



# **383 Herring Cove Road Traffic Impact Statement**

April 2015

Prepared for  
Servant Dunbrack McKenzie & MacDonald Ltd

**JRL consulting**

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Prepared by

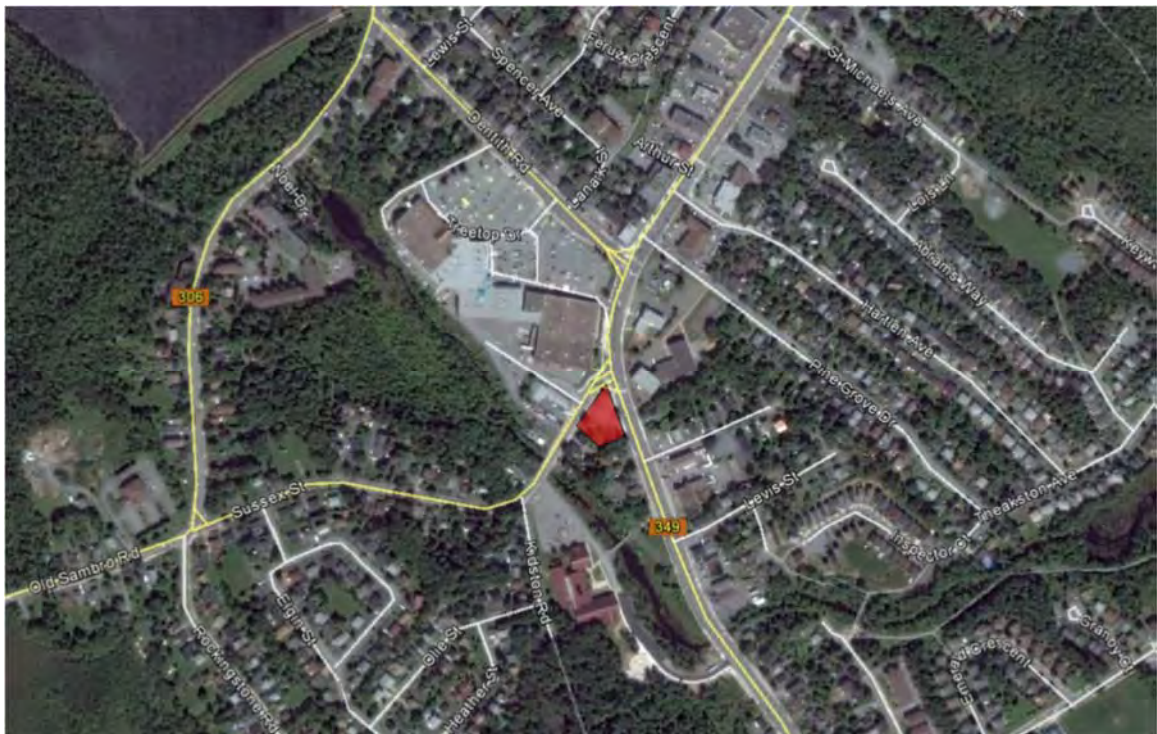
Jeff R. LeBlanc, P.Eng., RCDD

# 1 Introduction

## 1.1 Background

Servant Dunbrack McKenzie & MacDonald Ltd (SDMM) and Teal Architects on behalf of owner F.H. Construction Limited are preparing a proposal to redevelop 383 Herring Cove Road. This property is currently an empty commercial lot that once contained a gasoline service station. Exhibit 1.1 shows the existing site in red in the context of the surrounding area in Halifax, Nova Scotia while Exhibit 1.2 is a view of the site from Herring Cove Road.

Exhibit 1.1 – Aerial View of 383 Herring Cove Road in Halifax, Nova Scotia



Source: Google Earth

Exhibit 1.2 – 383 Herring Cove Road in Halifax, Nova Scotia



The proposed development will include a total of 82 apartment with a mixture of 1-bedroom (33), 2-bedroom (37) and 3-bedroom (12) units. A total of 5,790 of commercial space will also be provided over 4 separate units on the ground level. The pre-application information provided by the client shows a total of 105 parking space of which 23 are allocated to the commercial component and the remaining 82 are for the residential apartments. Refer to Exhibits 1.3, 1.4, 1.5 and 1.6 for a site plan, program plan and renderings of the proposed development at 383 Herring Cove Road as provided by Servant Dunbrack McKenzie & MacDonald Ltd (SDMM) and Teal Architects.

