

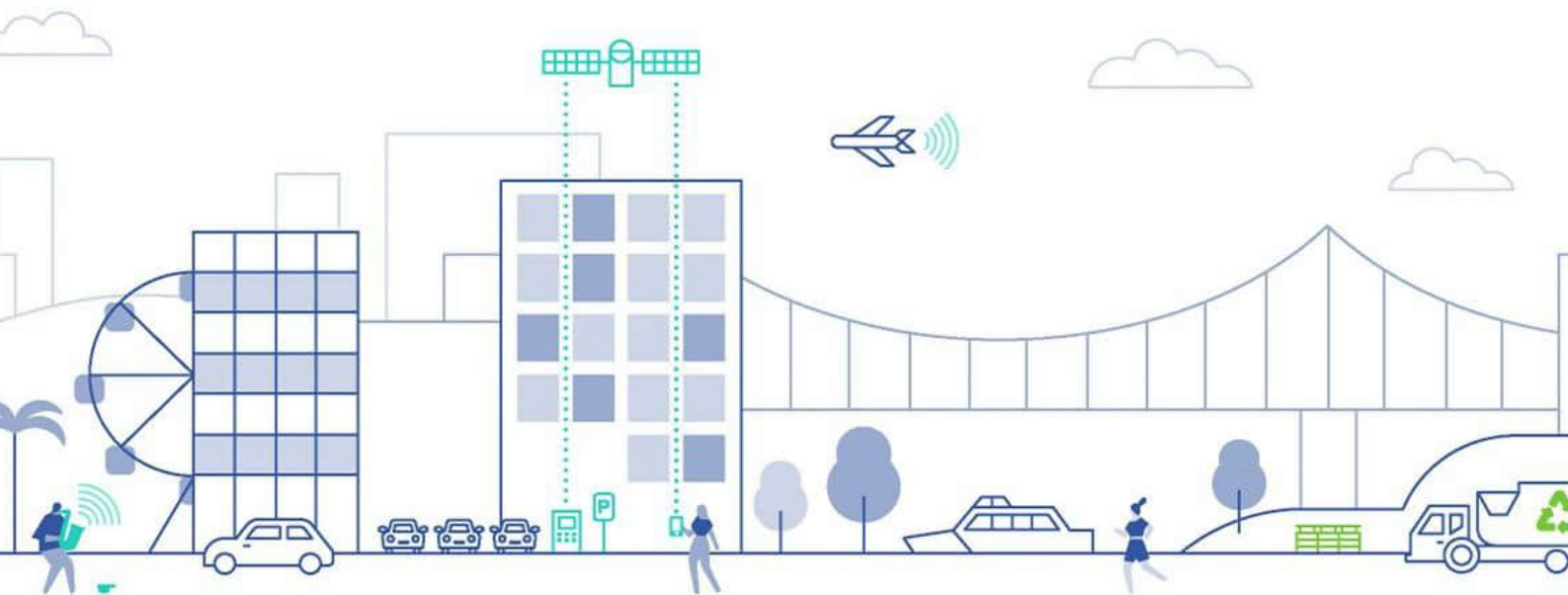


Ormiston College – Ministerial Infrastructure Designation

Transport Engineering Report

97 Dundas Street West, Ormiston

Prepared for: Rohrig.

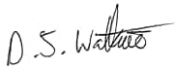


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Revision Record

No.	Author	Reviewed/Approved	Description	Date
1.	Alvin Adeleke-Omotuwa	Darryl Watkins	DA Report (DRAFT)	21/03/2025
2.	Alvin Adeleke-Omotuwa	Darryl Watkins	DA Report	2/04/2025
3.	Alvin Adeleke-Omotuwa	Darryl Watkins RPEQ #23854 	DA Report (update)	28/04/2025
4.				

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1. Introduction

1.1 Purpose

Colliers International Engineering and Design (TTMC) Pty Ltd has been engaged by Rohrig to prepare a transport engineering assessment in relation to the expansion of Ormiston College (subject site).

It is understood that the approval of the proposed expansion of the College will be sought through a Ministerial Infrastructure Designation (MID) process with a referral to Redland City Council ('Council') and will identify the expected impact of the proposed expansion on the surrounding road network.

1.2 Background

Colliers has consulted with the project team and College to identify the most efficient design for the site for traffic operations, noting the constraints of the development and the requirements of other project disciplines.

Colliers staff previously provided traffic advice in 2022 regarding existing operational issues and provided recommendations and mitigation measures to increase safety and improve traffic flow and operations at the College. Subsequently, a preliminary report was prepared in 2023 to assist with discussions with MID.

This report summarises the outcome of the assessment as well as updated Master Plan layouts.

1.3 Scope

Accordingly, the subsequent sections of this report address the following transport-related items:

- The prevailing traffic and transport conditions surrounding the site.
- The anticipated student and staff increases and how these changes would impact:
 - On-site parking supply
 - Access arrangements
 - Traffic operations on the surrounding road network.
- The parking layout is to provide efficient and safe internal circulation and manoeuvring.
- The access configuration to provide efficient and safe manoeuvring between the site and the public road network for cars, service vehicles, cyclists, and pedestrians.
- The service vehicle needs for the site and the internal service vehicle layouts to provide efficiency and safety for on-site service vehicle operation.
- The expected traffic volumes and traffic distribution from the development and the likely traffic impacts of development on the surrounding road network.
- Potential road network changes, modifications or enhancements that can support anticipated traffic demand due to the College expansion.

A summary of the findings of this report is included in Section 6 of this report.

2. Site Location and Environment

2.1. Development Profile

The subject site is located at 97 Dundas St W, Ormiston and on lands identified as Lot 1-5 on RP109238, Lot 1 on RP122772, Lot 1 on RP127130, Lot 100-102 on SP306734, Lot 1 & 2 on RP110831 and Lot 3 on RP49638. The site has a total area of 66,495m² and is currently zoned as “CF3 Community facilities” within Council’s City Plan 2018.

The subject site has three road frontages (Old Cleveland Road/Sturgeon Street to the north, Dundas Street to the south and Delancey Street to the east). Access to the College is provided off all of these road frontages. The College campus currently has eight (8) vehicle accesses:

- 1 combined ingress / egress access off Old Cleveland Road East / Sturgeon Street Roundabout
- 4 combined ingress / egress access off Dundas Street West
- 1 ingress only access off Dundas Street West
- 2 egress only accesses off Dundas Street West.

The subject site’s location in relation to the surrounding road network is illustrated on Figure 2-1.



Figure 2-1: Subject site location in context of the surrounding road network

(Source: Nearmap, 2025)

2.2. Site Travel Environment

2.2.1. The Road Network

The key characteristics of the surrounding road network in the vicinity of the subject site are summarised in Table 2.1, including typical road cross-sections and posted speed limits. Figure 2-2 identifies the existing road network and Council's Road Hierarchy overlay as per Council's City Plan 2018.

Table 2.1: Surrounding Road Hierarchy

Road	Speed Limit	Road Configuration		Classification	Authority
		Carriageway Width	Lane Configuration		
Dundas Street West	60km/h except for school days when it is 40km/h from 7-9 am and 2-4 pm.	~17m with parallel kerbside parking on both sides of the roadway	Two-way undivided road plus turn lanes. Direct school access and single lane in each direction	Local Street	Council
Old Cleveland Road East/ Sturgeon Street	60km/h except for school days when it is 40km/h from 7-9 am and 2-4 pm.	~9m	Two-way, Direct school access with single lane in each direction and bicycle lane in each direction.	Sub Arterial Road	Council
Delancey Street	50km/h ¹	~7m – 10m	Two-way undivided road. Single lane in each direction	Local Street	Council

¹Default speed limit on unsigned roads in built up areas in Queensland.

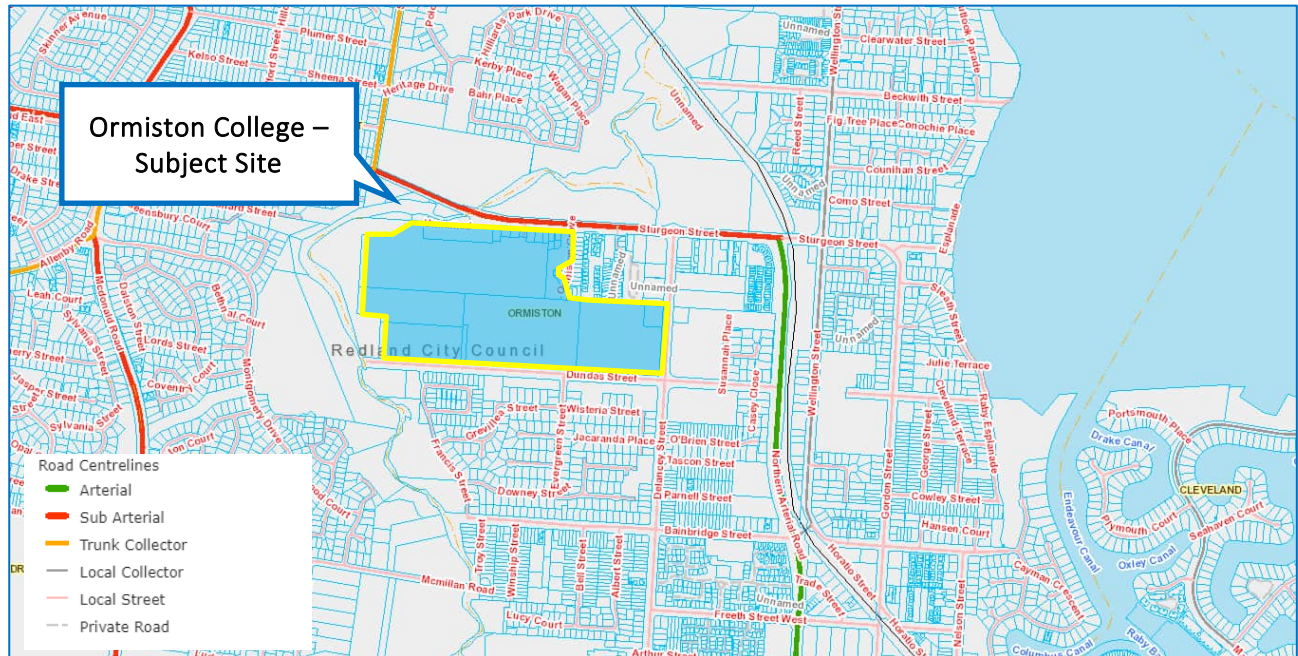


Figure 2-2: Existing Road Network and Road Hierarchy Overlay

(Source: Redland City Council)

The following is noted in relation to the existing road network:

- Sturgeon Street provides direct access to the Northern Arterial Road creating a strong traffic link to/from the subject site; and
- Dundas Street West provides a direct connection to the residential catchment south of the College.

Indicative photos outlining the respective road cross-section and typical arrangements are provided in Figure 2-3 to Figure 2-6.



Figure 2-3: Sturgeon Street Access looking southeast toward the College Access



Figure 2-4: Dundas Street West looking northwest toward the College's combined accesses



Figure 2-5: Delaney Street (looking north)

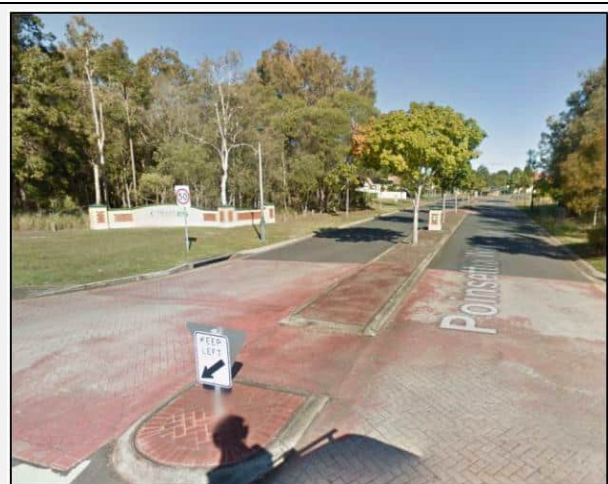


Figure 2-6: Poinsettia Way (looking south)

2.2.2. Train Services

Ormiston (Wellington Point) train station is near the College, approximately 850m east of the College (as the crow flies) translating to between 15 to 20 min walking distance. This station services six (6) key lines including the following:

- BRCL – Brisbane to Cleveland
- CLBR – Cleveland to Brisbane
- CLDB – Cleveland to Doomben
- DBCL – Doomben to Cleveland
- CLSH – Cleveland via Brisbane City to Shorncliffe
- SHCL – Shorncliffe via Brisbane City to Cleveland.

These lines run between 4:45 am and midnight during the weekday and 5:15 am to 1:45 am during the weekend, with a typical frequency of 15 to 30 minutes for both inbound and outbound services during both on and off-peak periods.

2.2.3. Bus Services

The closest bus stops to the College are located within 500m walking distance. These stops are located along Sturgeon Street and Delancey Street, in proximity to the Sturgeon Street / Delancey Street Roundabout intersection. Both stops are serviced by Route 251, with the Sturgeon Street at Delancey Street stop also serviced by Route 252.

Route 251 travels from Ormiston to Brisbane City via Alexandra Hills, servicing Alexandra Hills, Capalaba Park 'n' Ride, Capalaba and Chandler, while Route 252 travels from Capalaba to Cleveland, servicing Metro South TAFE, Alexandra Hills, Wellington Point and Ormiston. Route 251 has a weekday peak AM and PM service and is active from 5:45 am to 8:30 am and 4:05 pm to 6:55 pm while Route 252 is operational from 7:35 am to 6:00 pm on the weekday, with two (2) services each during the peak AM (7:30 am - 9:00 am) and peak PM (4:30 pm – 6:30 pm).

Given the proximity of the subject site to both bus and train services, it is expected that a portion of both staff and students will be travelling to/from the campus using public transport. Notwithstanding, only 2 routes service the stops with very low frequency during the peak periods.

2.2.4. Active Transport Facilities

Public off-road paths of varying standards exist on the surrounding network in the vicinity of the College providing connectivity for pedestrians, cyclists, and other e-mobility road users. Public footpaths are located as follows (overleaf):

- Both sides of Old Cleveland Road East / Sturgeon Street connecting the College access off Sturgeon Street to the bus stops and the train station
- Western side of Delancey Street
- The northern side of Dundas Street West connecting the College accesses off Dundas Street West.

With respect to the bicycle network, bicycle infrastructure partially exists nearby but is predominantly provided as on-road infrastructure (on Sturgeon Street and Old Cleveland Road East) and is unlikely to be attractive to staff or students at the College. Given the limited walking and cycling infrastructure and walking distances between the College and neighbouring developments, pedestrian and cycling trips to/from the College are expected to be very low relative to other schools of similar size.

It is noted that Sturgeon Street is classified as an “On-Road Commuter Connector” as per Redland’s City Cycle and Walking Guide. Further, Sturgeon Street and Northern Arterial Road within the vicinity of the subject site are also classified as Principal routes in the Department of Transport and Main Road’s (DTMR) South-East Queensland Principal Cycle Network Plan (PCNP).

Figure 2-7 below and Figure 2-8 illustrate Redland City Council’s Cycling and Walking Guide and DTMR’s SEQ PCNP overlay within the area surrounding the subject site, respectively.

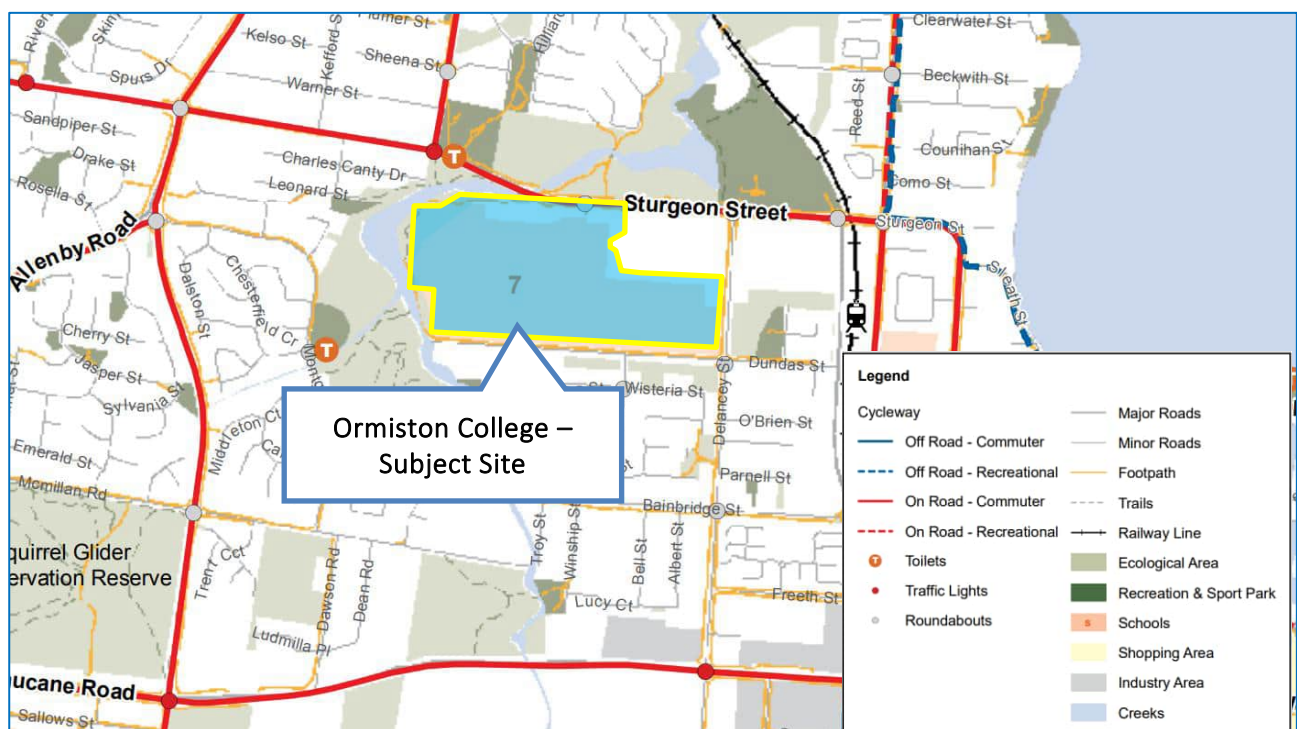


Figure 2-7: Active Transport Network in the vicinity of the Subject Site

(Source: Redland City Council’s Cycling and Walking Guide)

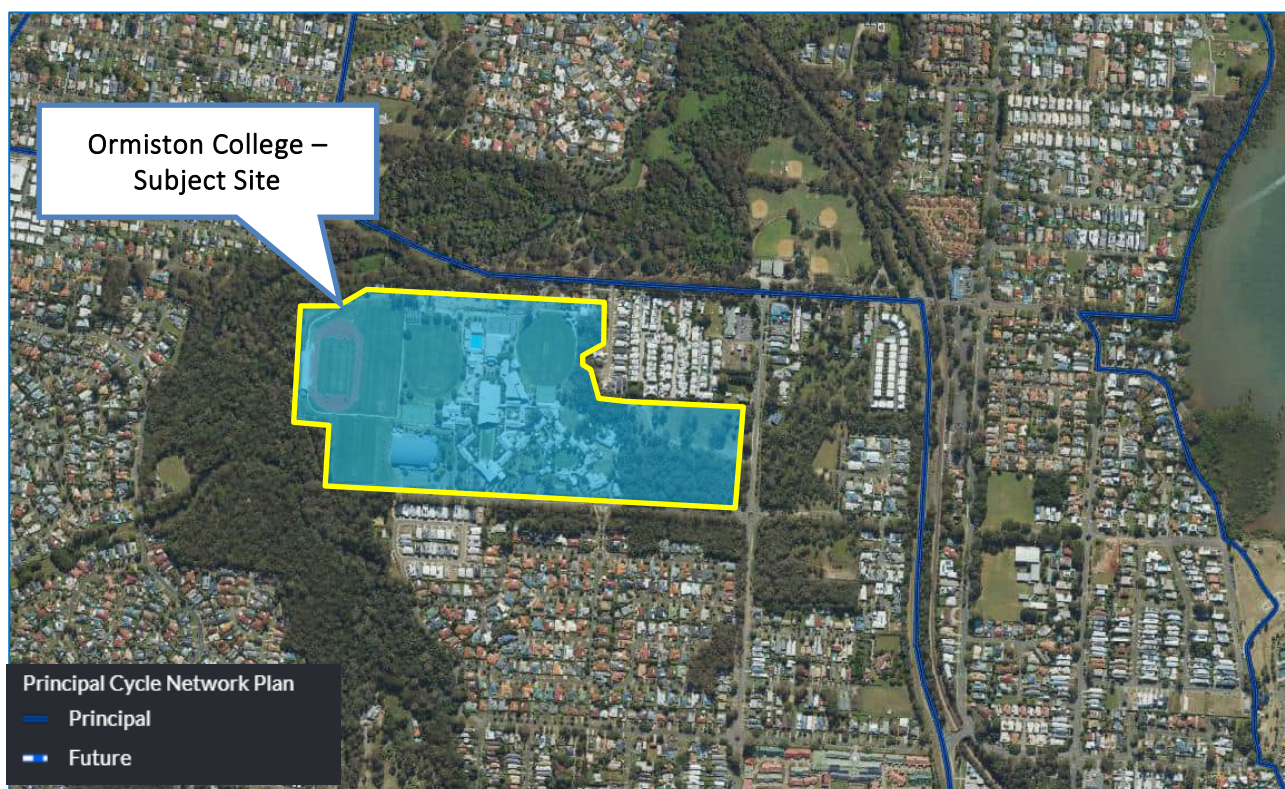


Figure 2-8: SEQ Principal Cycle Network Plan

(Source: Queensland Globe)

2.2.5. Ormiston College Bus Service

Ormiston College offers an extensive bus service and network to compensate for the public transport network connectivity deficit with the College. The College offers several chartered bus services for the exclusive use of Ormiston College students, offering families the option of private bus passes for their children. There are eight bus routes servicing suburbs from Brisbane and the bayside.

The College's bus services are managed by a bus management software, RollCall.

A summary of the bus services is provided below:

- A total of 16 bus services arrive/depart from the College during a typical weekday
- 8 buses arrive at the College in the drop-off period from 8:05 am to 8:18 am
- 8 buses depart the College in the pick-up period from 3:33 pm to 3:38 pm
- All buses arrive and depart from the College using the bus bay provided within the Somerset Sports Centre off Dundas Street West

Table 2.2 and Table 2.3 overleaf details the timetable for the College bus network for the Arrival and Departure services, respectively – obtained March 2025.

Table 2.2: Ormiston College Buses - Arrival

Bus Service / Route	Bus Bay Arrival Location	Arrival Time
OC1 - Cornubia, Mount Cotton, Redland Bay, Thornlands, Cleveland	SOMERSET SPORTS CENTRE, Dundas Street West	8:15 AM
OC2 - Carindale, Gumdale, Chandler, Capalaba, Alexandra Hills		8:12 AM
OC3 - Rochedale, Sheldon, Capalaba, Alexandra Hills		8:18 AM
OC4 - Rochedale, Sheldon, Capalaba, Alexandra Hills		8:15 AM
OC5 - Victoria Point, Thornlands, Cleveland		8:15 AM
OC6 - Capalaba, Thorneside, Birkdale, Wellington Point		8:10 AM
OC7 - Thornlands, Cleveland, Raby Bay, Ormiston		8:15 AM
OC8 - Manly West, Wakerley, Gumdale, Ransome, Birkdale, Wellington Point, Alexandra Hills		8:10 AM

Table 2.3: Ormiston College Buses - Departure

Bus Service / Route	Bus Bay Departure Location	Departure Time
OC1 - Cleveland, Thornlands, Redland Bay, Mount Cotton, Cornubia	SOMERSET SPORTS CENTRE, Dundas Street West	3:33 PM
OC2 - Alexandra Hills, Capalaba, Chandler, Gumdale, Carindale		3:33 PM
OC3 - Alexandra Hills, Capalaba, Sheldon, Rochedale		3:33 PM
OC4 - Birkdale, Ransome, Lota, Manly West, Manly, Wynnum, Wynnum West		3:33 PM
OC5 - Cleveland, Thornlands, Victoria Point		3:36 PM
OC6 - Wellington Point, Birkdale, Thorneside, Capalaba		3:37 PM
OC7 - Ormiston, Cleveland, Raby Bay, Thornlands		3:38 PM
OC8 - Alexandra Hills, Wellington Point, Birkdale, Ransome, Gumdale, Wakerley, Manly West		3:33 PM

3. The Proposed Development

3.1. Development Profile

The proposed expansion of the College will incorporate the following changes in terms of student/staff numbers:

- The 1,484 students that are enrolled at the College (as of 2022) will increase to 1,812 full-time students (an increase of 22%) broken down as follows:
 - Junior school (Prep to Year 6): From 644 students to 840 students
 - Middle School (Year 7 to Year 9): from 420 students to 504 students
 - Senior school (Year 10 to Year 12): From 420 students to 504 students.
- The existing Early Learning Centre (ELC) will increase from 79 children capacity to 130 children enrolments.
- Total staff numbers will increase from 225 staff members in 2022 to 263 staff members, broken down as follows:
 - Ormiston College staff: From 201 staff on campus to 226 staff members on campus each day
 - ELC staff: From 20 staff members to 32 staff members
 - OSHC staff: From up to 4 staff members to 5 staff members.

This expansion will result in general infrastructure changes within the College including, but not limited to:

- Car parking increase from approximately 338 formal car parking spaces to 445 car spaces (an increase of 107 car parking spaces).
- The refurbishment of existing buildings and construction of new buildings including general and specialised learning, early learning centre, aquatic centre, outdoor courts, sports ovals, and cricket nets/pitches.
- New boarding facility and associated car parking/drop-off zone off Old Cleveland Road East as well as new covered drop-off/pick-up zone facilities for Junior School students with direct access off Dundas Street West.
- New full perimeter boundary security fence with automatic vehicular sliding gates, pedestrian access gates and koala crossing.
- New tennis court, aquatic centre, cricket pitch, and other recreational/sporting areas.
- Additional areas and buildings including amenities, maintenance, circulation, service area, and plant.

The proposed Master Plan of the college expansion, prepared by Rohrig, is included within Appendix A of this report.

Figure 3-1 overleaf illustrates the proposed Master Plan for Canterbury College which is the subject of this Ministerial Infrastructure Designation (MID) application.

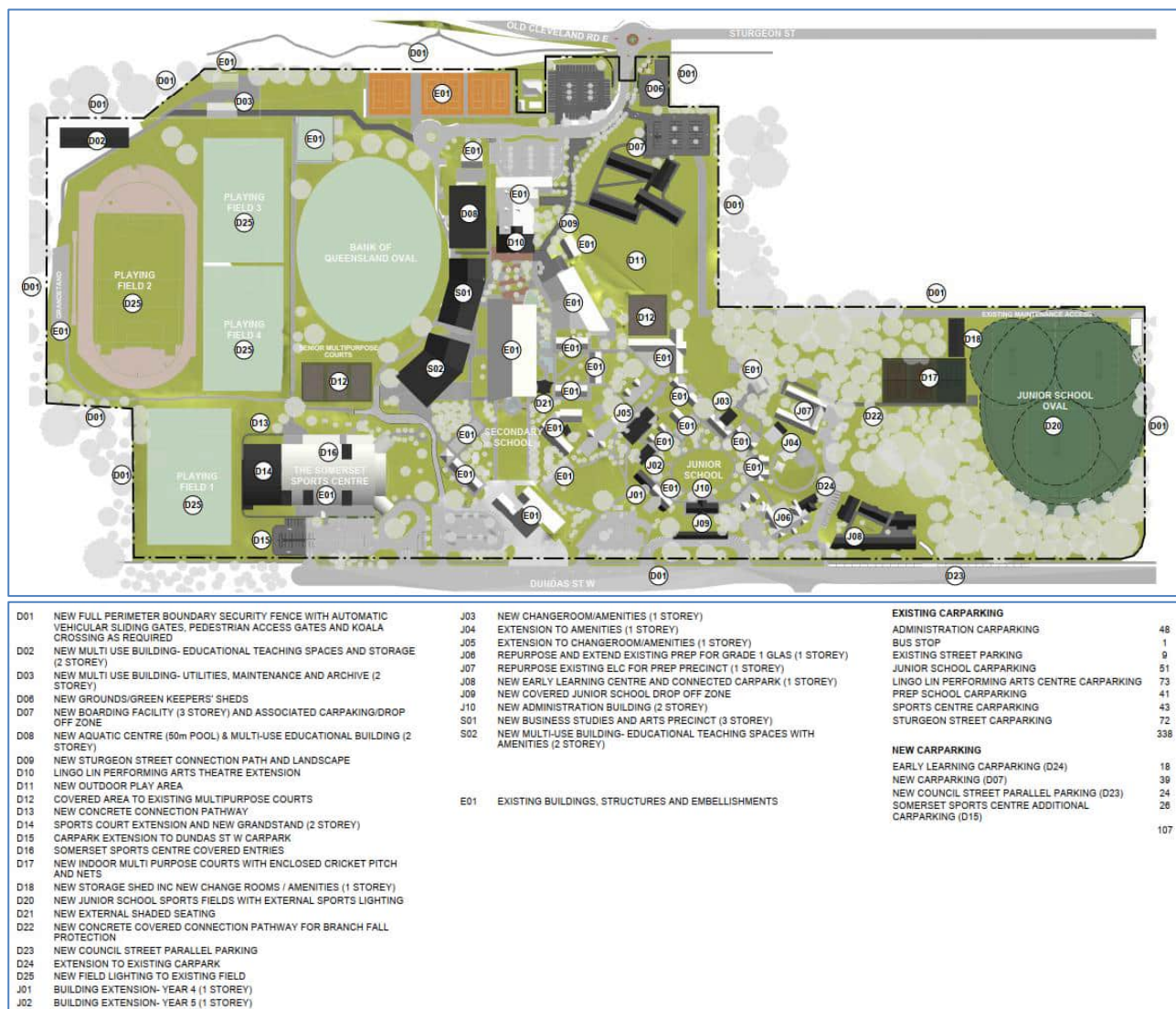


Figure 3-1: Proposed Master Plan

3.2. Car Parking

3.2.1. Existing Car Parking Supply

A review of the existing formal car parking supply at the College was completed to understand the existing car parking supply. For the car park count, the car parking areas within the College were divided into several sections as shown in Figure 3-2 overleaf.

