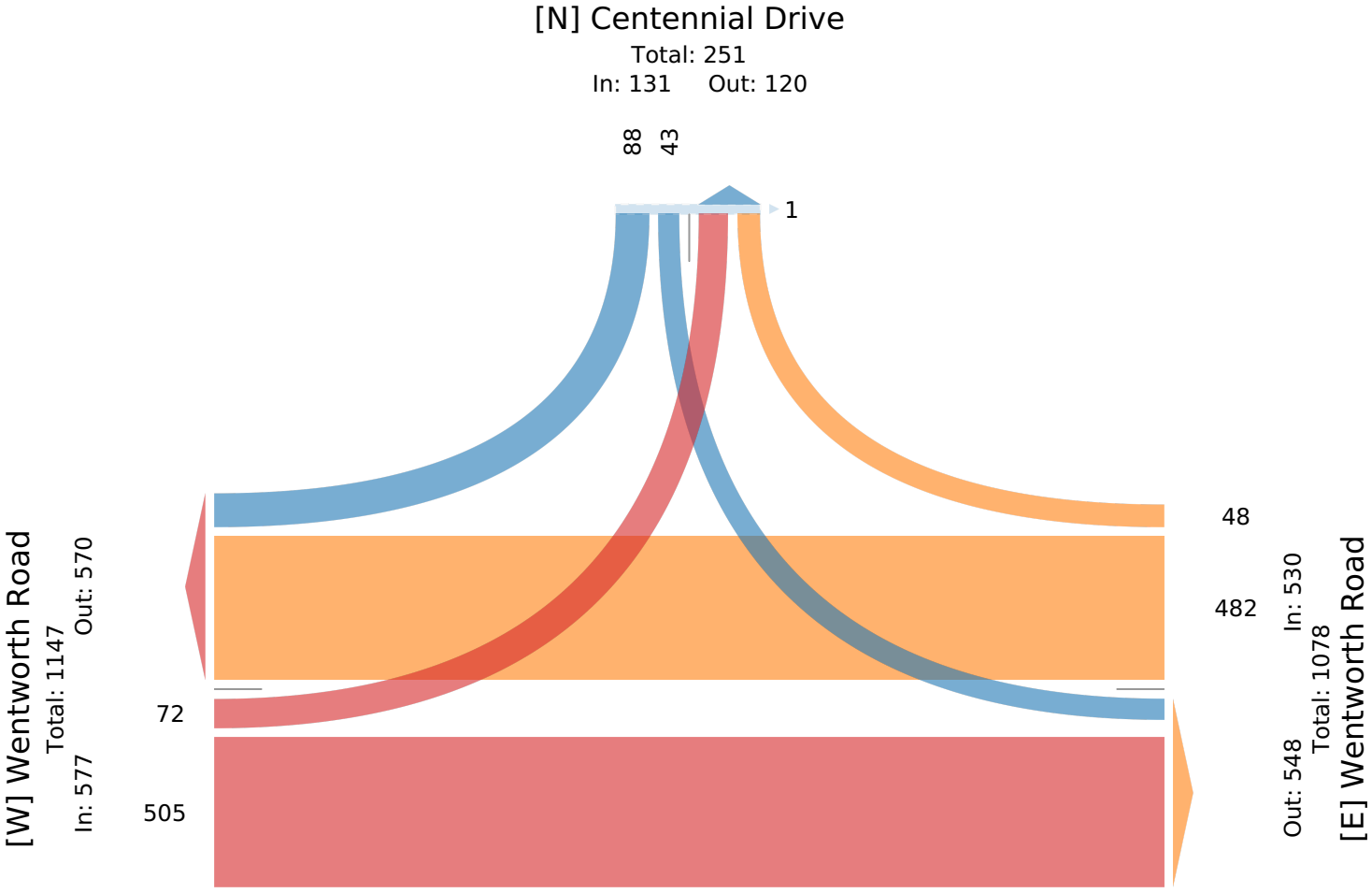

Wentworth / Centennial - TMC

Thu Nov 14, 2024
PM Peak (4 PM - 5 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

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90 Western Parkway, Suite 500,
Bedford, NS, B4B 2J3, CA

Leg Direction	Centennial Drive Southbound					Wentworth Road Westbound					Wentworth Road Eastbound					
Time	R	L	U	**App**	Ped*	R	T	U	**App**	Ped*	T	L	U	**App**	Ped*	**Int**
2024-11-14 4:00PM	20	3	0	**23**	0	2	125	0	**127**	0	168	6	0	**174**	0	**324**
4:15PM	9	8	0	**17**	0	6	105	0	**111**	0	130	13	0	**143**	0	**271**
4:30PM	25	4	0	**29**	0	6	125	0	**131**	0	131	9	0	**140**	0	**300**
4:45PM	11	8	0	**19**	0	2	133	0	**135**	0	112	6	0	**118**	0	**272**
Total	65	23	0	**88**	0	16	488	0	**504**	0	541	34	0	**575**	0	**1167**
% Approach	73.9%	26.1%	0%	**-**	-	3.2%	96.8%	0%	**-**	-	94.1%	5.9%	0%	**-**	-	-
% Total	5.6%	2.0%	0%	**7.5%**	-	1.4%	41.8%	0%	**43.2%**	-	46.4%	2.9%	0%	**49.3%**	-	-
PHF	0.650	0.719	-	**0.759**	-	0.667	0.917	-	**0.933**	-	0.805	0.654	-	**0.826**	-	0.900
Lights	63	23	0	**86**	-	15	484	0	**499**	-	539	33	0	**572**	-	1157
% Lights	96.9%	100%	0%	**97.7%**	-	93.8%	99.2%	0%	**99.0%**	-	99.6%	97.1%	0%	**99.5%**	-	99.1%
Single-Unit Trucks	2	0	0	**2**	-	1	3	0	**4**	-	2	1	0	**3**	-	9
% Single-Unit Trucks	3.1%	0%	0%	**2.3%**	-	6.3%	0.6%	0%	**0.8%**	-	0.4%	2.9%	0%	**0.5%**	-	0.8%
Articulated Trucks	0	0	0	**0**	-	0	1	0	**1**	-	0	0	0	**0**	-	1
% Articulated Trucks	0%	0%	0%	**0%**	-	0%	0.2%	0%	**0.2%**	-	0%	0%	0%	**0%**	-	0.1%
Buses	0	0	0	**0**	-	0	0	0	**0**	-	0	0	0	**0**	-	0
% Buses	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	0	-	-	-	-	0	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Centennial - TMC
Thu Nov 14, 2024
PM Peak (4 PM - 5 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1248585, Location: 44.989795, -64.118776

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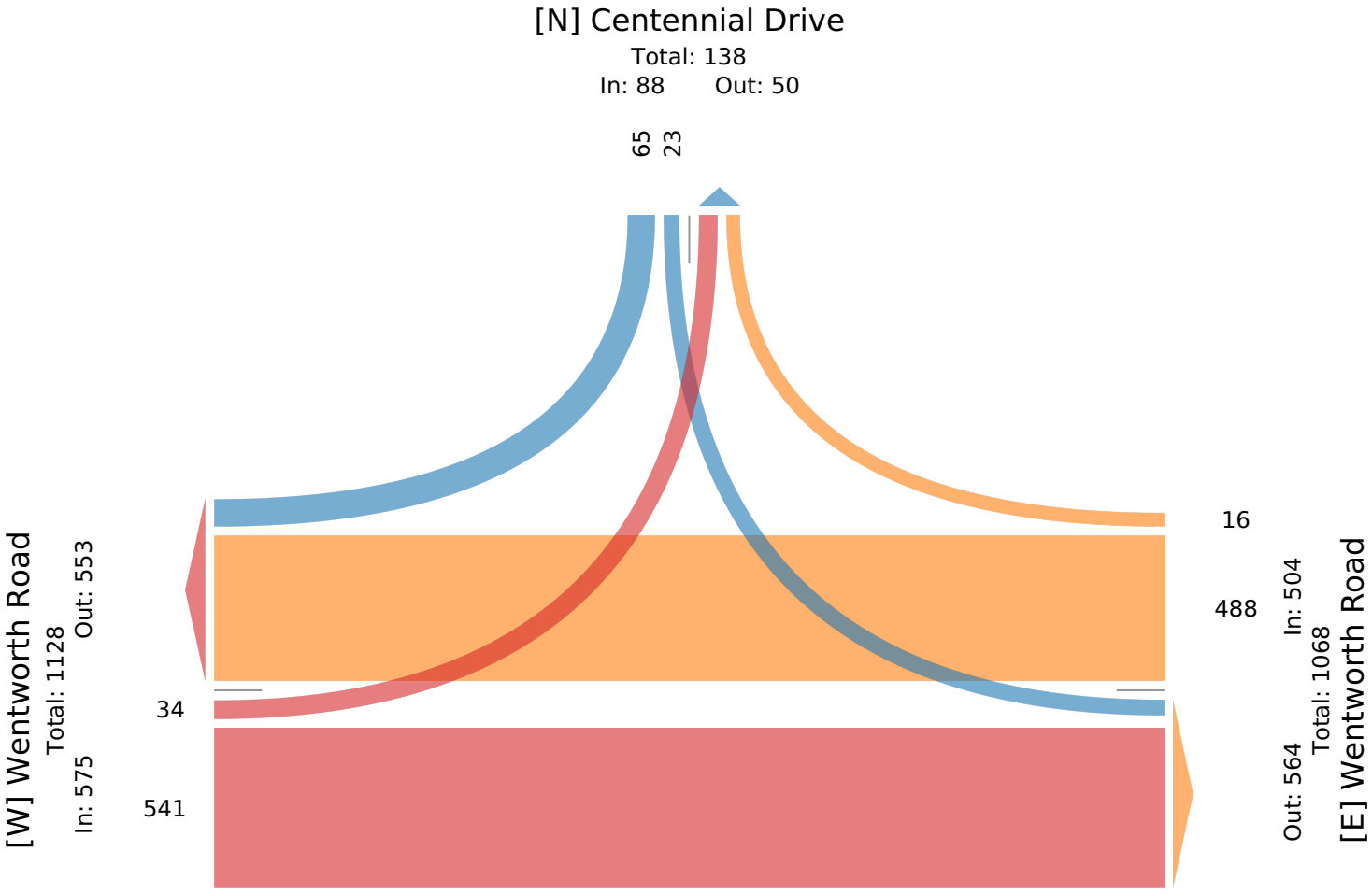

APPENDIX A- TRAFFIC COUNTS

Wentworth / Payzant - TMC

Thu Nov 14, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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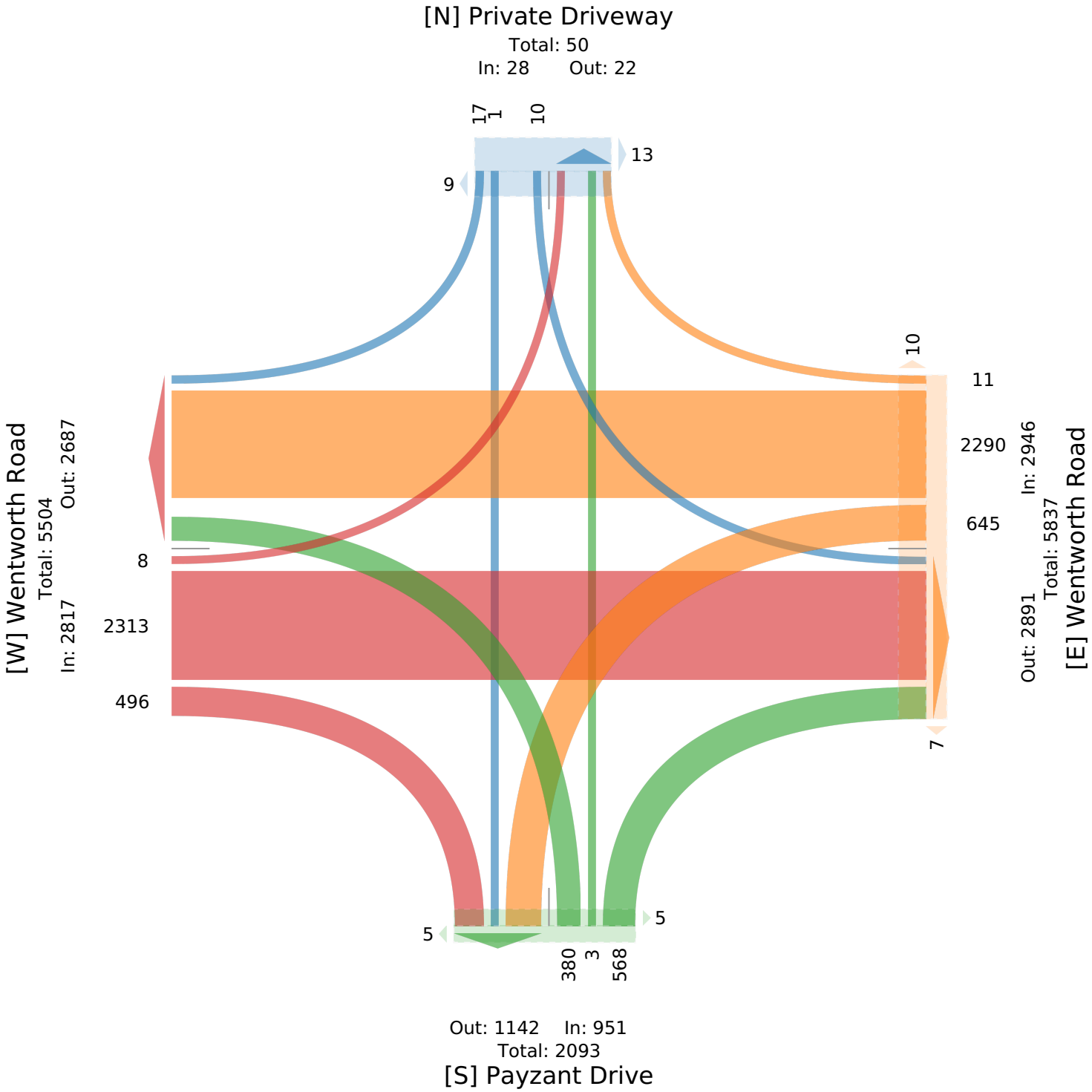
Leg	Private Driveway						Wentworth Road						Payzant Drive						Wentworth Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-14 7:00AM	0	0	0	0	**0**	5	3	230	99	0	**332**	3	45	0	33	0	**78**	1	57	263	3	0	**323**	0	**733**
8:00AM	3	0	0	0	**3**	6	3	323	238	0	**564**	4	151	1	65	0	**217**	5	152	333	2	0	**487**	0	**1271**
11:00AM	3	0	1	0	**4**	5	1	394	82	0	**477**	5	89	1	97	0	**187**	1	79	422	1	0	**502**	0	**1170**
12:00PM	5	1	3	0	**9**	2	3	462	96	0	**561**	3	112	1	74	0	**187**	1	93	461	1	0	**555**	0	**1312**
4:00PM	6	0	4	0	**10**	3	1	477	73	0	**551**	2	101	0	69	0	**170**	1	71	466	0	0	**537**	0	**1268**
5:00PM	0	0	2	0	**2**	1	0	404	57	0	**461**	0	70	0	42	0	**112**	1	44	368	1	0	**413**	0	**988**
Total	17	1	10	0	**28**	22	11	2290	645	0	**2946**	17	568	3	380	0	**951**	10	496	2313	8	0	**2817**	0	**6742**
% Approach	60.7%	3.6%	35.7%	0%	**-**	-	0.4%	77.7%	21.9%	0%	**-**	-	59.7%	0.3%	40.0%	0%	**-**	-	17.6%	82.1%	0.3%	0%	**-**	-	-
% Total	0.3%	0%	0.1%	0%	**0.4%**	-	0.2%	34.0%	9.6%	0%	**43.7%**	-	8.4%	0%	5.6%	0%	**14.1%**	-	7.4%	34.3%	0.1%	0%	**41.8%**	-	-
Lights	17	1	10	0	**28**	-	11	2249	623	0	**2883**	-	543	3	374	0	**920**	-	482	2277	8	0	**2767**	-	6598
% Lights	100%	100%	100%	0%	**100%**	-	100%	98.2%	96.6%	0%	**97.9%**	-	95.6%	100%	98.4%	0%	**96.7%**	-	97.2%	98.4%	100%	0%	**98.2%**	-	97.9%
Single-Unit Trucks	0	0	0	0	**0**	-	0	31	8	0	**39**	-	12	0	4	0	**16**	-	5	26	0	0	**31**	-	86
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.4%	1.2%	0%	**1.3%**	-	2.1%	0%	1.1%	0%	**1.7%**	-	1.0%	1.1%	0%	0%	**1.1%**	-	1.3%
Articulated Trucks	0	0	0	0	**0**	-	0	6	0	0	**6**	-	0	0	0	0	**0**	-	0	8	0	0	**8**	-	14
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0.3%	0%	0%	**0.3%**	-	0.2%
Buses	0	0	0	0	**0**	-	0	4	14	0	**18**	-	13	0	2	0	**15**	-	9	2	0	0	**11**	-	44
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.2%	2.2%	0%	**0.6%**	-	2.3%	0%	0.5%	0%	**1.6%**	-	1.8%	0.1%	0%	0%	**0.4%**	-	0.7%
Pedestrians	-	-	-	-	-	22	-	-	-	-	-	17	-	-	-	-	-	10	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Payzant - TMC
Thu Nov 14, 2024
Full Length (7 AM-9 AM, 11 AM-1 PM, 4 PM-6 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

Provided by: DesignPoint Engineering & Surveying Ltd.
90 Western Parkway, Suite 500,
Bedford, NS, B4B 2J3, CA



Wentworth / Payzant - TMC

Thu Nov 14, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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Provided by: DesignPoint Engineering & Surveying Ltd.
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Bedford, NS, B4B 2J3, CA