Exhibit 1.3 – Proposed Site Plan for 383 Herring Cove Road in Halifax, Nova Scotia

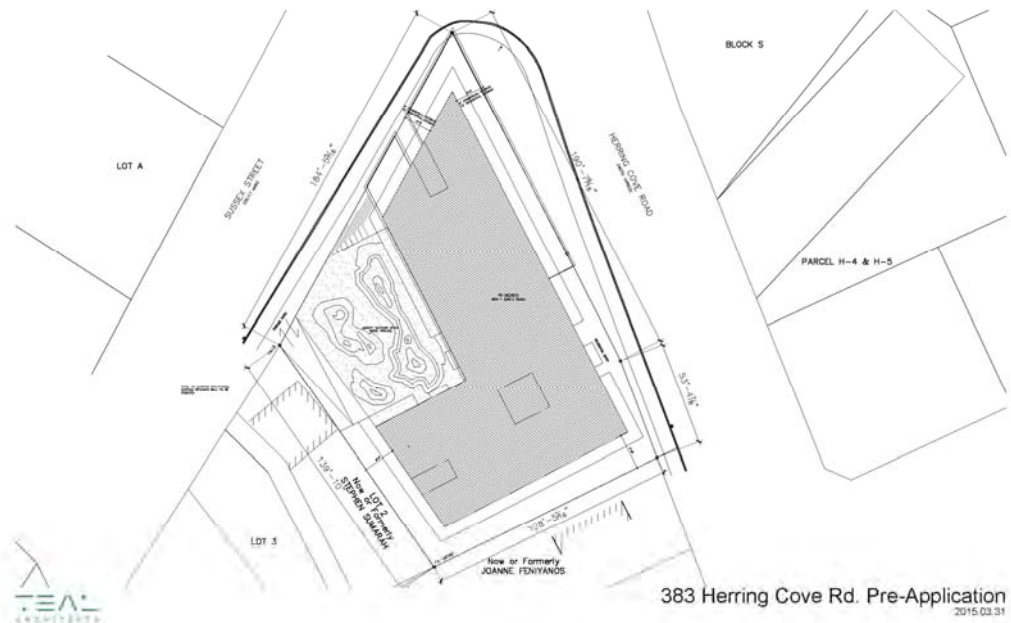


Exhibit 1.4 – Proposed Program Plan for 383 Herring Cove Road in Halifax, Nova Scotia