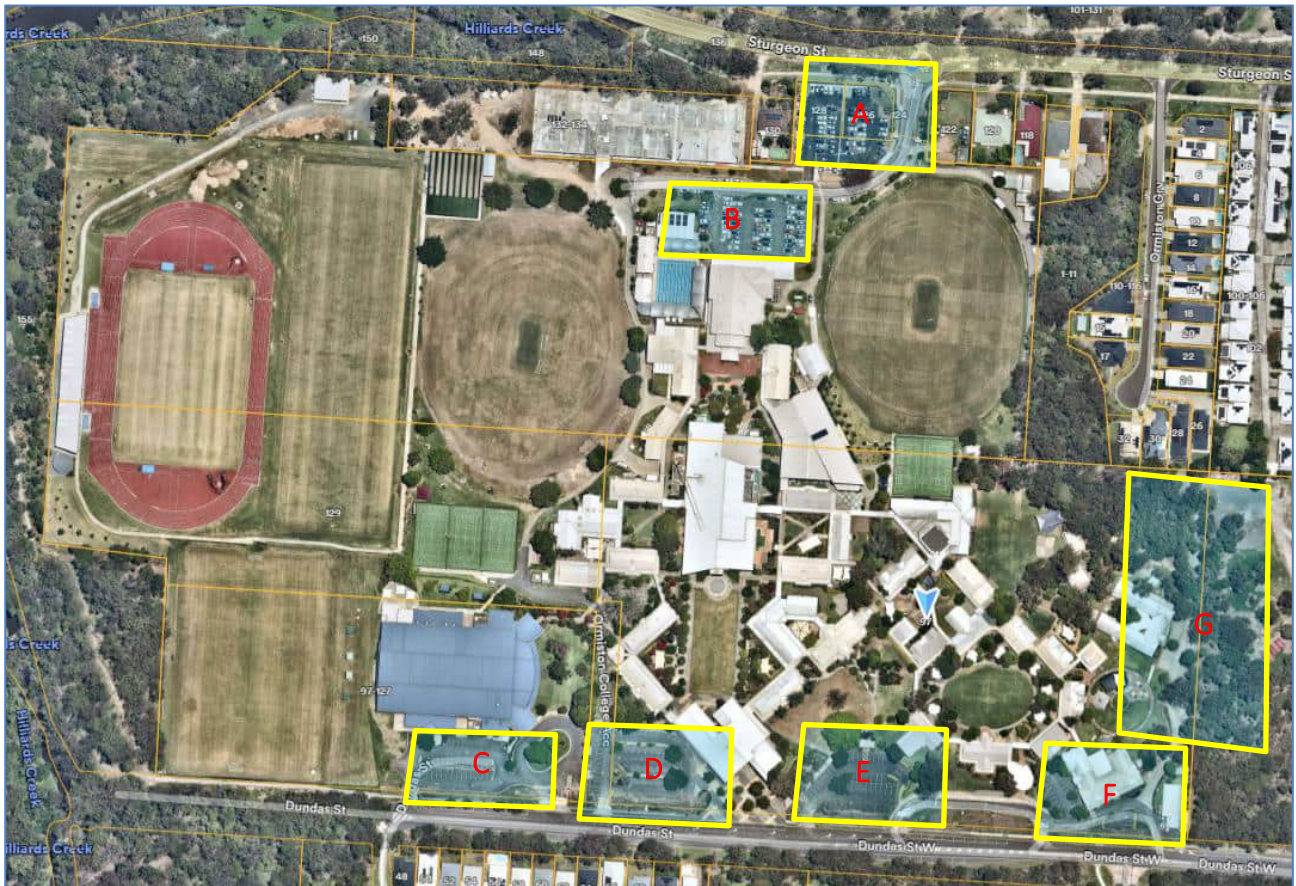


Figure 3-2: Existing Campus Car Parking Provision

As per the car parking review, the College currently has 339 formal car parking spaces with an additional informal parking and turnaround area. The breakdown of the current car parking provision is as follows:

Table 3.1: Car Parking count Areas

Car Park Areas	Approximate Car Parking Spaces
A	80 spaces
B	71 spaces including 2 PWD spaces
C	43 spaces including 3 PWD spaces
D	49 spaces including 3 PWD spaces
E	48 spaces
F	20 spaces including 2 PWD spaces
G	28 spaces
TOTAL	339 spaces including 10 PWD spaces

The College also currently provides a bus set-down area and two (2) pick-up/drop-off areas. It is also noted that parallel kerbside parking is also available on Dundas Street West to accommodate any overflow from the College car parking areas during pick-up/drop-off operations.

3.2.2. Car Parking Requirement

As outlined earlier, the proposed College expansion involves the provision of additional learning areas and an overall increase in students/staff/learning areas at the College as well as an expansion of the existing Early Learning Centre.

The car parking requirements for the proposed extension and new development, along with the requirements for visitor parking, bus spaces, employee spaces and students accessible parking spaces based on Council's Transport, servicing, access and parking (TSAP) code *Table 9.3.5.3.2 — Minimum on-site vehicle parking requirements* is summarised in Table 3.2.

In relation to car parking provision, the proposed expansion is to accommodate the following additional numbers:

- 160 primary school students
- 168 secondary school students (middle and senior school) inc. 28 x Year 12 students
- 51 children at the EL
- 25 staff members for the College, 12 staff members for the ELC and 2 staff members for the OSHC.

Based on Council's recommended car parking rate, this equates to **58 additional required spaces** as shown in the table below.

Table 3.2: Council's TSAP Code Parking Requirement

Use	Categories	Council's TAPS Code Rate	Requirements
Educational Establishment	Primary -160 students	• Set down - 1 space per 20 students (maximum capacity)	• 8 additional set down spaces
	Secondary – 168 students inc. 28 Year 12 students	• Set down - 1 space per 100 students (maximum capacity) • Student - 1 space per 10 students over the age of 17	• 2 additional set down spaces • 3 additional student spaces for Year 12 students
	Staff – 25 staff members	• 1 space per employee (on duty) for both primary and secondary	• 25 staff spaces
Childcare centre	ELC – 51 children and 12 additional staff	• 1 space per 7 children (maximum licensed capacity) • 1 space per employee (on duty)	• 8 spaces for children • 12 spaces for staff
TOTAL Required Additional Car Parking Spaces			58 car spaces

Alternative parking provisions rates for visitor parking, bus spaces, employee spaces and students accessible parking spaces are provided through the Department of Transport and Main Roads (DTMR) Planning for Safe Transport Infrastructure at Schools (PSTIS). Parking provisions under the DTMR PSTIS rates are summarised in Table 3-3 overleaf.

Table 3.3: DTMR's PSTIS Car Parking Supply

Use	Categories	Council's TAPS Code Rate	Requirements
Educational Establishment	Preparatory/special education – 16 students	1 per 8-10 students	1 – 2 spaces
	Short-term – 328 total students	1 per 15 students	22 spaces
	Long-term – 25 staff	0.7 per staff member	18 spaces
	Pick-up/drop-off (2 minutes)	20% of short-term supply (parent parking supply)	5 spaces for pick-up/drop-off
	TOTAL Parking Spaces & Pick-Up / Drop-off Requirements		41 – 42 spaces <i>plus</i> 5 pick-up/drop-off spaces
Childcare centre	ELC – 51 children	1 per 8-10 students	5 – 7 spaces
TOTAL Required Additional Car Parking Spaces			46 - 49 car spaces <i>plus</i> 5 pick-up/drop-off spaces.

As noted from Table 3.3, the overall parking supply under the DTMR PSTIS rates (54 additional spaces) for the College expansion is lower than Council's resultant overall car parking supply (58 additional spaces as outlined in Table 3.2 previously).

It is noted that under the MID Master Plan, the proposed campus car parking provision of 445 spaces (an increase of 107 spaces from the existing) would result in **a surplus of 49 car parking spaces** in consideration of Council's requirements for the additional students proposed at the College. While this is an oversupply in consideration of both Council and PSTIS requirements, the additional car parking is proposed in close proximity to sporting /recreational facilities. This is to accommodate additional outside-of-hours demand for these facilities rather than typical pick-up/drop-off operations. As such, the proposed Master Plan car parking provision is considered satisfactory.

Persons with disability (PWD) parking should also be provided across all parking user types at a rate of "1 accessible space for every 100 carparking spaces or part thereof" of total parking supply to comply with the National Construction Code (2022) – five (5) PWD spaces total. Notwithstanding, there are ~10 PWD spaces currently provided. Additional PWD parking to be incorporated into new carparking areas as required to provide enhanced accessibility / access to new / re-developed buildings / facilities.

3.2.3. Car Parking Layout

In terms of car park layout and dimensions, the relevant standard which is referenced by both TMR PSTIS and Redland City Council, is the Australian Standards AS2890.1:2004 *Off-street parking facilities*.

Table 3.4 outlines the typical / recommended design parameters for car parking for the various types of users/drivers that would access a school.

Table 3.4: DTMR's PSTIS Parking Design Requirements

Design Aspect		AS2890.1:2004 Recommended Design Criteria
Staff Parking spaces	Dimensions	5.4m length x 2.4m width
	Aisle Width	5.8m
Visitor Parking spaces	Dimensions	5.4m length x 2.6m width
	Aisle Width	5.8m
Short-term Parking spaces (AS2890 Class 3/3A) - 60° angle	Dimensions	5.1m length x 2.6m width
	Aisle Width	5.7m
PWD Parking spaces	Dimensions	5.4m length x 2.4m width + 2.4m Shared Area
	Aisle Width	5.8m
Parking Envelope Clearance	Envelope	AS2890.1 envelope
	Adjacent Walls	Additional 0.3m against walls
Terminated Aisle	Aisle extension	AS2890.1:2004 – 1m aisle extension and 0.3m against a wall or fence
Height Clearance	General Minimum	2.3m for standard spaces / 2.5m for PWD spaces

It is expected that the on-site parking supply generally meets the minimum AS2890.1:2004 requirements. The current and proposed arrangement of existing/new parking areas are generally considered to provide satisfactory access and circulation and will not result in adverse operational or safety conditions within the site or on the external road network.

Overall, the proposed car parking layout is designed generally in accordance with DTMR's PSTIS and Council's policy, apart from some design performance solutions which are deemed fit-for-purpose.

3.3. Bicycle Parking

Although Council's Transport Servicing, Access, and Parking policy does not specify a bicycle parking provision rate for either an educational establishment or a child care centre (Early Learning Centre), other transport planning documents such as DTMR's PSTIS and Austroads' *Cycling Aspects of Austroads Guides* have been considered in terms of bicycle parking rates for educational facilities including end-of-trip facilities.

Bicycle network infrastructure partially exists nearby but is predominantly provided as on-road infrastructure and is unlikely to be attractive for staff or students at the College. Given the limited walking and cycling infrastructure and distances between the College and neighbouring developments, pedestrian and cycling trips to / from the College is expected to be very low relative to other schools of similar size.

Therefore, the relatively high provision rates outlined in DTMR's PSTIS are not considered appropriate on this occasion and alternative rates for bicycle parking provision from Austroads' *Cycling Aspects of Austroads Guides* have been assessed for students based on the surrounding cycle accessibility network and catchment comprising of low density residential (i.e., detached houses). This assessment is outlined in Table 3.5.

Table 3.5: Austroads Cycling Facilities Assessment

Configuration	Numbers	Alternative rates	Requirements
Students	1,812 total students	2 per 100 students (Austroads Institute of Tech.)	37 spaces with Gymnasium and locker room use recommended
Staff (primary and secondary) – long term	226 staff members	Parking - 1 per 10 staff Lockers – 2 per bicycle space Showers – 1 per 10 bicycle spaces Toilets – 1 per 2 shower w/minimum of 1 per male/female Wash Basin – 1 per shower	23 spaces, 46 lockers, 3 showers, 2 toilets and 3 wash basins.
Visitors – short-term	37 spaces	1 per 10% of student parking	4 spaces
ADDITIONAL REQUIREMENT			60 long term spaces plus 4 short-term spaces

As such, it is currently recommended that **64 bicycles spaces be provided on the site**. This provision is considered appropriate for the projected usage of staff/students/visitors and should be implemented (based on demand) as part of new building works.

In the event that future demand exceeds these levels, there is an opportunity within the site to expand bicycle parking facilities to meet the needs of users.

3.4. Vehicular Access

As detailed earlier, the subject site has three road frontages - Old Cleveland Road/Sturgeon Street to the north, Dundas Street to the south and Delancey Street to the east. Access to the College is provided off all of these road frontages. The College campus currently has and proposes to maintain eight (8) vehicle accesses:

- 1 combined ingress / egress access off Old Cleveland Road East / Sturgeon Street Roundabout
- 4 combined ingress /egress access off Dundas Street West
- 1 ingress-only access off Dundas Street West
- 2 egress-only accesses off Dundas Street West

In general, all accesses, both existing and proposed, will have the following characteristics:

- All crossovers will be a B-type arrangement with varying width and according to function as per AS2890.1:2009 – Council's standard drawings R-RCC-3 as per Council's Table 8.3 - Standard drawings for Roads of Council's Planning Scheme Policy 2 – Infrastructure Works.

- Separation of vehicle crossovers from various road features (intersections, site boundaries, bus stops, other crossovers) will generally comply with the AS2890.
- Sightlines from all access crossovers will be adequate given the relatively straight/flat characteristics of frontage roads and relatively low posted speed limits.
- Car access crossovers have an internal queuing space of a minimum 1 car length (6m) over 1:20 grade (max)– which is considered sufficient given the likely distribution of demands across the subject site.
- Provision of adequate pedestrian sight triangles at vehicle access crossovers.

3.5. Active Transport Access

Public off-road paths of varying standards exist on the surrounding network in the vicinity of the College providing connectivity for pedestrians, cyclists, and other e-mobility road users including on both sides of Old Cleveland Road East / Sturgeon Street, the western side of Delancey Street and the northern side of Dundas Street West connecting the College accesses off Dundas Street west.

No changes to the existing active transport network are proposed as part of the Master Plan. Nonetheless, the existing active transport network are considered appropriate and deemed fit for purpose.

3.6. Servicing Arrangements

DTMR's PSTIS does not provide any recommendation regarding service vehicle arrangements. As such, Council's TAPS has been referenced. Council's PSP *Table 12: Service vehicle for non-residential uses* indicate that the design service vehicles for an educational establishment and child care centre are as follows:

- Child care centre (ELC) – 6.4m Small rigid vehicle (SRV)
- Educational Establishment – 12.5m Heavy rigid vehicle (HRV).

Nonetheless, the internal layout is generally considered to be able to accommodate the relevant design service vehicles as listed below:

- 14.5m Coach
- 12.5m Coach and 12.5m Heavy Rigid Vehicle.
- 10.5m front-lift and 9.9m rear-loading refuse collection vehicle (RCV)
- 8.8m medium rigid vehicle (MRV)
- 6.4m Small Rigid Vehicle (SRV).

Manoeuvring requirements for the relevant design service vehicles for all new areas will be assessed as part of functional and detailed design drawings documentation.

4. Development Transport Demands

4.1. Existing Traffic Volumes

Traffic surveys were completed on Thursday 13th March 2025 between 7:00 am to 9:00 am and 2:00 pm to 4:00 pm to establish the base traffic conditions on the network:

The intersections surveyed include:

1. Delancey Street / Dundas Street W
2. Dundas Street W / Poinsettia Way / College Access.
3. Ormiston Street / College Access

The traffic surveys recorded data over 15-minute intervals to gain a better understanding of the peak entry and exit traffic flows to/from the College. Further, due to the intensity of school pick-up and drop-off periods, it is generally accepted that school traffic usually peaks during a short period of time (i.e., less than an hour). Therefore, in order to adequately assess traffic volume peaks associated with school traffic, the peak 30-minute AM and PM periods have been assessed in the analysis to better represent the peak traffic demands at the College.

Based on the review of the traffic survey data and site observation, the following 30-minute peak periods were established:

30-minute Peaks

- AM Peak / College drop-off: 8:00 am – 8:30 am
- PM Peak / College pick-up: 3:15 pm – 3:45 pm.

Detailed (traffic count reports and/or network diagrams) showing traffic movement splits at all surrounding road intersections is included in Appendix B of this report.

Colliers Figures B1 and B2 included within Appendix B of this report illustrate the existing traffic volumes.

The location of the study site and survey locations are illustrated in Figure 4-1 overleaf.

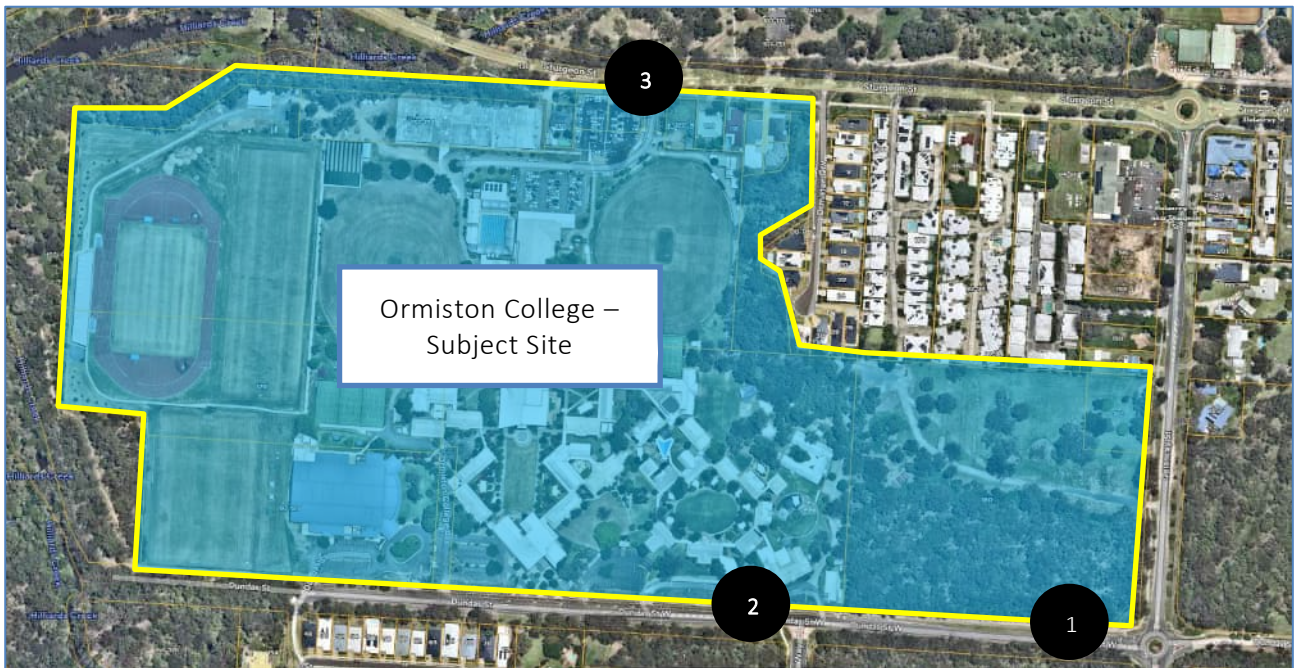


Figure 4-1: Subject Site and Survey Location

(Map Source: Nearmap, 2024)

4.1.1. Traffic Distribution and Assignment

Assignment of traffic on the network have been obtained using the turn volumes for each of the accesses and the approximate splits of survey traffic at the key intersections. Table 4.1 below identify the ascertained traffic assignment.

Table 4.1: External Road Network Distributions

Peak	Direction	Poinsettia Way (South)	Dundas Street (East)	Sturgeon Street (East)	Old Cleveland Road (West)	Delaney Street (South)
AM	Entering	2%	1%	17%	35%	45%
	Exiting	1%	0%	17%	36%	45%
PM	Entering	1%	1%	12%	40%	44%
	Exiting	1%	0%	14%	40%	45%

As expected, these distributions indicate that the majority of vehicles would typically approach/depart via the Delaney Street (south) approach.

4.2. 2027 and 2037 Base Traffic Volumes

Historical Annual Average Traffic Volumes (AADT) are not available for the study area; therefore, Council's LGIP *Table SC 3.1.9—Existing and projected demand for the transport network has been referenced*. As detailed in the table, an anticipated growth rate of 0.9% p.a. (compound) is expected for the Ormiston service catchment between 2021 and 2031. This growth rate has been used to estimate the future background traffic on the road network in the vicinity of the site during the peak ½ hour AM and PM peak periods; this represents approximately 9% growth over a 10-year period. This is considered acceptable given that the land surrounding the school is generally well developed and the surrounding road network is generally at or near capacity.

Application of the above growth rate to the 2025 Base traffic volumes (Figure B1 and B2 within Appendix B) yields the 2027 and 2037 Base traffic volumes as follows:

- 2027 Base traffic volumes = 2025 Existing / Base traffic volumes x $(1+0.9\%)^2$
- 2037 Base traffic volumes = 2025 Existing / Base traffic volumes x $(1+0.9\%)^{12}$.

Colliers Figures B5 to B8 included within Appendix B of this report illustrate the 2027 and 2037 Base (without development) traffic volumes.

4.3. College and ELC Traffic

The proposed extension of the College is set to increase student numbers from 1,563 inc. ELC in 2022 to 1,942 students - an increase of approximately 24% or 2.2% per annum (compound) - in 2027 (opening year of the completed Master Plan). To estimate the traffic impact of the proposed extension, a review of the existing College traffic was conducted to determine the traffic generation rate per student and its distribution on the surrounding network. The vehicle trip generation rates during the AM / PM peak periods are as follows:

- 30-minute period:
 - Entering traffic - 0.34 vehicles per student enrolment during the AM peak and 0.16 vehicles per student during the PM peak period.
 - Exiting traffic - 0.29 vehicles per student enrolment during the AM and 0.26 vehicles per student during the PM peak period.

Based on the above, the estimated total traffic to/from the College during the peak periods following the proposed expansion works is as follows:

- 30-minute peak:
 - AM Peak: 654 vehicles in and 568 vehicles out
 - PM Peak: 311 vehicles in and 504 vehicles out.

The additional traffic generated by the proposed extension has been distributed on the network in line with the existing traffic distribution during the AM and PM school peak periods. The expected traffic generation following the proposed College extension has been illustrated in Figure B3 and B4 within Appendix B.

4.4. Assessment Years and Traffic Growth

The applicant has indicated that the targeted completion date for the proposed expansion is 2027. On this basis, the following assessment years have been considered:

- Existing Scenario (Current Traffic Survey): 2025
- Opening Year (Full Completion): 2027
- Design Horizon (Opening + 10 years): 2037.

4.5. Assessment Scenarios

The following future year scenarios have been assessed:

- **2025 Survey and Base Scenario:** Existing and base operation of the College's accesses and surrounding road network.
- **2027/2037 Base Case Scenario:** Base operation at the opening year of the proposed expansion and 10-year design horizon. This includes background growth on the road network with existing College and ELC traffic.
- **2027/2037 Base + Development Case Scenario:** Base operation plus additional traffic generation due to proposed expansion and additional child care traffic in both the opening year and 10-year design horizon.

Traffic network diagrams illustrating the traffic movements for the key scenarios are included as Appendix B of this report.

5. Traffic Impact Assessment

The design traffic volumes have been calculated by adding the proposed expansion traffic with the base traffic volumes. These volumes are illustrated in Colliers Figures within Appendix B.

The following sub-section summarises the most relevant measures of intersection performance for the impacted intersections for the Base and Design traffic scenarios. Appendix C contains the SIDRA Movement Summary outputs for all scenarios and peak hours analysed.

The key measures of performance considered in the SIDRA summaries below are:

- Overall intersection and the delays for the worst movement
- Level of Service (LOS) for worst movement
- 95th %ile back of queue for all approaches.

The majority of the default values used by SIDRA Intersection 9.1 were retained for traffic analysis of the road network, with a ½ hour analysis period and Peak Hour Factor (PHF) of 1.0. Utilising a peak ½ hour analysis allows analysis of the critical time period for schools that tend to have short and “sharp” traffic activity peaks.

5.1. Sturgeon Street / College Northern Access

The operation of the College’s access off Sturgeon Street intersection has been analysed using the SIDRA Intersection software. A SIDRA-generated layout of the intersection is illustrated in Figure 5-1.

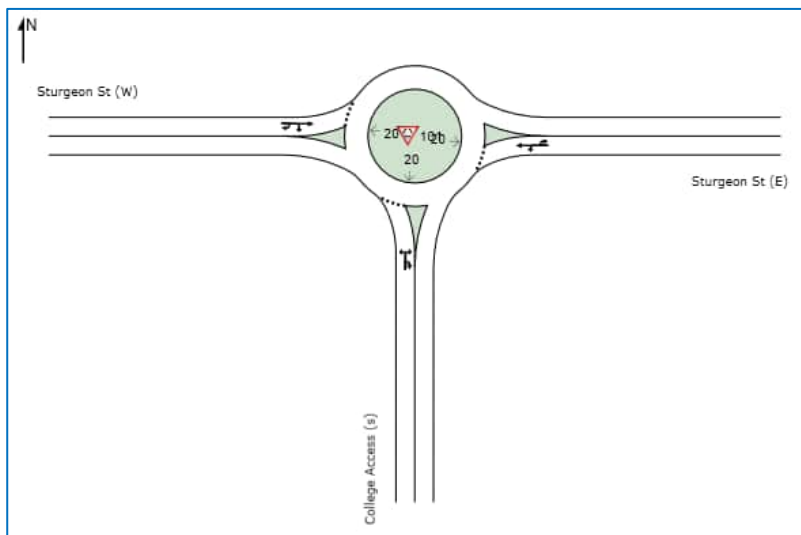


Figure 5-1: SIDRA Generated Layout of the Sturgeon Street/College Access Intersection.

Summary SIDRA results for the AM and PM peak periods for the Existing, Base and Design scenarios are provided in Table 5.1 to Table 5.5 overleaf.

Table 5.1: Sturgeon Street / College Access Intersection – Existing Case (30-minute Peak)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.47	18	28	0.36	18	18
Sturgeon Street (E)	0.75	14	68	0.63	11	48
Sturgeon Street (W)	0.76	12	75	0.66	12	55

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.2: Sturgeon Street / College Access Intersection – 2027 Base (30-minute Peak)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.48	18	29	0.36	18	18
Sturgeon Street (E)	0.76	14	71	0.64	11	49
Sturgeon Street (W)	0.77	12	77	0.67	12	57

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.3: Sturgeon Street / College Access Intersection – 2027 Design (30-minute Peak)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.72	27	61	0.56	24	38
Sturgeon Street (E)	0.89	20	142	0.77	12	73
Sturgeon Street (W)	0.89	16	142	0.77	12	82

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.4: Sturgeon Street / College Access Intersection – 2037 Base (30-minute Peak)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.54	21	36	0.40	20	22
Sturgeon Street (E)	0.81	15	91	0.68	12	59
Sturgeon Street (W)	0.82	13	92	0.72	12	68

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.5: Sturgeon Street / College Access Intersection – 2037 Design (30-minute Peak)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.80	34	77	0.67	30	51
Sturgeon Street (E)	0.94	25	196	0.82	13	90
Sturgeon Street (W)	0.94	19	199	0.83	12	103

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

For the Existing and Base scenarios (without development) for Sturgeon Street / College Access Intersection, all approach DoS are within acceptable parameters and forecast queues do not impact adjacent accesses or intersections. The maximum average delay is 21 seconds from the College approach in the 2037 Base, which is considered acceptable for a roundabout during peak periods. However, it is noted that the DoS for the Surgeon Street / College Access Roundabout is approaching practical capacity (85%) in the 2037 Base, with a maximum Dos of 0.82 (82%).