Leg	Private Driveway						Wentworth Road						Payzant Drive						Wentworth Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	R	T	L	U	App	Ped*	Int
2024-11-14 8:00AM	1	0	0	0	**1**	1	1	56	48	0	**105**	0	20	1	8	0	**29**	1	27	78	1	0	**106**	0	**241**
8:15AM	0	0	0	0	**0**	2	0	80	51	0	**131**	2	23	0	16	0	**39**	0	31	87	1	0	**119**	0	**289**
8:30AM	0	0	0	0	**0**	2	0	89	60	0	**149**	0	46	0	24	0	**70**	0	44	77	0	0	**121**	0	**340**
8:45AM	2	0	0	0	**2**	1	2	98	79	0	**179**	2	62	0	17	0	**79**	4	50	91	0	0	**141**	0	**401**
Total	3	0	0	0	**3**	6	3	323	238	0	**564**	4	151	1	65	0	**217**	5	152	333	2	0	**487**	0	**1271**
% Approach	100%	0%	0%	0%	**-**	-	0.5%	57.3%	42.2%	0%	**-**	-	69.6%	0.5%	30.0%	0%	**-**	-	31.2%	68.4%	0.4%	0%	**-**	-	-
% Total	0.2%	0%	0%	0%	**0.2%**	-	0.2%	25.4%	18.7%	0%	**44.4%**	-	11.9%	0.1%	5.1%	0%	**17.1%**	-	12.0%	26.2%	0.2%	0%	**38.3%**	-	-
PHF	0.375	-	-	-	**0.375**	-	0.375	0.824	0.753	-	**0.788**	-	0.609	0.250	0.677	-	**0.687**	-	0.760	0.915	0.500	-	**0.863**	-	0.792
Lights	3	0	0	0	**3**	-	3	316	221	0	**540**	-	133	1	64	0	**198**	-	141	325	2	0	**468**	-	1209
% Lights	100%	0%	0%	0%	**100%**	-	100%	97.8%	92.9%	0%	**95.7%**	-	88.1%	100%	98.5%	0%	**91.2%**	-	92.8%	97.6%	100%	0%	**96.1%**	-	95.1%
Single-Unit Trucks	0	0	0	0	**0**	-	0	4	3	0	**7**	-	5	0	0	0	**5**	-	3	5	0	0	**8**	-	20
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.2%	1.3%	0%	**1.2%**	-	3.3%	0%	0%	0%	**2.3%**	-	2.0%	1.5%	0%	0%	**1.6%**	-	1.6%
Articulated Trucks	0	0	0	0	**0**	-	0	2	0	0	**2**	-	0	0	0	0	**0**	-	0	2	0	0	**2**	-	4
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.4%**	-	0%	0%	0%	0%	**0%**	-	0%	0.6%	0%	0%	**0.4%**	-	0.3%
Buses	0	0	0	0	**0**	-	0	1	14	0	**15**	-	13	0	1	0	**14**	-	8	1	0	0	**9**	-	38
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.3%	5.9%	0%	**2.7%**	-	8.6%	0%	1.5%	0%	**6.5%**	-	5.3%	0.3%	0%	0%	**1.8%**	-	3.0%
Pedestrians	-	-	-	-	-	6	-	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Payzant - TMC
Thu Nov 14, 2024
AM Peak (8 AM - 9 AM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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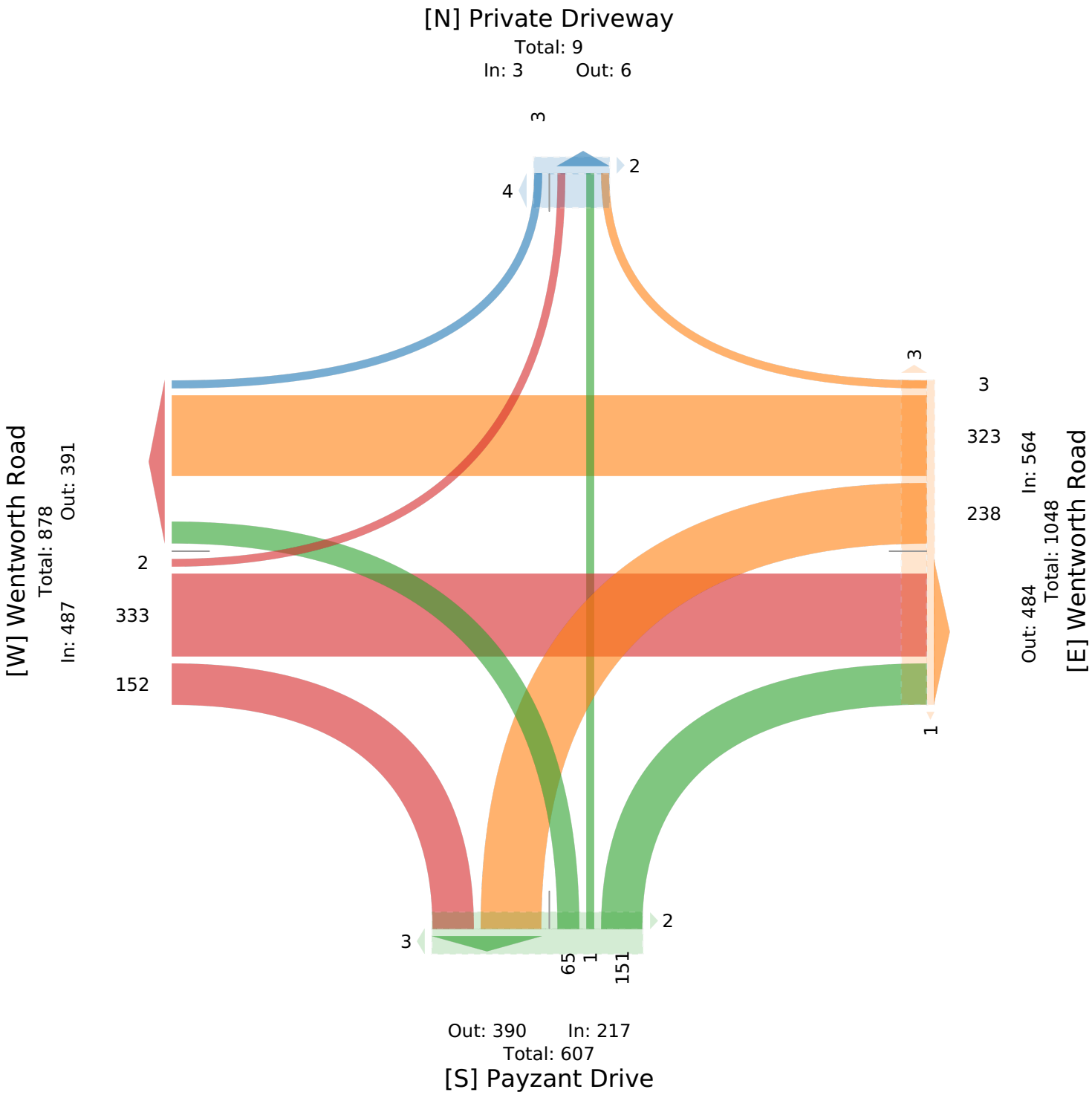

Wentworth / Payzant - TMC

Thu Nov 14, 2024
Midday Peak (11:30 AM - 12:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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Leg	Private Driveway						Wentworth Road						Payzant Drive						Wentworth Road						
Direction	Southbound						Westbound						Northbound						Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-14 11:30AM	0	0	0	0	**0**	3	0	109	20	0	**129**	1	32	1	29	0	**62**	0	24	114	0	0	**138**	0	**329**
11:45AM	1	0	0	0	**1**	0	0	105	35	0	**140**	4	27	0	25	0	**52**	1	21	112	0	0	**133**	0	**326**
12:00PM	3	0	0	0	**3**	1	0	125	17	0	**142**	0	36	0	27	0	**63**	0	30	113	0	0	**143**	0	**351**
12:15PM	1	0	1	0	**2**	0	0	116	18	0	**134**	0	27	0	15	0	**42**	0	24	125	0	0	**149**	0	**327**
Total	5	0	1	0	**6**	4	0	455	90	0	**545**	5	122	1	96	0	**219**	1	99	464	0	0	**563**	0	**1333**
% Approach	83.3%	0%	16.7%	0%	**-**	-	0%	83.5%	16.5%	0%	**-**	-	55.7%	0.5%	43.8%	0%	**-**	-	17.6%	82.4%	0%	0%	**-**	-	-
% Total	0.4%	0%	0.1%	0%	**0.5%**	-	0%	34.1%	6.8%	0%	**40.9%**	-	9.2%	0.1%	7.2%	0%	**16.4%**	-	7.4%	34.8%	0%	0%	**42.2%**	-	-
PHF	0.417	-	0.250	-	**0.500**	-	-	0.910	0.643	-	**0.960**	-	0.847	0.250	0.828	-	**0.869**	-	0.825	0.928	-	-	**0.945**	-	0.949
Lights	5	0	1	0	**6**	-	0	450	88	0	**538**	-	122	1	95	0	**218**	-	98	457	0	0	**555**	-	1317
% Lights	100%	0%	100%	0%	**100%**	-	0%	98.9%	97.8%	0%	**98.7%**	-	100%	100%	99.0%	0%	**99.5%**	-	99.0%	98.5%	0%	0%	**98.6%**	-	98.8%
Single-Unit Trucks	0	0	0	0	**0**	-	0	4	2	0	**6**	-	0	0	1	0	**1**	-	1	6	0	0	**7**	-	14
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	0.9%	2.2%	0%	**1.1%**	-	0%	0%	1.0%	0%	**0.5%**	-	1.0%	1.3%	0%	0%	**1.2%**	-	1.1%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	1	0	0	**1**	-	1
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0.1%
Buses	0	0	0	0	**0**	-	0	1	0	0	**1**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	1
% Buses	0%	0%	0%	0%	**0%**	-	0%	0.2%	0%	0%	**0.2%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0.1%
Pedestrians	-	-	-	-	-	4	-	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Payzant - TMC
Thu Nov 14, 2024
Midday Peak (11:30 AM - 12:30 PM) - Overall Peak Hour
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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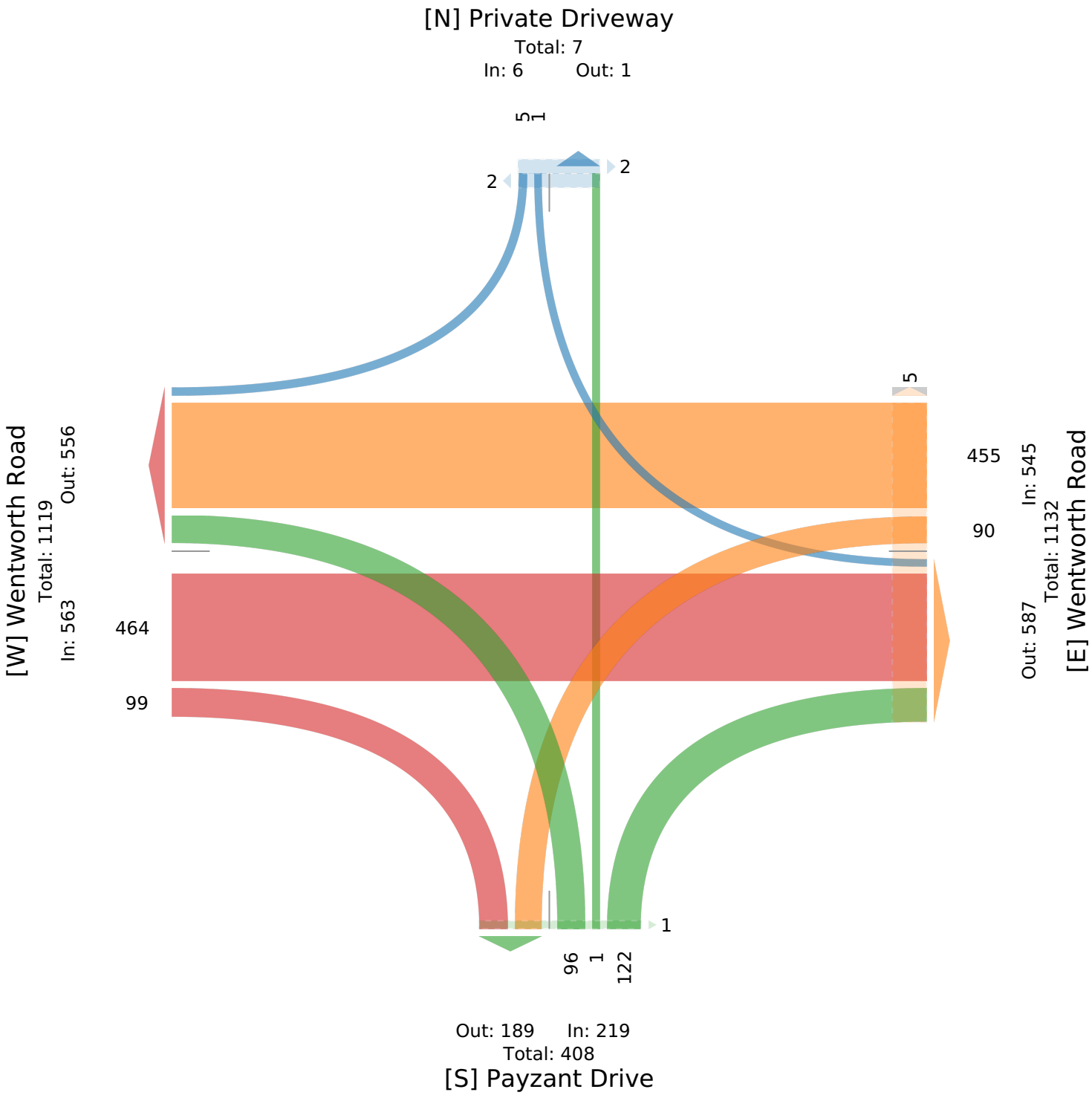

Wentworth / Payzant - TMC

Thu Nov 14, 2024
PM Peak (4 PM - 5 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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Leg / Direction	Private Driveway Southbound						Wentworth Road Westbound						Payzant Drive Northbound						Wentworth Road Eastbound						
Time	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	R	T	L	U	**App**	Ped*	**Int**
2024-11-14 4:00PM	1	0	0	0	**1**	0	0	127	17	0	**144**	1	33	0	23	0	**56**	1	11	141	0	0	**152**	0	**353**
4:15PM	0	0	1	0	**1**	1	0	97	16	0	**113**	1	29	0	11	0	**40**	0	17	110	0	0	**127**	0	**281**
4:30PM	2	0	3	0	**5**	0	0	135	19	0	**154**	0	20	0	20	0	**40**	0	21	114	0	0	**135**	0	**334**
4:45PM	3	0	0	0	**3**	2	1	118	21	0	**140**	0	19	0	15	0	**34**	0	22	101	0	0	**123**	0	**300**
Total	6	0	4	0	**10**	3	1	477	73	0	**551**	2	101	0	69	0	**170**	1	71	466	0	0	**537**	0	**1268**
% Approach	60.0%	0%	40.0%	0%	**-**	-	0.2%	86.6%	13.2%	0%	**-**	-	59.4%	0%	40.6%	0%	**-**	-	13.2%	86.8%	0%	0%	**-**	-	-
% Total	0.5%	0%	0.3%	0%	**0.8%**	-	0.1%	37.6%	5.8%	0%	**43.5%**	-	8.0%	0%	5.4%	0%	**13.4%**	-	5.6%	36.8%	0%	0%	**42.4%**	-	-
PHF	0.500	-	0.333	-	**0.500**	-	0.250	0.883	0.869	-	**0.894**	-	0.765	-	0.750	-	**0.759**	-	0.807	0.826	-	-	**0.883**	-	0.898
Lights	6	0	4	0	**10**	-	1	472	72	0	**545**	-	101	0	68	0	**169**	-	71	463	0	0	**534**	-	1258
% Lights	100%	0%	100%	0%	**100%**	-	100%	99.0%	98.6%	0%	**98.9%**	-	100%	0%	98.6%	0%	**99.4%**	-	100%	99.4%	0%	0%	**99.4%**	-	99.2%
Single-Unit Trucks	0	0	0	0	**0**	-	0	5	1	0	**6**	-	0	0	1	0	**1**	-	0	3	0	0	**3**	-	10
% Single-Unit Trucks	0%	0%	0%	0%	**0%**	-	0%	1.0%	1.4%	0%	**1.1%**	-	0%	0%	1.4%	0%	**0.6%**	-	0%	0.6%	0%	0%	**0.6%**	-	0.8%
Articulated Trucks	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Articulated Trucks	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Buses	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0	0	0	0	**0**	-	0
% Buses	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%	0%	0%	0%	**0%**	-	0%
Pedestrians	-	-	-	-	-	3	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	100%	-	-	-	-	-	-	-

*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

Wentworth / Payzant - TMC
Thu Nov 14, 2024
PM Peak (4 PM - 5 PM)
All Classes (Lights, Single-Unit Trucks, Articulated Trucks, Buses, Pedestrians)
All Movements
ID: 1247502, Location: 44.98996, -64.121081

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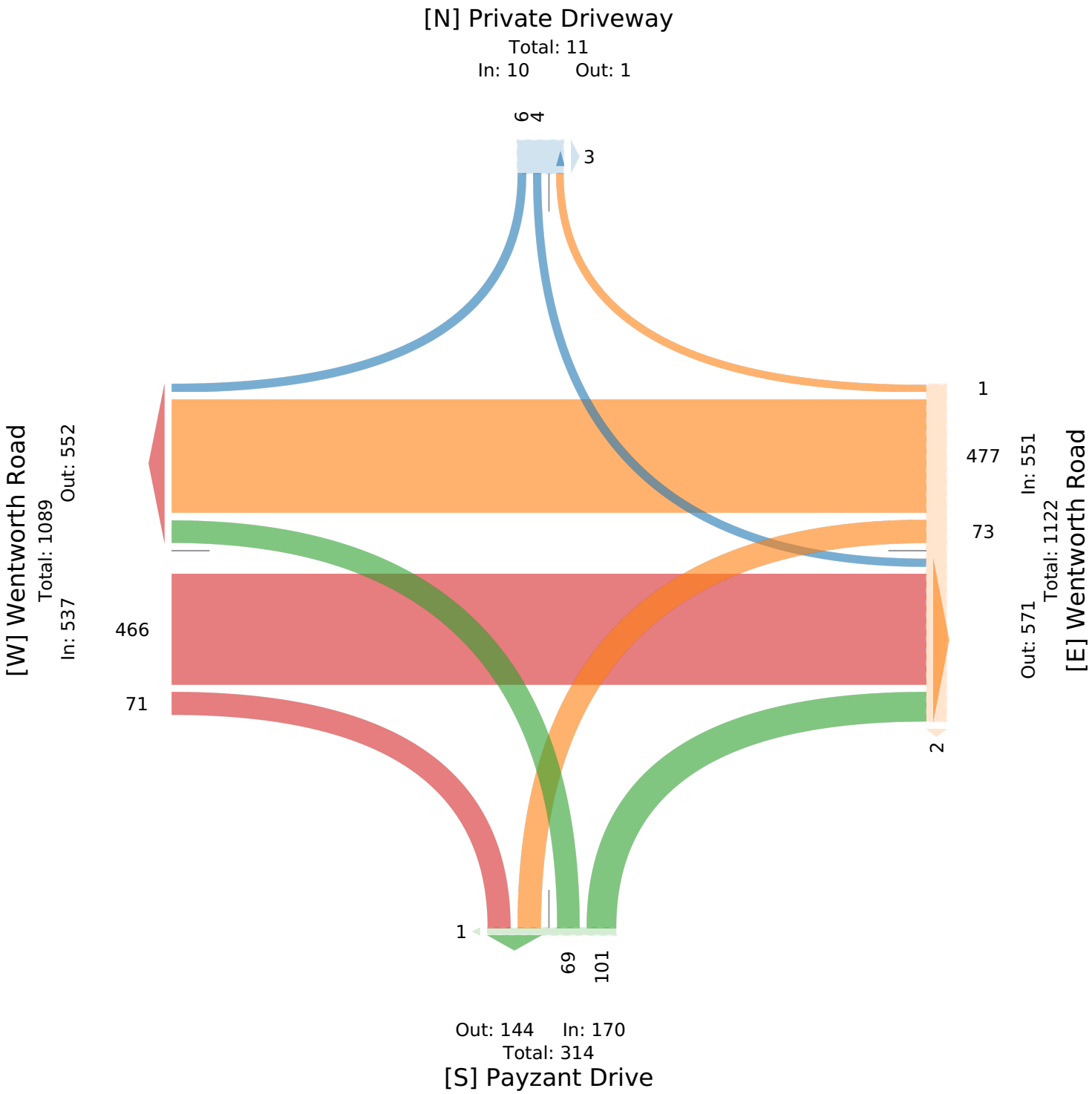


APPENDIX B- VISTRO REPORTS

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Signalized	Delay (sec / veh):	13.1
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.492

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	0	101	3	4	6	2	466	71	75	477	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	32	0	0	0	0	71	0	33	73	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	0	149	3	4	7	2	609	82	120	624	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	37	1	1	2	1	152	21	30	156	0
Total Analysis Volume [veh/h]	80	0	149	3	4	7	2	609	82	120	624	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	23	0	0	23	0	0	58	0	9	67	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	10	0	0	6	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	17	17	17	57	57	57	65	65
g / C, Green / Cycle	0.19	0.19	0.19	0.63	0.63	0.63	0.73	0.73
(v / s)_i Volume / Saturation Flow Rate	0.06	0.10	0.01	0.00	0.36	0.06	0.16	0.37
s, saturation flow rate [veh/h]	1263	1431	1071	720	1683	1431	773	1683
c, Capacity [veh/h]	121	266	248	406	1057	898	539	1220
d1, Uniform Delay [s]	36.22	33.28	30.20	13.54	9.77	6.61	5.91	5.41
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.04	1.84	0.09	0.02	2.29	0.20	0.21	1.54
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.66	0.56	0.06	0.00	0.58	0.09	0.22	0.51
d, Delay for Lane Group [s/veh]	42.26	35.12	30.30	13.56	12.06	6.81	6.12	6.95
Lane Group LOS	D	D	C	B	B	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.90	3.04	0.25	0.02	6.73	0.60	0.54	4.42
50th-Percentile Queue Length [m/ln]	14.49	23.14	1.93	0.18	51.29	4.59	4.11	33.66
95th-Percentile Queue Length [veh/ln]	3.42	5.47	0.46	0.04	10.99	1.08	0.97	7.86
95th-Percentile Queue Length [m/ln]	26.08	41.65	3.47	0.33	83.71	8.26	7.39	59.93

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	42.26	35.12	35.12	30.30	30.30	30.30	13.56	12.06	6.81	6.12	6.95	6.95
Movement LOS	D	D	D	C	C	C	B	B	A	A	A	A
d_A, Approach Delay [s/veh]	37.61			30.30			11.44			6.82		
Approach LOS	D			C			B			A		
d_I, Intersection Delay [s/veh]	13.12											
Intersection LOS	B											
Intersection V/C	0.492											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	0.00	0.00	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.288	0.000	0.000	2.762
Crosswalk LOS	B	F	F	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	422	422	1200	1400
d_b, Bicycle Delay [s]	28.01	28.01	7.20	4.05
l_b,int, Bicycle LOS Score for Intersection	1.937	1.583	2.703	2.789
Bicycle LOS	A	A	B	C

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	39.5
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.203