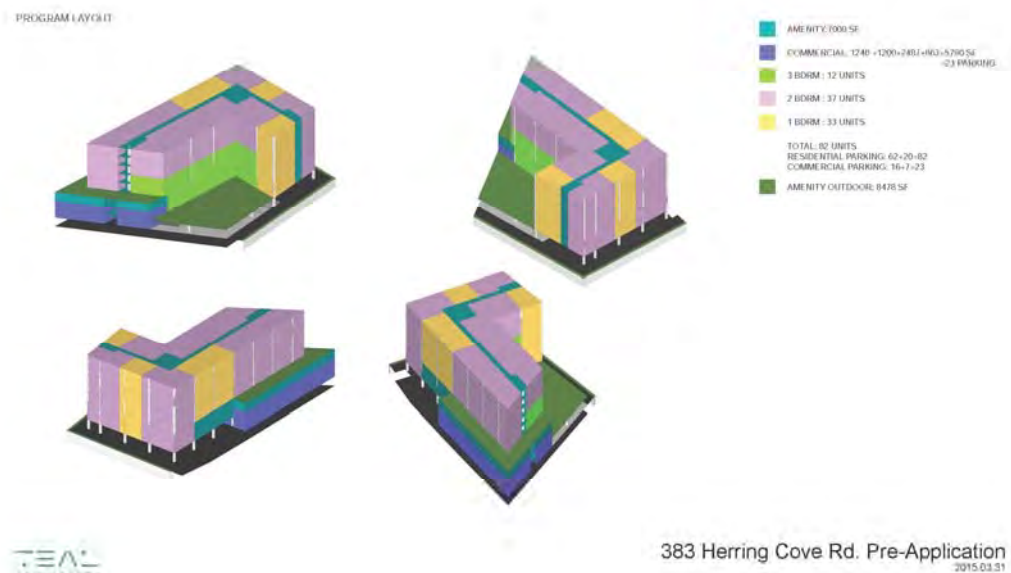


Exhibit 1.4 – Proposed Development at 383 Herring Cove Road in Halifax, Nova Scotia



Exhibit 1.5 – Proposed Development at 383 Herring Cove Road in Halifax, Nova Scotia



JRL consulting inc. was retained by SDMM to prepare a Traffic Impact Statement (TIS) to assess the potential traffic impacts of the proposed development at 383 Herring Cove Road in Halifax.

The purpose of a Traffic Impact Statement is to provide a high level overview of a proposed development including estimates of site-generated traffic along with an initial review of existing traffic counts in the general area of the proposed development. This information will form part of the initial application to HRM which will be reviewed by staff and council. We are pleased to submit this report which summarizes our findings and provides the information required by HRM for review.

## 2 Existing Traffic Conditions

### 2.1 Description

The principal routes affected by this proposed development are Herring Cove Road and Sussex Street. Exhibit 2.1 summarizes HRM's Characteristics of Street Classes from HRM's Municipal Service Systems Design Guidelines.

Exhibit 2.1 - HRM Characteristics of Street Classes

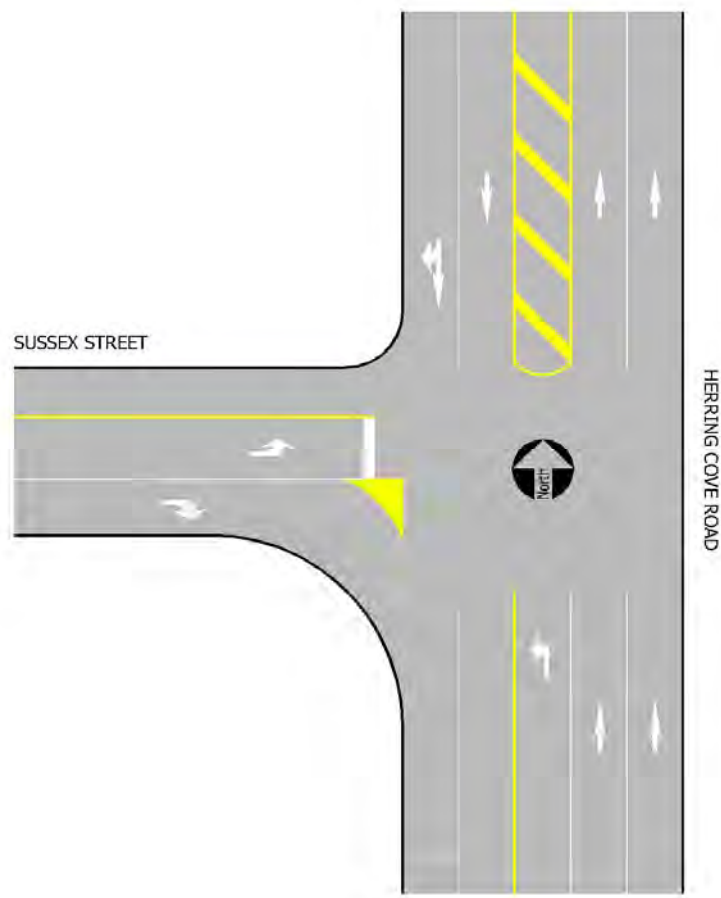
Characteristic	Arterial Street	Major Collector	Minor Collector	Local Industrial	Local Street
1. Traffic Service Function	First Consideration	Traffic movement	Traffic movement of equal importance with land access, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted
2. Land Access Function	Limited Access with no parking	primary consideration, land access secondary consideration, some parking			
3. Range of design traffic average daily volume	More than 20,000	12,000 to 20,000 or more	Up to 12,000	Less than 3,000	Less than 3,000
4. Characteristics of traffic flow	Uninterrupted flow except at signals; w/ pedestrian overpass	Uninterrupted flow except at signals and crosswalks	Interrupted flow	Interrupted flow	Interrupted flow
5. Average running speed in off-peak conditions	50-70 km/hr	40-60 km/hr	30-50 km/hr	15-30 km/hr	15-30 km/hr
6. Vehicle types	All types	All types but trucks may be limited	All types with truck limitation	All types	Passenger and service vehicles, transit buses; large vehicles restricted
7. Connects to	Expressways, arterials, major collectors, minor collectors	Expressways, arterials, major collectors, minor collectors, some locals	Arterials, major collectors, minor collectors, locals	Some major collectors, minor collectors, locals	Some major collectors, minor collectors, locals