In the Design (with development) scenarios, the SIDRA intersection performance results indicate:

- The intersection operates outside of practical capacity during both peak 30-minute periods in both the 2027 and 2037 Design Scenarios
- A maximum Degree of Saturation of approximately 0.89 (92%) and 0.94 (94%) during both the 2027 and 2037 Design cases respectively on the Sturgeon Street West approach during the AM 30-minute peak
- The maximum approach average delay is 27 seconds during the 2027 Design Scenario and 34 seconds in the 2037 Design Scenario, both during the AM peak 30-minute period.
- A maximum queue length of 142 metres is observed in the 2027 Design Scenario and 199 metres in the 2037 Design Scenario on Sturgeon Street West approach and during the AM peak 30-minute period.

The results suggest that, with the proposed College Master Plan expansion, the intersection would operate outside of practical operating parameters in the design horizon years of 2027 and 2037 during both peak 30-minute periods.

Additional assessment has been completed using hourly volumes to estimate the impact of the additional Master Plan traffic during the peak hour periods. The outcome of the assessment is provided in Table 5.6 and Table 5.7.

Table 5.6: Sturgeon Street / College Access Intersection – 2027 Design (Hourly Volumes)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.48	19	29	0.39	19	21
Sturgeon Street (E)	0.78	14	80	0.72	12	63
Sturgeon Street (W)	0.81	12	93	0.74	12	73

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.7: Sturgeon Street / College Access Intersection – 2037 Design (Hourly Volumes)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
College Access (S)	0.52	21	33	0.42	20	23
Sturgeon Street (E)	0.81	14	93	0.74	12	70
Sturgeon Street (W)	0.84	12	105	0.77	12	82

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

The hourly intersection performance analysis indicates that the DoS for the Surgeon Street / College Access Roundabout is operating within capacity during both the AM and PM peak periods.

Noting that the intersection is operating within the capacity over the entire hour, the operation during the peak 30-minute periods is not expected to significantly limit the through function of Old Cleveland Road / Sturgeon Street intersection and east-west road corridor, rather simply a slowing of traffic flow within a defined traffic corridor. Further, any significant impacts are limited to the AM peak period and are not considered to be detrimental to the overall operation or safety of the road corridor.

Additionally, the traffic assessment is based on equitable distribution of the additional traffic from the proposed expansion to all accesses based on existing in / out trips to the College. However, it is expected that given the presence of alternate accesses (4 accesses) off Dundas Street West, parents and visitors of the College would be familiar with the traffic operations while accessing the College from Old Cleveland Road west and can use alternate routes

It is also noted that there are opportunities for the College to introduce traffic management at the northern access to help redirect traffic to the other accesses off Dundas Street West during the peak periods as required.

Noting the above, no additional upgrade works are considered necessary or warranted at this intersection.

5.2. Dundas Street W / Poinsettia Way T- Intersection Performance

The existing layout of Dundas Street W / Poinsettia Way priority T-intersection, as analysed within SIDRA 9.1, is displayed below, noting that in the existing configuration, the north approach is offset ~15m east from the centre of the intersection but for the purpose of this SIDRA analysis was considered to be the fourth approach to the intersection. No changes are proposed to this intersection as per the current masterplan.

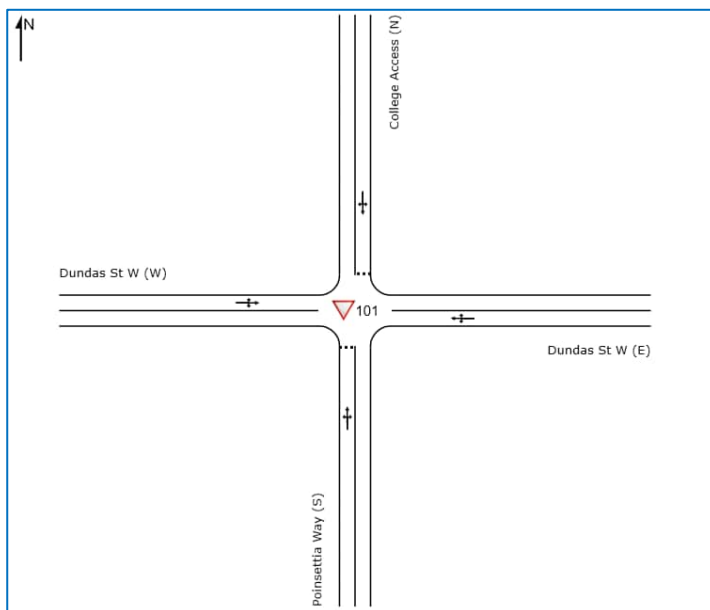


Figure 5-2: SIDRA Generated Layouts of the Dundas Street W/ Poinsettia Way T- Intersection (Existing and Proposed)

Summary SIDRA results for the AM and PM peak periods for the Existing scenario is provided in Table 5.8., with the Base scenario assessments provided in Table 5.9 below and the Design scenario assessments provided in Table 5.10 overleaf.

Table 5.8: Dundas Street W / Poinsettia Way T- Intersection – Existing Case

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Poinsettia Way (S)	0.38	26	10	0.34	14	10
Dundas Street West (E)	0.37	6	0	0.17	6	0
College Access (N)	0.07	8	2	0.08	8	2
Dundas Street West (W)	0.27	10	1	0.26	6	1

Note: DoS for any movement should not exceed 0.80 for an unsignalised intersection per AGTM12-20.

Table 5.9: Dundas Street W / Poinsettia Way T- Intersection – 2027 and 2037 Base

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Poinsettia Way (S)	0.38	26	10	0.34	14	10
Dundas Street West (E)	0.37	6	0	0.17	6	0
College Access (N)	0.07	8	2	0.08	8	2
Dundas Street West (W)	0.27	10	1	0.26	6	0

Note: DoS for any movement should not exceed 0.80 for an unsignalised intersection per AGTM12-20.

Table 5.10: Dundas Street W / Poinsettia Way T- Intersection – 2027 and 2037 Design

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Poinsettia Way (S)	0.81	77	25	0.60	28	18
Dundas Street West (E)	0.47	6	0	0.27	6	0
College Access (N)	0.11	9	3	0.12	9	3
Dundas Street West (W)	0.36	12	2	0.33	7	1

Note: DoS for any movement should not exceed 0.80 for an unsignalised intersection per AGTM12-20.

For the Existing and Base scenarios (without development), all approach DoS are within acceptable limits and forecast queues do not impact adjacent accesses or intersections. The maximum average delay is 26 seconds (i.e., Level of Service D) for the south approach, which is considered acceptable for the intersection.

For the design scenarios (with development), the southern approach is noted to be operating slightly outside of practical capacity during the 2027 AM peak period. As such, an additional assessment has been completed

using hourly volumes to estimate the impact of the additional traffic during the peak hour periods. A summary of the updated assessment is provided below

Table 5.11: Dundas Street W / Poinsettia Way T- Intersection – 2027 and 2037 Design (Hourly Volumes)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Poinsettia Way (S)	0.39	26	10	0.26	15	7
Dundas Street West (E)	0.37	6	0	0.25	6	0
College Access (N)	0.09	7	3	0.08	7	2
Dundas Street West (W)	0.25	10	1	0.22	8	1

Note: DoS for any movement should not exceed 0.80 for an unsignalised intersection per AGTM12-20.

The hourly volume analysis indicates that the Degree of Saturation (DoS) for the Dundas Street W / Poinsettia Way T- Intersection is operating within practical capacity during both the weekday AM and PM peak periods. This suggests that while the intersection will have significant traffic and slightly lower throughput during the College's 30-min peak AM period, over the peak hour, the intersection will be operating within acceptable practical limits given that the additional traffic will be rolling traffic. The assessment also indicates a maximum average vehicle delay of 26 seconds and 95th percentile back of queue length of 10m, which are within the normal parameters for this intersection. Noting the above, no additional upgrade works are considered necessary or warranted at this intersection.

5.3. Delancey Street / Dundas Street West Roundabout

The performance of the College's access Delancey Street / Dundas Street West roundabout intersection has been analysed in the SIDRA 9.1 software. A SIDRA-generated layout of the intersection is shown in Figure 5-3.

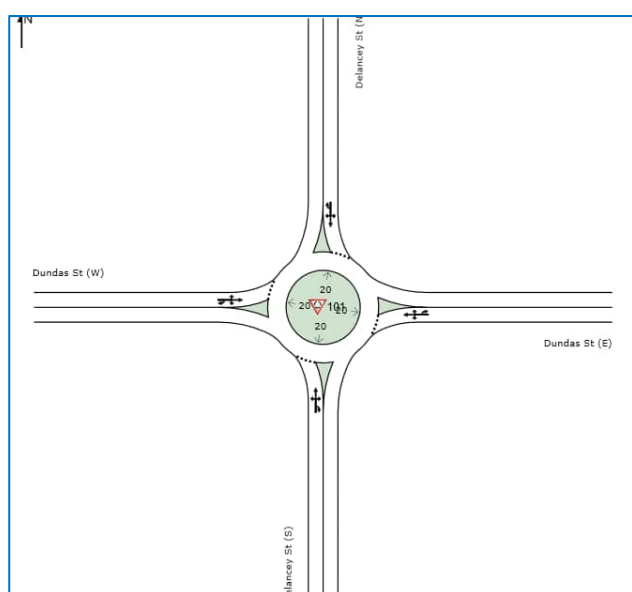


Figure 5-3: SIDRA Generated Layout of the Delancey Street / Dundas Street West Intersection.

Summary SIDRA results for the AM and PM peak periods are provided below.

Table 5.12: Delancey Street / Dundas Street West – Existing Case

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (S)	0.53	13	31	0.29	12	13
Dundas Street (E)	0.02	16	1	0.02	15	1
Delancey Street (N)	0.41	14	20	0.36	13	17
Dundas Street (West)	0.49	12	29	0.49	12	27

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.13: Delancey Street / Dundas Street West – 2027 Base

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (S)	0.54	13	31	0.29	12	14
Dundas Street (E)	0.02	16	3	0.02	15	1
Delancey Street (N)	0.42	14	21	0.37	13	18
Dundas Street (W)	0.50	12	30	0.50	12	28

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.14: Delancey Street / Dundas Street West – 2027 Design

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (S)	0.71	16	64	0.43	12	24
Dundas Street (E)	0.03	18	2	0.02	17	1
Delancey Street (N)	0.58	16	39	0.50	15	29
Dundas Street (W)	0.65	12	49	0.64	13	44

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

For the Existing and Base scenarios (without development), all approach DoS are within acceptable limits and forecast queues do not impact adjacent accesses or intersections. The highest average delay is 16 seconds from the Dundas Street East approach in the 2027 Base, which is considered acceptable for a roundabout during peak periods.

In the Design scenarios, the SIDRA results indicate the following:

- The intersection operates within practical capacity during both peak periods in the 2027 Design Scenario with a Degree of Saturation of approximately 0.71 (71%) on the Delancey Street (south) approach during the AM peak.

- The maximum approach delay is 18 seconds during the 2027 Design Scenario during the AM peak period – an increase of 3 seconds from the Base scenario.
- A maximum queue length of 64 meters is observed in the 2027 Design Scenario on the Delancey Street (south) approach during the AM Peak period.

The results suggest that, with or without the proposed College masterplan expansion, the intersection within acceptable operating limits in the design horizon year of 2027 during both peak periods.

Noting the above, no additional upgrade works are considered necessary or warranted at this intersection.

5.4. Sturgeon Street / Delancey Street Roundabout

The operation of the College access off the Sturgeon Street/ Delancey Street roundabout intersection has been analysed using the SIDRA 9 software. A SIDRA-generated layout of the intersection is illustrated in Figure 5-4.

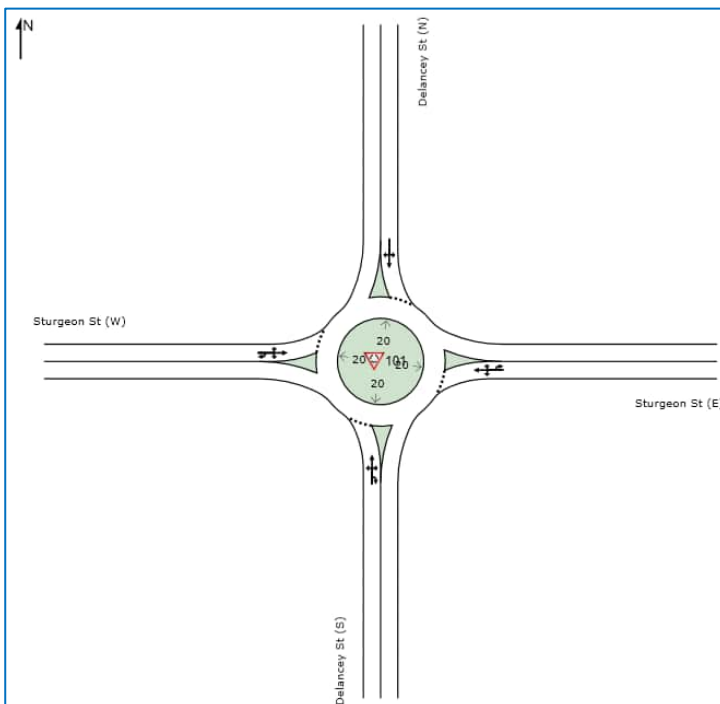


Figure 5-4: SIDRA Generated Layout of the Sturgeon Street / Delancey Street Intersection.

Summary SIDRA results for the AM and PM peak periods for the Existing scenario is provided in Table 5.15, with the 2027 Base scenario assessment provided in Table 5.16 and the 2027 Design scenario assessment provided in Table 5.17 overleaf.

Table 5.15: Sturgeon Street / Delancey Street – Existing Case

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (South)	0.54	17	34	0.61	19	44
Sturgeon Street (East)	0.65	14	48	0.65	14	48
Delancey Street (North)	0.02	20	1	0.05	20	2
Sturgeon Street (West)	0.79	12	83	0.80	12	89

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.16: Sturgeon Street / Delancey Street – 2027 Base

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (South)	0.55	17	36	0.63	19	46
Sturgeon Street (East)	0.66	14	51	0.67	14	51
Delancey Street (North)	0.02	20	1	0.05	21	2
Sturgeon Street (West)	0.80	12	86	0.81	12	93

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

Table 5.17: Sturgeon Street / Delancey Street – 2027 Design

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (South)	0.69	20	57	0.79	26	79
Sturgeon Street (East)	0.76	27	77	0.76	17	77
Delancey Street (North)	0.02	25	1	0.06	25	4
Sturgeon Street (West)	0.88	14	131	0.88	13	122

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

For the Existing and Base scenarios (without development), all approach DoS are within acceptable limits and forecast queues do not impact adjacent accesses or intersections. The maximum average delay is 27 seconds from the Delancey Street north approach in the 2027 Base, which is considered acceptable for a roundabout during peak periods.

In the Design (with development) scenarios, the SIDRA results indicate the following:

- The intersection operates outside of practical capacity during both peak periods in the 2025 Design Scenario with a maximum Degree of Saturation of approximately 0.88 (88%).

- The maximum approach delay is 27 seconds during the 2027 Design Scenario during the AM peak period and from the Sturgeon Street (east) approach.
- A maximum queue length of 131 metres is observed in the AM peak and 122 metres in the PM peak, both from the Sturgeon Street West approach.

The results suggest that, with the proposed College masterplan expansion, the intersection is operating outside of acceptable operating limits in the design horizon year of 2027 during both peak periods. An additional assessment has been completed using hourly volumes to estimate the impact of the additional traffic during the peak hour periods. A summary of the updated assessment is provided in Table 5.18 overleaf.

Table 5.18: Sturgeon Street / Delancey Street – 2027 Design (Hourly Volumes)

Scenario	School AM / Drop-Off Peak			School PM / Pick-Up Peak		
	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)	DoS (v/c)	Max Average Delay (s)	95 th percentile Queue (m)
Delancey Street (S)	0.64	20	48	0.73	25	64
Sturgeon Street (E)	0.82	19	96	0.79	17	84
Delancey Street (N)	0.01	22	1	0.03	20	1
Sturgeon Street (W)	0.82	12	104	0.79	12	87

Note: DoS for any movement should not exceed 0.85 for a roundabout as per AGTM12-20.

The hourly volume analysis indicates that the Degree of Saturation (DoS) for the Sturgeon Street / Delancey Street Roundabout is operating within practical capacity during both the weekday AM and PM peak periods. This suggests that while the intersection will have significant traffic and slightly lower throughput during the College's 30-min peak AM period, over the peak hour, the intersection will be operating within acceptable practical limits given that the additional traffic will be rolling traffic. The assessment also indicates a maximum average vehicle delay of 25 seconds and 95th percentile back of queue length of 104m, which are within the normal parameters for this type of roundabout.

While the increased delay and DoS is somewhat significant from a traffic perspective, it is not expected to significantly limit the through traffic function of Sturgeon Street / Delancey Street roundabout intersection, any impacts are not considered to be detrimental to the overall operation or safety of the intersection and / or road corridor.

Noting the above, no additional upgrade works are considered necessary or warranted at this intersection.

6. Summary and Conclusions

Following a review of the expansion of the college, which is located at 97 Dundas Street West, Ormiston (south of Old Cleveland Road East / Sturgeon Street College access roundabout), this report has addressed the transport-related issues associated with the proposed Master Plan expansion of the College, in relation to the access, car parking demand and operations, servicing, and trip generation / traffic impacts.

As detailed herein, the proposed development demonstrates general compliance and acceptable outcomes when assessed against the Department of Transport and Main Roads' (DTMR) Planning for Safe Transport Infrastructure at Schools (PSTIS).

6.1. Proposed Development

The proposed expansion of the College will incorporate the following changes in terms of students / staff numbers:

- The 1,484 students that are enrolled at the College (as of 2022) will increase to 1,812 full-time students (an increase of 22%) broken down as follows:
 - Junior school (Prep to Year 6) – From 644 students to 840 students
 - Middle School (Year 7 to Year 9) – from 420 students to 504 students
 - Senior school (Year 10 to Year 12) – From 420 students to 504 students.
- The existing Early Learning Centre (ELC) will increase from 79 child capacity to 130 child enrolments.
- Total staff numbers will increase from 225 staff members in 2022 to 263 staff members, as follows:
 - Ormiston College staff – From 201 staff on campus to 226 staff members on campus each day
 - ELC staff – From 20 staff members to 32 staff members
 - OSHC staff – From up to 4 staff members to 5 staff members.
- Car parking increase from approximately 338 formal car parking spaces to 445 car spaces (an increase of 107 car parking spaces).

Architectural Plans of the proposed new College campus, prepared by Rohrig, are included within Appendix A of this report.

6.2. Parking Arrangements

- Given that the proposed expansion results in an increase in staff to 263 staff members, the additional car parking requirement based on the rates stipulated in DTMR PSTIS for the College expansion is approximately **46 - 49 car spaces plus 5 pick-up / drop-off spaces.**

- The proposed campus car parking provision of **445 spaces (an increase of 107 spaces from existing)** would result in a surplus of 49 car parking spaces in consideration of Council's requirements for the additional students proposed at the College. As such, the proposed car parking provision is considered satisfactory.
- It is noted that bicycle infrastructure only partially exists nearby the College and is predominantly provided as on-road infrastructure and is unlikely to be attractive for staff or students at the College. Given the limited walking and cycling infrastructure and distances between the College and residential catchments, quality of surrounding bicycle infrastructure and surrounding road hierarchy, consisting predominantly of major roads with high traffic volumes, pedestrian and cycling trips to/from the College are expected to be very low relative to other schools of similar size.
- As such, it is currently recommended that **64 bicycles spaces be provided on the site**. This provision is considered appropriate for the projected usage of staff / students / visitors and should be implemented (based on demand) as part of new building works.
- The proposed parking layout of the development generally complies with the requirements of AS2890.1:2004 and is considered satisfactory for the scale/type of parking (including turnover). Overall, the proposed car parking layout is designed generally in accordance with the DTMR's PSTIS, apart from some design performance solutions which are deemed fit-for-purpose.

6.3. Access Arrangements

- The subject site has three road frontages - Old Cleveland Road/Sturgeon Street to the north, Dundas Street to the south and Delancey Street to the east. Access to the College is provided off all of these road frontages. The College campus currently has 8 vehicle accesses:
 - 1 combined ingress/egress access off Old Cleveland Road East / Sturgeon Street Roundabout
 - 4 combined ingress /egress access off Dundas Street West
 - 1 ingress-only access off Dundas Street West
 - 2 egress-only accesses off Dundas Street West
- Public off-road paths of varying standards exist on the surrounding network in the vicinity of the College providing connectivity for pedestrians, cyclists, and other e-mobility road users including on both sides of Old Cleveland Road East/ Sturgeon Street, western side of Delancey Street and the northern side of Dundas Street West connecting the College accesses off Dundas Street west.

6.4. Service Vehicle Arrangements

- DTMR's PSTIS does not provide any recommendation regarding service vehicle arrangement. As such, Council's TSAP has been referenced. Council's Infrastructure Works Section 3 TSAP *Table 12 – Service vehicle for non-residential uses* indicates that the design service vehicles for an educational establishment and child care centre are as follows:
 - Child care centre (ELC) – 6.4m Small rigid vehicle (SRV)

- Educational Establishment – 12.5m Heavy rigid vehicle (HRV).
- The proposed internal layout of the College has been / will be designed to accommodate the relevant design services vehicles for delivery, passenger transport and waste collection purposes.

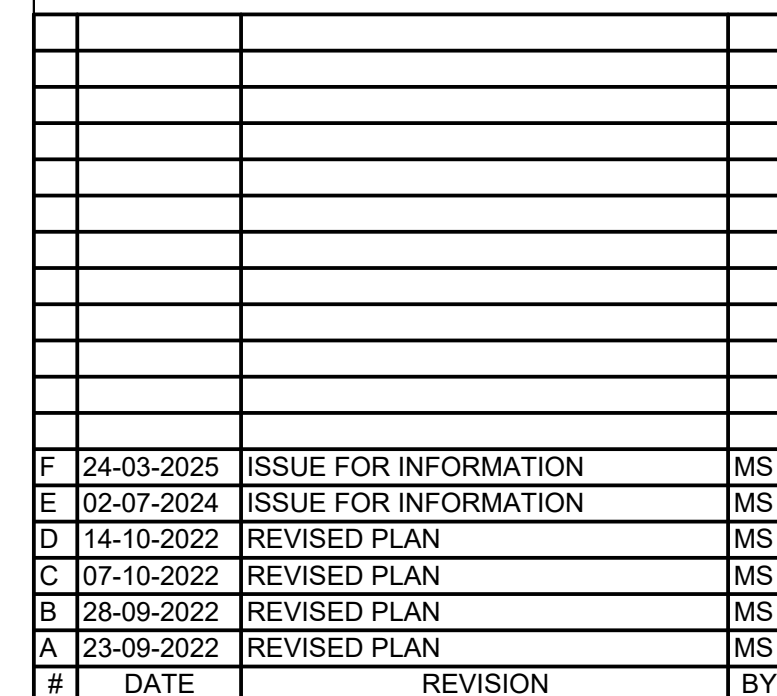
6.5. Traffic Impact Assessment

- The operation of the College's accesses and key intersections has been analysed using the SIDRA 9.1 software. The outcome of the SIDRA Assessment indicated the following:
 - **Sturgeon Street / College Northern Access:** With the proposed College Master Plan expansion, the intersection would operate outside of acceptable operating limits in the design horizon year of 2027 and 2037 during both peak PM ½-hour periods. While the increased delay and DoS is somewhat significant from a traffic perspective, the through function of Sturgeon Street will be maintained. The hourly intersection DoS for the Surgeon Street / College Access Roundabout is within capacity during both the weekday AM and PM peak periods.
 - **Sturgeon Street / Delancey Street Roundabout:** The hourly volume analysis indicates that the Degree of Saturation (DoS) for the Sturgeon Street / Delancey Street Roundabout is generally operating within practical capacity during both peak weekday periods.. This suggests that while the intersection will have significant traffic and slightly diminished operations during the Colleges' 30-min peak AM period, over the peak hour, the intersection will operate within accepted practical limits with the additional Master Plan traffic.
 - **Delancey Street / Dundas Street W:** The results suggest that, with or without the proposed College Master Plan expansion, the intersection will be within acceptable operating limits in the design horizon year of 2027 and 2037 during both peak periods.
 - **Dundas Street W / Poinsettia Way / College Access:**
 - For the Existing and Base scenarios (without development), all approach DoS are within acceptable limits and forecast queues will not impact adjacent accesses or intersections. The maximum average delay is 26 seconds (i.e., LOS D) for the south approach, which is considered acceptable.
 - For the Design (with Master Plan) scenarios, the southern approach is noted to be operating slightly outside of practical capacity during the 2027 AM peak ½ -hour period. The hourly volume analysis indicates that the Degree of Saturation (DoS) for the Dundas Street W / Poinsettia Way T-Intersection is operating within practical capacity during both the weekday AM and PM peak periods. This suggests that while the intersection will have significant traffic and slightly lower throughput during the College's 30-min peak AM period, over the peak hour, the intersection will be operating within acceptable practical limits given that the additional traffic will be rolling traffic.

6.6. Conclusion

Based on the assessment contained within this report, Colliers see no traffic engineering reason why the relevant approvals should not be granted.

Appendix A Development Plans



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PROJECT

MASTERPLAN DEVELOPMENT

JOB No.
QC2120

TITLE

COVER SHEET

DRAWN	APPROVED	
MS	SS	

DRAWING No. _____ ISSUE _____

A-00-0001 **F**

ADDRESS
97 Dundas Street West, Ormiston, QLD, 4160

REAL PROPERTY DESCRIPTION

Lot 1-5 on RP109238
Lot 1 on RP122772
Lot 1 on RP127130
Lot 100-102 on SP306734
Lot 1 & 2 on RP110831
Lot 3 on RP49638

- EXISTING BUILDINGS, STRUCTURES AND EMBELLISHMENTS
- NEW DEVELOPMENT WORKS
- DXX

NEW GENERAL SCHOOL DEVELOPMENT
- JXX

NEW JUNIOR SCHOOL DEVELOPMENT
- SXX

NEW SECONDARY SCHOOL DEVELOPMENT
- EXX

EXISTING BUILDINGS, STRUCTURES AND EMBELLISHMENTS

X	24-03-2025	ISSUE FOR INFORMATION	MS
W	24-02-2025	ISSUE FOR INFORMATION	MS
V	23-04-2024	ISSUE FOR INFORMATION	AS
U	13-03-2024	ISSUE FOR INFORMATION	MS
T	12-03-2024	ISSUE FOR INFORMATION	MS
S	08-03-2024	ISSUE FOR INFORMATION	MS
R	14-10-2022	REVISED PLAN	MS
Q	07-10-2022	REVISED PLAN	MS
P	28-09-2022	REVISED PLAN	MS
O	23-09-2022	REVISED PLAN	MS
N	21-03-2022	REVISED PLAN	MS
M	01-03-2022	REVISED PLAN	MS
L	03-12-2021	REVISED PLAN	CG
K	26-11-2021	JUNIOR SCHOOL & ELC REVISED	CG
J	16-11-2021	DELANCY ST PARKING REVISED	CG
I	10-11-2021	MASTER PLAN REVISED	CG
H	02-11-2021	MASTER PLAN REVISED	CG
G	22-10-2021	TENNIS COURTS REVISED	CG
#	DATE	REVISION	BY

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PROJECT

MASTERPLAN DEVELOPMENT

JOB No.