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	23	65	34	541	482	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	103	106	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	75	39	728	662	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	19	10	182	166	5
Total Analysis Volume [veh/h]	27	75	39	728	662	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.20	0.16	0.04	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	39.47	20.25	9.13	0.00	0.00	0.00
Movement LOS	E	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.62	1.62	0.13	0.00	0.00	0.00
95th-Percentile Queue Length [m/ln]	12.38	12.38	1.02	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	25.34		0.46		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	1.90					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.598

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	198	0	163	0	0	0	0	330	172	1	189	288
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	97	0	186	0	0	0	0	24	49	139	66	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	326	0	375	0	0	0	0	405	248	140	285	333
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	82	0	94	0	0	0	0	101	62	35	71	83
Total Analysis Volume [veh/h]	326	0	375	0	0	0	0	405	248	140	285	333
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	37	0	0	37	0	0	44	0	9	53	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	33	33	33	40	40	49	49
g / C, Green / Cycle	0.37	0.37	0.37	0.44	0.44	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.23	0.24	0.00	0.22	0.16	0.15	0.36
s, saturation flow rate [veh/h]	1439	1589	1870	1870	1589	922	1708
c, Capacity [veh/h]	608	583	726	871	706	502	930
d1, Uniform Delay [s]	23.05	23.62	0.00	17.73	16.46	11.43	14.64
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.37	5.39	0.00	1.78	1.37	1.38	3.75
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.54	0.64	0.00	0.46	0.35	0.28	0.66
d, Delay for Lane Group [s/veh]	26.43	29.02	0.00	19.51	17.83	12.81	18.38
Lane Group LOS	C	C	A	B	B	B	B
Critical Lane Group	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	5.97	7.20	0.00	6.10	3.49	1.48	9.16
50th-Percentile Queue Length [m/ln]	45.50	54.90	0.00	46.45	26.58	11.26	69.78
95th-Percentile Queue Length [veh/ln]	9.98	11.61	0.00	10.14	6.28	2.66	14.12
95th-Percentile Queue Length [m/ln]	76.04	88.44	0.00	77.30	47.85	20.26	107.60

Movement, Approach, & Intersection Results

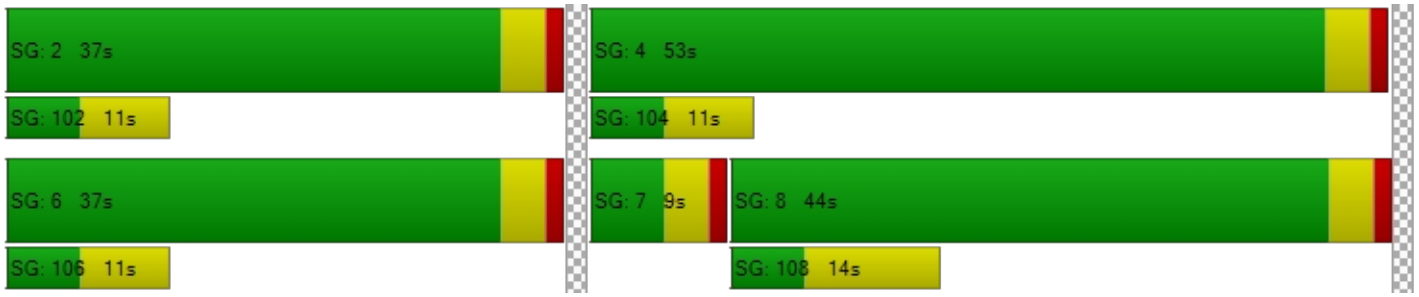
d_M, Delay for Movement [s/veh]	26.43	26.43	29.02	0.00	0.00	0.00	19.51	19.51	17.83	12.81	18.38	18.38
Movement LOS	C	C	C	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	27.81			0.00			18.87			17.35		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	21.29											
Intersection LOS	C											
Intersection V/C	0.598											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.625	1.987	3.090	2.775
Crosswalk LOS	B	A	C	C
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	733	733	889	1089
d_b, Bicycle Delay [s]	18.05	18.05	13.89	9.34
l_b,int, Bicycle LOS Score for Intersection	2.716	1.560	2.637	2.810
Bicycle LOS	B	A	B	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	440.0
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.253

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	70	16	115	8	351	230	101	405	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	97	0	165	44	0	107	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	19	230	9	570	309	117	574	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	20	5	58	2	143	77	29	144	5
Total Analysis Volume [veh/h]	0	0	0	81	19	230	9	570	309	117	574	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	1.07	0.25	0.45	0.01	0.01	0.00	0.15	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	439.43	439.97	398.98	8.67	0.00	0.00	10.52	0.00	0.00
Movement LOS				F	F	F	A	A	A	B	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	23.28	23.28	23.28	0.02	0.02	0.02	0.54	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	177.39	177.39	177.39	0.12	0.12	0.12	4.08	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			411.27			0.09			1.73		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	71.07											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.9
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right	Left	Thru	Thru	Right	Left	Thru	Right	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	152	0	101	31	0	0	0	0	152	184	57	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.0000	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	43	0	0	0	0	0	0	0	99	66	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	218	0	112	36	0	0	0	0	274	270	65	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	28	9	0	0	0	0	69	68	16	0
Total Analysis Volume [veh/h]	218	0	112	36	0	0	0	0	274	270	65	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	4.06	0.00	3.66
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.92		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	24	0	118	65	0	112	62	75
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	64	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	0	201	75	0	129	71	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	50	19	0	32	18	21
Total Analysis Volume [veh/h]	28	0	201	75	0	129	71	83
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.93	4.30
Approach LOS	A	A
Intersection Delay [s/veh]	3.92	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Signalized	Delay (sec / veh):	10.9
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.465

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	1	151	2	0	4	2	333	152	238	323	3
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	18	0	0	0	0	40	0	12	28	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	1	192	2	0	4	2	424	175	287	401	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	0	48	1	0	1	1	106	44	72	100	1
Total Analysis Volume [veh/h]	75	1	192	2	0	4	2	424	175	287	401	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	35	0	0	35	0	0	15	0	10	25	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	10	0	0	6	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	10	10	10	32	32	32	42	42
g / C, Green / Cycle	0.17	0.17	0.17	0.53	0.53	0.53	0.69	0.69
(v / s)_i Volume / Saturation Flow Rate	0.06	0.13	0.01	0.00	0.25	0.12	0.32	0.24
s, saturation flow rate [veh/h]	1271	1432	671	883	1683	1431	903	1681
c, Capacity [veh/h]	155	247	196	459	888	754	673	1166
d1, Uniform Delay [s]	23.09	23.73	20.87	11.41	8.96	7.63	4.88	3.70
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.18	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.34	5.30	0.06	0.02	1.84	0.72	0.72	0.82
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.48	0.78	0.03	0.00	0.48	0.23	0.43	0.35
d, Delay for Lane Group [s/veh]	25.43	29.02	20.93	11.43	10.80	8.35	5.61	4.52
Lane Group LOS	C	C	C	B	B	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.02	2.79	0.07	0.02	3.25	1.13	0.89	1.41
50th-Percentile Queue Length [m/ln]	7.75	21.24	0.52	0.13	24.74	8.64	6.78	10.76
95th-Percentile Queue Length [veh/ln]	1.83	5.02	0.12	0.03	5.84	2.04	1.60	2.54
95th-Percentile Queue Length [m/ln]	13.95	38.24	0.94	0.23	44.54	15.54	12.21	19.37

Movement, Approach, & Intersection Results

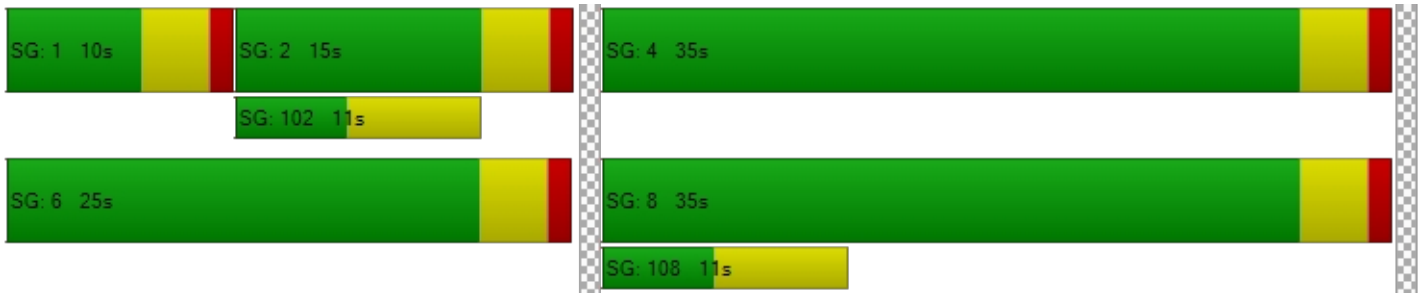
d_M, Delay for Movement [s/veh]	25.43	29.02	29.02	20.93	20.93	20.93	11.43	10.80	8.35	5.61	4.52	4.52
Movement LOS	C	C	C	C	C	C	B	B	A	A	A	A
d_A, Approach Delay [s/veh]	28.02			20.93			10.09			4.97		
Approach LOS	C			C			B			A		
d_I, Intersection Delay [s/veh]	10.94											
Intersection LOS	B											
Intersection V/C	0.465											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.546	0.000	0.000	2.633
Crosswalk LOS	B	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1033	1033	367	700
d_b, Bicycle Delay [s]	7.01	7.01	20.01	12.68
l_b,int, Bicycle LOS Score for Intersection	2.002	1.570	2.551	2.700
Bicycle LOS	B	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	27.7
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.006

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	1	4	51	427	527	24
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	58	40	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	4	59	551	648	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	15	138	162	7
Total Analysis Volume [veh/h]	1	4	59	551	648	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.06	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	27.75	12.96	9.20	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.05	0.05	0.21	0.00	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.35	0.35	1.57	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.92		0.89		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.48					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	18.5
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.426

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	159	0	68	0	0	0	0	229	148	134	446	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	0	67	0	0	0	0	11	24	78	37	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	-40	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	218	0	146	0	0	0	0	275	195	232	512	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	0	37	0	0	0	0	69	49	58	128	1
Total Analysis Volume [veh/h]	218	0	146	0	0	0	0	275	195	232	512	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	33	0	0	33	0	0	35	0	22	57	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	29	29	29	31	31	53	53
g / C, Green / Cycle	0.32	0.32	0.32	0.34	0.34	0.59	0.59
(v / s)_i Volume / Saturation Flow Rate	0.15	0.09	0.00	0.15	0.12	0.19	0.28
s, saturation flow rate [veh/h]	1442	1589	1870	1870	1589	1247	1869
c, Capacity [veh/h]	545	512	643	684	547	749	1100
d1, Uniform Delay [s]	24.07	22.76	0.00	22.67	22.04	9.51	10.49
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.19	1.40	0.00	1.76	1.81	1.07	1.43
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.40	0.29	0.00	0.40	0.36	0.31	0.47
d, Delay for Lane Group [s/veh]	26.25	24.16	0.00	24.43	23.85	10.59	11.92
Lane Group LOS	C	C	A	C	C	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.90	2.45	0.00	4.67	3.27	2.18	5.64
50th-Percentile Queue Length [m/ln]	29.75	18.68	0.00	35.60	24.89	16.63	43.00
95th-Percentile Queue Length [veh/ln]	7.03	4.41	0.00	8.22	5.88	3.93	9.54
95th-Percentile Queue Length [m/ln]	53.55	33.62	0.00	62.62	44.79	29.94	72.69

Movement, Approach, & Intersection Results

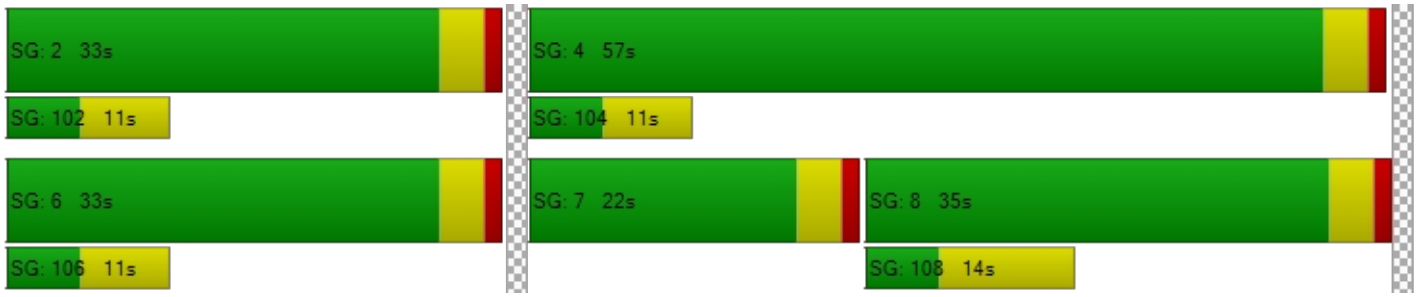
d_M, Delay for Movement [s/veh]	26.25	26.25	24.16	0.00	0.00	0.00	24.43	24.43	23.85	10.59	11.92	11.92
Movement LOS	C	C	C	A	A	A	C	C	C	B	B	B
d_A, Approach Delay [s/veh]	25.41			0.00			24.19			11.50		
Approach LOS	C			A			C			B		
d_I, Intersection Delay [s/veh]	18.48											
Intersection LOS	B											
Intersection V/C	0.426											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.491	1.718	2.902	2.574
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	644	689	1178
d_b, Bicycle Delay [s]	20.67	20.67	19.34	7.61
l_b,int, Bicycle LOS Score for Intersection	2.160	1.560	2.335	2.791
Bicycle LOS	B	A	B	C

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	124.2
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.609

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	78	10	122	5	281	130	61	444	24
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	55	0	61	17	0	59	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	90	11	196	6	385	167	70	572	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	3	49	2	96	42	18	143	7
Total Analysis Volume [veh/h]	0	0	0	90	11	196	6	385	167	70	572	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane				No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance				No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.61	0.07	0.38	0.01	0.00	0.00	0.07	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	124.20	123.73	106.92	8.69	0.00	0.00	8.80	0.00	0.00
Movement LOS				F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	11.76	11.76	11.76	0.01	0.01	0.01	0.22	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	89.61	89.61	89.61	0.08	0.08	0.08	1.68	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			112.78			0.09			0.92		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	22.40											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.8
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right	Left	Thru	Thru	Right	Left	Thru	Right	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	162	0	223	72	0	0	0	0	106	126	80	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.0000	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	23	0	0	0	0	0	0	0	36	25	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	209	0	248	83	0	0	0	0	158	165	92	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	0	62	21	0	0	0	0	40	41	23	0
Total Analysis Volume [veh/h]	209	0	248	83	0	0	0	0	158	165	92	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	4.53	0.00	3.14
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.84		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	70	0	158	92	0	30	17	21
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	36	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	0	218	107	0	34	20	23
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	55	27	0	9	5	6
Total Analysis Volume [veh/h]	81	0	218	107	0	34	20	23
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.72	3.30
Approach LOS	A	A
Intersection Delay [s/veh]	3.84	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	0	101	3	4	6	0	466	71	75	477	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	0	117	3	4	7	0	538	82	87	551	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	29	1	1	2	0	135	21	22	138	0
Total Analysis Volume [veh/h]	80	0	117	3	4	7	0	538	82	87	551	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	0	32	0	9	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	10	0	0	6	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	10	10	34	34	34	42	42
g / C, Green / Cycle	0.17	0.17	0.57	0.57	0.57	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.14	0.01	0.00	0.32	0.06	0.10	0.33
s, saturation flow rate [veh/h]	1399	1574	770	1683	1431	846	1682
c, Capacity [veh/h]	319	337	408	955	812	607	1175
d1, Uniform Delay [s]	24.04	20.95	0.00	8.25	5.95	4.49	4.06
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.94	0.05	0.00	2.40	0.25	0.11	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.04	0.00	0.56	0.10	0.14	0.47
d, Delay for Lane Group [s/veh]	25.98	21.00	0.00	10.65	6.20	4.60	5.40
Lane Group LOS	C	C	A	B	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.68	0.16	0.00	4.00	0.43	0.21	2.14
50th-Percentile Queue Length [m/ln]	20.40	1.21	0.00	30.45	3.24	1.59	16.31
95th-Percentile Queue Length [veh/ln]	4.82	0.29	0.00	7.19	0.77	0.38	3.85
95th-Percentile Queue Length [m/ln]	36.71	2.19	0.00	54.82	5.84	2.86	29.35

Movement, Approach, & Intersection Results

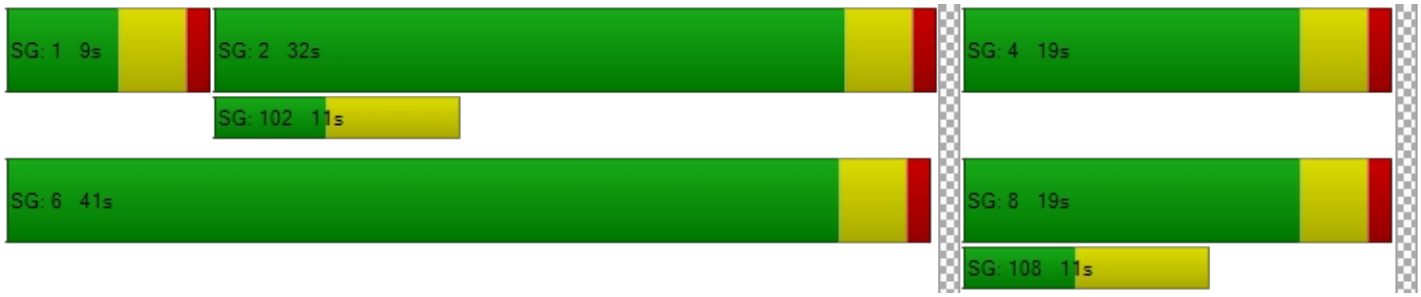
d_M, Delay for Movement [s/veh]	25.98	25.98	25.98	21.00	21.00	21.00	0.00	10.65	6.20	4.60	5.40	5.40
Movement LOS	C	C	C	C	C	C	A	B	A	A	A	A
d_A, Approach Delay [s/veh]	25.98			21.00			10.06			5.29		
Approach LOS	C			C			B			A		
d_I, Intersection Delay [s/veh]	10.23											
Intersection LOS	B											
Intersection V/C	0.482											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.071	0.000	0.000	2.628
Crosswalk LOS	B	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	500	933	1233
d_b, Bicycle Delay [s]	16.88	16.88	8.53	4.41
l_b,int, Bicycle LOS Score for Intersection	1.885	1.583	2.583	2.614
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	23	65	34	541	482	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	75	39	625	556	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	19	10	156	139	5
Total Analysis Volume [veh/h]	27	75	39	625	556	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.14	0.04	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	29.99	16.26	8.65	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.22	1.22	0.07	0.07	0.00	0.00
95th-Percentile Queue Length [m/ln]	9.31	9.31	0.51	0.51	0.00	0.00
d_A, Approach Delay [s/veh]	19.89		0.51		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.76					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	198	0	163	0	0	0	0	330	172	189	288	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	0	189	0	0	0	0	381	199	219	333	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	0	47	0	0	0	0	95	50	55	83	0
Total Analysis Volume [veh/h]	229	0	189	0	0	0	0	381	199	219	333	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	0	47	0	9	56	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	30	30	30	43	43	52	52
g / C, Green / Cycle	0.33	0.33	0.33	0.48	0.48	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.16	0.12	0.00	0.20	0.13	0.23	0.18
s, saturation flow rate [veh/h]	1441	1589	1870	1870	1589	961	1869
c, Capacity [veh/h]	560	530	663	933	759	564	1080
d1, Uniform Delay [s]	23.49	22.70	0.00	15.41	14.03	10.24	9.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.20	1.87	0.00	1.32	0.84	2.01	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.36	0.00	0.41	0.26	0.39	0.31
d, Delay for Lane Group [s/veh]	25.69	24.57	0.00	16.74	14.87	12.25	10.51
Lane Group LOS	C	C	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.05	3.22	0.00	5.19	2.48	2.22	3.32
50th-Percentile Queue Length [m/ln]	30.90	24.55	0.00	39.52	18.90	16.91	25.32
95th-Percentile Queue Length [veh/ln]	7.30	5.80	0.00	8.92	4.46	3.99	5.98
95th-Percentile Queue Length [m/ln]	55.62	44.19	0.00	67.99	34.01	30.44	45.58