**Herring Cove Road** is an arterial road that runs in a general north-south direction from the Armdale Rotary to Sambro and is also known as Route 349. It has two lanes in each direction at the proposed development at 383 Herring Cove Road. Concrete sidewalks are installed on the east and west side of Herring Cove Road. There is a pedestrian crosswalk with actuated overhead lights on Herring Cove Road just south of its intersection with Sussex Street. The posted speed limit in the area is 50 km/hr.

**Sussex Street** is a collector road that runs in a general east-west direction from the Old Sambro Road to Herring Cove Road. It has one lane in each direction throughout its length. Concrete sidewalks are installed on the north and south side of Sussex Street near the proposed development. The posted speed limit in the area is 50 km/hr.

The [Herring Cove Road at Sussex Street](#) intersection is a 3-leg unsignalized intersection stop controlled at the minor approach from Sussex Street. It has a dedicated northbound left turn lane with approximately 49 meters of storage and two through lanes on Herring Cove Road. The southbound approach on Herring Cove Road has a shared right-through lane as well as a through lane. The east bound approach from Sussex Street has a dedicated left turn lane and a dedicated right turn lane with a channelized right turn lane with a pedestrian island and yield sign. Refer to Exhibit 2.2 for a schematic drawing that shows the existing intersection configuration.

Exhibit 2.2 – Herring Cove Road at Sussex Street Intersection Existing Configuration



Refer to Exhibit 2.3 for photos of the Study Area around the proposed development at 383 Herring Cove Road.

Exhibit 2.3 – Study Area Photos



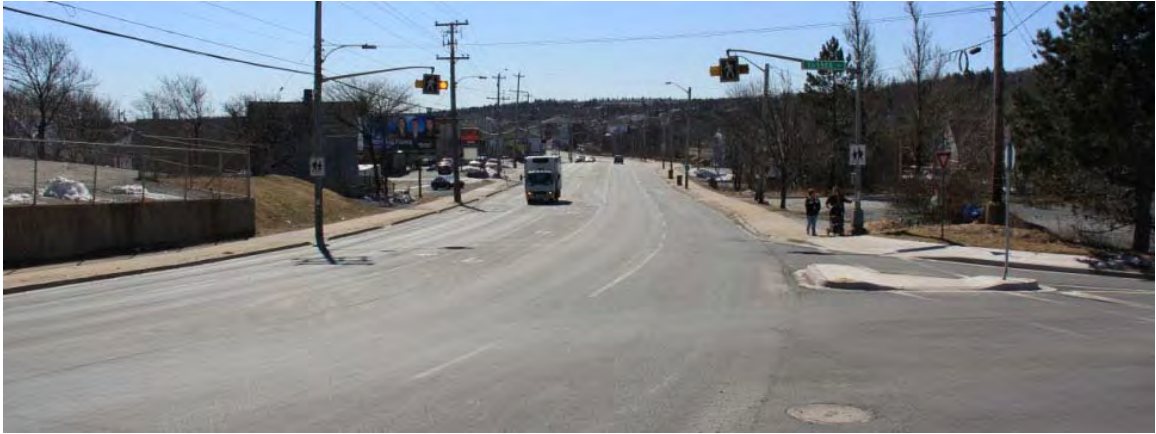
Herring Cove Road looking south at 383 Herring Cove Road on right