QC2120

TITLE

PROPOSED MASTER PLAN

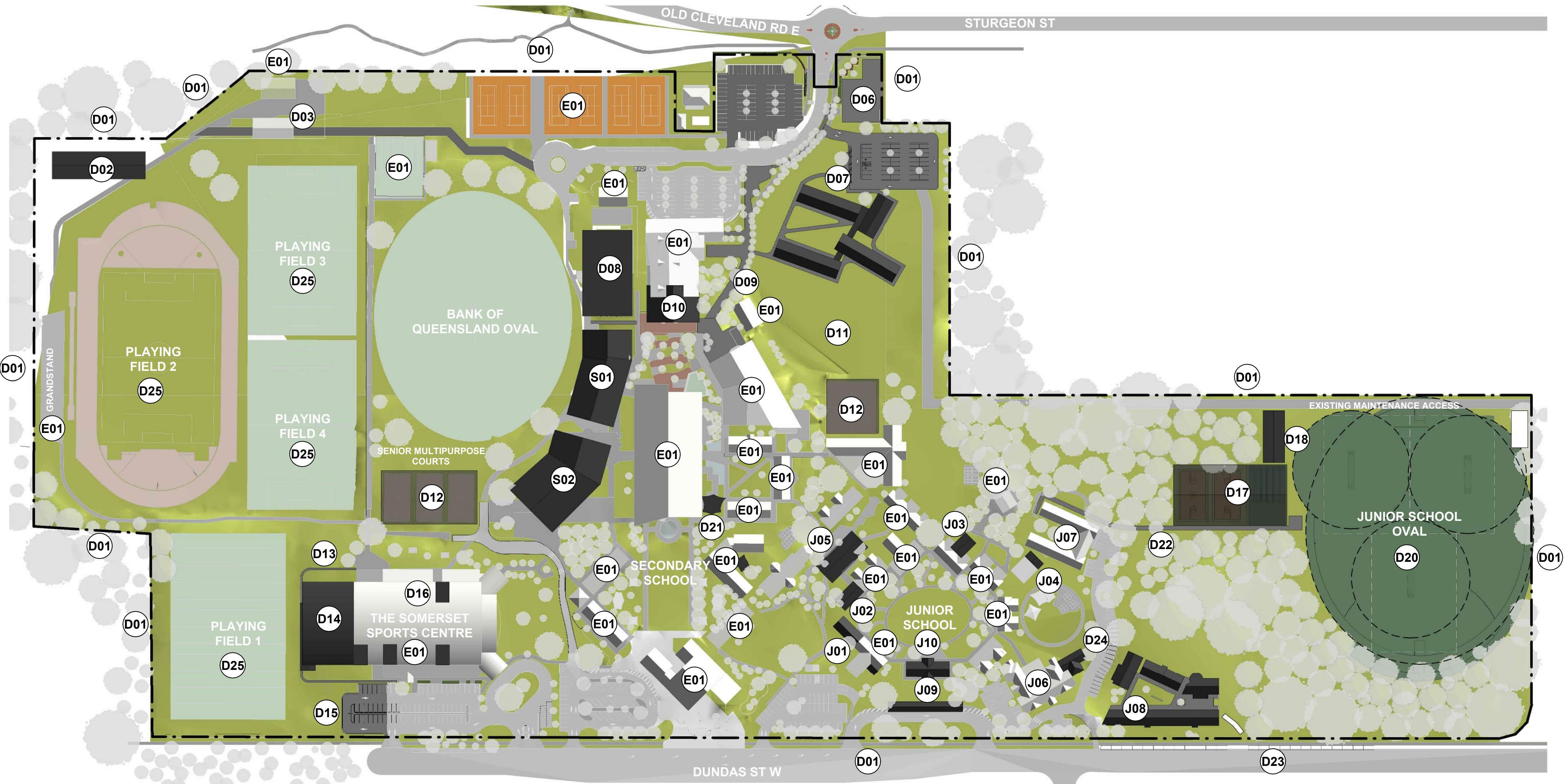
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DRAWING No.

A-01-0001

ISSUE

X



- D01NEW FULL PERIMETER BOUNDARY SECURITY FENCE WITH AUTOMATIC VEHICULAR SLIDING GATES, PEDESTRIAN ACCESS GATES AND KOALA CROSSING AS REQUIRED
- D02NEW MULTI USE BUILDING- EDUCATIONAL TEACHING SPACES AND STORAGE (2 STOREY)
- D03NEW MULTI USE BUILDING- UTILITIES, MAINTENANCE AND ARCHIVE (2 STOREY)
- D06NEW GROUNDS/GREEN KEEPERS' SHEDS
- D07NEW BOARDING FACILITY (3 STOREY) AND ASSOCIATED CARPAKING/DROP OFF ZONE
- D08NEW AQUATIC CENTRE (50m POOL) & MULTI-USE EDUCATIONAL BUILDING (2 STOREY)
- D09NEW STURGEON STREET CONNECTION PATH AND LANDSCAPE
- D10LINGO LIN PERFORMING ARTS THEATRE EXTENSION
- D11NEW OUTDOOR PLAY AREA
- D12COVERED AREA TO EXISTING MULTIPURPOSE COURTS
- D13NEW CONCRETE CONNECTION PATHWAY
- D14SPORTS COURT EXTENSION AND NEW GRANDSTAND (2 STOREY)
- D15CARPARK EXTENSION TO DUNDAS ST W CARPARK
- D16SOMERSET SPORTS CENTRE COVERED ENTRIES
- D17NEW INDOOR MULTI PURPOSE COURTS WITH ENCLOSED CRICKET PITCH AND NETS
- D18NEW STORAGE SHED INC NEW CHANGE ROOMS / AMENITIES (1 STOREY)
- D20NEW JUNIOR SCHOOL SPORTS FIELDS WITH EXTERNAL SPORTS LIGHTING
- D21NEW EXTERNAL SHADED SEATING
- D22NEW CONCRETE COVERED CONNECTION PATHWAY FOR BRANCH FALL PROTECTION
- D23NEW COUNCIL STREET PARALLEL PARKING
- D24EXTENSION TO EXISTING CARPARK
- D25NEW FIELD LIGHTING TO EXISTING FIELD
- J01BUILDING EXTENSION- YEAR 4 (1 STOREY)
- J02BUILDING EXTENSION- YEAR 5 (1 STOREY)

- J03NEW CHANGEROOM/AMENITIES (1 STOREY)
- J04EXTENSION TO AMENITIES (1 STOREY)
- J05EXTENSION TO CHANGEROOM/AMENITIES (1 STOREY)
- J06REPURPOSE AND EXTEND EXISTING PREP FOR GRADE 1 GLAS (1 STOREY)
- J07REPURPOSE EXISTING ELC FOR PREP PRECINCT (1 STOREY)
- J08NEW EARLY LEARNING CENTRE AND CONNECTED CARPARK (1 STOREY)
- J09NEW COVERED JUNIOR SCHOOL DROP OFF ZONE
- J10NEW ADMINISTRATION BUILDING (2 STOREY)
- S01NEW BUSINESS STUDIES AND ARTS PRECINCT (3 STOREY)
- S02NEW MULTI-USE BUILDING- EDUCATIONAL TEACHING SPACES WITH AMENITIES (2 STOREY)

- E01EXISTING BUILDINGS, STRUCTURES AND EMBELLISHMENTS

EXISTING CARPARKING	
ADMINISTRATION CARPARKING	48
BUS STOP	1
EXISTING STREET PARKING	9
JUNIOR SCHOOL CARPARKING	51
LINGO LIN PERFORMING ARTS CENTRE CARPARKING	73
PREP SCHOOL CARPARKING	41
SPORTS CENTRE CARPARKING	43
STURGEON STREET CARPARKING	72
	338
NEW CARPARKING	
EARLY LEARNING CARPARKING (D24)	18
NEW CARPARKING (D07)	39
NEW COUNCIL STREET PARALLEL PARKING (D23)	24
SOMERSET SPORTS CENTRE ADDITIONAL CARPARKING (D15)	26
	107

ADDRESS
97 Dundas Street West, Ormiston, QLD, 4160

REAL PROPERTY DESCRIPTION

Lot 1-5 on RP109238
Lot 1 on RP122772
Lot 1 on RP127130
Lot 100-102 on SP306734
Lot 1 & 2 on RP110831
Lot 3 on RP49638

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R	24-02-2025	ISSUE FOR INFORMATION	MS
Q	23-04-2024	ISSUE FOR INFORMATION	AS
P	09-04-2024	ISSUE FOR INFORMATION	MS
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J	29-02-2024	ISSUE FOR INFORMATION	MS
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H	14-10-2022	REVISED PLAN	MS
G	07-10-2022	REVISED PLAN	MS
F	28-09-2022	REVISED PLAN	MS
E	23-09-2022	REVISED PLAN	MS
D	21-03-2022	REVISED PLAN	MS
C	03-12-2021	REVISED PLAN	CG
B	12-11-2021	REVISED ISSUED	CG
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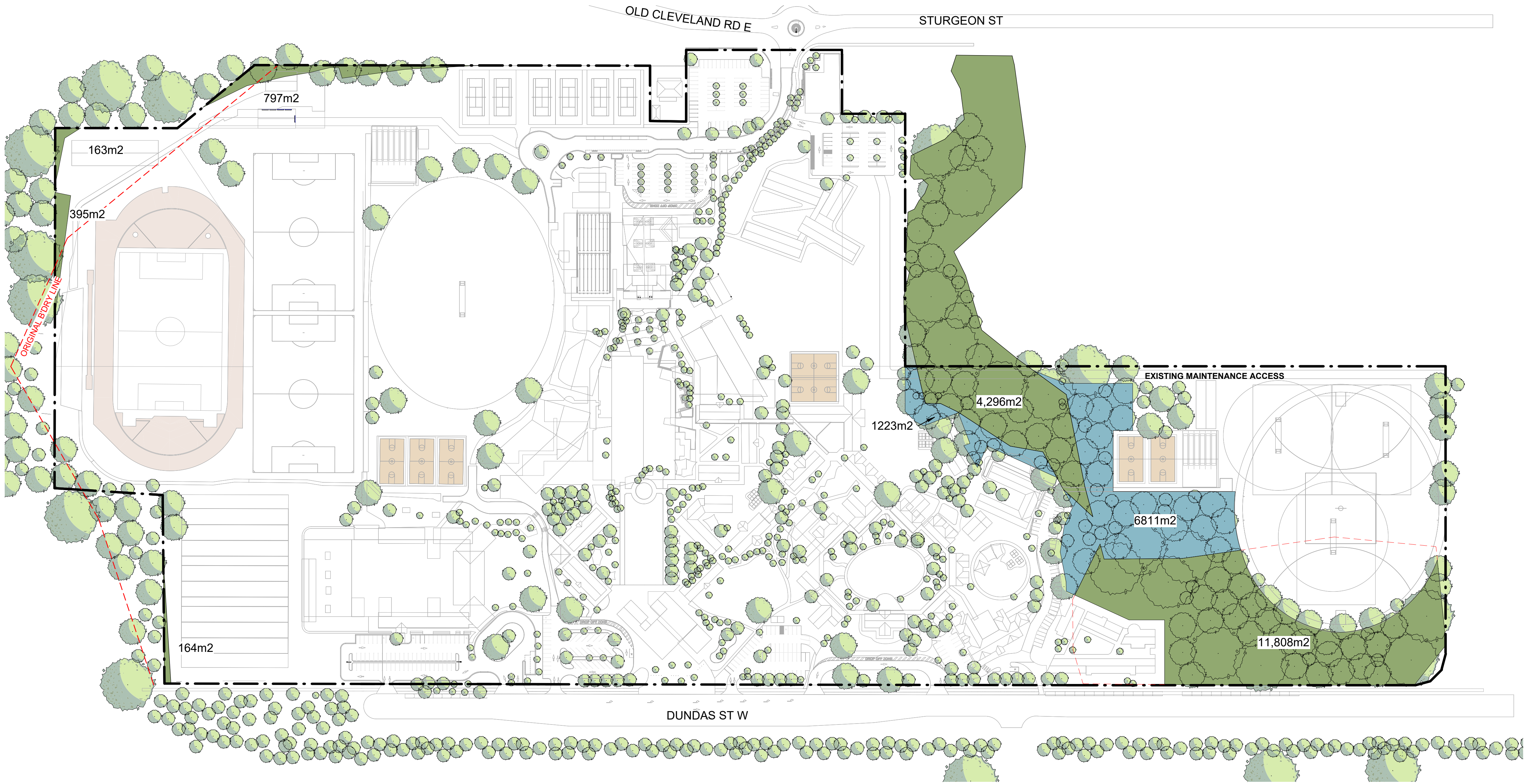
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MASTERPLAN DEVELOPMENT

JOB No.
QC2120

TITLE
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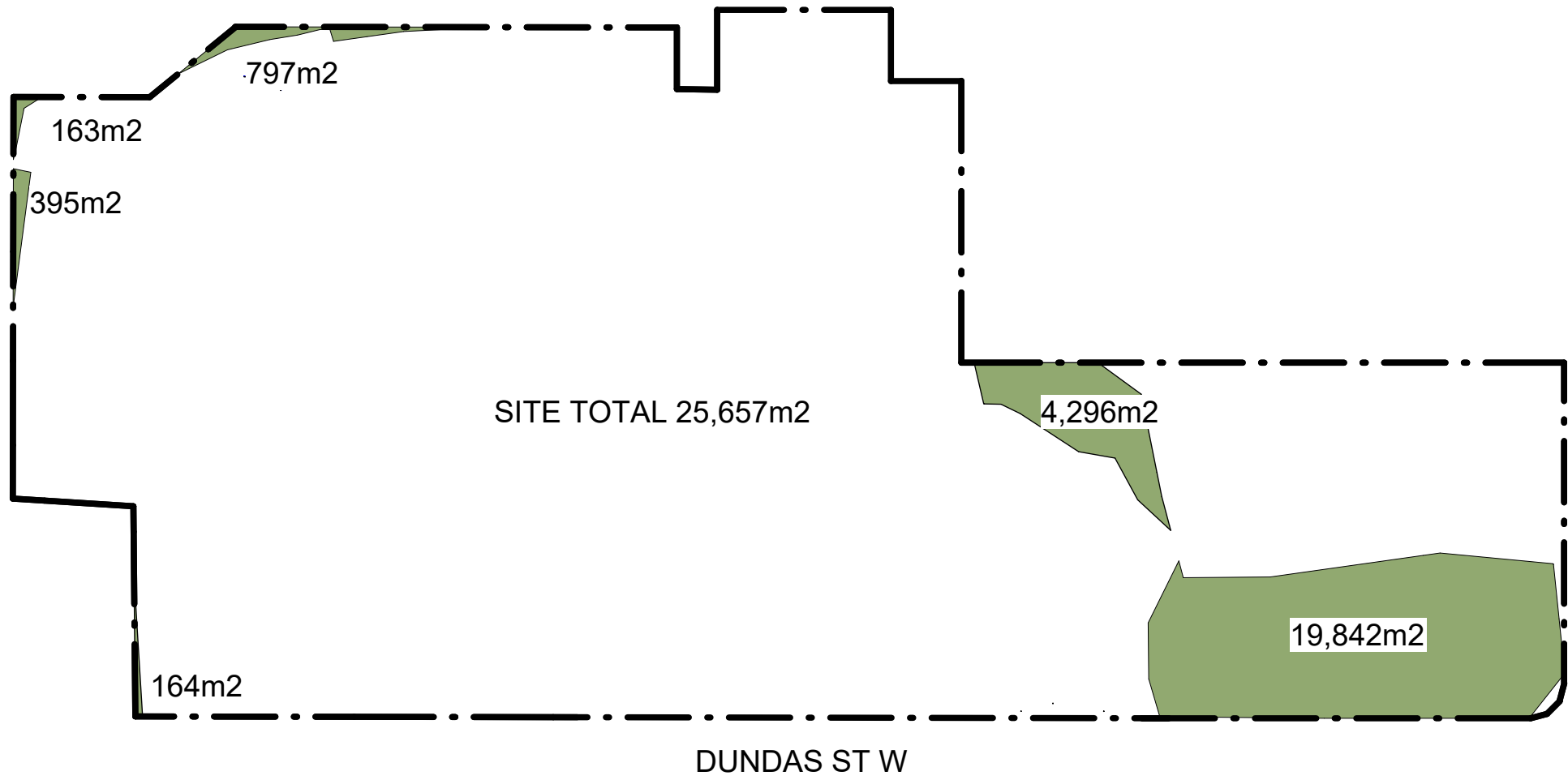
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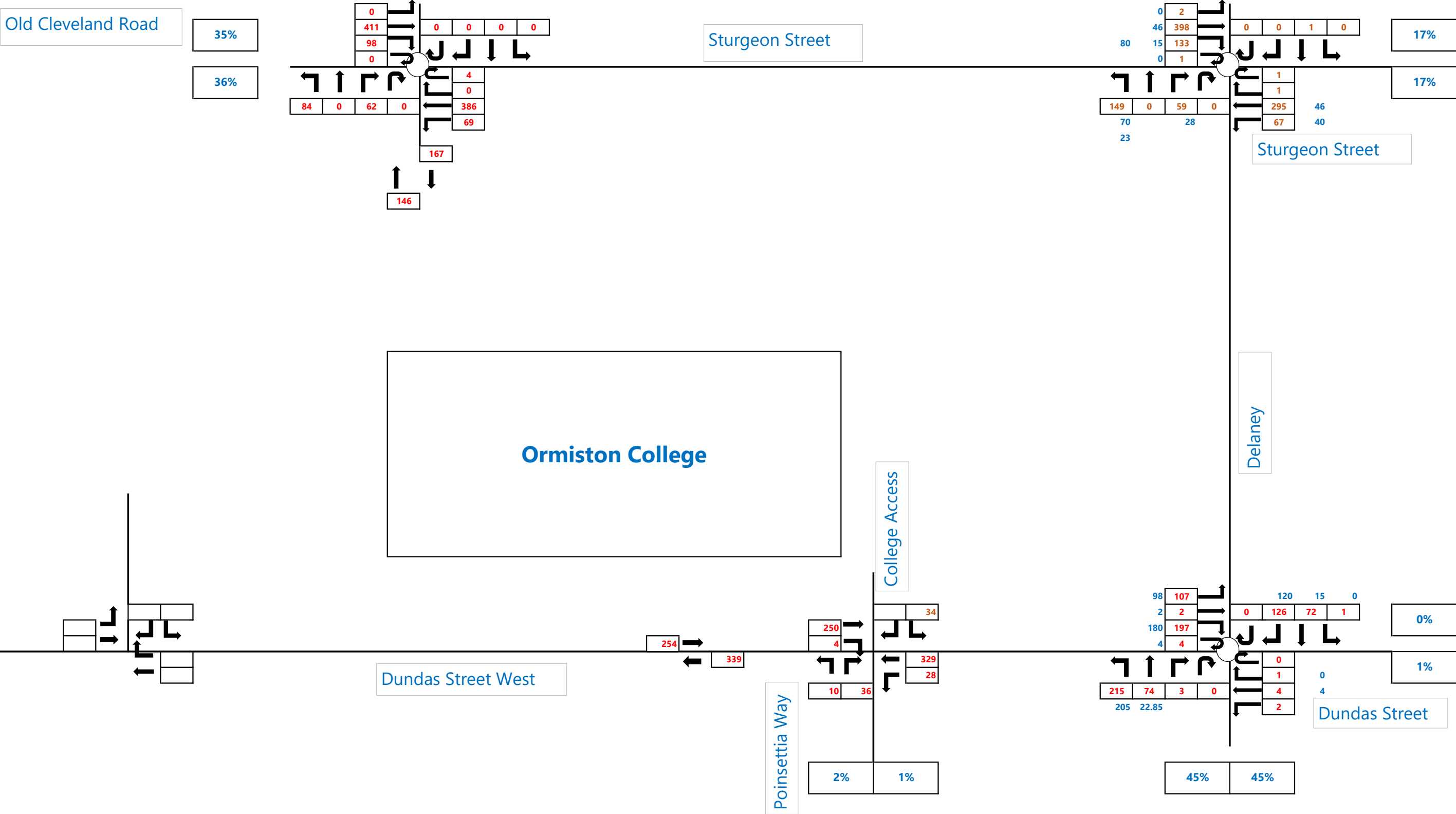
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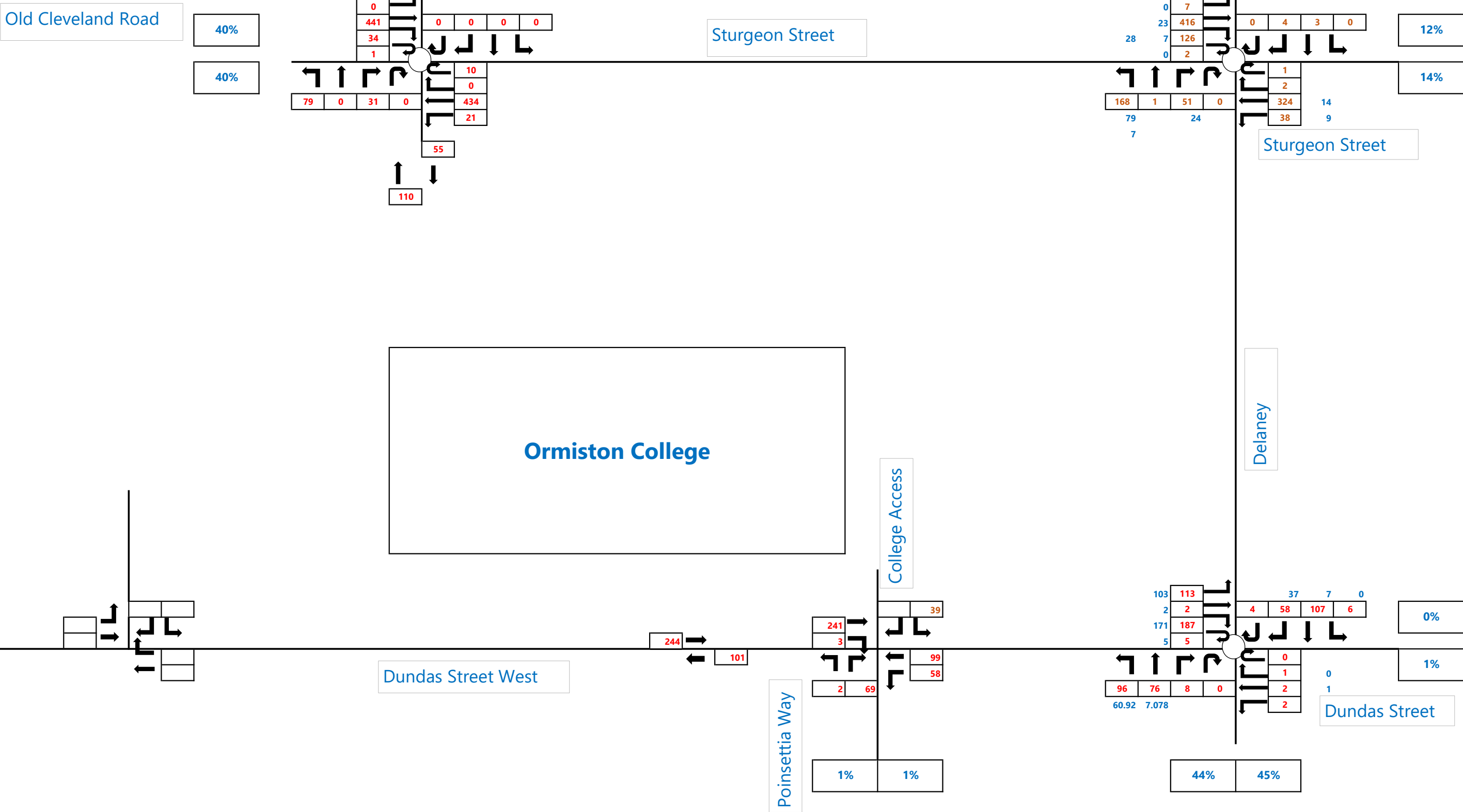
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TOTAL KOALA HABITAT ACHEIVED	25,657 m2	25,657 m2
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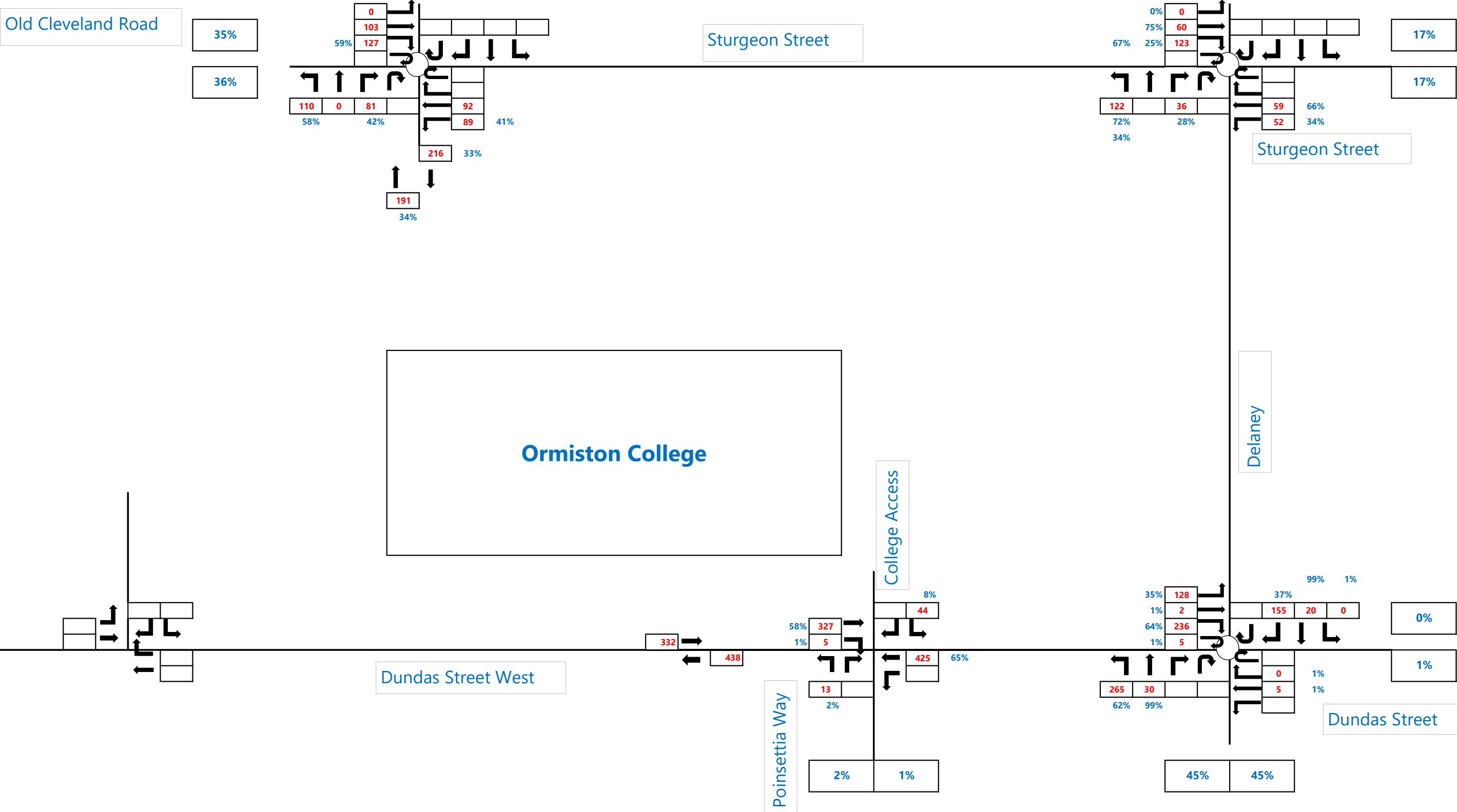


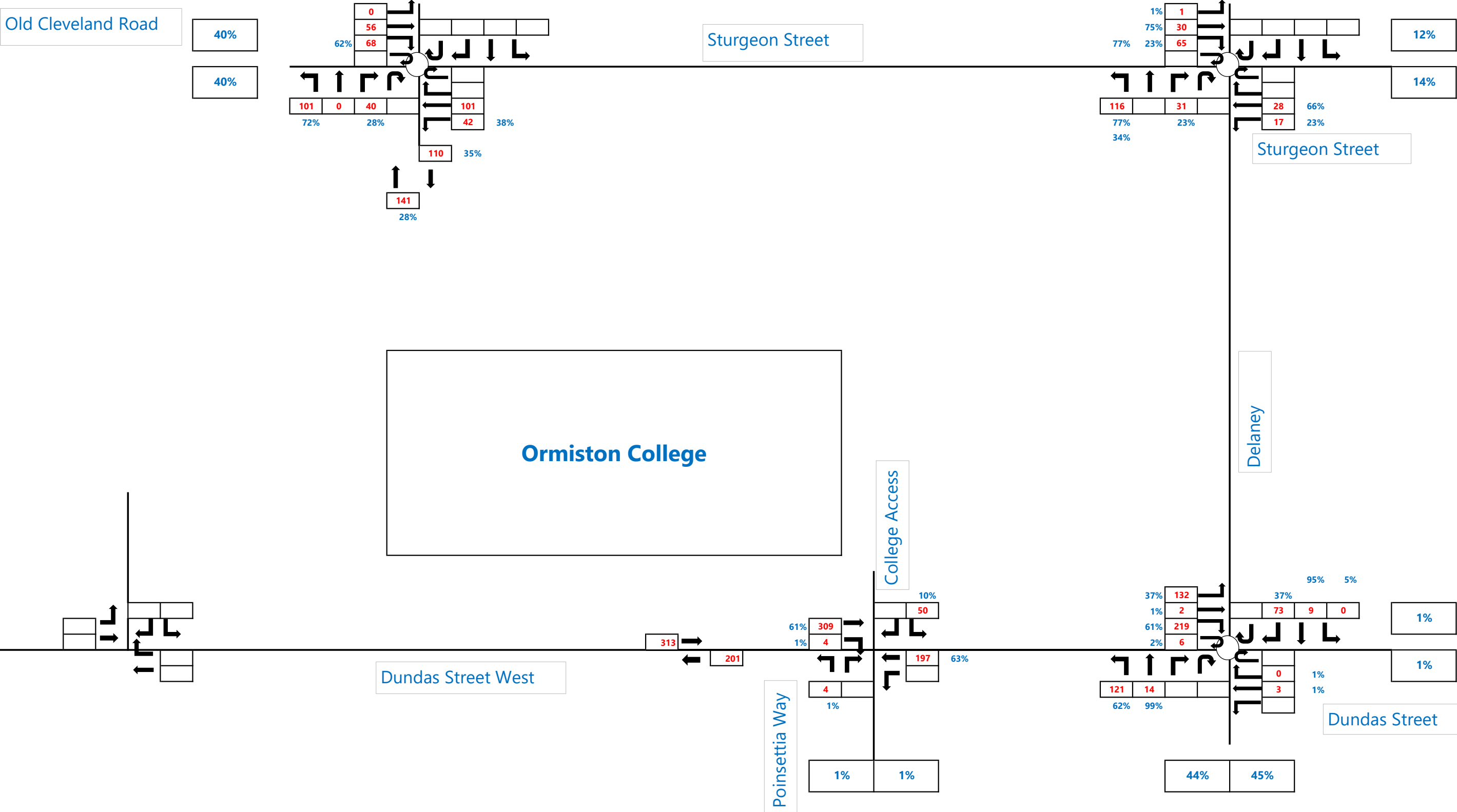
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Appendix B Traffic Network Diagrams









Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

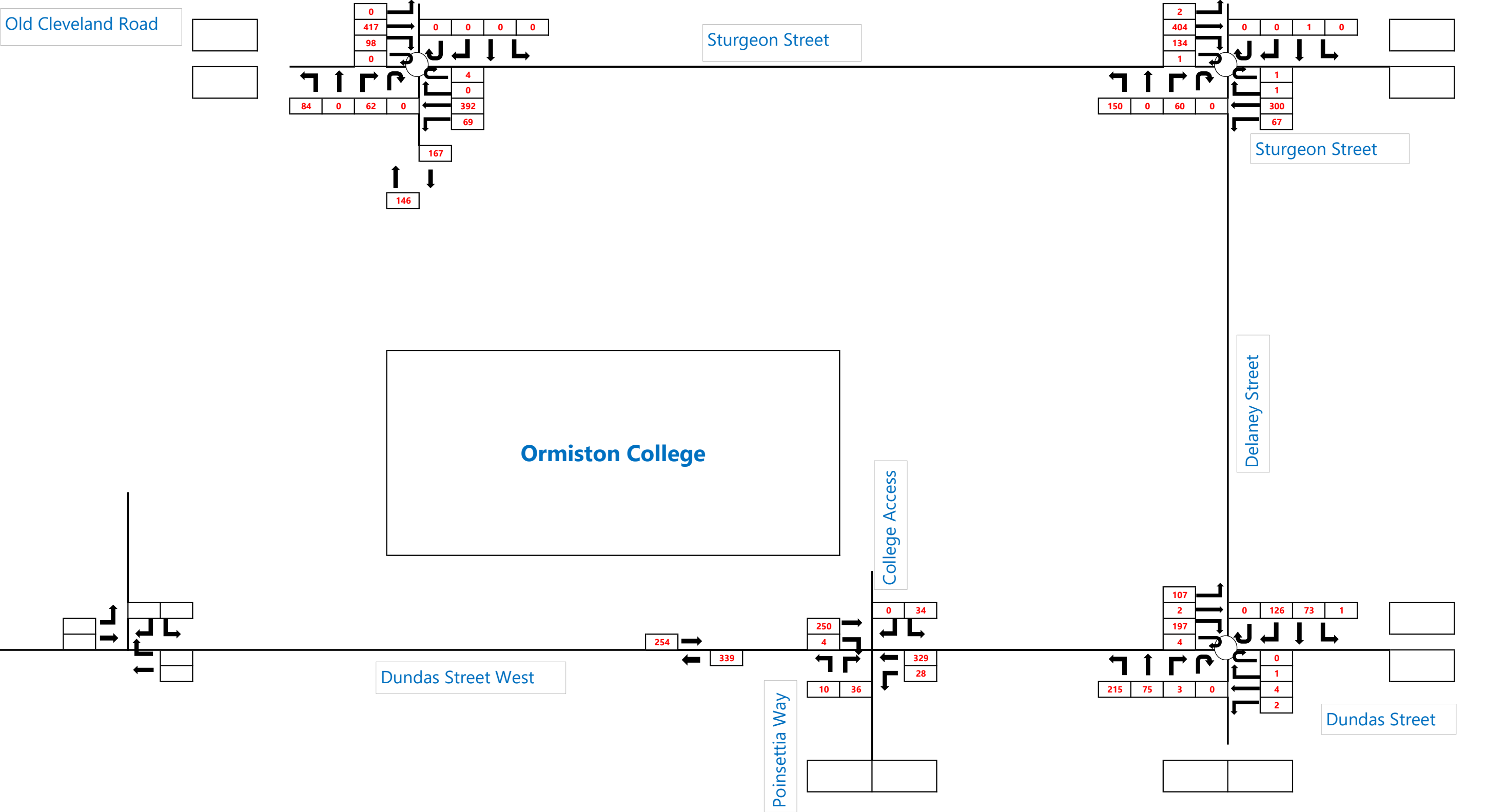
Delaney Street

College Access

Dundas Street West

Poinsettia Way

Dundas Street



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

Delaney Street

College Access

Dundas Street West

Poinsettia Way

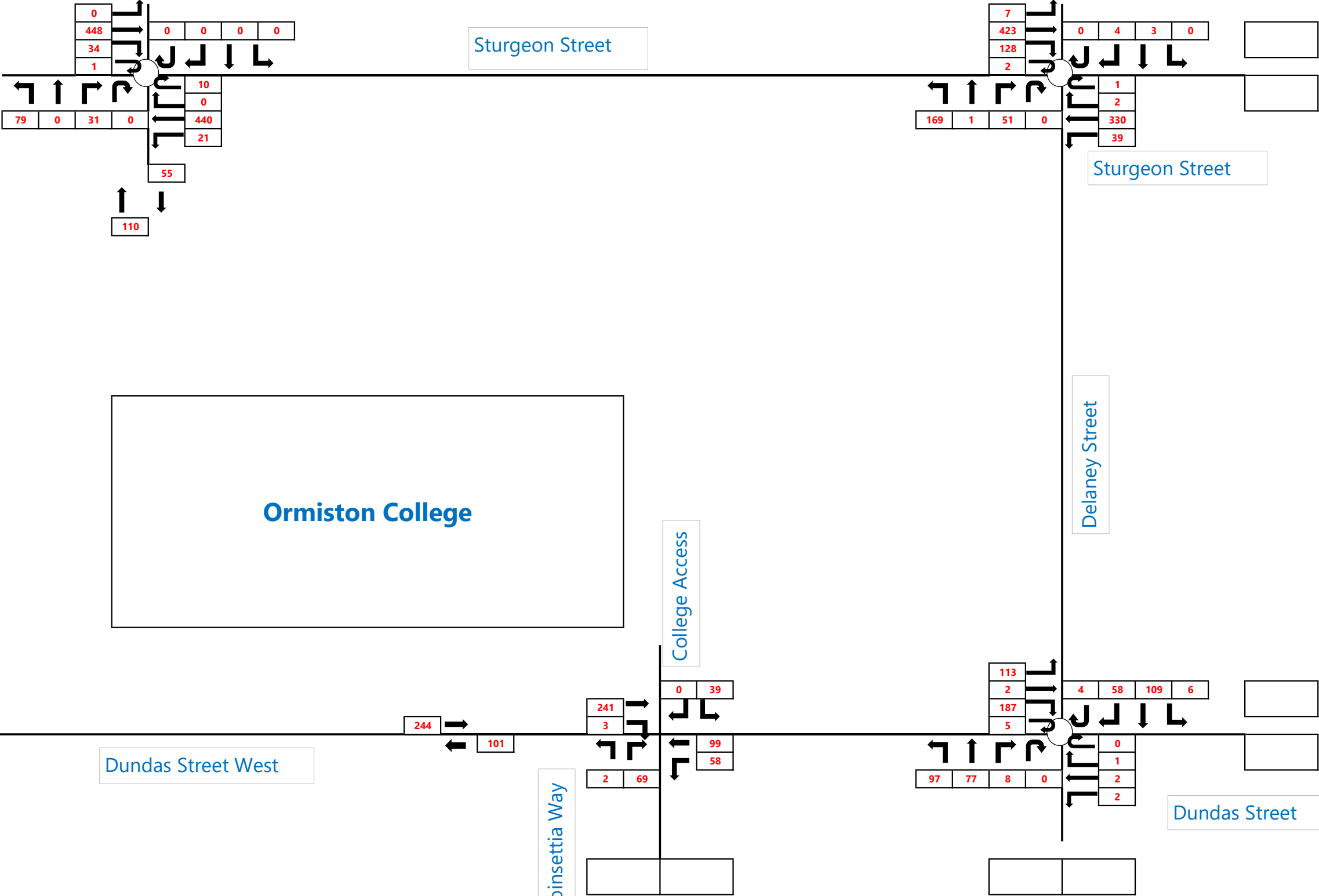
Dundas Street

Ormiston College Master Plan

2027 Base 30-minute PM Traffic Volumes - Weekday

Figure B6

Project 22BRT0853



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

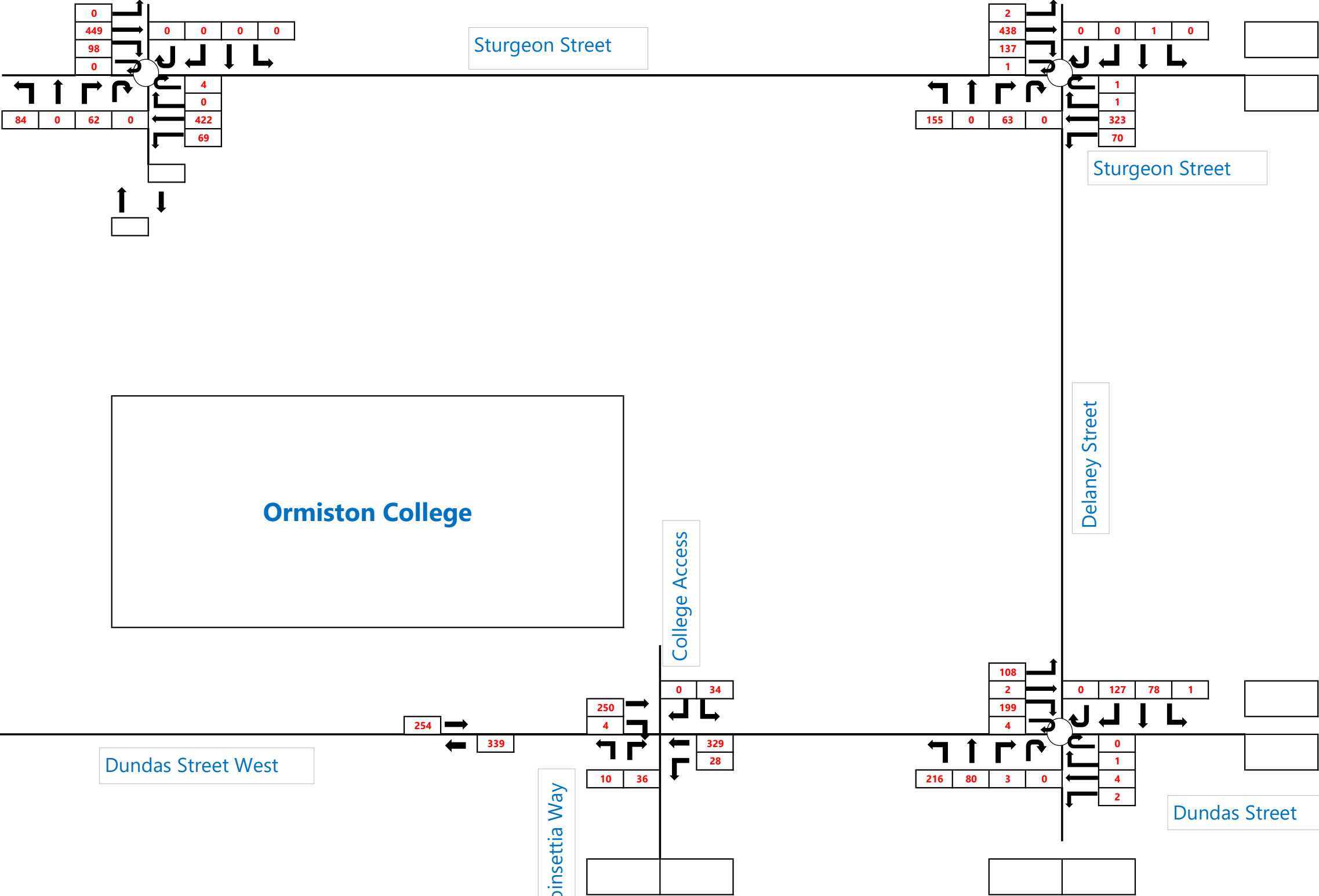
Delaney Street

College Access

Dundas Street West

Poinsettia Way

Dundas Street



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

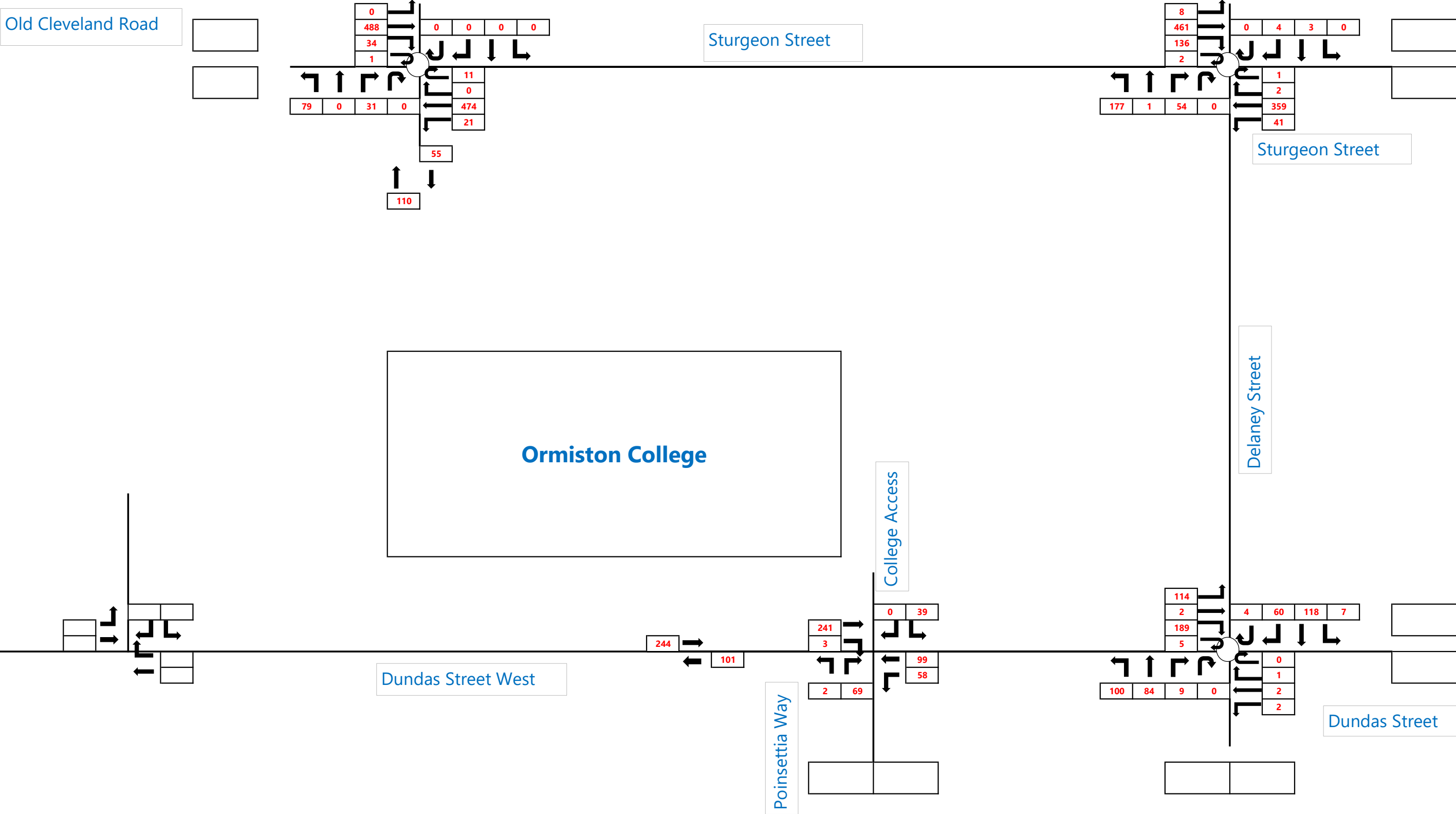
Delaney Street

College Access

Dundas Street West

Poinsettia Way

Dundas Street



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

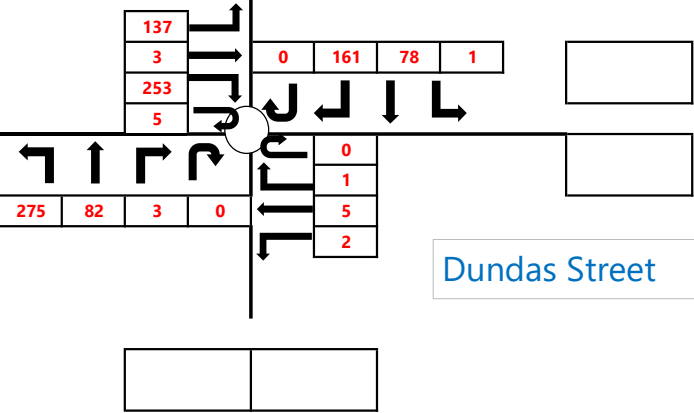
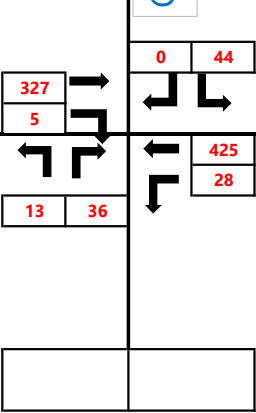
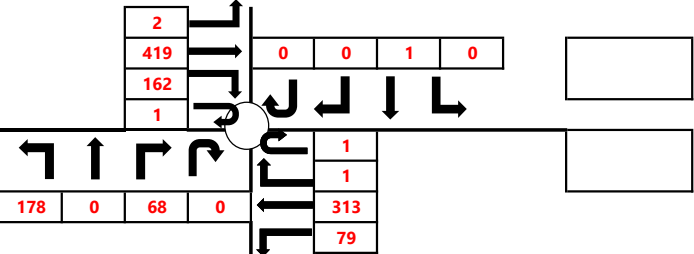
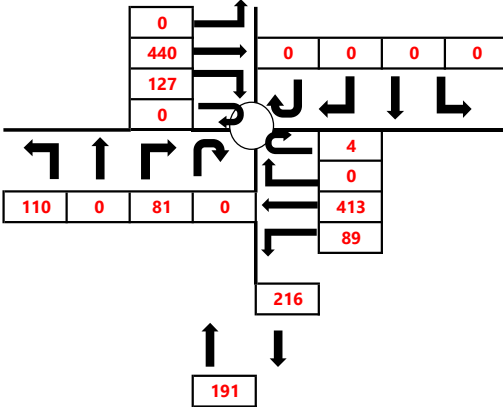
Delaney Street