Movement, Approach, & Intersection Results

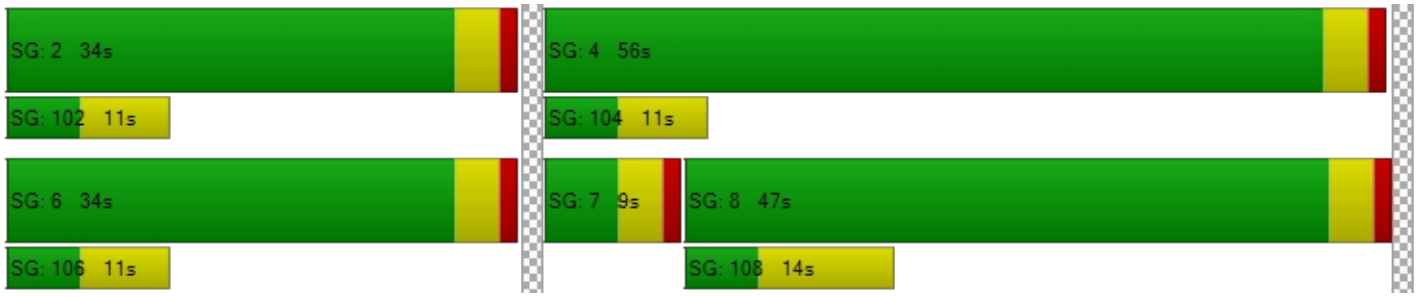
d_M, Delay for Movement [s/veh]	25.69	25.69	24.57	0.00	0.00	0.00	16.74	16.74	14.87	12.25	10.51	10.51
Movement LOS	C	C	C	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	25.19			0.00			16.09			11.20		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	16.80											
Intersection LOS	B											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.550	1.717	2.886	2.550
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	956	1156
d_b, Bicycle Delay [s]	20.00	20.00	12.27	8.02
l_b,int, Bicycle LOS Score for Intersection	2.249	1.560	2.517	2.472
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	127.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.157

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	70	16	115	8	351	231	101	405	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	19	133	9	405	266	117	467	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	20	5	33	2	101	67	29	117	5
Total Analysis Volume [veh/h]	0	0	0	81	19	133	9	405	266	117	467	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.65	0.16	0.23	0.01	0.00	0.00	0.13	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	126.33	127.42	103.74	8.35	0.00	0.00	9.49	0.00	0.00
Movement LOS				F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	9.77	9.77	9.77	0.02	0.02	0.02	0.44	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	74.44	74.44	74.44	0.12	0.12	0.12	3.32	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			113.53			0.11			1.84		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	18.23											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	152	0	101	31	0	0	0	0	152	184	57	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.0000	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	0	112	36	0	0	0	0	175	204	65	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	0	28	9	0	0	0	0	44	51	16	0
Total Analysis Volume [veh/h]	175	0	112	36	0	0	0	0	175	204	65	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.53	0.00	3.14
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.43		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	24	0	118	65	0	112	62	75
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	0	137	75	0	129	71	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	34	19	0	32	18	21
Total Analysis Volume [veh/h]	28	0	137	75	0	129	71	83
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.40	3.78
Approach LOS	A	A
Intersection Delay [s/veh]	3.43	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Signalized	Delay (sec / veh):	10.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
No. of Lanes in Entry Pocket	0	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	0	101	3	4	6	0	466	71	75	477	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	80	0	117	3	4	7	0	538	82	87	551	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	29	1	1	2	0	135	21	22	138	0
Total Analysis Volume [veh/h]	80	0	117	3	4	7	0	538	82	87	551	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	19	0	0	19	0	0	32	0	9	41	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	10	0	0	6	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	C	L	C	R	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	10	10	34	34	34	42	42
g / C, Green / Cycle	0.17	0.17	0.57	0.57	0.57	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.14	0.01	0.00	0.32	0.06	0.10	0.33
s, saturation flow rate [veh/h]	1399	1574	770	1683	1431	846	1682
c, Capacity [veh/h]	319	337	408	955	812	607	1175
d1, Uniform Delay [s]	24.04	20.95	0.00	8.25	5.95	4.49	4.06
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.11	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.94	0.05	0.00	2.40	0.25	0.11	1.35
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.62	0.04	0.00	0.56	0.10	0.14	0.47
d, Delay for Lane Group [s/veh]	25.98	21.00	0.00	10.65	6.20	4.60	5.40
Lane Group LOS	C	C	A	B	A	A	A
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	2.68	0.16	0.00	4.00	0.43	0.21	2.14
50th-Percentile Queue Length [m/ln]	20.40	1.21	0.00	30.45	3.24	1.59	16.31
95th-Percentile Queue Length [veh/ln]	4.82	0.29	0.00	7.19	0.77	0.38	3.85
95th-Percentile Queue Length [m/ln]	36.71	2.19	0.00	54.82	5.84	2.86	29.35

Movement, Approach, & Intersection Results

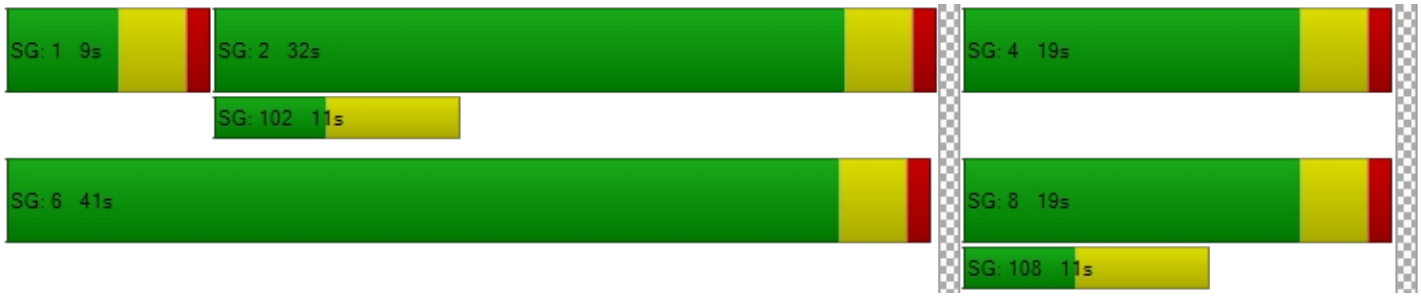
d_M, Delay for Movement [s/veh]	25.98	25.98	25.98	21.00	21.00	21.00	0.00	10.65	6.20	4.60	5.40	5.40
Movement LOS	C	C	C	C	C	C	A	B	A	A	A	A
d_A, Approach Delay [s/veh]	25.98			21.00			10.06			5.29		
Approach LOS	C			C			B			A		
d_I, Intersection Delay [s/veh]	10.23											
Intersection LOS	B											
Intersection V/C	0.482											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.071	0.000	0.000	2.628
Crosswalk LOS	B	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	500	500	933	1233
d_b, Bicycle Delay [s]	16.88	16.88	8.53	4.41
l_b,int, Bicycle LOS Score for Intersection	1.885	1.583	2.583	2.614
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	30.0
Analysis Method:	HCM 7th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.154

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	23	65	34	541	482	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	75	39	625	556	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	19	10	156	139	5
Total Analysis Volume [veh/h]	27	75	39	625	556	19
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.15	0.14	0.04	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	29.99	16.26	8.65	0.00	0.00	0.00
Movement LOS	D	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.22	1.22	0.07	0.07	0.00	0.00
95th-Percentile Queue Length [m/ln]	9.31	9.31	0.51	0.51	0.00	0.00
d_A, Approach Delay [s/veh]	19.89		0.51		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.76					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	16.8
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	198	0	163	0	0	0	0	330	172	189	288	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	229	0	189	0	0	0	0	381	199	219	333	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	57	0	47	0	0	0	0	95	50	55	83	0
Total Analysis Volume [veh/h]	229	0	189	0	0	0	0	381	199	219	333	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	0	47	0	9	56	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	30	30	30	43	43	52	52
g / C, Green / Cycle	0.33	0.33	0.33	0.48	0.48	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.16	0.12	0.00	0.20	0.13	0.23	0.18
s, saturation flow rate [veh/h]	1441	1589	1870	1870	1589	961	1869
c, Capacity [veh/h]	560	530	663	933	759	564	1080
d1, Uniform Delay [s]	23.49	22.70	0.00	15.41	14.03	10.24	9.77
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.20	1.87	0.00	1.32	0.84	2.01	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.41	0.36	0.00	0.41	0.26	0.39	0.31
d, Delay for Lane Group [s/veh]	25.69	24.57	0.00	16.74	14.87	12.25	10.51
Lane Group LOS	C	C	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	4.05	3.22	0.00	5.19	2.48	2.22	3.32
50th-Percentile Queue Length [m/ln]	30.90	24.55	0.00	39.52	18.90	16.91	25.32
95th-Percentile Queue Length [veh/ln]	7.30	5.80	0.00	8.92	4.46	3.99	5.98
95th-Percentile Queue Length [m/ln]	55.62	44.19	0.00	67.99	34.01	30.44	45.58

Movement, Approach, & Intersection Results

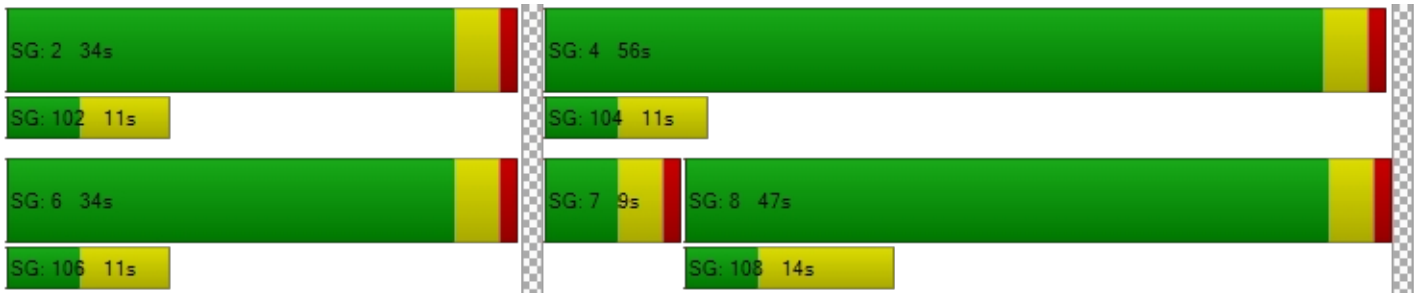
d_M, Delay for Movement [s/veh]	25.69	25.69	24.57	0.00	0.00	0.00	16.74	16.74	14.87	12.25	10.51	10.51
Movement LOS	C	C	C	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	25.19			0.00			16.09			11.20		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	16.80											
Intersection LOS	B											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.550	1.717	2.886	2.550
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	956	1156
d_b, Bicycle Delay [s]	20.00	20.00	12.27	8.02
l_b,int, Bicycle LOS Score for Intersection	2.249	1.560	2.517	2.472
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	127.4
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.157

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	70	16	115	8	351	231	101	405	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	19	133	9	405	266	117	467	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	20	5	33	2	101	67	29	117	5
Total Analysis Volume [veh/h]	0	0	0	81	19	133	9	405	266	117	467	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.65	0.16	0.23	0.01	0.00	0.00	0.13	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	126.33	127.42	103.74	8.35	0.00	0.00	9.49	0.00	0.00
Movement LOS				F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	9.77	9.77	9.77	0.02	0.02	0.02	0.44	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	74.44	74.44	74.44	0.12	0.12	0.12	3.32	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			113.53			0.11			1.84		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	18.23											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.4
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right2	Left	Thru	Thru	Right	Left	Thru	Right	Right2
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	152	0	101	31	0	0	0	0	152	184	57	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.0000	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	0	112	36	0	0	0	0	175	204	65	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	0	28	9	0	0	0	0	44	51	16	0
Total Analysis Volume [veh/h]	175	0	112	36	0	0	0	0	175	204	65	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.53	0.00	3.14
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.43		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left2	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	24	0	118	65	0	112	62	75
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	28	0	137	75	0	129	71	83
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	0	34	19	0	32	18	21
Total Analysis Volume [veh/h]	28	0	137	75	0	129	71	83
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.40	3.78
Approach LOS	A	A
Intersection Delay [s/veh]	3.43	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Signalized	Delay (sec / veh):	10.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.424

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50	3.50
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	1	151	2	0	4	2	333	238	238	323	3
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	75	1	174	2	0	4	2	384	275	275	373	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	19	0	44	1	0	1	1	96	69	69	93	1
Total Analysis Volume [veh/h]	75	1	174	2	0	4	2	384	275	275	373	3
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	Yes
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	8	0	0	4	0	0	2	0	1	6	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	21	0	0	21	0	0	29	0	10	39	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	10	0	0	6	0	0	10	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	C	L	C	R	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	10	10	10	32	32	32	42	42
g / C, Green / Cycle	0.17	0.17	0.17	0.54	0.54	0.54	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.06	0.12	0.01	0.00	0.23	0.19	0.32	0.22
s, saturation flow rate [veh/h]	1271	1432	711	906	1683	1431	865	1681
c, Capacity [veh/h]	137	238	198	490	905	770	677	1178
d1, Uniform Delay [s]	23.55	23.78	21.17	10.52	8.30	7.93	4.32	3.46
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50	0.18	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.37	4.41	0.06	0.02	1.46	1.29	0.67	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.55	0.74	0.03	0.00	0.42	0.36	0.41	0.32
d, Delay for Lane Group [s/veh]	26.92	28.19	21.23	10.53	9.75	9.22	4.98	4.18
Lane Group LOS	C	C	C	B	A	A	A	A
Critical Lane Group	No	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	1.06	2.48	0.07	0.02	2.73	1.89	0.80	1.22
50th-Percentile Queue Length [m/ln]	8.06	18.91	0.53	0.12	20.77	14.41	6.11	9.31
95th-Percentile Queue Length [veh/ln]	1.90	4.47	0.13	0.03	4.91	3.40	1.44	2.20
95th-Percentile Queue Length [m/ln]	14.51	34.03	0.95	0.22	37.38	25.94	11.01	16.76

Movement, Approach, & Intersection Results

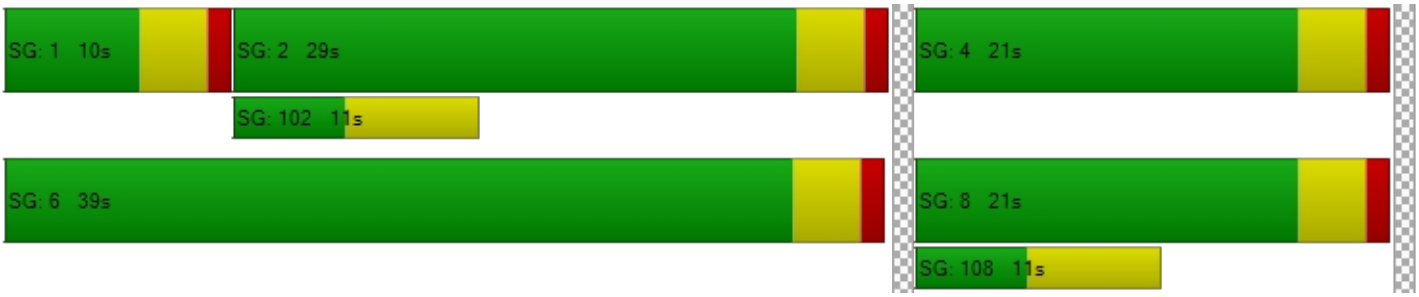
d_M, Delay for Movement [s/veh]	26.92	28.19	28.19	21.23	21.23	21.23	10.53	9.75	9.22	4.98	4.18	4.18
Movement LOS	C	C	C	C	C	C	B	A	A	A	A	A
d_A, Approach Delay [s/veh]	27.81			21.23			9.54			4.52		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	10.41											
Intersection LOS	B											
Intersection V/C	0.424											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	0.0	0.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	0.00	0.00	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.578	0.000	0.000	2.580
Crosswalk LOS	B	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	567	567	833	1167
d_b, Bicycle Delay [s]	15.41	15.41	10.21	5.21
l_b,int, Bicycle LOS Score for Intersection	1.972	1.570	2.650	2.634
Bicycle LOS	A	A	B	B

Sequence

Ring 1	1	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	-	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	24.8
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	1	4	51	427	527	24
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	4	59	493	608	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	15	123	152	7
Total Analysis Volume [veh/h]	1	4	59	493	608	28
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.01	0.06	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	24.79	12.53	9.05	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.20	0.00	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.32	0.32	1.52	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	14.99		0.97		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.51					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	14.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.402

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	159	0	68	0	0	0	0	229	148	134	446	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	183	0	79	0	0	0	0	264	171	154	515	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	46	0	20	0	0	0	0	66	43	39	129	1
Total Analysis Volume [veh/h]	183	0	79	0	0	0	0	264	171	154	515	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	80
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	23	0	0	23	0	0	37	0	20	57	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	80	80	80	80	80	80	80
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	19	19	19	33	33	53	53
g / C, Green / Cycle	0.24	0.24	0.24	0.41	0.41	0.66	0.66
(v / s)_i Volume / Saturation Flow Rate	0.13	0.05	0.00	0.14	0.11	0.12	0.28
s, saturation flow rate [veh/h]	1455	1589	1870	1870	1589	1234	1869
c, Capacity [veh/h]	436	378	489	816	656	860	1238
d1, Uniform Delay [s]	26.32	24.47	0.00	16.08	15.47	5.43	6.30
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.96	1.26	0.00	1.05	0.97	0.46	1.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.42	0.21	0.00	0.32	0.26	0.18	0.42
d, Delay for Lane Group [s/veh]	29.28	25.73	0.00	17.13	16.44	5.89	7.34
Lane Group LOS	C	C	A	B	B	A	A
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	3.27	1.30	0.00	3.35	2.12	0.88	3.62
50th-Percentile Queue Length [m/ln]	24.94	9.88	0.00	25.53	16.12	6.70	27.60
95th-Percentile Queue Length [veh/ln]	5.89	2.33	0.00	6.03	3.81	1.58	6.52
95th-Percentile Queue Length [m/ln]	44.89	17.79	0.00	45.95	29.02	12.05	49.67

Movement, Approach, & Intersection Results

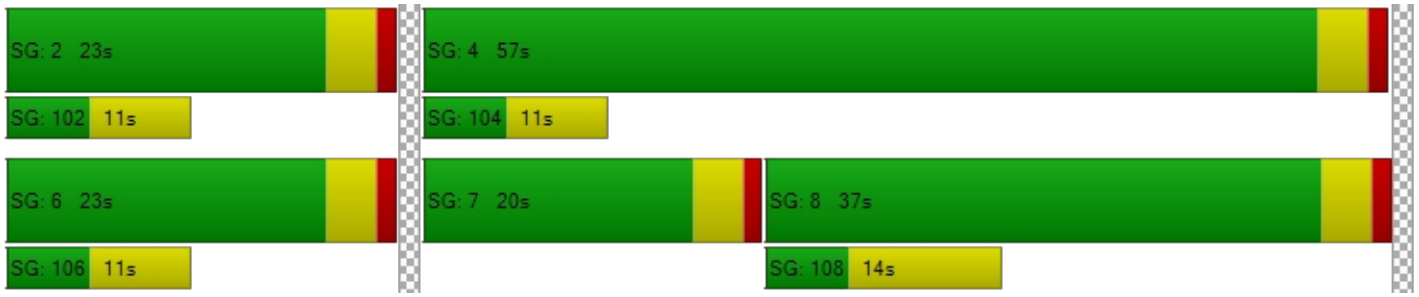
d_M, Delay for Movement [s/veh]	29.28	29.28	25.73	0.00	0.00	0.00	17.13	17.13	16.44	5.89	7.34	7.34
Movement LOS	C	C	C	A	A	A	B	B	B	A	A	A
d_A, Approach Delay [s/veh]	28.21			0.00			16.85			7.00		
Approach LOS	C			A			B			A		
d_I, Intersection Delay [s/veh]	14.20											
Intersection LOS	B											
Intersection V/C	0.402											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	31.51	31.51	31.51	31.51
l_p,int, Pedestrian LOS Score for Intersectio	2.350	1.712	2.810	2.485
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	475	475	825	1325
d_b, Bicycle Delay [s]	23.26	23.26	13.81	4.56
l_b,int, Bicycle LOS Score for Intersection	1.992	1.560	2.277	2.667
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	60.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.494