Herring Cove Road looking north at 383 Herring Cove Road on left



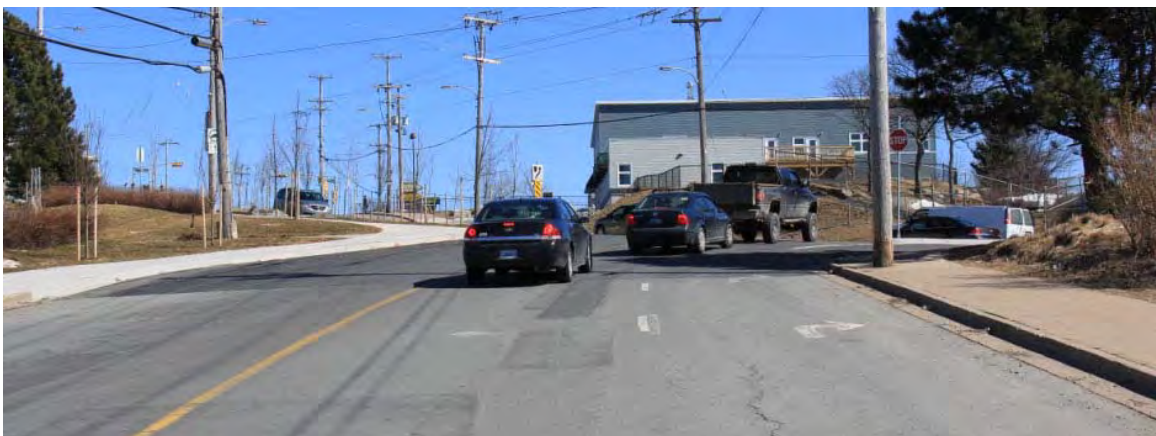
Herring Cove Road at Sussex Street looking north



Herring Cove Road at Sussex Street looking south



Sussex Street looking west near proposed development

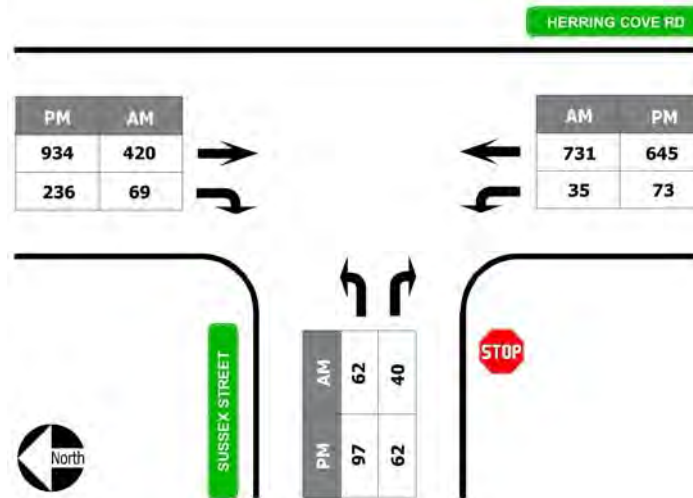


Sussex Street at Herring Cove Road looking east

## 2.2 Existing Traffic Volumes

JRL consulting completed AM and PM peak hour turning movement counts at the Herring Cove Road/Sussex Street intersection on Thursday March 7, 2013 for another Traffic Impact Study. We added a 2% annual growth rate to our 2013 counts to estimate current volumes in 2015 as summarized in Exhibit 2.4.

Exhibit 2.4 – Herring Cove Road at Sussex Street Estimated Traffic Volumes 2015



## 2.3 Existing Trip Distribution

Our manual turning movement counts at the Herring Cove/Sussex Street intersection provide an accurate picture of current trip distribution near 383 Herring Cove Road and we expect that new traffic generated by the development will follow similar patterns.