College Access

Dundas Street West

Poinsettia Way

Dundas Street



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

Delaney Street

College Access

Dundas Street West

Poinsettia Way

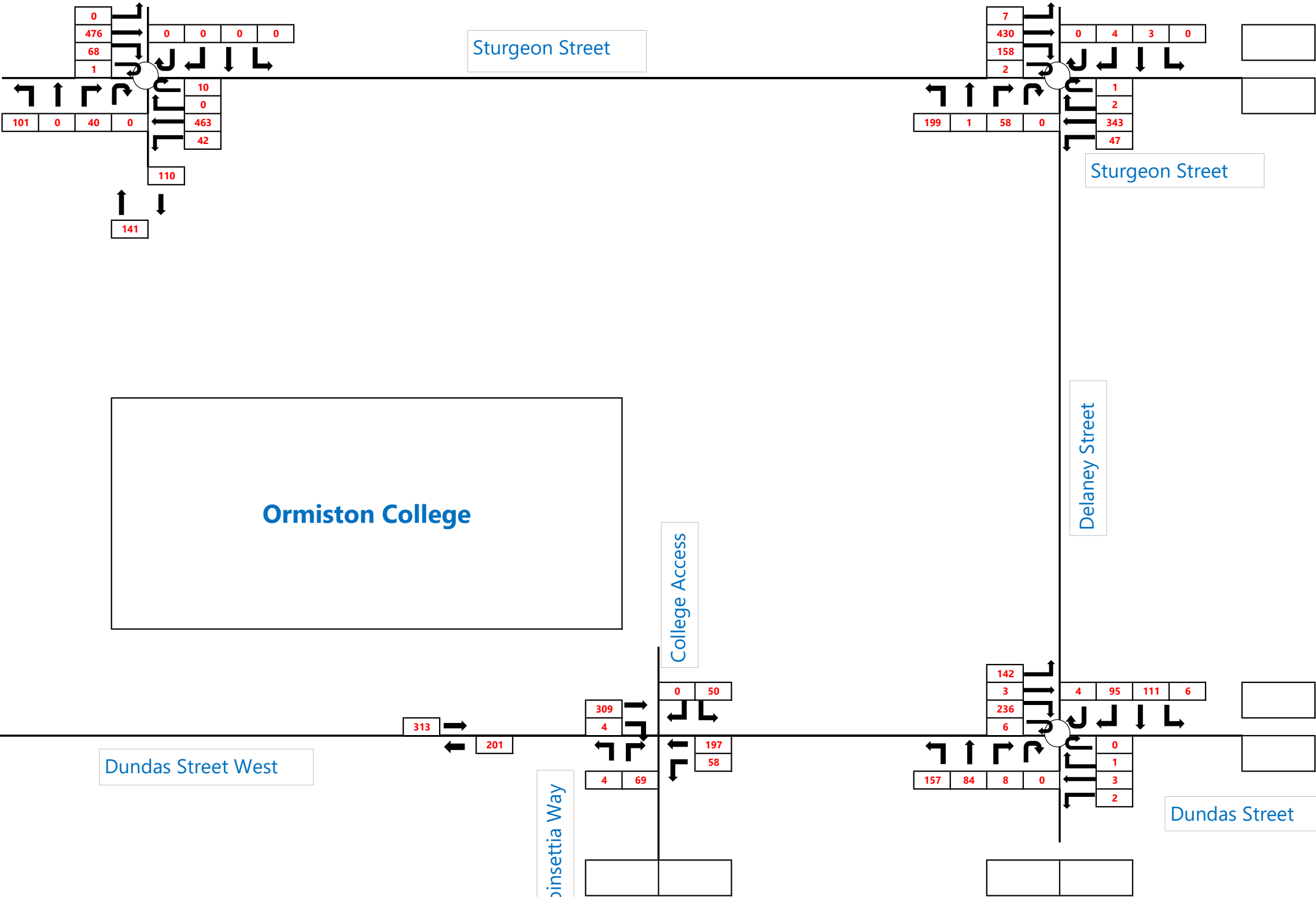
Dundas Street

Ormiston College Master Plan

2027 Design 30-minute PM Traffic Volumes - Weekday

Figure B10

Project 22BRT0853



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

Delaney Street

College Access

Dundas Street West

Poinsettia Way

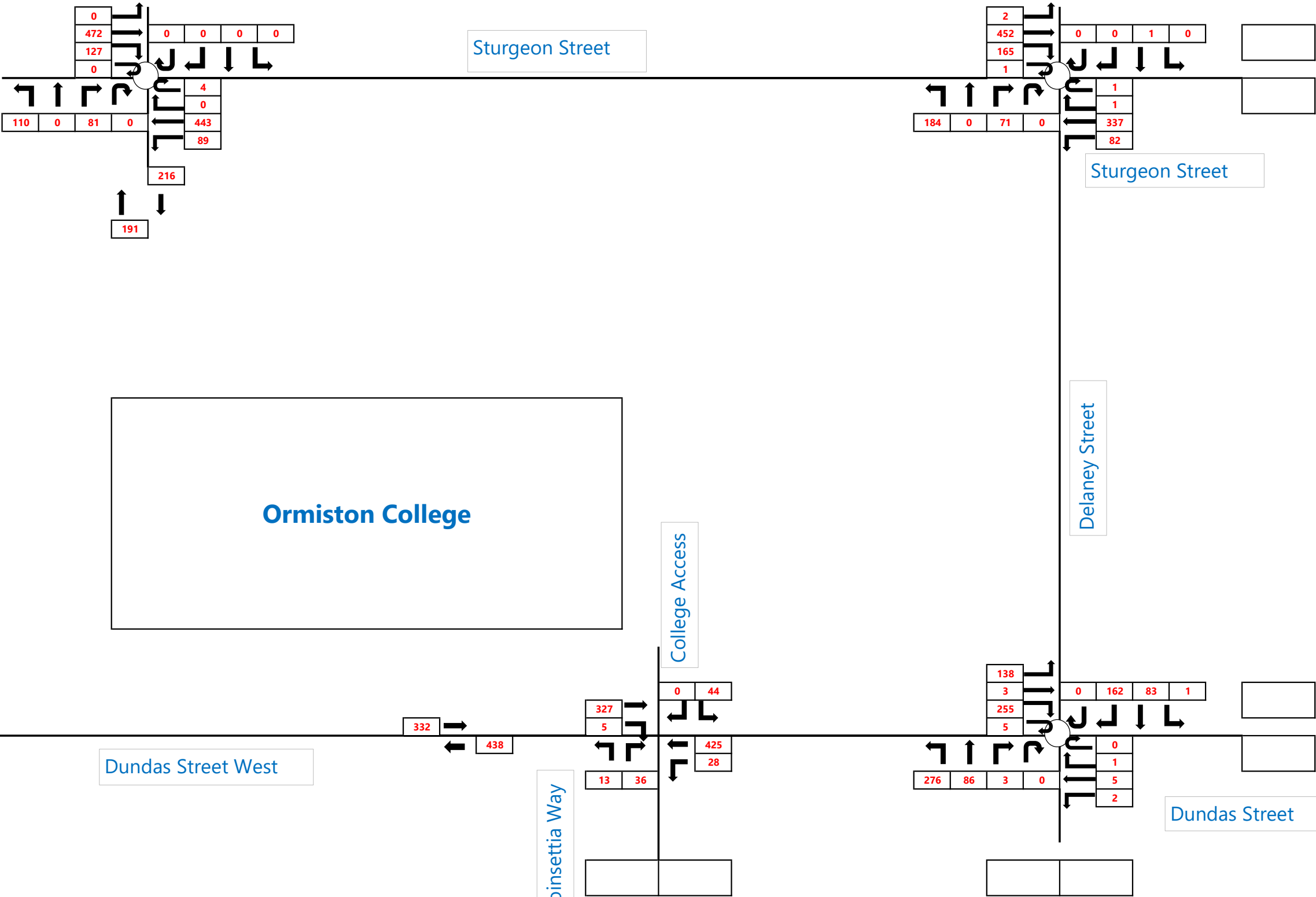
Dundas Street

Ormiston College Master Plan

2037 Design 30-minute AM Traffic Volumes - Weekday

Figure B11

Project 22BRT0853



Old Cleveland Road

Sturgeon Street

Sturgeon Street

Ormiston College

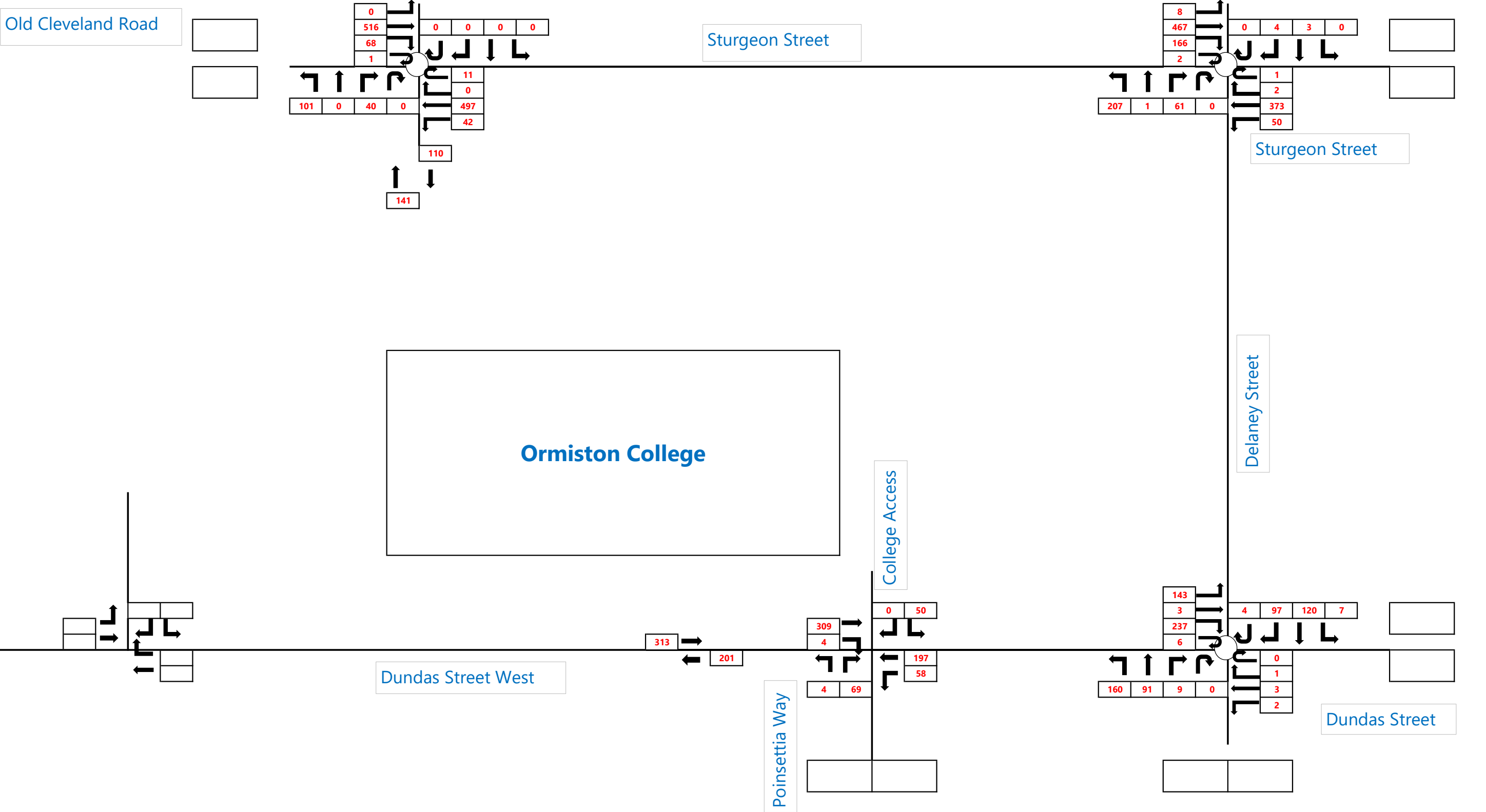
Delaney Street

College Access

Dundas Street West

Poinsettia Way

Dundas Street



Appendix C SIDRA Output Reports

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2025 Existing)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	168	1.6	168	1.6	0.474	11.0	LOS B	4.0	28.2	0.94	0.83	1.04	48.4
3	R2	All MCs	124	0.0	124	0.0	0.474	15.8	LOS B	4.0	28.2	0.94	0.83	1.04	48.0
3u	U	All MCs	2	0.0	2	0.0	0.474	17.9	LOS B	4.0	28.2	0.94	0.83	1.04	48.0
Approach			294	0.9	294	0.9	0.474	13.1	LOS B	4.0	28.2	0.94	0.83	1.04	48.2
East: Sturgeon St (E)															
4	L2	All MCs	138	0.0	138	0.0	0.746	6.5	LOS A	9.7	68.2	0.80	0.60	0.83	51.4
5	T1	All MCs	772	0.0	772	0.0	0.746	6.8	LOS A	9.7	68.2	0.80	0.60	0.83	51.7
6u	U	All MCs	8	0.0	8	0.0	0.746	13.5	LOS B	9.7	68.2	0.80	0.60	0.83	50.9
Approach			918	0.0	918	0.0	0.746	6.8	LOS A	9.7	68.2	0.80	0.60	0.83	51.7
West: Sturgeon St (W)															
11	T1	All MCs	822	0.0	822	0.0	0.762	5.6	LOS A	10.7	74.8	0.75	0.53	0.75	51.5
12	R2	All MCs	196	1.4	196	1.4	0.762	10.2	LOS B	10.7	74.8	0.75	0.53	0.75	50.7
12u	U	All MCs	2	0.0	2	0.0	0.762	12.3	LOS B	10.7	74.8	0.75	0.53	0.75	50.7
Approach			1020	0.3	1020	0.3	0.762	6.5	LOS A	10.7	74.8	0.75	0.53	0.75	51.4
All Vehicles			2232	0.2	2232	0.2	0.762	7.5	LOS A	10.7	74.8	0.79	0.60	0.82	51.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2025 Existing)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	158	1.6	158	1.6	0.356	10.9	LOS B	2.5	17.7	0.88	0.78	0.88	48.9
3	R2	All MCs	62	0.0	62	0.0	0.356	15.6	LOS B	2.5	17.7	0.88	0.78	0.88	48.5
3u	U	All MCs	2	0.0	2	0.0	0.356	17.7	LOS B	2.5	17.7	0.88	0.78	0.88	48.5
Approach			222	1.1	222	1.1	0.356	12.2	LOS B	2.5	17.7	0.88	0.78	0.88	48.8
East: Sturgeon St (E)															
4	L2	All MCs	42	0.0	42	0.0	0.629	4.5	LOS A	6.8	47.7	0.41	0.42	0.41	52.9
5	T1	All MCs	868	0.0	868	0.0	0.629	4.7	LOS A	6.8	47.7	0.41	0.42	0.41	53.2
6u	U	All MCs	20	0.0	20	0.0	0.629	11.4	LOS B	6.8	47.7	0.41	0.42	0.41	52.4
Approach			930	0.0	930	0.0	0.629	4.9	LOS A	6.8	47.7	0.41	0.42	0.41	53.2
West: Sturgeon St (W)															
11	T1	All MCs	882	0.0	882	0.0	0.658	4.9	LOS A	7.8	54.7	0.49	0.44	0.49	52.8
12	R2	All MCs	68	1.4	68	1.4	0.658	9.5	LOS A	7.8	54.7	0.49	0.44	0.49	51.9
12u	U	All MCs	2	0.0	2	0.0	0.658	11.6	LOS B	7.8	54.7	0.49	0.44	0.49	51.9
Approach			952	0.1	952	0.1	0.658	5.2	LOS A	7.8	54.7	0.49	0.44	0.49	52.7
All Vehicles			2104	0.2	2104	0.2	0.658	5.8	LOS A	7.8	54.7	0.50	0.47	0.50	52.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - AM Peak (Site Folder: 2025 Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	20	0.0	20	0.0	0.383	11.4	LOS B	1.4	9.7	0.85	1.00	1.09	42.3
3	R2	All MCs	72	0.0	72	0.0	0.383	26.0	LOS D	1.4	9.7	0.85	1.00	1.09	42.1
Approach			92	0.0	92	0.0	0.383	22.8	LOS C	1.4	9.7	0.85	1.00	1.09	42.1
East: Dundas St W (E)															
4	L2	All MCs	56	0.0	56	0.0	0.373	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	56.9
5	T1	All MCs	658	2.3	658	2.3	0.373	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	59.3
Approach			714	2.1	714	2.1	0.373	0.6	NA	0.0	0.0	0.00	0.05	0.00	59.1
North: College Access (N)															
7	L2	All MCs	68	0.0	68	0.0	0.069	7.6	LOS A	0.3	1.8	0.48	0.69	0.48	51.4
Approach			68	0.0	68	0.0	0.069	7.6	LOS A	0.3	1.8	0.48	0.69	0.48	51.4
West: Dundas St W (W)															
11	T1	All MCs	500	3.4	500	3.4	0.272	0.1	LOS A	0.1	0.9	0.03	0.04	0.03	59.7
12	R2	All MCs	8	0.0	8	0.0	0.272	9.6	LOS A	0.1	0.9	0.03	0.04	0.03	56.9
Approach			508	3.3	508	3.3	0.272	0.3	NA	0.1	0.9	0.03	0.04	0.03	59.7
All Vehicles			1382	2.3	1382	2.3	0.383	2.3	NA	1.4	9.7	0.09	0.14	0.11	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - PM Peak (Site Folder: 2025 Existing)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Poinsettia Way (S)															
1	L2	All MCs	4	0.0	4	0.0	0.337	7.2	LOS A	1.4	9.5	0.70	0.93	0.88	47.1
3	R2	All MCs	138	0.0	138	0.0	0.337	14.2	LOS B	1.4	9.5	0.70	0.93	0.88	46.9
Approach			142	0.0	142	0.0	0.337	14.0	LOS B	1.4	9.5	0.70	0.93	0.88	46.9
East: Dundas St W (E)															
4	L2	All MCs	116	1.0	116	1.0	0.167	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.6
5	T1	All MCs	198	4.2	198	4.2	0.167	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.9
Approach			314	3.0	314	3.0	0.167	2.1	NA	0.0	0.0	0.00	0.22	0.00	57.0
North: College Access (N)															
7	L2	All MCs	78	0.0	78	0.0	0.077	7.5	LOS A	0.3	2.1	0.48	0.68	0.48	51.4
Approach			78	0.0	78	0.0	0.077	7.5	LOS A	0.3	2.1	0.48	0.68	0.48	51.4
West: Dundas St W (W)															
11	T1	All MCs	482	4.0	482	4.0	0.258	0.0	LOS A	0.1	0.4	0.01	0.01	0.01	59.9
12	R2	All MCs	6	0.0	6	0.0	0.258	6.0	LOS A	0.1	0.4	0.01	0.01	0.01	57.1
Approach			488	4.0	488	4.0	0.258	0.1	NA	0.1	0.4	0.01	0.01	0.01	59.8
All Vehicles			1022	2.8	1022	2.8	0.337	3.2	NA	1.4	9.5	0.14	0.25	0.17	56.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Delancey St/Dundas St - AM Peak (Site Folder: 2025 Existing)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	430	2.0	430	2.0	0.528	5.9	LOS A	4.3	30.7	0.66	0.58	0.66	52.4
2	T1	All MCs	148	0.0	148	0.0	0.528	6.1	LOS A	4.3	30.7	0.66	0.58	0.66	52.8
3	R2	All MCs	6	2.0	6	2.0	0.528	10.8	LOS B	4.3	30.7	0.66	0.58	0.66	51.9
3u	U	All MCs	2	0.0	2	0.0	0.528	12.8	LOS B	4.3	30.7	0.66	0.58	0.66	52.0
Approach			586	1.5	586	1.5	0.528	6.0	LOS A	4.3	30.7	0.66	0.58	0.66	52.5
East: Dundas St (E)															
4	L2	All MCs	4	0.0	4	0.0	0.023	8.5	LOS A	0.1	1.0	0.73	0.66	0.73	50.4
5	T1	All MCs	8	4.0	8	4.0	0.023	8.9	LOS A	0.1	1.0	0.73	0.66	0.73	50.6
6	R2	All MCs	2	2.0	2	2.0	0.023	13.5	LOS B	0.1	1.0	0.73	0.66	0.73	49.8
6u	U	All MCs	2	0.0	2	0.0	0.023	15.5	LOS B	0.1	1.0	0.73	0.66	0.73	49.9
Approach			16	2.3	16	2.3	0.023	10.2	LOS B	0.1	1.0	0.73	0.66	0.73	50.3
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.412	6.6	LOS A	2.9	20.2	0.68	0.67	0.68	50.4
8	T1	All MCs	144	0.0	144	0.0	0.412	6.8	LOS A	2.9	20.2	0.68	0.67	0.68	50.7
9	R2	All MCs	252	0.0	252	0.0	0.412	11.5	LOS B	2.9	20.2	0.68	0.67	0.68	49.9
9u	U	All MCs	2	0.0	2	0.0	0.412	13.6	LOS B	2.9	20.2	0.68	0.67	0.68	49.9
Approach			400	0.0	400	0.0	0.412	9.8	LOS A	2.9	20.2	0.68	0.67	0.68	50.2
West: Dundas St (W)															
10	L2	All MCs	214	0.0	214	0.0	0.491	5.0	LOS A	4.1	29.0	0.51	0.58	0.51	51.2
11	T1	All MCs	4	3.0	4	3.0	0.491	5.3	LOS A	4.1	29.0	0.51	0.58	0.51	51.4
12	R2	All MCs	394	2.0	394	2.0	0.491	9.9	LOS A	4.1	29.0	0.51	0.58	0.51	50.6
12u	U	All MCs	8	0.0	8	0.0	0.491	11.9	LOS B	4.1	29.0	0.51	0.58	0.51	50.7
Approach			620	1.3	620	1.3	0.491	8.2	LOS A	4.1	29.0	0.51	0.58	0.51	50.8
All Vehicles			1622	1.1	1622	1.1	0.528	7.8	LOS A	4.3	30.7	0.61	0.60	0.61	51.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Delancey St/Dundas St - PM Peak (Site Folder: 2025 Existing)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	192	2.0	192	2.0	0.286	4.7	LOS A	1.9	13.4	0.39	0.48	0.39	53.2
2	T1	All MCs	152	0.0	152	0.0	0.286	4.9	LOS A	1.9	13.4	0.39	0.48	0.39	53.6
3	R2	All MCs	16	2.0	16	2.0	0.286	9.5	LOS A	1.9	13.4	0.39	0.48	0.39	52.6
3u	U	All MCs	2	0.0	2	0.0	0.286	11.6	LOS B	1.9	13.4	0.39	0.48	0.39	52.7
Approach			362	1.1	362	1.1	0.286	5.0	LOS A	1.9	13.4	0.39	0.48	0.39	53.3
East: Dundas St (E)															
4	L2	All MCs	4	0.0	4	0.0	0.016	7.7	LOS A	0.1	0.6	0.68	0.63	0.68	50.6
5	T1	All MCs	4	0.0	4	0.0	0.016	8.0	LOS A	0.1	0.6	0.68	0.63	0.68	50.9
6	R2	All MCs	2	0.0	2	0.0	0.016	12.6	LOS B	0.1	0.6	0.68	0.63	0.68	50.1
6u	U	All MCs	2	0.0	2	0.0	0.016	14.7	LOS B	0.1	0.6	0.68	0.63	0.68	50.1
Approach			12	0.0	12	0.0	0.016	9.8	LOS A	0.1	0.6	0.68	0.63	0.68	50.6
North: Delancey St (N)															
7	L2	All MCs	12	0.0	12	0.0	0.358	6.4	LOS A	2.4	16.8	0.65	0.64	0.65	51.1
8	T1	All MCs	214	0.0	214	0.0	0.358	6.7	LOS A	2.4	16.8	0.65	0.64	0.65	51.4
9	R2	All MCs	116	0.0	116	0.0	0.358	11.3	LOS B	2.4	16.8	0.65	0.64	0.65	50.6
9u	U	All MCs	8	0.0	8	0.0	0.358	13.4	LOS B	2.4	16.8	0.65	0.64	0.65	50.6
Approach			350	0.0	350	0.0	0.358	8.3	LOS A	2.4	16.8	0.65	0.64	0.65	51.1
West: Dundas St (W)															
10	L2	All MCs	226	0.0	226	0.0	0.492	5.1	LOS A	3.8	27.2	0.51	0.59	0.51	51.2
11	T1	All MCs	4	4.0	4	4.0	0.492	5.5	LOS A	3.8	27.2	0.51	0.59	0.51	51.5
12	R2	All MCs	374	2.0	374	2.0	0.492	10.0	LOS B	3.8	27.2	0.51	0.59	0.51	50.7
12u	U	All MCs	10	0.0	10	0.0	0.492	12.1	LOS B	3.8	27.2	0.51	0.59	0.51	50.8
Approach			614	1.2	614	1.2	0.492	8.2	LOS A	3.8	27.2	0.51	0.59	0.51	50.9
All Vehicles			1338	0.9	1338	0.9	0.492	7.4	LOS A	3.8	27.2	0.52	0.57	0.52	51.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/Delaney St - AM Peak (Site Folder: 2025 Existing)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	298	1.6	298	1.6	0.540	9.7	LOS A	4.9	34.3	0.88	0.80	1.01	49.7
2	T1	All MCs	2	0.0	2	0.0	0.540	9.8	LOS A	4.9	34.3	0.88	0.80	1.01	50.0
3	R2	All MCs	118	0.0	118	0.0	0.540	14.4	LOS B	4.9	34.3	0.88	0.80	1.01	49.2
3u	U	All MCs	2	0.0	2	0.0	0.540	16.5	LOS B	4.9	34.3	0.88	0.80	1.01	49.2
Approach			420	1.1	420	1.1	0.540	11.0	LOS B	4.9	34.3	0.88	0.80	1.01	49.5
East: Sturgeon St (E)															
4	L2	All MCs	134	0.0	134	0.0	0.651	6.8	LOS A	6.9	48.3	0.77	0.63	0.81	51.6
5	T1	All MCs	590	0.0	590	0.0	0.651	7.0	LOS A	6.9	48.3	0.77	0.63	0.81	51.9
6	R2	All MCs	2	0.0	2	0.0	0.651	11.6	LOS B	6.9	48.3	0.77	0.63	0.81	51.1
6u	U	All MCs	2	0.0	2	0.0	0.651	13.7	LOS B	6.9	48.3	0.77	0.63	0.81	51.1
Approach			728	0.0	728	0.0	0.651	7.0	LOS A	6.9	48.3	0.77	0.63	0.81	51.8
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.017	14.8	LOS B	0.1	0.8	0.96	0.72	0.96	46.4
8	T1	All MCs	2	0.0	2	0.0	0.017	15.0	LOS B	0.1	0.8	0.96	0.72	0.96	46.7
9	R2	All MCs	2	0.0	2	0.0	0.017	19.6	LOS B	0.1	0.8	0.96	0.72	0.96	46.0
Approach			6	0.0	6	0.0	0.017	16.5	LOS B	0.1	0.8	0.96	0.72	0.96	46.4
West: Sturgeon St (W)															
10	L2	All MCs	4	0.0	4	0.0	0.787	5.4	LOS A	11.8	82.6	0.77	0.54	0.77	51.0
11	T1	All MCs	796	0.0	796	0.0	0.787	5.6	LOS A	11.8	82.6	0.77	0.54	0.77	51.4
12	R2	All MCs	266	1.4	266	1.4	0.787	10.3	LOS B	11.8	82.6	0.77	0.54	0.77	50.5
12u	U	All MCs	2	0.0	2	0.0	0.787	12.3	LOS B	11.8	82.6	0.77	0.54	0.77	50.6
Approach			1068	0.4	1068	0.4	0.787	6.8	LOS A	11.8	82.6	0.77	0.54	0.77	51.1
All Vehicles			2222	0.4	2222	0.4	0.787	7.7	LOS A	11.8	82.6	0.79	0.62	0.83	51.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/Delaney St - PM Peak (Site Folder: 2025 Existing)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	336	1.6	336	1.6	0.612	12.0	LOS B	6.2	44.0	0.94	0.88	1.19	48.3
2	T1	All MCs	2	0.0	2	0.0	0.612	12.2	LOS B	6.2	44.0	0.94	0.88	1.19	48.6
3	R2	All MCs	102	0.0	102	0.0	0.612	16.8	LOS B	6.2	44.0	0.94	0.88	1.19	47.9
3u	U	All MCs	2	0.0	2	0.0	0.612	18.9	LOS B	6.2	44.0	0.94	0.88	1.19	47.9
Approach			442	1.2	442	1.2	0.612	13.2	LOS B	6.2	44.0	0.94	0.88	1.19	48.2
East: Sturgeon St (E)															
4	L2	All MCs	76	0.0	76	0.0	0.650	6.7	LOS A	6.8	47.8	0.76	0.62	0.80	51.5
5	T1	All MCs	648	0.0	648	0.0	0.650	7.0	LOS A	6.8	47.8	0.76	0.62	0.80	51.8
6	R2	All MCs	4	0.0	4	0.0	0.650	11.6	LOS B	6.8	47.8	0.76	0.62	0.80	51.0
6u	U	All MCs	2	0.0	2	0.0	0.650	13.7	LOS B	6.8	47.8	0.76	0.62	0.80	51.0
Approach			730	0.0	730	0.0	0.650	7.0	LOS A	6.8	47.8	0.76	0.62	0.80	51.8
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.045	15.3	LOS B	0.3	2.3	0.97	0.80	0.97	45.7
8	T1	All MCs	6	0.0	6	0.0	0.045	15.5	LOS B	0.3	2.3	0.97	0.80	0.97	46.0
9	R2	All MCs	8	0.0	8	0.0	0.045	20.1	LOS C	0.3	2.3	0.97	0.80	0.97	45.4
Approach			16	0.0	16	0.0	0.045	17.8	LOS B	0.3	2.3	0.97	0.80	0.97	45.6
West: Sturgeon St (W)															
10	L2	All MCs	14	0.0	14	0.0	0.796	5.3	LOS A	12.6	88.6	0.76	0.52	0.76	51.1
11	T1	All MCs	832	0.0	832	0.0	0.796	5.5	LOS A	12.6	88.6	0.76	0.52	0.76	51.4
12	R2	All MCs	252	1.4	252	1.4	0.796	10.1	LOS B	12.6	88.6	0.76	0.52	0.76	50.6
12u	U	All MCs	4	0.0	4	0.0	0.796	12.2	LOS B	12.6	88.6	0.76	0.52	0.76	50.6
Approach			1102	0.3	1102	0.3	0.796	6.6	LOS A	12.6	88.6	0.76	0.52	0.76	51.2
All Vehicles			2290	0.4	2290	0.4	0.796	8.1	LOS A	12.6	88.6	0.80	0.62	0.86	50.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2027 Base)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: College Access (s)															
1	L2	All MCs	168	1.6	168	1.6	0.484	11.4	LOS B	4.2	29.3	0.95	0.84	1.07	48.1
3	R2	All MCs	124	0.0	124	0.0	0.484	16.2	LOS B	4.2	29.3	0.95	0.84	1.07	47.8
3u	U	All MCs	2	0.0	2	0.0	0.484	18.3	LOS B	4.2	29.3	0.95	0.84	1.07	47.8
Approach			294	0.9	294	0.9	0.484	13.5	LOS B	4.2	29.3	0.95	0.84	1.07	48.0
East: Sturgeon St (E)															
4	L2	All MCs	138	0.0	138	0.0	0.755	6.7	LOS A	10.2	71.4	0.81	0.61	0.86	51.3
5	T1	All MCs	784	0.0	784	0.0	0.755	6.9	LOS A	10.2	71.4	0.81	0.61	0.86	51.7
6u	U	All MCs	8	0.0	8	0.0	0.755	13.6	LOS B	10.2	71.4	0.81	0.61	0.86	50.9
Approach			930	0.0	930	0.0	0.755	6.9	LOS A	10.2	71.4	0.81	0.61	0.86	51.6
West: Sturgeon St (W)															
11	T1	All MCs	834	0.0	834	0.0	0.771	5.6	LOS A	11.0	77.3	0.76	0.54	0.76	51.5
12	R2	All MCs	196	1.4	196	1.4	0.771	10.3	LOS B	11.0	77.3	0.76	0.54	0.76	50.6
12u	U	All MCs	2	0.0	2	0.0	0.771	12.3	LOS B	11.0	77.3	0.76	0.54	0.76	50.7
Approach			1032	0.3	1032	0.3	0.771	6.5	LOS A	11.0	77.3	0.76	0.54	0.76	51.3
All Vehicles			2256	0.2	2256	0.2	0.771	7.6	LOS A	11.0	77.3	0.81	0.60	0.84	51.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2027 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: College Access (s)															
1	L2	All MCs	158	1.6	158	1.6	0.362	11.0	LOS B	2.6	18.1	0.89	0.78	0.89	48.8
3	R2	All MCs	62	0.0	62	0.0	0.362	15.8	LOS B	2.6	18.1	0.89	0.78	0.89	48.4
3u	U	All MCs	2	0.0	2	0.0	0.362	17.9	LOS B	2.6	18.1	0.89	0.78	0.89	48.4
Approach			222	1.1	222	1.1	0.362	12.4	LOS B	2.6	18.1	0.89	0.78	0.89	48.6
East: Sturgeon St (E)															
4	L2	All MCs	42	0.0	42	0.0	0.636	4.5	LOS A	7.0	49.2	0.42	0.42	0.42	52.9
5	T1	All MCs	880	0.0	880	0.0	0.636	4.7	LOS A	7.0	49.2	0.42	0.42	0.42	53.2
6u	U	All MCs	20	0.0	20	0.0	0.636	11.4	LOS B	7.0	49.2	0.42	0.42	0.42	52.4
Approach			942	0.0	942	0.0	0.636	4.9	LOS A	7.0	49.2	0.42	0.42	0.42	53.2
West: Sturgeon St (W)															
11	T1	All MCs	896	0.0	896	0.0	0.667	4.9	LOS A	8.1	56.5	0.50	0.44	0.50	52.7
12	R2	All MCs	68	1.4	68	1.4	0.667	9.5	LOS A	8.1	56.5	0.50	0.44	0.50	51.9
12u	U	All MCs	2	0.0	2	0.0	0.667	11.6	LOS B	8.1	56.5	0.50	0.44	0.50	51.9
Approach			966	0.1	966	0.1	0.667	5.2	LOS A	8.1	56.5	0.50	0.44	0.50	52.7
All Vehicles			2130	0.2	2130	0.2	0.667	5.8	LOS A	8.1	56.5	0.50	0.47	0.50	52.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - AM
Peak (Site Folder: 2027 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	20	0.0	20	0.0	0.383	11.4	LOS B	1.4	9.7	0.85	1.00	1.09	42.3
3	R2	All MCs	72	0.0	72	0.0	0.383	26.0	LOS D	1.4	9.7	0.85	1.00	1.09	42.1
Approach			92	0.0	92	0.0	0.383	22.8	LOS C	1.4	9.7	0.85	1.00	1.09	42.1
East: Dundas St W (E)															
4	L2	All MCs	56	0.0	56	0.0	0.373	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	56.9
5	T1	All MCs	658	2.3	658	2.3	0.373	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	59.3
Approach			714	2.1	714	2.1	0.373	0.6	NA	0.0	0.0	0.00	0.05	0.00	59.1
North: ELC Exit															
7	L2	All MCs	68	0.0	68	0.0	0.069	7.6	LOS A	0.3	1.8	0.48	0.69	0.48	51.4
Approach			68	0.0	68	0.0	0.069	7.6	LOS A	0.3	1.8	0.48	0.69	0.48	51.4
West: Dundas St W (W)															
11	T1	All MCs	500	3.4	500	3.4	0.272	0.1	LOS A	0.1	0.9	0.03	0.04	0.03	59.7
12	R2	All MCs	8	0.0	8	0.0	0.272	9.6	LOS A	0.1	0.9	0.03	0.04	0.03	56.9
Approach			508	3.3	508	3.3	0.272	0.3	NA	0.1	0.9	0.03	0.04	0.03	59.7
All Vehicles			1382	2.3	1382	2.3	0.383	2.3	NA	1.4	9.7	0.09	0.14	0.11	57.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