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	78	10	122	5	281	130	61	444	24
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	90	11	141	6	324	150	70	513	28
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	23	3	35	2	81	38	18	128	7
Total Analysis Volume [veh/h]	0	0	0	90	11	141	6	324	150	70	513	28
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane				Yes								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance				No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.49	0.06	0.26	0.01	0.00	0.00	0.06	0.01	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	60.87	60.76	47.64	8.51	0.00	0.00	8.54	0.00	0.00
Movement LOS				F	F	E	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	6.62	6.62	6.62	0.01	0.01	0.01	0.21	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	50.42	50.42	50.42	0.08	0.08	0.08	1.57	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			53.15			0.11			0.98		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	10.14											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.6
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right	Left	Thru	Thru	Right	Left	Thru	Right	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	162	0	223	72	0	0	0	0	106	126	80	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.0000	1.1090	1.1090	1.1090	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	0	248	83	0	0	0	0	122	140	92	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	0	62	21	0	0	0	0	31	35	23	0
Total Analysis Volume [veh/h]	186	0	248	83	0	0	0	0	122	140	92	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	4.23	0.00	2.99
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.63		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	70	0	158	92	0	30	17	21
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100	1.1100
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	81	0	182	107	0	34	20	23
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	0	46	27	0	9	5	6
Total Analysis Volume [veh/h]	81	0	182	107	0	34	20	23
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.48	3.16
Approach LOS	A	A
Intersection Delay [s/veh]	3.63	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Two-way stop	Delay (sec / veh):	49.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.482

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	69	0	101	3	4	6	0	466	71	75	477	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	72	0	105	3	4	6	0	485	74	78	496	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	26	1	1	2	0	121	19	20	124	0
Total Analysis Volume [veh/h]	72	0	105	3	4	6	0	485	74	78	496	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.00	0.19	0.03	0.02	0.01	0.00	0.00	0.00	0.08	0.00	0.00
d_M, Delay for Movement [s/veh]	49.70	26.88	13.00	37.07	27.48	12.34	8.37	0.00	0.00	8.85	0.00	0.00
Movement LOS	E	D	B	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.26	0.69	0.69	0.19	0.19	0.19	0.00	0.00	0.00	0.25	0.00	0.00
95th-Percentile Queue Length [m/ln]	17.24	5.27	5.27	1.45	1.45	1.45	0.00	0.00	0.00	1.91	0.00	0.00
d_A, Approach Delay [s/veh]	27.93			22.71			0.00			1.20		
Approach LOS	D			C			A			A		
d_I, Intersection Delay [s/veh]	4.48											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	24.6
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.112

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	23	65	34	541	482	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	24	68	35	563	501	17
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	17	9	141	125	4
Total Analysis Volume [veh/h]	24	68	35	563	501	17
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.11	0.12	0.03	0.01	0.01	0.00
d_M, Delay for Movement [s/veh]	24.56	14.13	8.55	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.89	0.89	0.10	0.00	0.00	0.00
95th-Percentile Queue Length [m/ln]	6.78	6.78	0.79	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.85		0.50		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	1.53					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	16.2
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.382

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	198	0	163	0	0	0	0	330	172	189	288	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	206	0	170	0	0	0	0	343	179	197	300	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	0	43	0	0	0	0	86	45	49	75	0
Total Analysis Volume [veh/h]	206	0	170	0	0	0	0	343	179	197	300	1
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fixed time
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	34	0	0	34	0	0	47	0	9	56	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	90	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	30	30	30	43	43	52	52
g / C, Green / Cycle	0.33	0.33	0.33	0.48	0.48	0.58	0.58
(v / s)_i Volume / Saturation Flow Rate	0.14	0.11	0.00	0.18	0.11	0.20	0.16
s, saturation flow rate [veh/h]	1441	1589	1870	1870	1589	1001	1869
c, Capacity [veh/h]	560	530	663	933	759	595	1080
d1, Uniform Delay [s]	23.05	22.40	0.00	15.03	13.83	9.82	9.56
k, delay calibration	0.50	0.50	0.50	0.50	0.50	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.85	1.60	0.00	1.12	0.73	1.49	0.64
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.37	0.32	0.00	0.37	0.24	0.33	0.28
d, Delay for Lane Group [s/veh]	24.91	23.99	0.00	16.14	14.56	11.31	10.21
Lane Group LOS	C	C	A	B	B	B	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	3.56	2.85	0.00	4.54	2.20	1.93	2.93
50th-Percentile Queue Length [m/ln]	27.16	21.71	0.00	34.61	16.73	14.74	22.31
95th-Percentile Queue Length [veh/ln]	6.42	5.13	0.00	8.04	3.95	3.48	5.27
95th-Percentile Queue Length [m/ln]	48.89	39.08	0.00	61.24	30.12	26.54	40.16

Movement, Approach, & Intersection Results

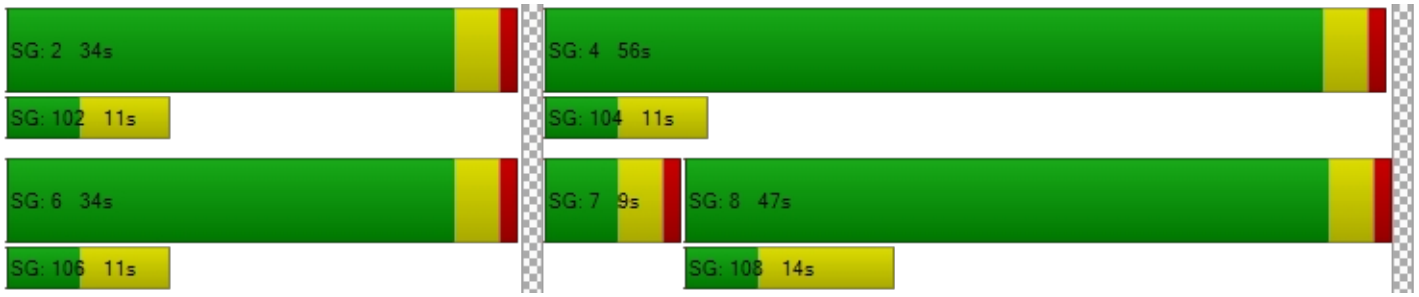
d_M, Delay for Movement [s/veh]	24.91	24.91	23.99	0.00	0.00	0.00	16.14	16.14	14.56	11.31	10.21	10.21
Movement LOS	C	C	C	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	24.49			0.00			15.60			10.64		
Approach LOS	C			A			B			B		
d_I, Intersection Delay [s/veh]	16.23											
Intersection LOS	B											
Intersection V/C	0.382											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	36.45	36.45	36.45	36.45
l_p,int, Pedestrian LOS Score for Intersectio	2.489	1.717	2.792	2.489
Crosswalk LOS	B	A	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	667	667	956	1156
d_b, Bicycle Delay [s]	20.00	20.00	12.27	8.02
l_b,int, Bicycle LOS Score for Intersection	2.180	1.560	2.421	2.381
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	125.9
Analysis Method:	HCM 7th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.156

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	48.28			48.28			48.28			48.28		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	70	16	115	8	351	230	101	405	16
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090	1.1090
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	19	133	9	405	265	116	467	19
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	20	5	33	2	101	66	29	117	5
Total Analysis Volume [veh/h]	0	0	0	81	19	133	9	405	265	116	467	19
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane		No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance		No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.64	0.16	0.23	0.01	0.00	0.00	0.13	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	124.78	125.85	102.34	8.35	0.00	0.00	9.48	0.00	0.00
Movement LOS				F	F	F	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	9.71	9.71	9.71	0.02	0.02	0.02	0.43	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	73.97	73.97	73.97	0.12	0.12	0.12	3.28	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			112.06			0.11			1.83		
Approach LOS	A			F			A			A		
d_I, Intersection Delay [s/veh]	18.02											
Intersection LOS	F											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.3
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right	Left	Thru	Thru	Right	Left	Thru	Right	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	152	0	101	31	0	0	0	0	152	184	57	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	0	101	32	0	0	0	0	158	184	59	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	0	25	8	0	0	0	0	40	46	15	0
Total Analysis Volume [veh/h]	158	0	101	32	0	0	0	0	158	184	59	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.34	0.00	3.03
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.26		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	24	0	118	65	0	112	62	75
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	25	0	123	68	0	116	64	75
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	6	0	31	17	0	29	16	19
Total Analysis Volume [veh/h]	25	0	123	68	0	116	64	75
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.24	3.55
Approach LOS	A	A
Intersection Delay [s/veh]	3.26	
Intersection LOS	A	

Intersection Level Of Service Report
Intersection 1: Payzant Drive

Control Type:	Two-way stop	Delay (sec / veh):	45.7
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.441

Intersection Setup

Name											
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	1	0	0	0	0	0	1	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			No			No			Yes		

Volumes

Name												
Base Volume Input [veh/h]	65	1	155	2	0	4	0	466	71	75	477	1
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	1	161	2	0	4	0	485	74	78	496	1
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	0	40	1	0	1	0	121	19	20	124	0
Total Analysis Volume [veh/h]	68	1	161	2	0	4	0	485	74	78	496	1
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop	Stop	Free	Free
Flared Lane	No	No		
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance	No	No		
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.44	0.01	0.29	0.02	0.00	0.01	0.00	0.00	0.00	0.08	0.00	0.00
d_M, Delay for Movement [s/veh]	45.66	28.11	14.23	42.73	26.89	11.75	8.37	0.00	0.00	8.85	0.00	0.00
Movement LOS	E	D	B	E	D	B	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.00	1.23	1.23	0.09	0.09	0.09	0.00	0.00	0.00	0.25	0.00	0.00
95th-Percentile Queue Length [m/ln]	15.24	9.37	9.37	0.65	0.65	0.65	0.00	0.00	0.00	1.91	0.00	0.00
d_A, Approach Delay [s/veh]	23.58			22.08			0.00			1.20		
Approach LOS	C			C			A			A		
d_I, Intersection Delay [s/veh]	4.56											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 2: Centennial Drive

Control Type:	Two-way stop	Delay (sec / veh):	21.5
Analysis Method:	HCM 7th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.005

Intersection Setup

Name						
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00		50.00		50.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name						
Base Volume Input [veh/h]	1	4	51	427	527	24
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1	4	53	444	548	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	13	111	137	6
Total Analysis Volume [veh/h]	1	4	53	444	548	25
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop		Free		Free	
Flared Lane	No					
Storage Area [veh]	0		0		0	
Two-Stage Gap Acceptance	No					
Number of Storage Spaces in Median	0		0		0	

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.05	0.00	0.01	0.00
d_M, Delay for Movement [s/veh]	21.53	11.93	8.80	0.00	0.00	0.00
Movement LOS	C	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.17	0.00	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.28	0.28	1.28	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	13.85		0.94		0.00	
Approach LOS	B		A		A	
d_I, Intersection Delay [s/veh]	0.50					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 3: Cole Drive

Control Type:	Signalized	Delay (sec / veh):	14.4
Analysis Method:	HCM 7th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.364

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	1	0	0	0	0	0	1	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name												
Base Volume Input [veh/h]	159	0	68	0	0	0	0	229	148	131	446	2
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Proportion of CAVs [%]	0.00											
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	0	71	0	0	0	0	238	154	136	464	2
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	41	0	18	0	0	0	0	60	39	34	116	1
Total Analysis Volume [veh/h]	165	0	71	0	0	0	0	238	154	136	464	2
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing m	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing mi	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	60
Active Pattern	Pattern 1
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Semi-actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	Permiss	ProtPer	Permiss	Permiss
Signal Group	0	6	0	0	2	0	0	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	-	-	-	Lead	-	-
Minimum Green [s]	0	10	0	0	10	0	0	10	0	5	10	0
Maximum Green [s]	0	30	0	0	30	0	0	30	0	30	30	0
Amber [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
All red [s]	0.0	1.0	0.0	0.0	1.0	0.0	0.0	1.0	0.0	1.0	1.0	0.0
Split [s]	0	15	0	0	15	0	0	18	0	27	45	0
Vehicle Extension [s]	0.0	3.0	0.0	0.0	3.0	0.0	0.0	3.0	0.0	3.0	3.0	0.0
Walk [s]	0	5	0	0	5	0	0	5	0	0	5	0
Pedestrian Clearance [s]	0	6	0	0	6	0	0	9	0	0	6	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0
Minimum Recall		No			No			No		No	No	
Maximum Recall		No			No			No		No	No	
Pedestrian Recall		No			No			No		No	No	
Detector Location [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [m]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering 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

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	C	R	C	C	R	L	C
C, Cycle Length [s]	60	60	60	60	60	60	60
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	2.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00	2.00
g_i, Effective Green Time [s]	30	30	30	14	14	22	22
g / C, Green / Cycle	0.50	0.50	0.50	0.23	0.23	0.37	0.37
(v / s)_i Volume / Saturation Flow Rate	0.11	0.04	0.00	0.13	0.10	0.11	0.25
s, saturation flow rate [veh/h]	1437	1589	1870	1870	1589	1195	1869
c, Capacity [veh/h]	749	695	878	594	454	447	802
d1, Uniform Delay [s]	10.56	9.94	0.00	17.55	16.96	12.71	13.01
k, delay calibration	0.50	0.50	0.50	0.11	0.11	0.11	0.11
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.68	0.29	0.00	0.44	0.44	0.38	0.67
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.22	0.10	0.00	0.40	0.34	0.30	0.58
d, Delay for Lane Group [s/veh]	11.24	10.24	0.00	17.98	17.40	13.09	13.68
Lane Group LOS	B	B	A	B	B	B	B
Critical Lane Group	Yes	No	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	1.14	0.46	0.00	2.79	1.76	1.16	4.86
50th-Percentile Queue Length [m/ln]	8.67	3.52	0.00	21.26	13.37	8.87	37.00
95th-Percentile Queue Length [veh/ln]	2.05	0.83	0.00	5.02	3.16	2.09	8.47
95th-Percentile Queue Length [m/ln]	15.61	6.33	0.00	38.27	24.07	15.96	64.54

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	11.24	11.24	10.24	0.00	0.00	0.00	17.98	17.98	17.40	13.09	13.68	13.68
Movement LOS	B	B	B	A	A	A	B	B	B	B	B	B
d_A, Approach Delay [s/veh]	10.94			0.00			17.75			13.55		
Approach LOS	B			A			B			B		
d_I, Intersection Delay [s/veh]	14.39											
Intersection LOS	B											
Intersection V/C	0.364											

Other Modes

g_Walk,mi, Effective Walk Time [s]	9.0	9.0	9.0	9.0
M_corner, Corner Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [m²/ped]	0.00	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	21.68	21.68	21.68	21.68
l_p,int, Pedestrian LOS Score for Intersectio	2.256	1.697	2.709	2.414
Crosswalk LOS	B	A	B	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	367	367	467	1367
d_b, Bicycle Delay [s]	20.01	20.01	17.63	3.01
l_b,int, Bicycle LOS Score for Intersection	1.949	1.560	2.206	2.553
Bicycle LOS	A	A	B	B

Sequence

Ring 1	-	2	-	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Intersection Level Of Service Report
Intersection 4: Industrial Drive

Control Type:	Two-way stop	Delay (sec / veh):	38.0
Analysis Method:	HCM 7th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.046

Intersection Setup

Name												
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	1	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	48.28			50.00			50.00			50.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			No			No		

Volumes

Name												
Base Volume Input [veh/h]	0	0	0	78	10	122	5	281	130	61	444	24
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	81	10	127	5	292	135	63	462	25
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	20	3	32	1	73	34	16	116	6
Total Analysis Volume [veh/h]	0	0	0	81	10	127	5	292	135	63	462	25
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Priority Scheme	Stop			Stop			Free			Free		
Flared Lane				No								
Storage Area [veh]	0			0			0			0		
Two-Stage Gap Acceptance				No								
Number of Storage Spaces in Median	0			0			0			0		

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.37	0.05	0.22	0.00	0.00	0.00	0.06	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	0.00	37.85	37.96	27.46	8.35	0.00	0.00	8.37	0.00	0.00
Movement LOS				E	E	D	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	4.10	4.10	4.10	0.01	0.01	0.01	0.18	0.00	0.00
95th-Percentile Queue Length [m/ln]	0.00	0.00	0.00	31.25	31.25	31.25	0.07	0.07	0.07	1.34	0.00	0.00
d_A, Approach Delay [s/veh]	0.00			31.80			0.10			0.96		
Approach LOS	A			D			A			A		
d_I, Intersection Delay [s/veh]	6.25											
Intersection LOS	E											

Intersection Level Of Service Report
Intersection 5: Roundabout

Control Type:	Roundabout	Delay (sec / veh):	3.2
Analysis Method:	Kimber	Level Of Service:	A
Analysis Period:	15 minutes		

Intersection Setup

Name											
Approach	Northbound				Southbound				Eastbound			
Lane Configuration												
Turning Movement	Left	Thru	Right	Right	Left	Thru	Thru	Right	Left	Thru	Right	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00				50.00			
Grade [%]	0.00				0.00				0.00			
Crosswalk	No				No				No			

Volumes

Name												
Base Volume Input [veh/h]	162	0	113	72	0	0	0	0	106	126	80	0
Base Volume Adjustment Factor	1.0400	1.0400	1.0000	1.0400	1.0000	1.0400	1.0400	1.0400	1.0400	1.0000	1.0400	1.0400
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	168	0	113	75	0	0	0	0	110	126	83	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	42	0	28	19	0	0	0	0	28	32	21	0
Total Analysis Volume [veh/h]	168	0	113	75	0	0	0	0	110	126	83	0
Pedestrian Volume [ped/h]	0				0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.49	0.00	2.89
Approach LOS	A	A	A
Intersection Delay [s/veh]	3.22		
Intersection LOS	A		

Intersection Setup

Name								
Approach	Westbound				Northwestbound			
Lane Configuration								
Turning Movement	Left2	Left	Thru	Right	Left	Left	Thru	Right
Lane Width [m]	3.66	3.66	3.66	3.66	3.66	3.66	3.66	3.66
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0
Entry Pocket Length [m]	30.48	30.48	30.48	30.48	30.48	30.48	30.48	30.48
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0
Exit Pocket Length [m]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [km/h]	50.00				50.00			
Grade [%]	0.00				0.00			
Crosswalk	Yes				No			

Volumes

Name								
Base Volume Input [veh/h]	70	0	158	92	0	30	17	21
Base Volume Adjustment Factor	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0400	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	73	0	164	96	0	31	18	21
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	18	0	41	24	0	8	5	5
Total Analysis Volume [veh/h]	73	0	164	96	0	31	18	21
Pedestrian Volume [ped/h]	0				0			

Intersection Settings

Movement, Approach, & Intersection Results

Approach Delay [s/veh]	3.30	2.89
Approach LOS	A	A
Intersection Delay [s/veh]	3.22	
Intersection LOS	A	

Attachment D – Public Information Meeting Notes

March 5, 2025

PIDs 45055241, 45190386, and 45366457, Wentworth Rd, Windsor

Meeting date and time	A Public Information Meeting was held on March 5, 2025, beginning at 6:00 p.m. The meeting was broadcast live on the Municipal YouTube Channel.
Attending	In attendance for the meeting: One (1) Chair: • Councillor Jim Ivey Four (4) members of staff: • Acting Director Fougere • Senior Planner Dunphy • Planner Hong • Planning Assistant Lake Approximately 2 members of the public.
Applicant Chrystal Fuller on behalf of J.D. Irving **Property** PIDs 45055241, 45190386, and 45366457, Wentworth Rd, Windsor	Planner Hong outlined the application to rezone the subject lots and concurrently enter into a development agreement to permit multiple commercial buildings on the properties.
Comments	Comments from the public could be submitted by mail, e-mail and telephone between March 5 - 19, 2025. Staff did not receive any phone calls or written submissions during the comment period. 1 member of the public spoke during the Public Information Meeting. Applicants responses are in purple. • Elizabeth McCarthy, resident of The Crossing, raised concerns about ambient light becoming worse, unless consideration is given to controlling the light. Another question was about the residential area, but this was not ready to be discussed at this time.

	• Chrystal Fuller, applicant, responded that Developer will ensure light pollution is minimized to the greatest extent possible. In larger developments by DA, the municipality can require a lighting plan, or a clause stating light will be directed away from adjacent residential use. Irving is open to adhering to these regulations. The proponent has no interest in contributing to light pollution. Developers often have a lighting splay plan to ensure lighting is appropriately kept to a minimum to the adjacent use. There will be more lights, but all attempts will be made to minimize impact. • Michael Simms, applicant, commented that J.D. Irving will make every attempt to ensure light is directed away from the residents. They are conscious about the cost of electricity and many lights will be turned off at night. Another common question is about noise, and Irving is very sensitive to this issue, as many stores are in/near residential areas. Hours of operation and noise will be sensitive to a residential area.
Adjournment	The Public Information Meeting was adjourned at approximately 6:35 p.m.

WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation X	Decision Request ☐	Councillor Activity ☐

To: Members of Planning and Heritage Advisory Committee (PAC/HAC)

Submitted by: _____
Will Hong, Planner

Date: November 13, 2025

Subject: Windsor MPS and LUB Amendments: PIDs 45439098 and 45190386, Wentworth Rd, Windsor; File#25-11/12

LEGISLATIVE AUTHORITY

Municipal Government Act Section 205 & 210

RECOMMENDATION

Staff recommend that the PAC/HAC forward a positive recommendation by passing the following motion:

…that PAC/HAC recommends that Council give First Reading and hold a Public Hearing to consider amending the Generalized Future Land Use Map of the Windsor Municipal Planning Strategy to include PIDs 45439098 and 45190386 in the Commercial designation as shown in the report #25-11/12 to the Planning and Heritage Advisory Committee dated November 13, 2025; and

…that PAC/HAC recommends that Council give First Reading and hold a Public Hearing to consider amending the zoning map of the Windsor Land Use By-law to rezone a portion of PID 45190386 from Agriculture (AG) to a split zone of Wentworth Road Commercial (WR-C) and Medium Density Residential (R-2) and amending the Schedule B of the Windsor Land Use By-law to adjust the Wentworth Road Gateway District boundary as shown in the report #25-11/12 to the Planning and Heritage Advisory Committee dated November 13, 2025.

BACKGROUND

Property X	Public Opinion ☐	Environment ☐	Social ☐	Economic ☐	Councillor Activity ☐

A completed application was received from Brighter Community Planning on behalf of J.D. Irving, Ltd. on January 27, 2025. The application was to amend the Generalized Future Land Use Map (GFLUM) of the Windsor Municipal Planning Strategy to redesignate PID 45439098 (former PID 45055241, boundary adjusted through a recent consolidation) to Commercial and rezone to Wentworth Road Commercial (WR-C), and rezone PID 45190386 from Agriculture (AG) to Medium Density Residential (R-2), and amend the Wentworth Road Gateway District boundary.

This application also included a development agreement application under report File #25-07. File #25-07 is to allow a large-format retail store and several smaller retail stores by development agreement. The nature of this file is not contingent on the development agreement application, as a development agreement serves as a flexible mechanism to advance the applicant's proposal. However, the intent of this application will establish the foundation for the applicant's future residential proposal on the subject lots.

DISCUSSION

This application comprises of two lots (PIDs 45439098 and PID 45190386). It is important to note that PID 45190386 extend past the boundary of the Windsor planning area. However, the proposed redesignation and rezoning requests all takes place within the Windsor planning area. Therefore, this application is entirely assessed against the policies in the Windsor Municipal Planning Strategy (WMPS).

The subject lot PID 45439098 (former PID 45055241, boundary adjusted through a recent consolidation) is a 23.7-acre vacant lot with frontage on Wentworth Road. The property is split-designated Commercial and Residential, and split-zoned Wentworth Road Commercial (WR-C) and Agriculture (AG). It is entirely located within the Wentworth Road Gateway District.

The PID 45190386 is a 15.6-acre of land fronting Cole Drive. As noted, this subject lot is partially within the jurisdiction of the WMPS and partially within the jurisdiction of the West Hants Municipal Planning Strategy. The portion within the Windsor planning area is designated Residential on GFLUM and zoned Agriculture (AG) on the zoning map of the Windsor Land Use By-law (Figure 2). The subject lot is also within the Wentworth Road Gateway District.

Properties surrounding the subject lots are mostly designated Commercial, Residential, or Joint Industrial. There are a variety of uses presented within the proximity of the subject lots, which include commercial, community facility, residential, and institutional. These properties have a mix of zoning including the Fairground (FG), Light Industrial Type Three (LI-3), Two Unit Residential (R-2) zone, General Commercial (GC) and Highway Commercial (HC) zone.

In summary, the requests from the applicant are as follows:

Property	Designation	Zoning	Wentworth Road Gateway District
PID 45439098	Redesignate from a split designation of Commercial and Residential to Commercial entirely	Rezone from a split zone of Wentworth Road Commercial (WR-C) and Agriculture (AG) to Wentworth Road Commercial (WR-C) entirely	*Not Applicable*
PID 45190386	*Not Applicable*	Rezone from Agriculture to Medium Density Residential (R-2)	Exclude the property from the Wentworth Road Gateway District

Municipal Planning Strategy Review

In considering the above requests, staff need to consider whether the proposed amendments align with the WMPS.

Policy 6.0.10 is the enabling policy for Council to consider rezoning lands zoned Agriculture for other uses. The evaluation of this policy is included in Attachment A. In summary, this policy is considered met since there are no active farms in the surrounding area of PIDs 45439098 and 45190386.

Policy 8.6.7 indicates Council's intention to designate all lands within the Wentworth Road Gateway District as Commercial, except for the Joint Industrial Park lands. As PID 45439098 is entirely within the Wentworth Road Gateway District, redesignating the property fully to Commercial is consistent with Council's policy direction.

Policy 8.6.10 establishes Council's intention to recognize Wentworth Road Commercial (WR-C) zone as the main commercial zone within the Wentworth Road Gateway District, which specifies that rezoning to other zones within the District will not be supported. As the proposed

redesignation to fully Commercial on PID 45439098 has been deemed consistent with the policy, rezoning the current Agriculture zone portion within the Wentworth Road Gateway District to Wentworth Road Commercial (WR-C) is supported through Policy 8.6.10.

The final matter for consideration is to assess whether the proposed exclusion of PID 45190386 from the Windsor Wentworth Road Gateway District is consistent with the WMPS. The preamble of Section 8.6 of the WMPS states "Council intends to recognize the role of Wentworth Road as an entrance to Windsor by designating it as a Gateway District". Through recent consolidation of lands, PID 45190386 no longer fronts onto Wentworth Road, the applicant has indicated that the future plan involves developing the property for residential purposes. The applicant further indicates that the access for future residential development would be provided via Cole Drive. Considering these factors, staff are of the opinion that adjusting Wentworth Road Gateway District boundary to align with the proposed development is appropriate and consistent with the intent of the WMPS.

Policy 16.3.1 establishes the general criteria that must be considered for all amendments to the Windsor Land Use By-law. The full list of criteria is included in Attachment A. In summary, the proposal meets the criteria as:

- the proposal is not considered premature or inappropriate for the area;
- no municipal costs related to the proposal are anticipated; and
- the Fire Chief, Development Officer, Manager of Building and Fire Inspection Services, Manager of Operations and Traffic Authority, and Public Works Engineering Division have no concerns which have not been addressed in this report.

Public Comment Response

Staff did not receive any correspondence during the 14-day comment period. A summary of notes from the Public Information Meeting is included in Attachment B.

MUNICIPAL CLIMATE CHANGE ACTION PLAN

The Municipal Climate Change Action Plan (MCCAP) for Windsor (2014) highlights two simulated flooding scenarios. The first scenario is based on a storm surge that occurred in 1997, which shows the expected damage is to occur along the coastline. The second scenario shows the simulated flooding extent for probable maximum flood due to climate change. Under this scenario most of the community of Windsor will experience extensive flooding. However, only a small portion of the subject lots fronting on Wentworth Road would be at risk based on the mapping. The subject lots do not contain any identified watercourses. The Municipal Public

Works department has already received a stormwater management plan that has been deemed acceptable to address any issues regarding runoff.

Property owners are responsible for ensuring that the lot is suitable for the proposed uses.

NEXT STEPS

As noted above, the proposed amendment has been considered within the context of the general policies of the WMPS, and is consistent with the intent, objectives, policies and criteria of the WMPS. As a result, it is reasonable to amend the designations and zoning of PIDs 45439098 and 45190386 to accommodate the proposed uses noted above.

Process

Public Information Meeting – March 5, 2025

▼

Staff Review

▼

PAC/HAC receives staff report and PIM Notes
Review and Recommendation – November 13, 2025

▼

Council First Reading – November 25*

▼

Public Hearing & Second Reading – TBD*

▼

Notice of Approval in Local Paper

▼

14-Day Appeal Period

*anticipated dates; final dates set by Council

FINANCIAL IMPLICATIONS

There are no financial implications to the Municipality with regard to the filing of this report.

ALTERNATIVES

In response to this application, the PAC/HAC may recommend that Council:

- hold First Reading and authorize a Public Hearing to approve the amendment as drafted or as specifically revised by direction of PAC/HAC;

- provide alternative direction, such as requesting further information on a specific topic.

ATTACHMENTS

Figure 1	Windsor GFLUM Extract
Figure 2	Windsor Zoning Map Extract
Figure 3	Windsor Wentworth Road Gateway District Extract
Figure 4	Windsor Proposed GFLUM Extract
Figure 5	Windsor Proposed Zoning Map Extract
Figure 6	Windsor Proposed Wentworth Road Gateway District Extract
Attachment A	Policy Summary for WMPS and WLUB Amendments
Attachment B	Public Information Meeting Notes

Report Prepared by: _____
Will Hong, Planner

Report Approved by: _____
Kari Fougere, Acting Director of Planning and Development