▼ Site: 101 [Dundas St/Poinsettia Way/College Access - PM
Peak (Site Folder: 2027 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	4	0.0	4	0.0	0.337	7.2	LOS A	1.4	9.5	0.70	0.93	0.88	47.1
3	R2	All MCs	138	0.0	138	0.0	0.337	14.2	LOS B	1.4	9.5	0.70	0.93	0.88	46.9
Approach			142	0.0	142	0.0	0.337	14.0	LOS B	1.4	9.5	0.70	0.93	0.88	46.9
East: Dundas St W (E)															
4	L2	All MCs	116	1.0	116	1.0	0.167	5.6	LOS A	0.0	0.0	0.00	0.22	0.00	55.6
5	T1	All MCs	198	4.2	198	4.2	0.167	0.0	LOS A	0.0	0.0	0.00	0.22	0.00	57.9
Approach			314	3.0	314	3.0	0.167	2.1	NA	0.0	0.0	0.00	0.22	0.00	57.0
North: ELC Exit															
7	L2	All MCs	78	0.0	78	0.0	0.077	7.5	LOS A	0.3	2.1	0.48	0.68	0.48	51.4
Approach			78	0.0	78	0.0	0.077	7.5	LOS A	0.3	2.1	0.48	0.68	0.48	51.4
West: Dundas St W (W)															
11	T1	All MCs	482	4.0	482	4.0	0.258	0.0	LOS A	0.1	0.4	0.01	0.01	0.01	59.9
12	R2	All MCs	6	0.0	6	0.0	0.258	6.0	LOS A	0.1	0.4	0.01	0.01	0.01	57.1
Approach			488	4.0	488	4.0	0.258	0.1	NA	0.1	0.4	0.01	0.01	0.01	59.8
All Vehicles			1022	2.8	1022	2.8	0.337	3.2	NA	1.4	9.5	0.14	0.25	0.17	56.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akcelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 101 [Delancey St/Dundas St - AM Peak (Site Folder: 2027 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	430	1.6	430	1.6	0.534	5.9	LOS A	4.4	31.3	0.67	0.58	0.67	52.4
2	T1	All MCs	150	3.3	150	3.3	0.534	6.2	LOS A	4.4	31.3	0.67	0.58	0.67	52.7
3	R2	All MCs	6	0.0	6	0.0	0.534	10.7	LOS B	4.4	31.3	0.67	0.58	0.67	52.0
3u	U	All MCs	2	0.0	2	0.0	0.534	12.8	LOS B	4.4	31.3	0.67	0.58	0.67	52.0
Approach			588	2.0	588	2.0	0.534	6.1	LOS A	4.4	31.3	0.67	0.58	0.67	52.5
East: Dundas St (E)															
4	L2	All MCs	4	0.0	4	0.0	0.023	8.6	LOS A	0.1	1.0	0.73	0.66	0.73	50.4
5	T1	All MCs	8	0.0	8	0.0	0.023	8.8	LOS A	0.1	1.0	0.73	0.66	0.73	50.7
6	R2	All MCs	2	0.0	2	0.0	0.023	13.4	LOS B	0.1	1.0	0.73	0.66	0.73	49.9
6u	U	All MCs	2	0.0	2	0.0	0.023	15.5	LOS B	0.1	1.0	0.73	0.66	0.73	49.9
Approach			16	0.0	16	0.0	0.023	10.2	LOS B	0.1	1.0	0.73	0.66	0.73	50.4
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.424	6.6	LOS A	3.0	21.4	0.69	0.67	0.69	50.3
8	T1	All MCs	146	4.0	146	4.0	0.424	7.0	LOS A	3.0	21.4	0.69	0.67	0.69	50.5
9	R2	All MCs	252	2.9	252	2.9	0.424	11.6	LOS B	3.0	21.4	0.69	0.67	0.69	49.8
9u	U	All MCs	2	0.0	2	0.0	0.424	13.6	LOS B	3.0	21.4	0.69	0.67	0.69	49.9
Approach			402	3.3	402	3.3	0.424	9.9	LOS A	3.0	21.4	0.69	0.67	0.69	50.1
West: Dundas St (W)															
10	L2	All MCs	214	2.8	214	2.8	0.495	5.1	LOS A	4.2	29.5	0.52	0.58	0.52	51.0
11	T1	All MCs	4	0.0	4	0.0	0.495	5.2	LOS A	4.2	29.5	0.52	0.58	0.52	51.4
12	R2	All MCs	394	1.4	394	1.4	0.495	9.9	LOS A	4.2	29.5	0.52	0.58	0.52	50.6
12u	U	All MCs	8	0.0	8	0.0	0.495	12.0	LOS B	4.2	29.5	0.52	0.58	0.52	50.6
Approach			620	1.9	620	1.9	0.495	8.2	LOS A	4.2	29.5	0.52	0.58	0.52	50.7
All Vehicles			1626	2.2	1626	2.2	0.534	7.9	LOS A	4.4	31.3	0.62	0.61	0.62	51.2

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Delancey St/Dundas St - PM Peak (Site Folder: 2027 Base)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	194	1.8	194	1.8	0.291	4.7	LOS A	1.9	13.7	0.39	0.48	0.39	53.2
2	T1	All MCs	154	1.8	154	1.8	0.291	4.9	LOS A	1.9	13.7	0.39	0.48	0.39	53.5
3	R2	All MCs	16	0.0	16	0.0	0.291	9.5	LOS A	1.9	13.7	0.39	0.48	0.39	52.7
3u	U	All MCs	2	0.0	2	0.0	0.291	11.6	LOS B	1.9	13.7	0.39	0.48	0.39	52.7
Approach			366	1.7	366	1.7	0.291	5.0	LOS A	1.9	13.7	0.39	0.48	0.39	53.3
East: Dundas St (E)															
4	L2	All MCs	4	0.0	4	0.0	0.016	7.8	LOS A	0.1	0.6	0.68	0.64	0.68	50.6
5	T1	All MCs	4	0.0	4	0.0	0.016	8.0	LOS A	0.1	0.6	0.68	0.64	0.68	50.9
6	R2	All MCs	2	0.0	2	0.0	0.016	12.7	LOS B	0.1	0.6	0.68	0.64	0.68	50.1
6u	U	All MCs	2	0.0	2	0.0	0.016	14.7	LOS B	0.1	0.6	0.68	0.64	0.68	50.1
Approach			12	0.0	12	0.0	0.016	9.8	LOS A	0.1	0.6	0.68	0.64	0.68	50.5
North: Delancey St (N)															
7	L2	All MCs	12	12.5	12	12.5	0.366	6.9	LOS A	2.5	17.5	0.66	0.64	0.66	50.7
8	T1	All MCs	218	1.1	218	1.1	0.366	6.7	LOS A	2.5	17.5	0.66	0.64	0.66	51.4
9	R2	All MCs	116	1.3	116	1.3	0.366	11.3	LOS B	2.5	17.5	0.66	0.64	0.66	50.6
9u	U	All MCs	8	0.0	8	0.0	0.366	13.4	LOS B	2.5	17.5	0.66	0.64	0.66	50.6
Approach			354	1.6	354	1.6	0.366	8.4	LOS A	2.5	17.5	0.66	0.64	0.66	51.1
West: Dundas St (W)															
10	L2	All MCs	226	4.1	226	4.1	0.499	5.3	LOS A	3.9	28.1	0.52	0.59	0.52	51.1
11	T1	All MCs	4	0.0	4	0.0	0.499	5.4	LOS A	3.9	28.1	0.52	0.59	0.52	51.5
12	R2	All MCs	374	2.3	374	2.3	0.499	10.1	LOS B	3.9	28.1	0.52	0.59	0.52	50.6
12u	U	All MCs	10	0.0	10	0.0	0.499	12.1	LOS B	3.9	28.1	0.52	0.59	0.52	50.7
Approach			614	2.9	614	2.9	0.499	8.3	LOS A	3.9	28.1	0.52	0.59	0.52	50.8
All Vehicles			1346	2.2	1346	2.2	0.499	7.5	LOS A	3.9	28.1	0.52	0.57	0.52	51.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 101 [Sturgeon St/Delaney St - AM Peak (Site Folder: 2027 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	300	1.6	300	1.6	0.553	10.0	LOS B	5.1	36.0	0.89	0.81	1.04	49.4
2	T1	All MCs	2	0.0	2	0.0	0.553	10.2	LOS B	5.1	36.0	0.89	0.81	1.04	49.8
3	R2	All MCs	120	0.0	120	0.0	0.553	14.8	LOS B	5.1	36.0	0.89	0.81	1.04	49.0
3u	U	All MCs	2	0.0	2	0.0	0.553	16.9	LOS B	5.1	36.0	0.89	0.81	1.04	49.0
Approach			424	1.1	424	1.1	0.553	11.4	LOS B	5.1	36.0	0.89	0.81	1.04	49.3
East: Sturgeon St (E)															
4	L2	All MCs	134	0.0	134	0.0	0.663	7.0	LOS A	7.3	50.8	0.78	0.64	0.84	51.5
5	T1	All MCs	600	0.0	600	0.0	0.663	7.2	LOS A	7.3	50.8	0.78	0.64	0.84	51.8
6	R2	All MCs	2	0.0	2	0.0	0.663	11.8	LOS B	7.3	50.8	0.78	0.64	0.84	51.0
6u	U	All MCs	2	0.0	2	0.0	0.663	13.9	LOS B	7.3	50.8	0.78	0.64	0.84	51.0
Approach			738	0.0	738	0.0	0.663	7.2	LOS A	7.3	50.8	0.78	0.64	0.84	51.8
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.017	15.2	LOS B	0.1	0.9	0.97	0.73	0.97	46.1
8	T1	All MCs	2	0.0	2	0.0	0.017	15.4	LOS B	0.1	0.9	0.97	0.73	0.97	46.4
9	R2	All MCs	2	0.0	2	0.0	0.017	20.1	LOS C	0.1	0.9	0.97	0.73	0.97	45.8
Approach			6	0.0	6	0.0	0.017	16.9	LOS B	0.1	0.9	0.97	0.73	0.97	46.1
West: Sturgeon St (W)															
10	L2	All MCs	4	0.0	4	0.0	0.800	5.4	LOS A	12.3	86.2	0.80	0.54	0.80	50.9
11	T1	All MCs	808	0.0	808	0.0	0.800	5.7	LOS A	12.3	86.2	0.80	0.54	0.80	51.3
12	R2	All MCs	268	1.4	268	1.4	0.800	10.3	LOS B	12.3	86.2	0.80	0.54	0.80	50.4
12u	U	All MCs	2	0.0	2	0.0	0.800	12.4	LOS B	12.3	86.2	0.80	0.54	0.80	50.5
Approach			1082	0.4	1082	0.4	0.800	6.8	LOS A	12.3	86.2	0.80	0.54	0.80	51.0
All Vehicles			2250	0.4	2250	0.4	0.800	7.8	LOS A	12.3	86.2	0.81	0.62	0.86	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 101 [Sturgeon St/Delaney St - PM Peak (Site Folder: 2027 Base)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	338	1.6	338	1.6	0.627	12.6	LOS B	6.5	46.2	0.96	0.89	1.22	47.9
2	T1	All MCs	2	0.0	2	0.0	0.627	12.7	LOS B	6.5	46.2	0.96	0.89	1.22	48.3
3	R2	All MCs	102	0.0	102	0.0	0.627	17.3	LOS B	6.5	46.2	0.96	0.89	1.22	47.5
3u	U	All MCs	2	0.0	2	0.0	0.627	19.4	LOS B	6.5	46.2	0.96	0.89	1.22	47.5
Approach			444	1.2	444	1.2	0.627	13.7	LOS B	6.5	46.2	0.96	0.89	1.22	47.8
East: Sturgeon St (E)															
4	L2	All MCs	78	0.0	78	0.0	0.666	7.0	LOS A	7.3	51.2	0.78	0.64	0.84	51.4
5	T1	All MCs	660	0.0	660	0.0	0.666	7.2	LOS A	7.3	51.2	0.78	0.64	0.84	51.7
6	R2	All MCs	4	0.0	4	0.0	0.666	11.9	LOS B	7.3	51.2	0.78	0.64	0.84	50.9
6u	U	All MCs	2	0.0	2	0.0	0.666	13.9	LOS B	7.3	51.2	0.78	0.64	0.84	50.9
Approach			744	0.0	744	0.0	0.666	7.2	LOS A	7.3	51.2	0.78	0.64	0.84	51.7
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.047	15.8	LOS B	0.3	2.4	0.98	0.81	0.98	45.4
8	T1	All MCs	6	0.0	6	0.0	0.047	16.0	LOS B	0.3	2.4	0.98	0.81	0.98	45.7
9	R2	All MCs	8	0.0	8	0.0	0.047	20.7	LOS C	0.3	2.4	0.98	0.81	0.98	45.1
Approach			16	0.0	16	0.0	0.047	18.3	LOS B	0.3	2.4	0.98	0.81	0.98	45.3
West: Sturgeon St (W)															
10	L2	All MCs	14	0.0	14	0.0	0.808	5.3	LOS A	13.3	93.2	0.79	0.53	0.79	51.0
11	T1	All MCs	846	0.0	846	0.0	0.808	5.5	LOS A	13.3	93.2	0.79	0.53	0.79	51.3
12	R2	All MCs	256	1.4	256	1.4	0.808	10.2	LOS B	13.3	93.2	0.79	0.53	0.79	50.5
12u	U	All MCs	4	0.0	4	0.0	0.808	12.2	LOS B	13.3	93.2	0.79	0.53	0.79	50.5
Approach			1120	0.3	1120	0.3	0.808	6.6	LOS A	13.3	93.2	0.79	0.53	0.79	51.1
All Vehicles			2324	0.4	2324	0.4	0.808	8.3	LOS A	13.3	93.2	0.82	0.63	0.89	50.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2037 Base)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	168	1.6	168	1.6	0.543	13.8	LOS B	5.1	35.9	1.00	0.89	1.21	46.7
3	R2	All MCs	124	0.0	124	0.0	0.543	18.6	LOS B	5.1	35.9	1.00	0.89	1.21	46.3
3u	U	All MCs	2	0.0	2	0.0	0.543	20.6	LOS C	5.1	35.9	1.00	0.89	1.21	46.3
Approach			294	0.9	294	0.9	0.543	15.9	LOS B	5.1	35.9	1.00	0.89	1.21	46.5
East: Sturgeon St (E)															
4	L2	All MCs	138	0.0	138	0.0	0.805	7.6	LOS A	12.9	90.5	0.90	0.66	0.98	51.0
5	T1	All MCs	844	0.0	844	0.0	0.805	7.8	LOS A	12.9	90.5	0.90	0.66	0.98	51.3
6u	U	All MCs	8	0.0	8	0.0	0.805	14.5	LOS B	12.9	90.5	0.90	0.66	0.98	50.5
Approach			990	0.0	990	0.0	0.805	7.9	LOS A	12.9	90.5	0.90	0.66	0.98	51.3
West: Sturgeon St (W)															
11	T1	All MCs	898	0.0	898	0.0	0.818	5.8	LOS A	13.1	91.9	0.85	0.55	0.85	51.2
12	R2	All MCs	196	1.4	196	1.4	0.818	10.5	LOS B	13.1	91.9	0.85	0.55	0.85	50.3
12u	U	All MCs	2	0.0	2	0.0	0.818	12.5	LOS B	13.1	91.9	0.85	0.55	0.85	50.4
Approach			1096	0.3	1096	0.3	0.818	6.7	LOS A	13.1	91.9	0.85	0.55	0.85	51.0
All Vehicles			2380	0.2	2380	0.2	0.818	8.3	LOS A	13.1	91.9	0.89	0.64	0.95	50.5

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2037 Base)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	158	1.6	158	1.6	0.400	12.9	LOS B	3.0	21.5	0.93	0.82	0.99	47.6
3	R2	All MCs	62	0.0	62	0.0	0.400	17.6	LOS B	3.0	21.5	0.93	0.82	0.99	47.2
3u	U	All MCs	2	0.0	2	0.0	0.400	19.7	LOS B	3.0	21.5	0.93	0.82	0.99	47.2
Approach			222	1.1	222	1.1	0.400	14.3	LOS B	3.0	21.5	0.93	0.82	0.99	47.5
East: Sturgeon St (E)															
4	L2	All MCs	42	0.0	42	0.0	0.682	4.6	LOS A	8.4	58.7	0.46	0.43	0.46	52.7
5	T1	All MCs	948	0.0	948	0.0	0.682	4.8	LOS A	8.4	58.7	0.46	0.43	0.46	53.0
6u	U	All MCs	22	0.0	22	0.0	0.682	11.5	LOS B	8.4	58.7	0.46	0.43	0.46	52.2
Approach			1012	0.0	1012	0.0	0.682	4.9	LOS A	8.4	58.7	0.46	0.43	0.46	53.0
West: Sturgeon St (W)															
11	T1	All MCs	976	0.0	976	0.0	0.722	5.0	LOS A	9.8	68.7	0.56	0.45	0.56	52.5
12	R2	All MCs	68	1.4	68	1.4	0.722	9.7	LOS A	9.8	68.7	0.56	0.45	0.56	51.6
12u	U	All MCs	2	0.0	2	0.0	0.722	11.7	LOS B	9.8	68.7	0.56	0.45	0.56	51.7
Approach			1046	0.1	1046	0.1	0.722	5.3	LOS A	9.8	68.7	0.56	0.45	0.56	52.4
All Vehicles			2280	0.2	2280	0.2	0.722	6.0	LOS A	9.8	68.7	0.56	0.48	0.56	52.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2027 Design)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	220	1.6	220	1.6	0.722	19.8	LOS B	8.7	61.4	1.00	1.07	1.48	43.4
3	R2	All MCs	162	0.0	162	0.0	0.722	24.5	LOS C	8.7	61.4	1.00	1.07	1.48	43.1
3u	U	All MCs	2	0.0	2	0.0	0.722	26.6	LOS C	8.7	61.4	1.00	1.07	1.48	43.1
Approach			384	0.9	384	0.9	0.722	21.8	LOS C	8.7	61.4	1.00	1.07	1.48	43.3
East: Sturgeon St (E)															
4	L2	All MCs	178	0.0	178	0.0	0.889	12.7	LOS B	20.2	141.5	1.00	0.94	1.33	48.5
5	T1	All MCs	826	0.0	826	0.0	0.889	12.9	LOS B	20.2	141.5	1.00	0.94	1.33	48.8
6u	U	All MCs	8	0.0	8	0.0	0.889	19.6	LOS B	20.2	141.5	1.00	0.94	1.33	48.1
Approach			1012	0.0	1012	0.0	0.889	12.9	LOS B	20.2	141.5	1.00	0.94	1.33	48.7
West: Sturgeon St (W)															
11	T1	All MCs	880	0.0	880	0.0	0.891	9.3	LOS A	20.2	141.9	1.00	0.74	1.12	50.2
12	R2	All MCs	254	1.4	254	1.4	0.891	14.0	LOS B	20.2	141.9	1.00	0.74	1.12	49.4
12u	U	All MCs	2	0.0	2	0.0	0.891	16.0	LOS B	20.2	141.9	1.00	0.74	1.12	49.4
Approach			1136	0.3	1136	0.3	0.891	10.4	LOS B	20.2	141.9	1.00	0.74	1.12	50.0
All Vehicles			2532	0.3	2532	0.3	0.891	13.1	LOS B	20.2	141.9	1.00	0.87	1.26	48.4

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2027 Design)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	202	1.6	202	1.6	0.564	16.7	LOS B	5.4	38.3	1.00	0.94	1.28	45.4
3	R2	All MCs	80	0.0	80	0.0	0.564	21.5	LOS C	5.4	38.3	1.00	0.94	1.28	45.0
3u	U	All MCs	2	0.0	2	0.0	0.564	23.5	LOS C	5.4	38.3	1.00	0.94	1.28	45.0
Approach			284	1.1	284	1.1	0.564	18.1	LOS B	5.4	38.3	1.00	0.94	1.28	45.3
East: Sturgeon St (E)															
4	L2	All MCs	84	0.0	84	0.0	0.770	5.5	LOS A	10.4	73.0	0.74	0.53	0.74	51.5
5	T1	All MCs	926	0.0	926	0.0	0.770	5.7	LOS A	10.4	73.0	0.74	0.53	0.74	51.8
6u	U	All MCs	20	0.0	20	0.0	0.770	12.4	LOS B	10.4	73.0	0.74	0.53	0.74	51.0
Approach			1030	0.0	1030	0.0	0.770	5.8	LOS A	10.4	73.0	0.74	0.53	0.74	51.8
West: Sturgeon St (W)															
11	T1	All MCs	952	0.0	952	0.0	0.773	5.3	LOS A	11.7	81.9	0.69	0.49	0.69	51.9
12	R2	All MCs	136	1.4	136	1.4	0.773	10.0	LOS A	11.7	81.9	0.69	0.49	0.69	51.0
12u	U	All MCs	2	0.0	2	0.0	0.773	12.0	LOS B	11.7	81.9	0.69	0.49	0.69	51.1
Approach			1090	0.2	1090	0.2	0.773	5.9	LOS A	11.7	81.9	0.69	0.49	0.69	51.7
All Vehicles			2404	0.2	2404	0.2	0.773	7.3	LOS A	11.7	81.9	0.75	0.56	0.78	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - AM Peak (Site Folder: 2027 Design)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	26	0.0	26	0.0	0.812	42.4	LOS E	3.5	24.7	0.98	1.22	1.94	27.7
3	R2	All MCs	72	0.0	72	0.0	0.812	77.2	LOS F	3.5	24.7	0.98	1.22	1.94	27.7
Approach			98	0.0	98	0.0	0.812	68.0	LOS F	3.5	24.7	0.98	1.22	1.94	27.7
East: Dundas St W (E)															
4	L2	All MCs	56	0.0	56	0.0	0.473	5.7	LOS A	0.0	0.0	0.00	0.04	0.00	56.9
5	T1	All MCs	850	2.3	850	2.3	0.473	0.2	LOS A	0.0	0.0	0.00	0.04	0.00	59.3
Approach			906	2.2	906	2.2	0.473	0.5	NA	0.0	0.0	0.00	0.04	0.00	59.1
North: ELC Exit															
7	L2	All MCs	88	0.0	88	0.0	0.110	8.7	LOS A	0.4	2.8	0.56	0.78	0.56	50.6
Approach			88	0.0	88	0.0	0.110	8.7	LOS A	0.4	2.8	0.56	0.78	0.56	50.6
West: Dundas St W (W)															
11	T1	All MCs	654	3.4	654	3.4	0.361	0.3	LOS A	0.2	1.7	0.04	0.05	0.04	59.6
12	R2	All MCs	10	0.0	10	0.0	0.361	12.3	LOS B	0.2	1.7	0.04	0.05	0.04	56.8
Approach			664	3.3	664	3.3	0.361	0.4	NA	0.2	1.7	0.04	0.05	0.04	59.5
All Vehicles			1756	2.4	1756	2.4	0.812	4.7	NA	3.5	24.7	0.10	0.15	0.15	55.3

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - PM
Peak (Site Folder: 2027 Design)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	8	0.0	8	0.0	0.596	13.3	LOS B	2.6	18.2	0.89	1.10	1.44	40.3
3	R2	All MCs	138	0.0	138	0.0	0.596	27.8	LOS D	2.6	18.2	0.89	1.10	1.44	40.1
Approach			146	0.0	146	0.0	0.596	27.0	LOS D	2.6	18.2	0.89	1.10	1.44	40.1
East: Dundas St W (E)															
4	L2	All MCs	116	1.0	116	1.0	0.270	5.6	LOS A	0.0	0.0	0.00	0.14	0.00	56.2
5	T1	All MCs	394	4.2	394	4.2	0.270	0.1	LOS A	0.0	0.0	0.00	0.14	0.00	58.6
Approach			510	3.5	510	3.5	0.270	1.3	NA	0.0	0.0	0.00	0.14	0.00	58.0
North: ELC Exit															
7	L2	All MCs	100	0.0	100	0.0	0.119	8.5	LOS A	0.4	3.1	0.55	0.77	0.55	50.8
Approach			100	0.0	100	0.0	0.119	8.5	LOS A	0.4	3.1	0.55	0.77	0.55	50.8
West: Dundas St W (W)															
11	T1	All MCs	618	4.0	618	4.0	0.333	0.0	LOS A	0.1	0.7	0.02	0.02	0.02	59.8
12	R2	All MCs	8	0.0	8	0.0	0.333	7.3	LOS A	0.1	0.7	0.02	0.02	0.02	57.0
Approach			626	4.0	626	4.0	0.333	0.1	NA	0.1	0.7	0.02	0.02	0.02	59.8
All Vehicles			1382	3.1	1382	3.1	0.596	4.0	NA	2.6	18.2	0.14	0.23	0.20	55.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - AM
Peak - 1hr (Site Folder: 2027 Design)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	17	0.0	17	0.0	0.388	11.5	LOS B	1.4	9.8	0.86	1.00	1.09	42.1
3	R2	All MCs	75	0.0	75	0.0	0.388	25.8	LOS D	1.4	9.8	0.86	1.00	1.09	41.9
Approach			92	0.0	92	0.0	0.388	23.2	LOS C	1.4	9.8	0.86	1.00	1.09	41.9
East: Dundas St W (E)															
4	L2	All MCs	57	0.0	57	0.0	0.374	5.6	LOS A	0.0	0.0	0.00	0.05	0.00	56.9
5	T1	All MCs	659	2.3	659	2.3	0.374	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	59.3
Approach			716	2.1	716	2.1	0.374	0.6	NA	0.0	0.0	0.00	0.05	0.00	59.1
North: ELC Exit															
7	L2	All MCs	97	0.0	97	0.0	0.094	7.4	LOS A	0.4	2.5	0.47	0.68	0.47	51.5
Approach			97	0.0	97	0.0	0.094	7.4	LOS A	0.4	2.5	0.47	0.68	0.47	51.5
West: Dundas St W (W)															
11	T1	All MCs	464	3.4	464	3.4	0.254	0.1	LOS A	0.1	0.9	0.03	0.04	0.03	59.7
12	R2	All MCs	8	0.0	8	0.0	0.254	9.6	LOS A	0.1	0.9	0.03	0.04	0.03	56.9
Approach			473	3.3	473	3.3	0.254	0.3	NA	0.1	0.9	0.03	0.04	0.03	59.6
All Vehicles			1377	2.2	1377	2.2	0.388	2.5	NA	1.4	9.8	0.10	0.15	0.12	57.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

Site: 101 [Dundas St/Poinsettia Way/College Access - PM
Peak - 1hr (Site Folder: 2027 Design)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Give-Way (Two-Way)