Figure 1 – Windsor GFLUM Extract

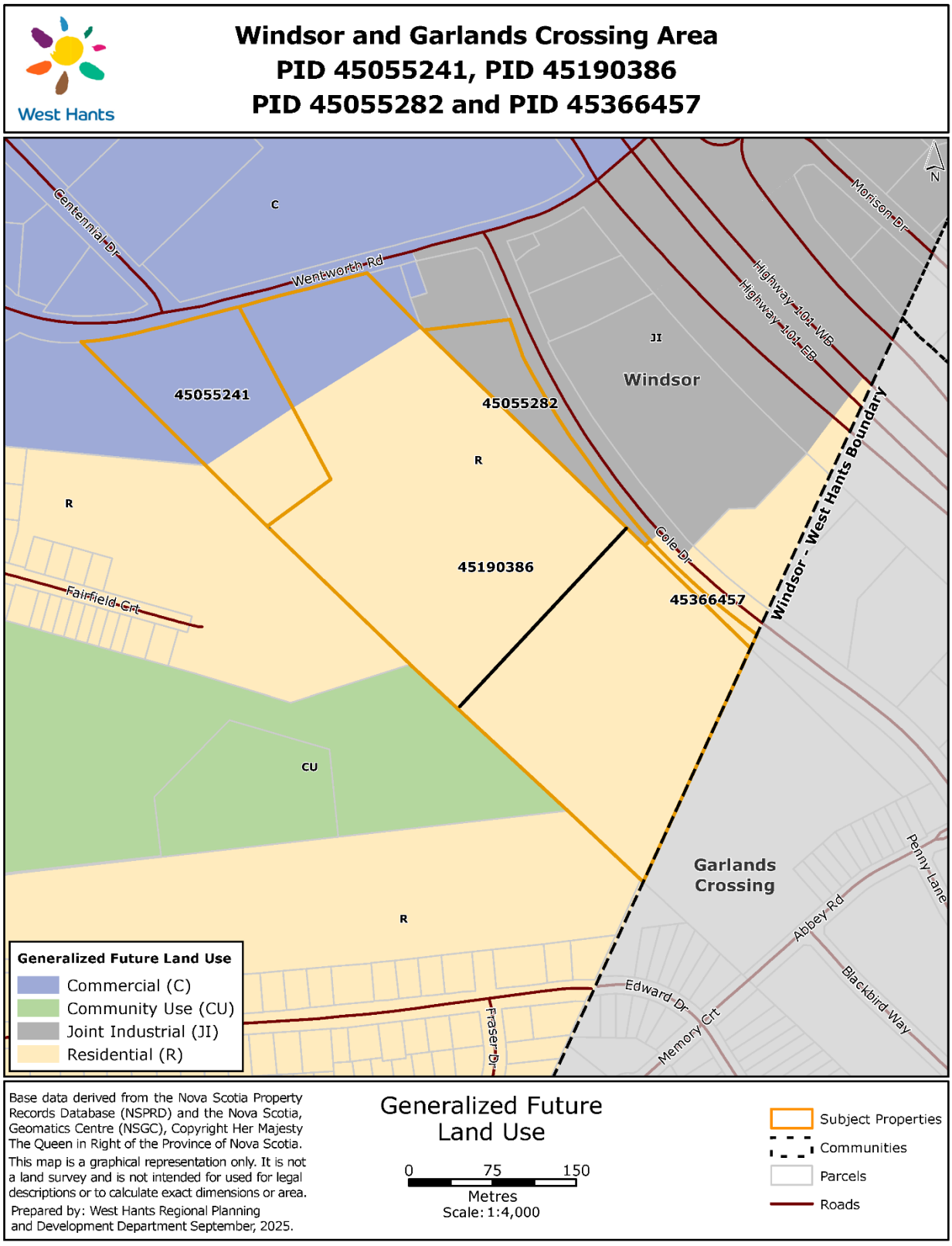


Figure 2 – Windsor Zoning Map Extract

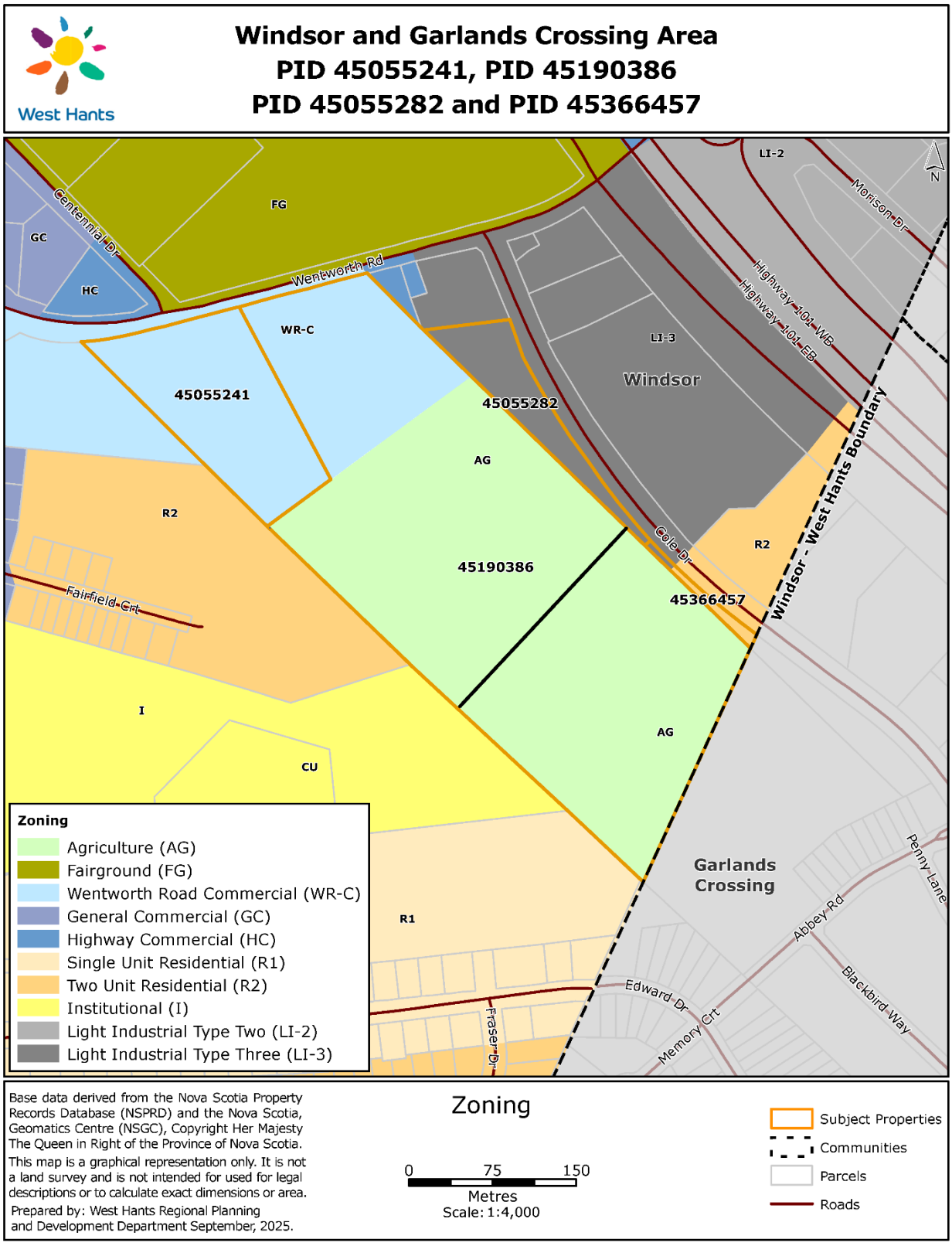


Figure 3 – Windsor Wentworth Road Gateway District Extract

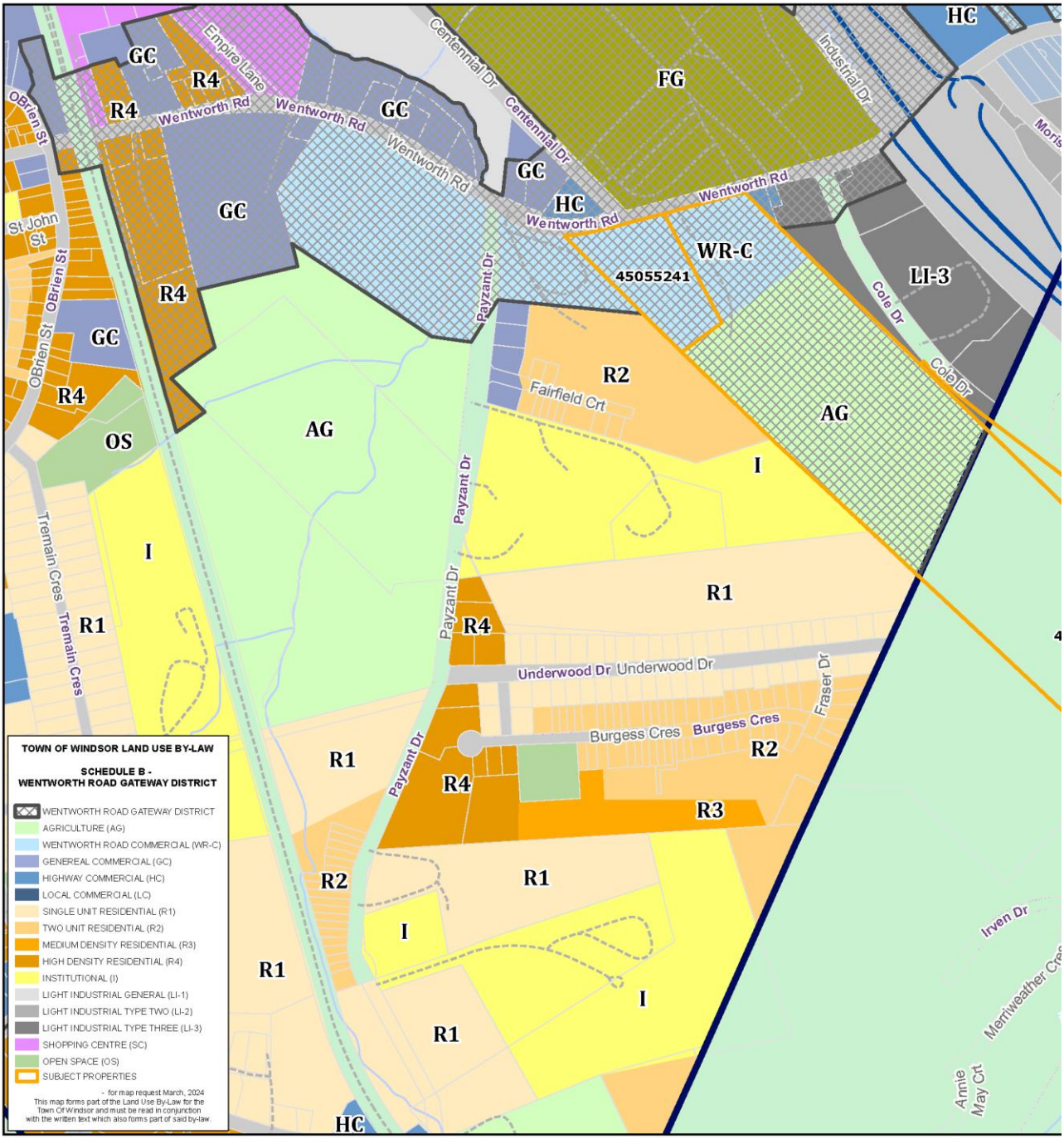


Figure 4 – Windsor Proposed GFLUM Map Extract

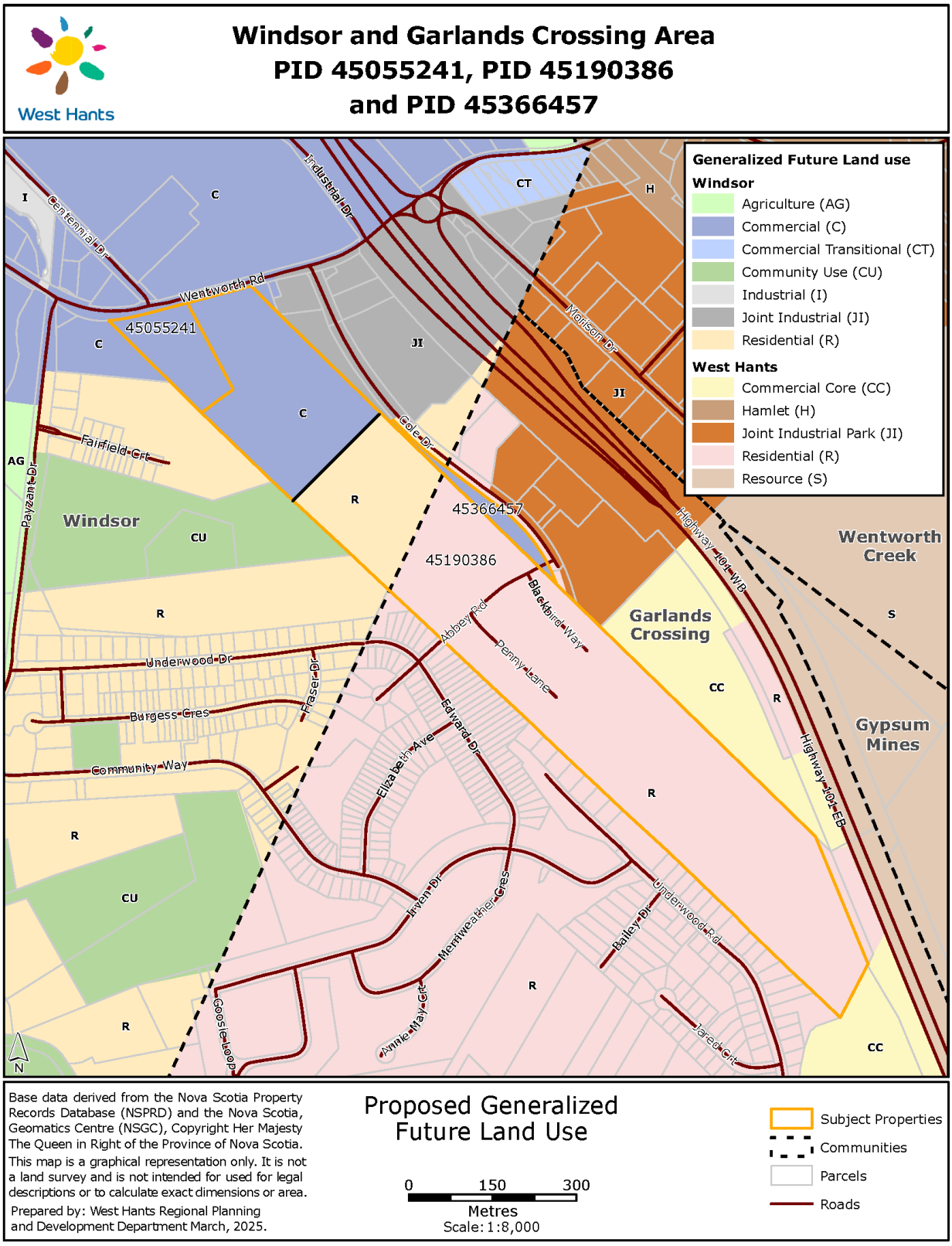


Figure 5 – Windsor Proposed Zoning Map Extract

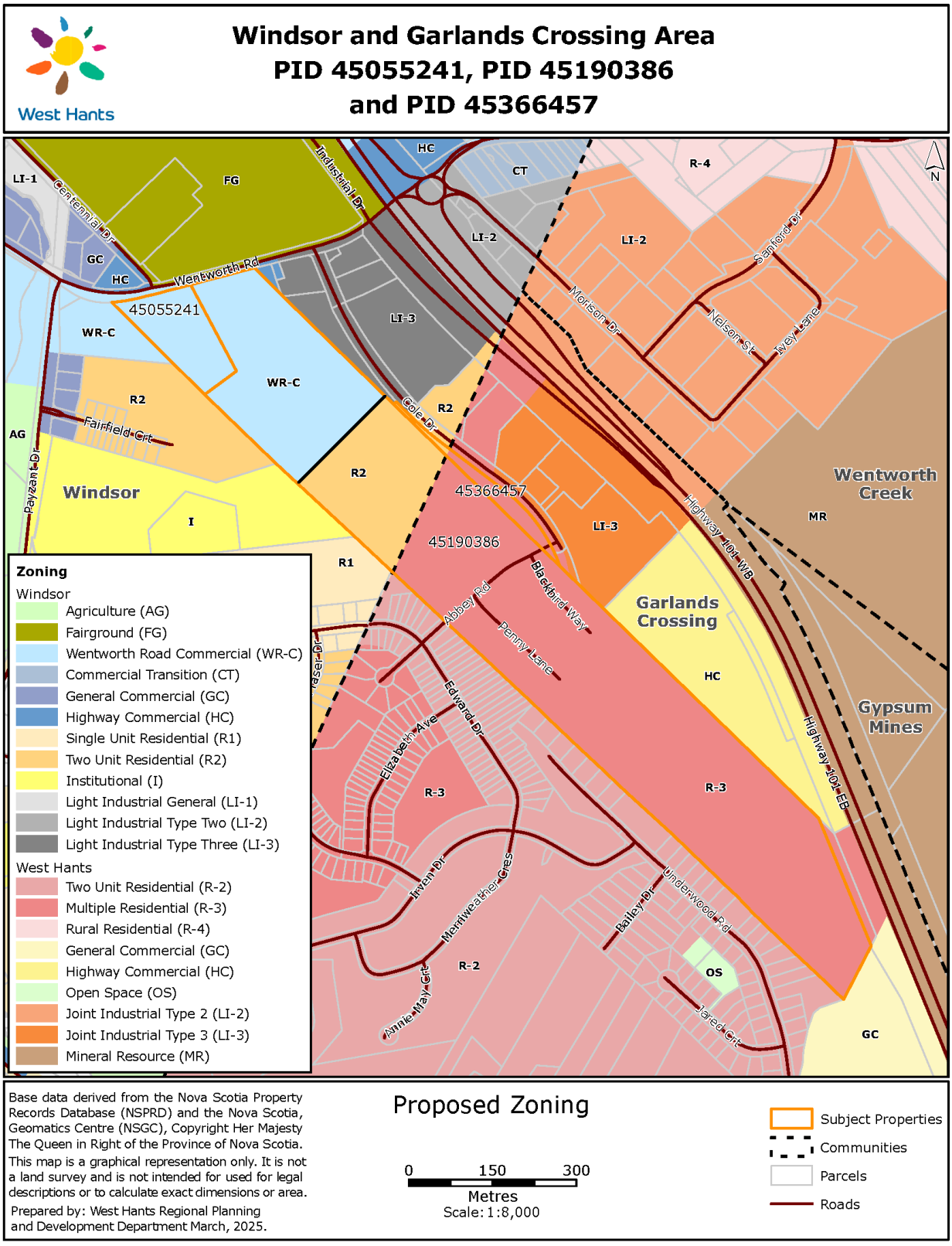
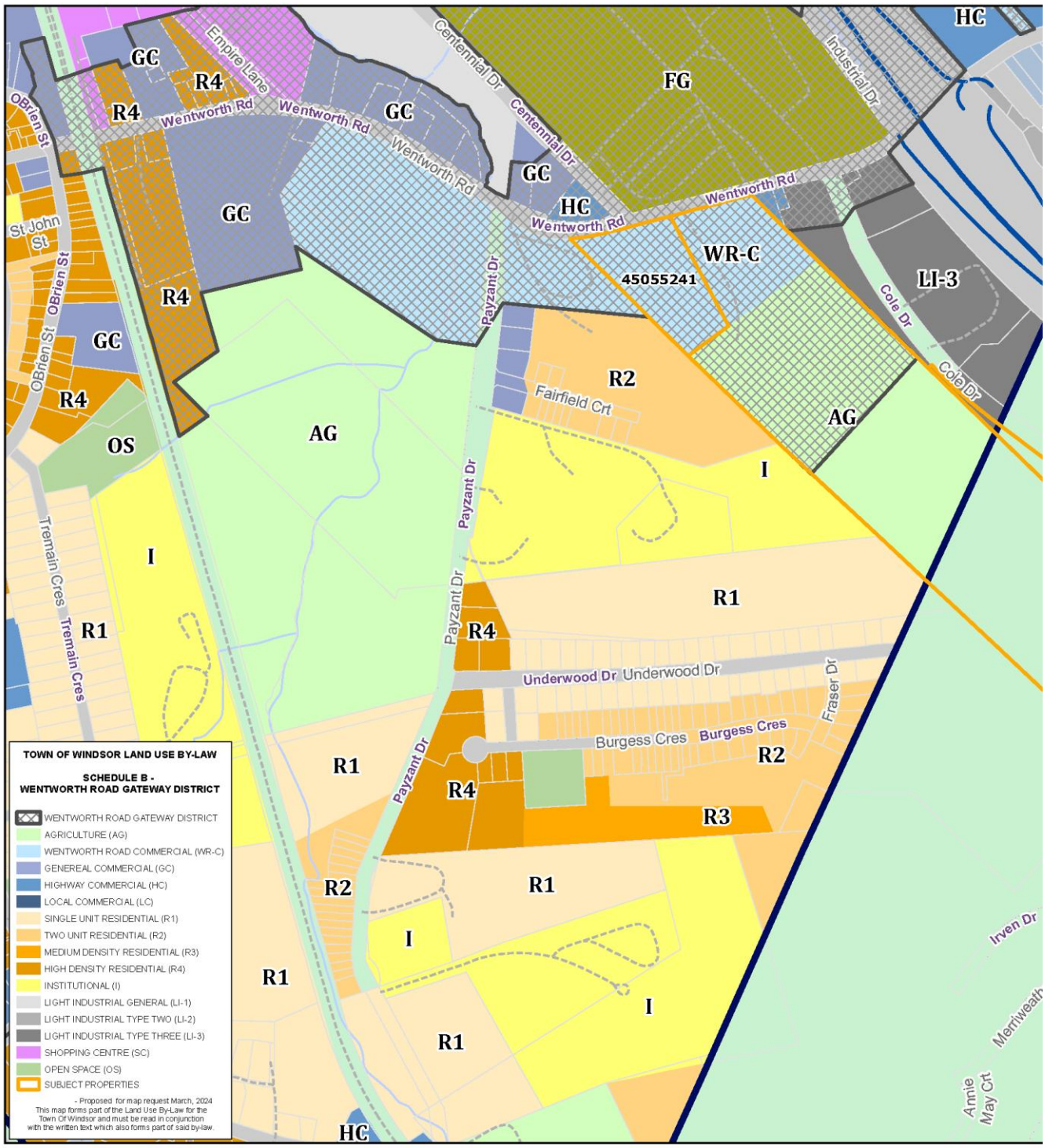


Figure 6 – Windsor Proposed Wentworth Road Gateway District Extract



Attachment A – Policy Summary for Amendments

Policy 6.0.10 *It shall be the policy of Council to permit lands zoned Agriculture to be considered for other uses by amendment to the Land Use By-law subject to Policy 16.3.1. In considering such a rezoning, Council shall have regard to the potential impact of the new development on adjacent active farms.*	The front portion of PID 45439098 is zoned Wentworth Road Commercial (WR-C), while the rear portion is zoned Agriculture (AG). Both PIDs 45439098 and 45190386 are currently vacant, with no active farming operations in the surrounding area. The existing Commercial and Residential designations indicate Council's intention to consider this property for alternative uses rather than maintaining it as Agriculture zone. Based on this direction, staff are of the opinion that Policy 6.0.10 has been met to support rezoning PID 45439098 to Wentworth Road Commercial (WR-C) entirely and rezoning PID 45190386 to Medium Density Residential (R-2) as proposed by the Applicant.

Policy 8.6.7 *It shall be the policy of Council that, with the exception of the Joint Industrial Park lands, lands within the Wentworth Road Gateway District shall be designated Commercial on the Generalized Future Land Use Map (Map 1).*	As illustrated in Figure 3, the entirety of PID 45439098, within the Windsor planning area, is in the Wentworth Road Gateway District on the Schedule B of the Windsor Land Use Bylaw. Based on the direction of Policy 8.6.7, staff recommend amending the existing split designations of Commercial and Residential to Commercial to align with Council's intention of this policy.

Policy 8.6.10 *It shall be the policy of Council to establish a Wentworth Road Commercial (WR-C)*	It is Council's intention to apply Wentworth Road Commercial (WR-C) in

zone which permits a wide range of general commercial and highway commercial uses, as well as large format retail stores within a specified size limit. The WR-C zone will be the main commercial zone in the District. Rezoning to any other zone will not be considered within the Wentworth Road Gateway District.	the Wentworth Road Gateway District only, where rezoning to other zones will not be considered. Therefore, it is considered reasonable to rezone PID 45439098, which is entirely within the Gateway District, to Wentworth Road Commercial (WR-C).

Policy 16.3.1 *In considering development agreements and amendments to the West Hants Land Use By-law, in addition to the criteria set out in various policies of this Strategy, Council shall consider:*	
(a) whether the proposal is considered premature or inappropriate in terms of:	
(i) the adequacy of sewer and water services;	The Public Works Engineering Division commented that they do not have any concern regarding the adequacy of sanitary sewer and water services for the proposed development.
(ii) the adequacy of school facilities;	Not applicable, as future residential development is not under consideration in this application.
(iii) the adequacy of fire protection and other emergency services;	Local Fire Chief and the Manager of Building and Fire Inspection Services commented they had no concerns regarding the adequacy of fire protection for the proposed development.
(iv) the adequacy of road networks adjacent to, or leading to the development; and	The Traffic Authority has no concerns regarding the adequacy of road networks to or surrounding the proposed development.
(v) the financial capacity of the Municipality to absorb any costs relating to the development.	There are no anticipated costs to the Municipality regarding this development.

(b) the suitability with any aspect relative to the movement of auto, rail and pedestrian traffic;	The Traffic Authority commented that they have no concerns regarding pedestrian or vehicle traffic. There is no active rail line in the vicinity.
(c) the adequacy of the dimensions and shape of the lot for the intended use;	The Development Officer commented that they had no concerns regarding the adequacy of the dimensions and shape of the lot for residential uses.
(d) the pattern of development which the proposal might create;	The Development Officer commented that they had no concerns regarding the pattern of development which the proposal might create.
(e) the suitability of the area in terms of steepness of grade, soil and geological conditions, location of water courses, wetlands, and susceptibility of flooding;	The Environmental constraints (Dykeland) overlay covers a small portion of the front of the PID 45439098. Otherwise, the majority of the subject lot appears to be gently sloped. No waterbodies or wetlands appear to be present on the mapping for the subject lot. Regarding the environmental constraint overlay, the applicant stated that "Irving will leave this area as open green space, except for constructing two driveways to Wentworth Road" Plus, a stormwater management plan has been provided and accepted by the Public Works Department.
(f) whether the proposal meets the requirements of the appropriate provincial or federal agencies as well as whether it conforms to all other relevant municipal by-laws and regulations; and	All Municipal, Provincial, and Federal regulations will have to be met.

(g) any other matter required by relevant policies of this Strategy.	All relevant matters have been addressed in this report.

Attachment B – Public Information Meeting Notes

March 5, 2025

PIDs 45055241, 45190386, and 45366457, Wentworth Rd, Windsor

Meeting date and time	A Public Information Meeting was held on March 5, 2025, beginning at 6:00 p.m. The meeting was broadcast live on the Municipal YouTube Channel.
Attending	In attendance for the meeting: One (1) Chair: • Councillor Jim Ivey Four (4) members of staff: • Acting Director Fougere • Senior Planner Dunphy • Planner Hong • Planning Assistant Lake Approximately 2 members of the public.
Applicant Chrystal Fuller on behalf of J.D. Irving **Property** PIDs 45055241, 45190386, and 45366457, Wentworth Rd, Windsor	Planner Hong outlined the application to rezone the subject lots and concurrently enter into a development agreement to permit multiple commercial buildings on the properties.
Comments	Comments from the public could be submitted by mail, e-mail and telephone between March 5 - 19, 2025. Staff did not receive any phone calls or written submissions during the comment period. 1 member of the public spoke during the Public Information Meeting. Applicants responses are in purple. • Elizabeth McCarthy, resident of The Crossing, raised concerns about ambient light becoming worse, unless consideration is given to controlling the light. Another question was about the residential area, but this was not ready to be discussed at this time. • Chrystal Fuller, applicant, responded that Developer will ensure light pollution is minimized to the greatest extent possible. In larger developments by DA, the

	municipality can require a lighting plan, or a clause stating light will be directed away from adjacent residential use. Irving is open to adhering to these regulations. The proponent has no interest in contributing to light pollution. Developers often have a lighting splay plan to ensure lighting is appropriately kept to a minimum to the adjacent use. There will be more lights, but all attempts will be made to minimize impact. • Michael Simms, applicant, commented that J.D. Irving will make every attempt to ensure light is directed away from the residents. They are conscious about the cost of electricity and many lights will be turned off at night. Another common question is about noise, and Irving is very sensitive to this issue, as many stores are in/near residential areas. Hours of operation and noise will be sensitive to a residential area.
Adjournment	The Public Information Meeting was adjourned at approximately 6:35 p.m.

WEST HANTS REGIONAL MUNICIPALITY REPORT

Information ☐	Recommendation X	Decision Request ☐	Councillor Activity ☐

To: Members of Planning and Heritage Advisory Committee (PAC/HAC)

Submitted by: _____
Alex Dunphy, Senior Planner

Date: November 13, 2025

Subject: Rezoning: Highway 14, Windsor Forks (PID 45038510);
File # 25-21

LEGISLATIVE AUTHORITY

Municipal Government Act Section 210

RECOMMENDATION

Staff recommends that the PAC/HAC forward a positive recommendation by passing the following motion:

…that PAC/HAC recommends that Council give First Reading and hold a Public Hearing to consider amending Schedule A of the West Hants Land Use By-law to rezone PID 45038510 on Highway 14 in Windsor Forks from the Rural Commercial (RC) zone to the General Resource (GR) zone as shown in the report #25-21 to the Planning and Heritage Advisory Committee dated November 13, 2025.

BACKGROUND

Property X	Public Opinion ☐	Environment ☐	Social ☐	Economic ☐	Councillor Activity ☐

An application was received from Stanley Boyd on July 30, 2025. The application is to rezone the subject property from Rural Commercial (RC) to General Resource (GR) to allow for subdivision and low-density residential development.

DISCUSSION

The subject lot is designated Resource on the Generalized Future Land Use Map (GFLUM) of the West Hants Municipal Planning Strategy (WHMPS) (Figure 1). The subject lot is zoned Rural Commercial (RC) on Schedule A of the West Hants Land Use By-law (WHLUB) (Figure 2).

Surrounding Context

Surrounding properties north of Highway 14 are are all designated Agriculture and zoned Agricultural Priority Two (AR-2). Surrounding properties south of Highway 14 are all designated Resource and zoned General Resource (GR). Uses on surrounding properties consist of agricultural uses as well as some residential dwellings.

Municipal Planning Strategy Review

Policy 16.1.3 of the WHMPS is the primary enabling policy to be considered for this application. This policy provides Council with the ability to consider rezoning properties to a zone which is permitted within the designation of an adjacent property. The proposal meets the criteria since the requested zone, General Resource (GR), is permitted within the Resource designation, which multiple nearby properties are designated.

Policy 16.3.1 of the WHMPS establishes the general criteria that must be considered for all rezoning applications. The full list of criteria is included with this report in Attachment A. In summary, the proposal meets the criteria as:

- the proposal is not considered premature or inappropriate for the area;
- no municipal costs related to the proposal are anticipated; and
- the Development Officer, Manager of Building and Fire Inspection Services, Public Works Engineering Division, and Area Manager from the Nova Scotia Department of Public Works have no concerns which have not been addressed in this report.

MUNICIPAL CLIMATE CHANGE ACTION PLAN

The subject lot is not identified in the Municipal Climate Change Action Plan (MCCAP) for Windsor (2014) as being affected on either the Inland Flooding Map or the Sea Level Rise Modeling Map.

Property owners are responsible for ensuring that their lot is suitable for the proposed uses.

NEXT STEPS

As noted above, the proposed development agreement has been considered within the context of both the specific and general policies of the WHMPS, and is consistent with the intent, objectives, policies and criteria of the WHMPS. As a result, it is reasonable to consider the

rezoning the subject property from Rural Commercial (RC) to General Resource (GR) to allow for subdivision and low-density residential development, at PID 45038510 on Highway 14 in Windsor Forks.

Process

Public Information Meeting – September 3

▼

Staff Review

▼

PAC/HAC Review and Recommendation – November 13

▼

Regional Council First Reading – November 25*

▼

Public Hearing & Second Reading – January 27, 2026*

▼

Notice of Approval in Local Paper

▼

14-Day Appeal Period

*final dates are set by Council

FINANCIAL IMPLICATIONS

There are no financial implications to the Municipality or residents with regard to the filing of this report.

ALTERNATIVES

In response to this application, PAC may:

- recommend that Council hold First Reading and authorize a Public Hearing to approve the rezoning or as specifically revised by direction of PAC/HAC; or
- recommend to Council to provide alternative direction such as requesting further information on a specific topic.

ATTACHMENTS

Figure 1	West Hants GFLUM Extract
Figure 2	West Hants Zoning Map Extract
Figure 3	West Hants Proposed Zoning Map Extract
Attachment A	Policy Summary
Attachment B	Public Information Meeting Notes

Report Prepared by: _____

Alex Dunphy, Senior Planner

Report Approved by: _____

Kari Fougere, Acting Director of Planning and Development

Figure 1 – West Hants GFLUM Extract

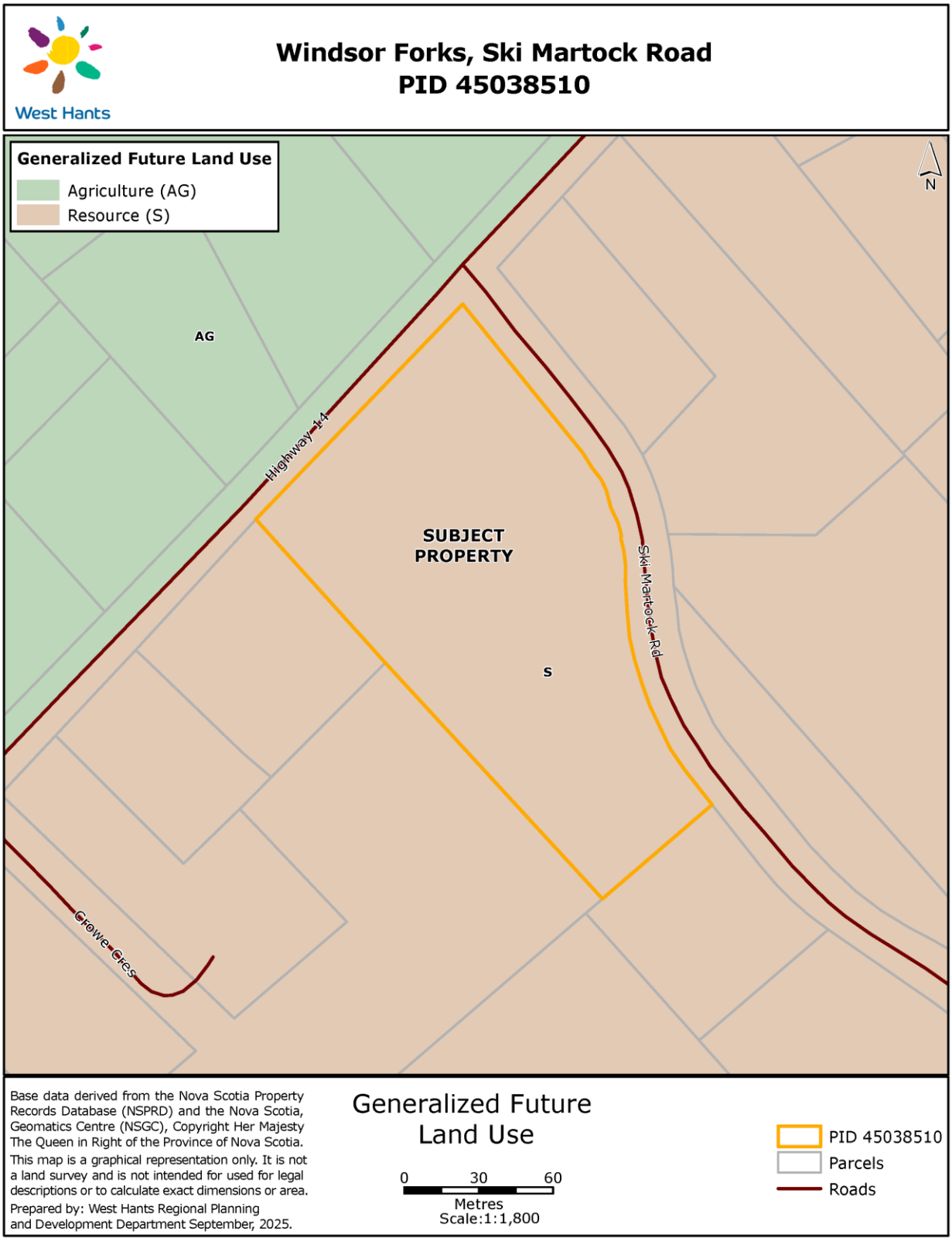


Figure 2 – West Hants Zoning Map Extract

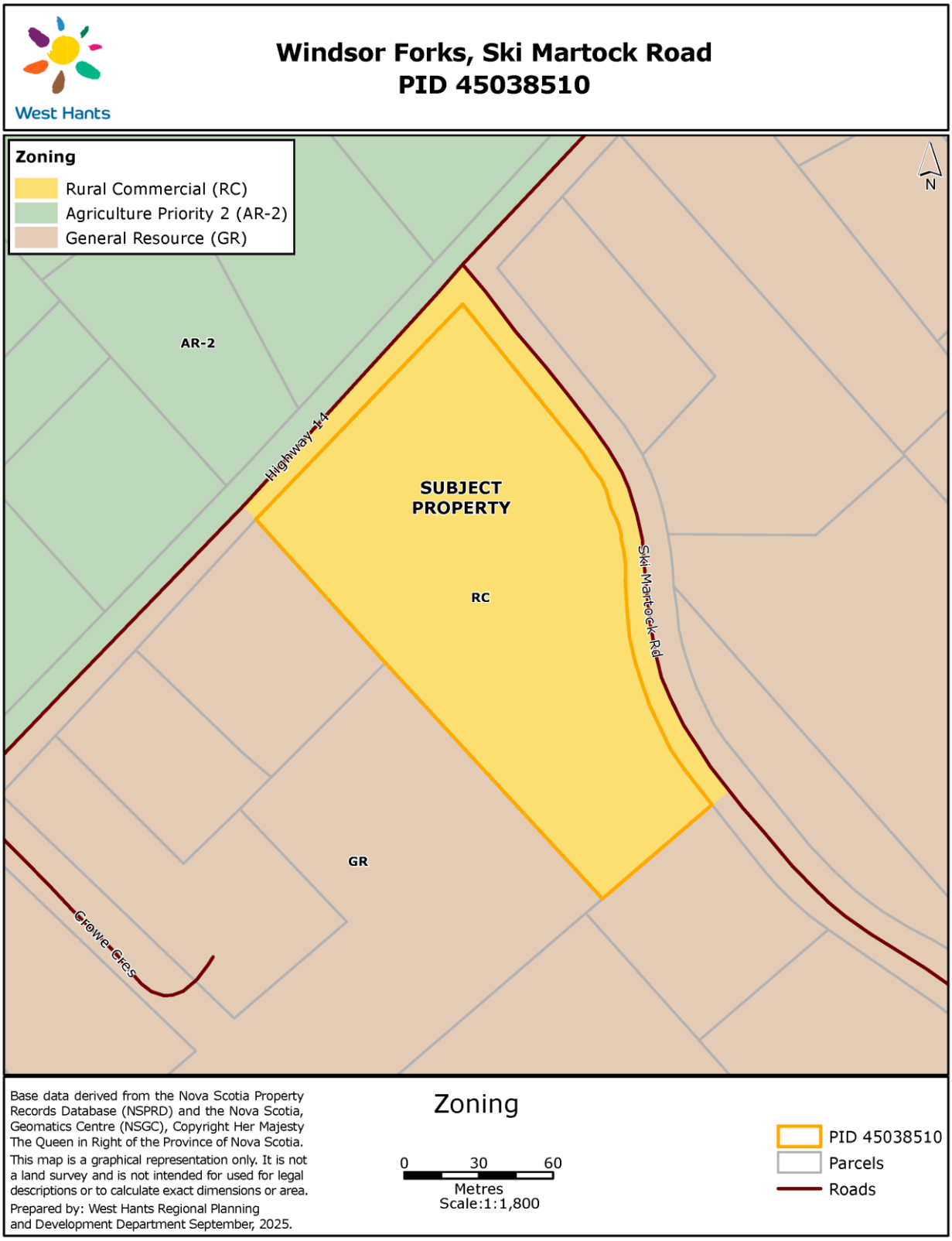
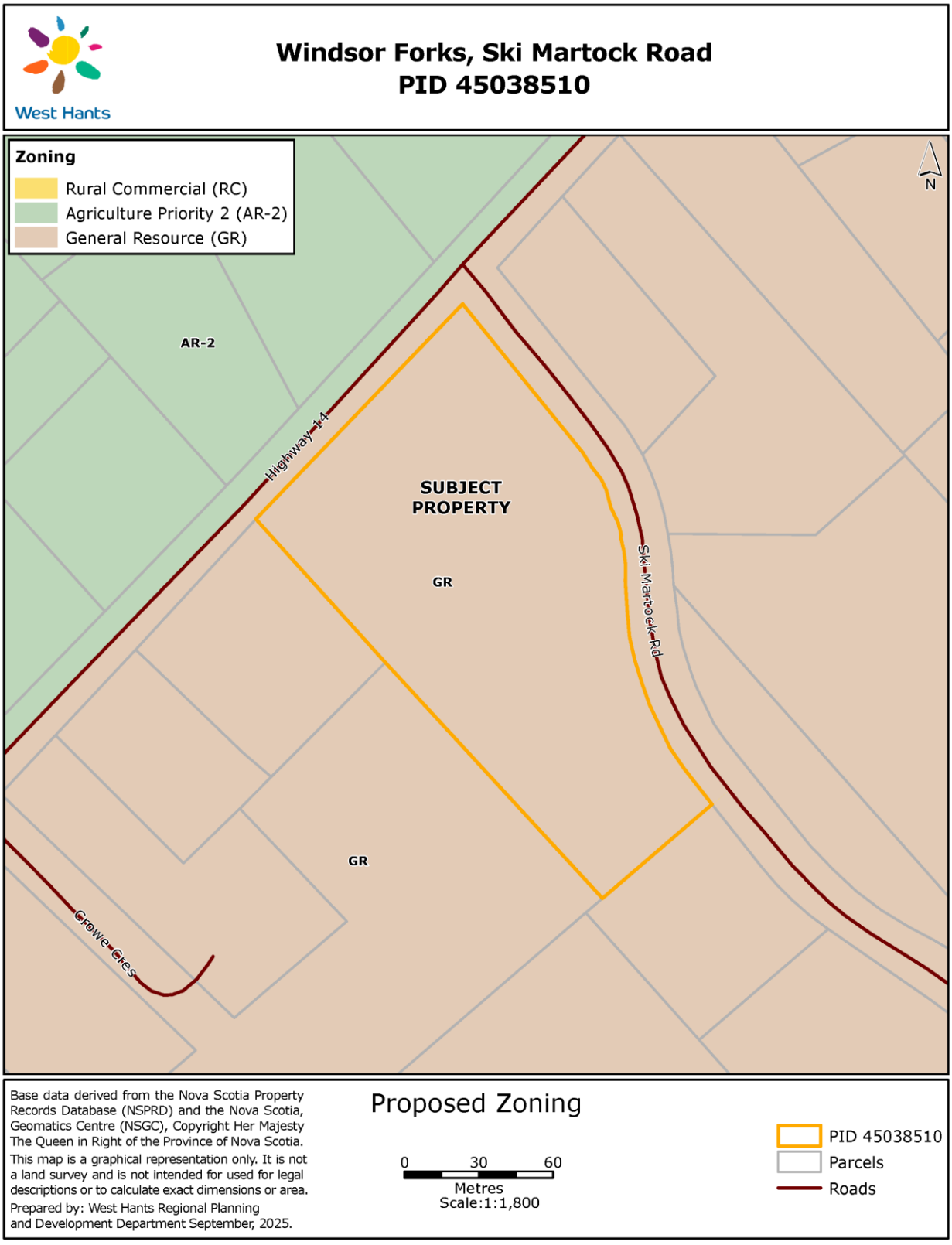


Figure 3 – West Hants Proposed Zoning Map Extract



Attachment A – Policy Summary for Development Agreement

Policy 16.1.3 *It shall be the intention of Council to consider a Land Use By law amendment to zone any area immediately adjacent to a given land use designation on the Generalized Future Land Use Map (Map 1) to a zone permitted in the adjacent designation without requiring a Strategy amendment, provided that all policies of the Strategy are satisfied.*	The subject lot, as well as half of the surrounding lots are designated Resource. The General Resource (GR) zone is a permitted zone within the Resource designation and there are multiple lots, designated Resource, which are immediately adjacent to the subject property. Therefore, staff feel that this policy is met.

Policy 16.3.1 *In considering development agreements and amendments to the West Hants Land Use By-law, in addition to the criteria set out in various policies of this Strategy, Council shall consider:*	
(a) whether the proposal is considered premature or inappropriate in terms of:	
(i) the adequacy of sewer and water services;	The Public Works Department confirmed that there are no municipal services on the subject lot. Any on-site services must meet the requirements of the Nova Scotia Department of Environment and Climate Change.
(ii) the adequacy of school facilities;	The Director of Operations for the Annapolis Valley Regional Centre for Education has stated that they will accommodate all students.
(iii) the adequacy of fire protection and other emergency services;	The Manager of Building and Fire Inspection Services had no concerns regarding the proposed rezoning. Although no concerns regarding fire protection or emergency services are expected, staff have not yet received a reply from Fire Chief. Staff hope to have this response prior to the Planning and Heritage Advisory Committee meeting.
(iv) the adequacy of road networks adjacent to, or leading to the development; and	The Area Manager from the Nova Scotia Department of Public Works

	confirmed that road access would be restricted to Ski Martock Road, as access spacing was not obtainable on Highway 14. They also had no concerns regarding the road networks adjacent or leading to the proposed development.
(v) the financial capacity of the Town to absorb any costs relating to the development.	There are no anticipated costs to the Municipality regarding the proposed development.
(b) whether the development is serviced, or capable of being serviced, by a potable water supply and either central sewer or an approved on site sewage disposal system;	See Policy 16.3.1 (a) (i).
(c) the suitability with any aspect relative to the movement of auto, rail and pedestrian traffic;	The Area Manager from the Nova Scotia Department of Public Works had no concerns regarding movement suitability on the subject lot. The subject lot is not anticipated to receive pedestrian traffic. There is no active rail line in the vicinity.
(d) the adequacy of the dimensions and shape of the lot for the intended use;	The Development Officer commented that the subject lot is suitable in terms of dimension and shape for this proposal. Any development will need to meet the requirements of the Land Use By-law following rezoning.
(e) the pattern of development which the proposal might create;	The Development Officer has no concerns regarding the pattern of development that the proposal may create. The intent of the proposed rezoning is to match the surrounding area.
(f) the suitability of the area in terms of steepness of grade, soil and geological conditions, location of water courses, wetlands, and susceptibility of flooding;	The subject lot is not located within the Dykeland Overlay or the Environmental Constraints Overlay. The lot appears dry, with no visible watercourse present.

(g) whether the proposal meets the requirements of the appropriate provincial or federal agencies as well as whether it conforms to all other relevant municipal by-laws and regulations; and	All Municipal, Provincial, and Federal regulations will have to be met.
(h) any other matter required by relevant policies of this Strategy.	All relevant matters have been addressed in this report.

Attachment B – Public Information Meeting Notes

September 3 - 17, 2025

Rezoning: Highway 14, Windsor Forks (PID 45038510); File # 25-21

Meeting date and time	A Public Information Meeting was held on September 3, 2025 beginning at 6:29 p.m. The meeting was broadcast live on the Municipal Facebook page.
Attending	In attendance for the meeting: One (1) Chair: • Councillor Francis Three (3) members of staff: • Senior Planner Dunphy • Planner Hong • Planning Assistant Lake No members of the public were in attendance for the meeting.
Applicant Stanley Boyd **Property** Highway 14, Windsor Forks (PID 45038510)	Planner Dunphy outlined the application to permit subdivision for low-density residential purposes.
Comments	Comments from the public could be submitted by mail, e-mail and telephone between September 3 - 17, 2025. Staff received no correspondence from the public.
Adjournment	The Public Information Meeting ended at 6:35 p.m.

10.0 Business Arising from the Minutes (File Updates)

Staff Review

10.1 File #24-22 Development Agreement: 411 King Street, Windsor Phase 2 (Alex Dunphy)

This is a development agreement application for Phase 2 of the residential development at 411 King Street, Windsor. The first phase is already approved and is for 18 stacked townhouse units on the site of the old Baptist church. The second phase is a 7-storey, 60-unit apartment building on the land behind the church. The Public Information Meeting was held on November 6, 2024. Alex is processing feedback from inquires and working with the developer to address that feedback before he brings this file forward to the PAC/HAC.

10.2 File #25-20 Rezoning: PID 45285103, Old Walton Rd, Upper Burlington (Will Hong)

This is an application to rezone PID 45285103, Old Walton Rd, Upper Burlington, from Open Space (OS) to Institutional (I) and amend the text of the West Hants Land Use By-law (WHLUB) to allow day care centres as a permitted use within the Institutional (I) Zone. This application was submitted by CAO Mark Phillips on behalf of Council. The property currently belongs to the Municipality. The intent is to donate the property to the Hants Shore Childcare Association so they may establish a daycare centre. The Public Information Meeting was held on September 3, 2025, and PAC/HAC voted in favour of this application on October 9, 2025. First Reading was held on October 28, 2025, and the Public Hearing and Second Reading are expected to be held on November 25, 2025.

10.3 File #25-23 Development Agreement: PID 45003266, Three Mile Plains (Alex Dunphy)

This is a development agreement application to permit 150 dwelling units across three multi-unit buildings on the south part of the lot. The Public Information Meeting was held on October 8, 2025, with 25 members of public in attendance. Several comments were made about stormwater, flooding, infrastructure capacity and traffic impact. Staff are processing the feedback from the public and working with the developer on the draft development agreement to address the concerns raised from public correspondence.

First Readings / Public Hearings

10.4 File #25-15 Development Agreement: PID 45053220 King St, Windsor (Will Hong)

This is a development agreement application to permit a 4 storey, 72-unit residential building, plus a basement level. The Public Information Meeting was held on June 4, 2025. In response to public feedback, staff added a requirement to the development agreement to keep as many trees as is feasible and replace any trees on a 1:1 ratio with the same species. PAC/HAC voted in favour of this application on September 11, 2025, and Council gave First Reading on September 23, 2025. The Public Hearing was held on October 28, 2025, where Council approved the application. The Notice of Approval was posted in the paper on November 7, 2025, initiating the 14-day appeal period.

10.5 File #25-18 Development Agreement: Bear Lake Wind Farm Revised (Kari Fougere)

This is a development agreement application to permit 7 wind turbines in the Vaughan/Upper Vaughan area. This application was previously submitted under previous MPS policy and withdrawn; the applicants have resubmitted a new, revised, application to be considered under new MPS Policy. The Public Information Meeting was held on May 21, 2025, and several members of the public were in attendance. All comments received at the meeting and during the comment period were included in the staff report. PAC/HAC considered this item on July 10, 2025, where the majority voted in favour of this application. The Committee made a separate motion with additional items for Council to consider. First Reading was held on July 22, 2025, and Public Hearing and Second Reading were held on September 23, 2025. Council did not vote in favour of this application. The applicant has appealed Council's decision and staff are working with a lawyer and the Nova Scotia Regulatory and Appeals Board (NSRAB) on the appeal process. The Appeal Hearing is scheduled for late January 2026.

ACTIVITY REPORT

For Month of October 2025-10-31

	Oct 2024			*Oct 2025*		
Type	**Permits**	**Units**	**Value of Construction**	**Permits**	**Units**	**Value of Construction**
Single Family	25	16	4,765,073	31	20	5,432,553
Duplex/Semi	2	0	20,000	2	4	750,000
Apartments	0	0	0	2	10	1,800,000
Other Residential	12	0	261,200	25	0	828,395
Commercial	2	0	200,000	2	0	500,000
Industrial	1	0	7,000	0	0	0
Inst & Gov	0	0	0	1	0	3,388
Agriculture	1	0	15,000	2	0	1,400,000
Other	0	0	0	0	0	0
Total	43	16	5,268,273	65	34	10,714,336
Year To Date	397	203	67,269,472	435	198	194,253,700

Demolition	2	2		2	2	
Sign Permits	2			1		
Sub Applications	5	5	(Lots Requested)	6	6	(Lots Requested)