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Poinsettia Way (S)															
1	L2	All MCs	7	0.0	7	0.0	0.261	7.5	LOS A	0.9	6.6	0.71	0.91	0.81	47.0
3	R2	All MCs	94	0.0	94	0.0	0.261	14.7	LOS B	0.9	6.6	0.71	0.91	0.81	46.8
Approach			101	0.0	101	0.0	0.261	14.2	LOS B	0.9	6.6	0.71	0.91	0.81	46.8
East: Dundas St W (E)															
4	L2	All MCs	111	0.0	111	0.0	0.251	5.6	LOS A	0.0	0.0	0.00	0.14	0.00	56.2
5	T1	All MCs	363	4.2	363	4.2	0.251	0.1	LOS A	0.0	0.0	0.00	0.14	0.00	58.6
Approach			474	3.2	474	3.2	0.251	1.4	NA	0.0	0.0	0.00	0.14	0.00	58.0
North: ELC Exit															
7	L2	All MCs	84	0.0	84	0.0	0.077	7.1	LOS A	0.3	2.1	0.44	0.65	0.44	51.6
Approach			84	0.0	84	0.0	0.077	7.1	LOS A	0.3	2.1	0.44	0.65	0.44	51.6
West: Dundas St W (W)															
11	T1	All MCs	409	4.0	409	4.0	0.224	0.1	LOS A	0.1	0.7	0.03	0.04	0.03	59.7
12	R2	All MCs	9	0.0	9	0.0	0.224	7.6	LOS A	0.1	0.7	0.03	0.04	0.03	56.9
Approach			419	3.9	419	3.9	0.224	0.3	NA	0.1	0.7	0.03	0.04	0.03	59.7
All Vehicles			1078	2.9	1078	2.9	0.261	2.6	NA	0.9	6.6	0.11	0.21	0.12	56.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Vehicle movement LOS values are based on average delay per movement.
Minor Road Approach LOS values are based on average delay for all vehicle movements.
NA (TWSC): Level of Service is not defined for major road approaches or the intersection as a whole for Two-Way Sign Control (HCM LOS rule).
Two-Way Sign Control Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Delancey St/Dundas St - AM Peak (Site Folder: 2027 Design)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	550	1.6	550	1.6	0.713	9.1	LOS A	8.9	63.7	0.88	0.76	1.05	50.8
2	T1	All MCs	164	3.3	164	3.3	0.713	9.4	LOS A	8.9	63.7	0.88	0.76	1.05	51.1
3	R2	All MCs	6	0.0	6	0.0	0.713	13.9	LOS B	8.9	63.7	0.88	0.76	1.05	50.4
3u	U	All MCs	2	0.0	2	0.0	0.713	16.0	LOS B	8.9	63.7	0.88	0.76	1.05	50.4
Approach			722	1.9	722	1.9	0.713	9.3	LOS A	8.9	63.7	0.88	0.76	1.05	50.9
East: Dundas St (E)															
4	L2	All MCs	4	0.0	4	0.0	0.033	11.2	LOS B	0.2	1.5	0.84	0.73	0.84	48.8
5	T1	All MCs	10	0.0	10	0.0	0.033	11.4	LOS B	0.2	1.5	0.84	0.73	0.84	49.1
6	R2	All MCs	2	0.0	2	0.0	0.033	16.0	LOS B	0.2	1.5	0.84	0.73	0.84	48.3
6u	U	All MCs	2	0.0	2	0.0	0.033	18.1	LOS B	0.2	1.5	0.84	0.73	0.84	48.3
Approach			18	0.0	18	0.0	0.033	12.6	LOS B	0.2	1.5	0.84	0.73	0.84	48.8
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.579	9.5	LOS A	5.4	39.2	0.86	0.80	1.01	48.6
8	T1	All MCs	156	4.0	156	4.0	0.579	9.9	LOS A	5.4	39.2	0.86	0.80	1.01	48.8
9	R2	All MCs	322	2.9	322	2.9	0.579	14.5	LOS B	5.4	39.2	0.86	0.80	1.01	48.1
9u	U	All MCs	2	0.0	2	0.0	0.579	16.4	LOS B	5.4	39.2	0.86	0.80	1.01	48.2
Approach			482	3.3	482	3.3	0.579	13.0	LOS B	5.4	39.2	0.86	0.80	1.01	48.4
West: Dundas St (W)															
10	L2	All MCs	274	2.8	274	2.8	0.645	5.5	LOS A	6.8	48.5	0.68	0.59	0.68	50.6
11	T1	All MCs	6	0.0	6	0.0	0.645	5.6	LOS A	6.8	48.5	0.68	0.59	0.68	51.0
12	R2	All MCs	506	1.4	506	1.4	0.645	10.3	LOS B	6.8	48.5	0.68	0.59	0.68	50.2
12u	U	All MCs	10	0.0	10	0.0	0.645	12.3	LOS B	6.8	48.5	0.68	0.59	0.68	50.2
Approach			796	1.9	796	1.9	0.645	8.6	LOS A	6.8	48.5	0.68	0.59	0.68	50.3
All Vehicles			2018	2.2	2018	2.2	0.713	9.9	LOS A	8.9	63.7	0.80	0.70	0.89	50.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Delancey St/Dundas St - PM Peak (Site Folder: 2027 Design)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	314	1.8	314	1.8	0.433	5.3	LOS A	3.3	23.6	0.56	0.54	0.56	52.7
2	T1	All MCs	168	1.8	168	1.8	0.433	5.6	LOS A	3.3	23.6	0.56	0.54	0.56	53.0
3	R2	All MCs	16	0.0	16	0.0	0.433	10.1	LOS B	3.3	23.6	0.56	0.54	0.56	52.2
3u	U	All MCs	2	0.0	2	0.0	0.433	12.2	LOS B	3.3	23.6	0.56	0.54	0.56	52.2
Approach			500	1.7	500	1.7	0.433	5.6	LOS A	3.3	23.6	0.56	0.54	0.56	52.8
East: Dundas St (E)															
4	L2	All MCs	4	0.0	4	0.0	0.023	9.7	LOS A	0.1	1.0	0.79	0.69	0.79	49.5
5	T1	All MCs	6	0.0	6	0.0	0.023	10.0	LOS A	0.1	1.0	0.79	0.69	0.79	49.8
6	R2	All MCs	2	0.0	2	0.0	0.023	14.6	LOS B	0.1	1.0	0.79	0.69	0.79	49.0
6u	U	All MCs	2	0.0	2	0.0	0.023	16.7	LOS B	0.1	1.0	0.79	0.69	0.79	49.0
Approach			14	0.0	14	0.0	0.023	11.5	LOS B	0.1	1.0	0.79	0.69	0.79	49.5
North: Delancey St (N)															
7	L2	All MCs	12	12.5	12	12.5	0.499	8.6	LOS A	4.1	28.7	0.80	0.73	0.86	49.7
8	T1	All MCs	222	1.1	222	1.1	0.499	8.3	LOS A	4.1	28.7	0.80	0.73	0.86	50.3
9	R2	All MCs	190	1.3	190	1.3	0.499	13.0	LOS B	4.1	28.7	0.80	0.73	0.86	49.5
9u	U	All MCs	8	0.0	8	0.0	0.499	15.0	LOS B	4.1	28.7	0.80	0.73	0.86	49.6
Approach			432	1.5	432	1.5	0.499	10.5	LOS B	4.1	28.7	0.80	0.73	0.86	49.9
West: Dundas St (W)															
10	L2	All MCs	284	4.1	284	4.1	0.636	5.7	LOS A	6.1	44.0	0.66	0.60	0.66	50.7
11	T1	All MCs	6	0.0	6	0.0	0.636	5.8	LOS A	6.1	44.0	0.66	0.60	0.66	51.1
12	R2	All MCs	472	2.3	472	2.3	0.636	10.5	LOS B	6.1	44.0	0.66	0.60	0.66	50.3
12u	U	All MCs	12	0.0	12	0.0	0.636	12.5	LOS B	6.1	44.0	0.66	0.60	0.66	50.3
Approach			774	2.9	774	2.9	0.636	8.7	LOS A	6.1	44.0	0.66	0.60	0.66	50.4
All Vehicles			1720	2.2	1720	2.2	0.636	8.3	LOS A	6.1	44.0	0.67	0.62	0.68	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 101 [Sturgeon St/Delaney St - AM Peak (Site Folder: 2027 Design)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	356	1.6	356	1.6	0.691	13.4	LOS B	8.1	57.3	1.00	0.92	1.33	47.3
2	T1	All MCs	2	0.0	2	0.0	0.691	13.6	LOS B	8.1	57.3	1.00	0.92	1.33	47.6
3	R2	All MCs	136	0.0	136	0.0	0.691	18.2	LOS B	8.1	57.3	1.00	0.92	1.33	46.9
3u	U	All MCs	2	0.0	2	0.0	0.691	20.3	LOS C	8.1	57.3	1.00	0.92	1.33	46.9
Approach			496	1.1	496	1.1	0.691	14.8	LOS B	8.1	57.3	1.00	0.92	1.33	47.2
East: Sturgeon St (E)															
4	L2	All MCs	158	0.0	158	0.0	0.763	9.7	LOS A	11.1	77.4	0.94	0.79	1.14	50.5
5	T1	All MCs	626	0.0	626	0.0	0.763	10.0	LOS A	11.1	77.4	0.94	0.79	1.14	50.8
6	R2	All MCs	2	0.0	2	0.0	0.763	14.6	LOS B	11.1	77.4	0.94	0.79	1.14	50.0
6u	U	All MCs	2	0.0	2	0.0	0.763	16.7	LOS B	11.1	77.4	0.94	0.79	1.14	50.0
Approach			788	0.0	788	0.0	0.763	10.0	LOS A	11.1	77.4	0.94	0.79	1.14	50.7
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.024	19.9	LOS B	0.2	1.3	1.00	0.80	1.00	43.6
8	T1	All MCs	2	0.0	2	0.0	0.024	20.2	LOS C	0.2	1.3	1.00	0.80	1.00	43.8
9	R2	All MCs	2	0.0	2	0.0	0.024	24.8	LOS C	0.2	1.3	1.00	0.80	1.00	43.2
Approach			6	0.0	6	0.0	0.024	21.6	LOS C	0.2	1.3	1.00	0.80	1.00	43.6
West: Sturgeon St (W)															
10	L2	All MCs	4	0.0	4	0.0	0.883	7.2	LOS A	18.7	131.1	1.00	0.64	1.05	50.1
11	T1	All MCs	838	0.0	838	0.0	0.883	7.4	LOS A	18.7	131.1	1.00	0.64	1.05	50.4
12	R2	All MCs	324	1.4	324	1.4	0.883	12.1	LOS B	18.7	131.1	1.00	0.64	1.05	49.6
12u	U	All MCs	2	0.0	2	0.0	0.883	14.1	LOS B	18.7	131.1	1.00	0.64	1.05	49.6
Approach			1168	0.4	1168	0.4	0.883	8.7	LOS A	18.7	131.1	1.00	0.64	1.05	50.2
All Vehicles			2458	0.4	2458	0.4	0.883	10.4	LOS B	18.7	131.1	0.98	0.74	1.13	49.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/Delaney St - PM Peak (Site Folder: 2027 Design)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: Delancey St (S)															
1	L2	All MCs	398	1.6	398	1.6	0.789	19.3	LOS B	11.2	79.1	1.00	1.11	1.60	44.1
2	T1	All MCs	2	0.0	2	0.0	0.789	19.4	LOS B	11.2	79.1	1.00	1.11	1.60	44.4
3	R2	All MCs	116	0.0	116	0.0	0.789	24.0	LOS C	11.2	79.1	1.00	1.11	1.60	43.8
3u	U	All MCs	2	0.0	2	0.0	0.789	26.1	LOS C	11.2	79.1	1.00	1.11	1.60	43.8
Approach			518	1.2	518	1.2	0.789	20.3	LOS C	11.2	79.1	1.00	1.11	1.60	44.0
East: Sturgeon St (E)															
4	L2	All MCs	94	0.0	94	0.0	0.762	9.8	LOS A	11.0	76.7	0.94	0.79	1.14	50.4
5	T1	All MCs	686	0.0	686	0.0	0.762	10.0	LOS B	11.0	76.7	0.94	0.79	1.14	50.7
6	R2	All MCs	4	0.0	4	0.0	0.762	14.7	LOS B	11.0	76.7	0.94	0.79	1.14	50.0
6u	U	All MCs	2	0.0	2	0.0	0.762	16.7	LOS B	11.0	76.7	0.94	0.79	1.14	50.0
Approach			786	0.0	786	0.0	0.762	10.0	LOS B	11.0	76.7	0.94	0.79	1.14	50.7
North: Delancey St (N)															
7	L2	All MCs	2	0.0	2	0.0	0.064	19.8	LOS B	0.5	3.5	1.00	0.86	1.00	43.3
8	T1	All MCs	6	0.0	6	0.0	0.064	20.1	LOS C	0.5	3.5	1.00	0.86	1.00	43.5
9	R2	All MCs	8	0.0	8	0.0	0.064	24.7	LOS C	0.5	3.5	1.00	0.86	1.00	43.0
Approach			16	0.0	16	0.0	0.064	22.4	LOS C	0.5	3.5	1.00	0.86	1.00	43.2
West: Sturgeon St (W)															
10	L2	All MCs	14	0.0	14	0.0	0.879	5.8	LOS A	17.4	122.4	0.98	0.58	0.98	50.3
11	T1	All MCs	860	0.0	860	0.0	0.879	6.1	LOS A	17.4	122.4	0.98	0.58	0.98	50.6
12	R2	All MCs	316	1.4	316	1.4	0.879	10.7	LOS B	17.4	122.4	0.98	0.58	0.98	49.8
12u	U	All MCs	4	0.0	4	0.0	0.879	12.8	LOS B	17.4	122.4	0.98	0.58	0.98	49.8
Approach			1194	0.4	1194	0.4	0.879	7.3	LOS A	17.4	122.4	0.98	0.58	0.98	50.4
All Vehicles			2514	0.4	2514	0.4	0.879	11.0	LOS B	17.4	122.4	0.97	0.75	1.16	49.0

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2037 Design)]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	220	1.6	220	1.6	0.796	27.3	LOS C	10.9	76.7	1.00	1.20	1.72	39.9
3	R2	All MCs	162	0.0	162	0.0	0.796	32.1	LOS C	10.9	76.7	1.00	1.20	1.72	39.6
3u	U	All MCs	2	0.0	2	0.0	0.796	34.1	LOS C	10.9	76.7	1.00	1.20	1.72	39.6
Approach			384	0.9	384	0.9	0.796	29.4	LOS C	10.9	76.7	1.00	1.20	1.72	39.8
East: Sturgeon St (E)															
4	L2	All MCs	178	0.0	178	0.0	0.939	17.5	LOS B	28.0	195.8	1.00	1.15	1.56	45.6
5	T1	All MCs	886	0.0	886	0.0	0.939	17.8	LOS B	28.0	195.8	1.00	1.15	1.56	45.9
6u	U	All MCs	8	0.0	8	0.0	0.939	24.5	LOS C	28.0	195.8	1.00	1.15	1.56	45.2
Approach			1072	0.0	1072	0.0	0.939	17.8	LOS B	28.0	195.8	1.00	1.15	1.56	45.8
West: Sturgeon St (W)															
11	T1	All MCs	944	0.0	944	0.0	0.939	12.6	LOS B	28.4	199.3	1.00	0.93	1.24	48.5
12	R2	All MCs	254	1.4	254	1.4	0.939	17.2	LOS B	28.4	199.3	1.00	0.93	1.24	47.7
12u	U	All MCs	2	0.0	2	0.0	0.939	19.3	LOS B	28.4	199.3	1.00	0.93	1.24	47.8
Approach			1200	0.3	1200	0.3	0.939	13.6	LOS B	28.4	199.3	1.00	0.93	1.24	48.3
All Vehicles			2656	0.3	2656	0.3	0.939	17.6	LOS B	28.4	199.3	1.00	1.06	1.44	45.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2037 Design)]

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: College Access (s)															
1	L2	All MCs	202	1.6	202	1.6	0.665	23.5	LOS C	7.2	51.0	1.00	1.07	1.46	41.8
3	R2	All MCs	80	0.0	80	0.0	0.665	28.3	LOS C	7.2	51.0	1.00	1.07	1.46	41.6
3u	U	All MCs	2	0.0	2	0.0	0.665	30.4	LOS C	7.2	51.0	1.00	1.07	1.46	41.6
Approach			284	1.1	284	1.1	0.665	24.9	LOS C	7.2	51.0	1.00	1.07	1.46	41.8
East: Sturgeon St (E)															
4	L2	All MCs	84	0.0	84	0.0	0.823	5.7	LOS A	12.8	89.6	0.85	0.55	0.85	51.1
5	T1	All MCs	994	0.0	994	0.0	0.823	5.9	LOS A	12.8	89.6	0.85	0.55	0.85	51.4
6u	U	All MCs	22	0.0	22	0.0	0.823	12.6	LOS B	12.8	89.6	0.85	0.55	0.85	50.6
Approach			1100	0.0	1100	0.0	0.823	6.0	LOS A	12.8	89.6	0.85	0.55	0.85	51.4
West: Sturgeon St (W)															
11	T1	All MCs	1032	0.0	1032	0.0	0.829	5.6	LOS A	14.6	102.6	0.79	0.51	0.79	51.5
12	R2	All MCs	136	1.4	136	1.4	0.829	10.2	LOS B	14.6	102.6	0.79	0.51	0.79	50.6
12u	U	All MCs	2	0.0	2	0.0	0.829	12.3	LOS B	14.6	102.6	0.79	0.51	0.79	50.7
Approach			1170	0.2	1170	0.2	0.829	6.1	LOS A	14.6	102.6	0.79	0.51	0.79	51.4
All Vehicles			2554	0.2	2554	0.2	0.829	8.2	LOS A	14.6	102.6	0.84	0.59	0.89	50.1

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2027 Design (1 hour))]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	153	1.6	153	1.6	0.476	12.6	LOS B	4.1	28.9	0.98	0.85	1.11	47.5
3	R2	All MCs	102	0.0	102	0.0	0.476	17.3	LOS B	4.1	28.9	0.98	0.85	1.11	47.1
3u	U	All MCs	1	0.0	1	0.0	0.476	19.4	LOS B	4.1	28.9	0.98	0.85	1.11	47.1
Approach			256	0.9	256	0.9	0.476	14.5	LOS B	4.1	28.9	0.98	0.85	1.11	47.3
East: Sturgeon St (E)															
4	L2	All MCs	112	0.0	112	0.0	0.783	6.6	LOS A	11.4	79.7	0.84	0.60	0.88	51.2
5	T1	All MCs	862	0.0	862	0.0	0.783	6.9	LOS A	11.4	79.7	0.84	0.60	0.88	51.5
6u	U	All MCs	12	0.0	12	0.0	0.783	13.6	LOS B	11.4	79.7	0.84	0.60	0.88	50.7
Approach			985	0.0	985	0.0	0.783	6.9	LOS A	11.4	79.7	0.84	0.60	0.88	51.5
West: Sturgeon St (W)															
11	T1	All MCs	939	0.0	939	0.0	0.811	5.6	LOS A	13.3	92.9	0.79	0.52	0.79	51.4
12	R2	All MCs	181	1.4	181	1.4	0.811	10.2	LOS B	13.3	92.9	0.79	0.52	0.79	50.6
12u	U	All MCs	1	0.0	1	0.0	0.811	12.3	LOS B	13.3	92.9	0.79	0.52	0.79	50.6
Approach			1121	0.2	1121	0.2	0.811	6.3	LOS A	13.3	92.9	0.79	0.52	0.79	51.3
All Vehicles			2362	0.2	2362	0.2	0.811	7.5	LOS A	13.3	92.9	0.83	0.59	0.86	50.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2027 Design (1 hour))]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	142	1.6	142	1.6	0.388	11.9	LOS B	2.9	20.6	0.94	0.81	0.97	48.1
3	R2	All MCs	69	0.0	69	0.0	0.388	16.6	LOS B	2.9	20.6	0.94	0.81	0.97	47.7
3u	U	All MCs	1	0.0	1	0.0	0.388	18.7	LOS B	2.9	20.6	0.94	0.81	0.97	47.7
Approach			213	1.0	213	1.0	0.388	13.4	LOS B	2.9	20.6	0.94	0.81	0.97	48.0
East: Sturgeon St (E)															
4	L2	All MCs	73	0.0	73	0.0	0.715	5.0	LOS A	9.0	63.0	0.59	0.47	0.59	52.2
5	T1	All MCs	914	0.0	914	0.0	0.715	5.2	LOS A	9.0	63.0	0.59	0.47	0.59	52.5
6u	U	All MCs	19	0.0	19	0.0	0.715	11.9	LOS B	9.0	63.0	0.59	0.47	0.59	51.7
Approach			1005	0.0	1005	0.0	0.715	5.3	LOS A	9.0	63.0	0.59	0.47	0.59	52.4
West: Sturgeon St (W)															
11	T1	All MCs	958	0.0	958	0.0	0.738	5.1	LOS A	10.4	72.9	0.60	0.47	0.60	52.3
12	R2	All MCs	101	1.4	101	1.4	0.738	9.7	LOS A	10.4	72.9	0.60	0.47	0.60	51.4
12u	U	All MCs	3	0.0	3	0.0	0.738	11.8	LOS B	10.4	72.9	0.60	0.47	0.60	51.5
Approach			1062	0.1	1062	0.1	0.738	5.5	LOS A	10.4	72.9	0.60	0.47	0.60	52.2
All Vehicles			2280	0.2	2280	0.2	0.738	6.2	LOS A	10.4	72.9	0.63	0.50	0.63	51.9

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/Delaney St - AM Peak (Site Folder: 2027 Design (1 hour))]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	323	1.6	323	1.6	0.639	13.1	LOS B	6.8	48.2	1.00	0.90	1.27	47.7
2	T1	All MCs	1	0.0	1	0.0	0.639	13.2	LOS B	6.8	48.2	1.00	0.90	1.27	48.0
3	R2	All MCs	93	0.0	93	0.0	0.639	17.8	LOS B	6.8	48.2	1.00	0.90	1.27	47.3
3u	U	All MCs	1	0.0	1	0.0	0.639	19.9	LOS B	6.8	48.2	1.00	0.90	1.27	47.3
Approach			418	1.2	418	1.2	0.639	14.1	LOS B	6.8	48.2	1.00	0.90	1.27	47.6
East: Sturgeon St (E)															
4	L2	All MCs	160	0.0	160	0.0	0.820	11.7	LOS B	13.7	95.7	0.99	0.87	1.30	49.2
5	T1	All MCs	689	0.0	689	0.0	0.820	11.9	LOS B	13.7	95.7	0.99	0.87	1.30	49.5
6	R2	All MCs	1	0.0	1	0.0	0.820	16.5	LOS B	13.7	95.7	0.99	0.87	1.30	48.7
6u	U	All MCs	2	0.0	2	0.0	0.820	18.6	LOS B	13.7	95.7	0.99	0.87	1.30	48.7
Approach			853	0.0	853	0.0	0.820	11.9	LOS B	13.7	95.7	0.99	0.87	1.30	49.4
North: Delancey St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.010	16.8	LOS B	0.1	0.5	0.99	0.70	0.99	45.3
8	T1	All MCs	1	0.0	1	0.0	0.010	17.0	LOS B	0.1	0.5	0.99	0.70	0.99	45.5
9	R2	All MCs	1	0.0	1	0.0	0.010	21.6	LOS C	0.1	0.5	0.99	0.70	0.99	44.9
Approach			3	0.0	3	0.0	0.010	18.5	LOS B	0.1	0.5	0.99	0.70	0.99	45.2
West: Sturgeon St (W)															
10	L2	All MCs	2	0.0	2	0.0	0.821	5.2	LOS A	14.8	104.0	0.79	0.52	0.79	50.9
11	T1	All MCs	816	0.0	816	0.0	0.821	5.4	LOS A	14.8	104.0	0.79	0.52	0.79	51.2
12	R2	All MCs	342	1.4	342	1.4	0.821	10.1	LOS B	14.8	104.0	0.79	0.52	0.79	50.4
12u	U	All MCs	1	0.0	1	0.0	0.821	12.1	LOS B	14.8	104.0	0.79	0.52	0.79	50.4
Approach			1161	0.4	1161	0.4	0.821	6.8	LOS A	14.8	104.0	0.79	0.52	0.79	51.0
All Vehicles			2435	0.4	2435	0.4	0.821	9.9	LOS A	14.8	104.0	0.90	0.71	1.05	49.8

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/Delaney St - PM Peak (Site Folder: 2027 Design (1 hour))]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: Delancey St (S)															
1	L2	All MCs	322	1.6	322	1.6	0.733	18.1	LOS B	9.0	63.7	1.00	1.05	1.47	44.7
2	T1	All MCs	2	0.0	2	0.0	0.733	18.2	LOS B	9.0	63.7	1.00	1.05	1.47	45.0
3	R2	All MCs	112	0.0	112	0.0	0.733	22.8	LOS C	9.0	63.7	1.00	1.05	1.47	44.3
3u	U	All MCs	1	0.0	1	0.0	0.733	24.9	LOS C	9.0	63.7	1.00	1.05	1.47	44.3
Approach			437	1.2	437	1.2	0.733	19.3	LOS B	9.0	63.7	1.00	1.05	1.47	44.6
East: Sturgeon St (E)															
4	L2	All MCs	100	0.0	100	0.0	0.788	9.6	LOS A	12.0	84.1	0.93	0.77	1.12	50.6
5	T1	All MCs	761	0.0	761	0.0	0.788	9.8	LOS A	12.0	84.1	0.93	0.77	1.12	50.9
6	R2	All MCs	4	0.0	4	0.0	0.788	14.5	LOS B	12.0	84.1	0.93	0.77	1.12	50.1
6u	U	All MCs	1	0.0	1	0.0	0.788	16.5	LOS B	12.0	84.1	0.93	0.77	1.12	50.1
Approach			866	0.0	866	0.0	0.788	9.8	LOS A	12.0	84.1	0.93	0.77	1.12	50.8
North: Delancey St (N)															
7	L2	All MCs	1	0.0	1	0.0	0.027	14.9	LOS B	0.2	1.4	0.97	0.76	0.97	45.8
8	T1	All MCs	3	0.0	3	0.0	0.027	15.1	LOS B	0.2	1.4	0.97	0.76	0.97	46.1
9	R2	All MCs	5	0.0	5	0.0	0.027	19.7	LOS B	0.2	1.4	0.97	0.76	0.97	45.4
Approach			9	0.0	9	0.0	0.027	17.6	LOS B	0.2	1.4	0.97	0.76	0.97	45.7
West: Sturgeon St (W)															
10	L2	All MCs	12	0.0	12	0.0	0.794	5.3	LOS A	12.5	87.4	0.79	0.53	0.79	51.0
11	T1	All MCs	784	0.0	784	0.0	0.794	5.6	LOS A	12.5	87.4	0.79	0.53	0.79	51.3
12	R2	All MCs	281	1.4	281	1.4	0.794	10.2	LOS B	12.5	87.4	0.79	0.53	0.79	50.4
12u	U	All MCs	6	0.0	6	0.0	0.794	12.3	LOS B	12.5	87.4	0.79	0.53	0.79	50.5
Approach			1083	0.4	1083	0.4	0.794	6.8	LOS A	12.5	87.4	0.79	0.53	0.79	51.1
All Vehicles			2396	0.4	2396	0.4	0.794	10.2	LOS B	12.5	87.4	0.88	0.71	1.03	49.7

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).
Roundabout LOS Method: SIDRA Roundabout LOS.
Vehicle movement LOS values are based on average delay per movement.
Intersection and Approach LOS values are based on average delay for all vehicle movements.
Roundabout Capacity Model: SIDRA Standard.
Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).
Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.
Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.
Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - AM Peak (Site Folder: 2037 Design (1 hour))]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[Total HV]	%	[Total HV]	%	v/c	sec		[Veh. veh	Dist] m				km/h
South: College Access (s)															
1	L2	All MCs	153	1.6	153	1.6	0.518	14.3	LOS B	4.7	33.2	1.00	0.90	1.19	46.5
3	R2	All MCs	102	0.0	102	0.0	0.518	19.1	LOS B	4.7	33.2	1.00	0.90	1.19	46.1
3u	U	All MCs	1	0.0	1	0.0	0.518	21.2	LOS C	4.7	33.2	1.00	0.90	1.19	46.1
Approach			256	0.9	256	0.9	0.518	16.2	LOS B	4.7	33.2	1.00	0.90	1.19	46.3
East: Sturgeon St (E)															
4	L2	All MCs	112	0.0	112	0.0	0.814	7.2	LOS A	13.3	92.8	0.90	0.64	0.96	50.9
5	T1	All MCs	898	0.0	898	0.0	0.814	7.5	LOS A	13.3	92.8	0.90	0.64	0.96	51.3
6u	U	All MCs	13	0.0	13	0.0	0.814	14.2	LOS B	13.3	92.8	0.90	0.64	0.96	50.5
Approach			1022	0.0	1022	0.0	0.814	7.5	LOS A	13.3	92.8	0.90	0.64	0.96	51.2
West: Sturgeon St (W)															
11	T1	All MCs	978	0.0	978	0.0	0.840	5.7	LOS A	15.0	105.2	0.86	0.54	0.86	51.2
12	R2	All MCs	181	1.4	181	1.4	0.840	10.4	LOS B	15.0	105.2	0.86	0.54	0.86	50.3
12u	U	All MCs	1	0.0	1	0.0	0.840	12.4	LOS B	15.0	105.2	0.86	0.54	0.86	50.4
Approach			1160	0.2	1160	0.2	0.840	6.5	LOS A	15.0	105.2	0.86	0.54	0.86	51.0
All Vehicles			2438	0.2	2438	0.2	0.840	7.9	LOS A	15.0	105.2	0.89	0.62	0.93	50.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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Project: C:\Users\AAdeleke-Omotuwa\TTM\2022 Synergy Projects - Brisbane\22BRT0853 Ormiston College - Master Plan\6 - Analysis
\\22BRT0853 SIDRA v2 (Hour only).sip9

MOVEMENT SUMMARY

 **Site: 101 [Sturgeon St/College Access - PM Peak (Site Folder: 2037 Design (1 hour))]**

Output produced by SIDRA INTERSECTION Version: 9.1.6.228

New Site
Site Category: (None)
Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows [Total HV] veh/h %		Arrival Flows [Total HV] veh/h %		Deg. Satn v/c	Aver. Delay sec	Level of Service	95% Back Of Queue [Veh. veh Dist] veh m		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed km/h
South: College Access (s)															
1	L2	All MCs	142	1.6	142	1.6	0.417	13.3	LOS B	3.3	23.4	0.97	0.84	1.05	47.2
3	R2	All MCs	69	0.0	69	0.0	0.417	18.0	LOS B	3.3	23.4	0.97	0.84	1.05	46.9
3u	U	All MCs	1	0.0	1	0.0	0.417	20.1	LOS C	3.3	23.4	0.97	0.84	1.05	46.9
Approach			213	1.0	213	1.0	0.417	14.9	LOS B	3.3	23.4	0.97	0.84	1.05	47.1
East: Sturgeon St (E)															
4	L2	All MCs	73	0.0	73	0.0	0.743	5.0	LOS A	10.1	70.4	0.63	0.48	0.63	52.0
5	T1	All MCs	954	0.0	954	0.0	0.743	5.3	LOS A	10.1	70.4	0.63	0.48	0.63	52.3
6u	U	All MCs	20	0.0	20	0.0	0.743	12.0	LOS B	10.1	70.4	0.63	0.48	0.63	51.5
Approach			1046	0.0	1046	0.0	0.743	5.4	LOS A	10.1	70.4	0.63	0.48	0.63	52.3
West: Sturgeon St (W)															
11	T1	All MCs	1002	0.0	1002	0.0	0.769	5.2	LOS A	11.7	81.8	0.65	0.47	0.65	52.1
12	R2	All MCs	101	1.4	101	1.4	0.769	9.8	LOS A	11.7	81.8	0.65	0.47	0.65	51.2
12u	U	All MCs	3	0.0	3	0.0	0.769	11.9	LOS B	11.7	81.8	0.65	0.47	0.65	51.3
Approach			1106	0.1	1106	0.1	0.769	5.6	LOS A	11.7	81.8	0.65	0.47	0.65	52.0
All Vehicles			2365	0.2	2365	0.2	0.769	6.3	LOS A	11.7	81.8	0.67	0.51	0.68	51.6

Site Level of Service (LOS) Method: Delay (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement.

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Control Delay: Geometric Delay is included).

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

Gap-Acceptance Capacity Formula: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

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