## 2.4 Transit and Pedestrians

The area near the proposed development at 383 Herring Cove Road is well serviced on Herring Cove Road by routes 19 and 20 that provide regular weekday and weekend service and access to the Mumford Terminal and Downtown Halifax as shown on the route maps provided by Metro Transit in Exhibit 2.5 and 2.6

Exhibit 2.5 – Metro Transit Route 20 Herring Cove



Exhibit 2.6 – Metro Transit Route 19 Greystone



## 2.5 Stopping Site Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping site distance (SSD) *"is essential for safe operation that the vehicle operator be able to see far enough ahead to stop if necessary. Conditions that would force a vehicle operator to stop are for example, an object on the roadway, a culvert washout or other fault in the roadway."*

*Adequate stopping site distance is required throughout the length of the roadway. Minimum stopping site distance is the sum of two distances namely:*

- *Brake reaction distance*

*The distance travelled during the brake reaction time, that is the time that elapses from the instant an object, for which the driver decides to stop, comes into view to the instant the driver takes remedial action (contacts brake pedal).*

- *Braking distance*

*The distance travelled from the time that braking begins to the time the vehicle comes to a stop."*

For a design speed of 50 km/h, the minimum stopping site distance is 65 m.

383 Herring Cove was formally home to a gasoline service station with driveways still existing on Sussex Street and Herring Cove Road. We reviewed the proposed site plan and we see no concerns with exceeding the minimum requirements for SSD.

## 3 Site Generated Traffic

### 3.1 Trip Generation

The proposed development at this site will include 82 apartment units along with a total of 5,790 sqft of commercial space over four separate units.

We completed new trip generation estimates using equations provided in Institute for Transportation Engineer's Trip Generation Manual Ninth Edition. We used the following ITE Land Use Code to assess site generated trips for the existing and proposed development:

- ITE Land Use 220 Apartment

*"Apartments are rental dwelling units that are located within the same building with at least three other dwelling units, for examples quadrplexes and all types of apartment buildings."* The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 820 Shopping Centre

*"A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center's composition is related to its market area in terms of size, location and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands."* The unit of measurement for average vehicle trip ends is 1,000 Square Feet Gross Floor Area.

Exhibit 3.1 – Estimated Site Generated Traffic Volumes at 383 Herring Cove Road

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Apartment ITE Land Use 220	82	44	20%	80%	63	65%	35%
			9	35		41	22
Shopping Centre ITE Land Use 820	5,655	28	61%	39%	95	48%	52%
			17	11		46	50
TOTAL		72	26	46	158	87	72

## 3.2 Pass By Trips

We expect that this proposed development will attract a significant portion of its trips from the existing traffic passing by the site. These pass-by trips do not add new traffic to the surrounding transportation network; however, they are included in the traffic volumes entering and exiting the site. Essentially, pass-by trips are intermediate stops of a trip that already exists on the transportation network. They are not diverted from another roadway. The proposed retail portion of the development is relatively small and as a result will primarily serve the local area and not attract regional traffic

We reviewed ITE's Trip Generation Manual, 9<sup>th</sup> Edition for their recommended practice regarding pass-by trips and it states that *"Pass-by trips are drawn from the passing traffic stream, but are always included in site driveway movements. In traffic analyses, the summation of driveway volumes must equal the total external site generation (i.e., the sum of primary, pass-by and diverted linked trips). Pass-by trips are not included in (and thus subtracted from) the through volumes passing a given site access point on an adjacent road."*

ITE provides data plots and equations that estimate the average pass-by trip percentage versus 1,000 Square Feet Gross Leasable Area of retail space that are based on field studies completed across North America. The smaller the retail space is the larger the percentage of pass-by trips.

The average pass-by trip percentage for a 5,790 sqft shopping center is 89% during the PM peak hour. To determine a more reasonable estimate of net new traffic we reduced PM peak hour traffic for the proposed retail component by the pass-by percentage described above.

Exhibit 3.2 – Estimated Net Future Traffic Volumes with Pass-By Trip Adjustments

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
TOTAL		72	26	46	73	46	27

## 4 Conclusions and Recommendations

- This Traffic Impact Statement has provided a high level overview of the proposed development at 383 Herring Cove Road that will include 82 apartments and 5,790 sqft of commercial space on the ground floor.
- It includes an estimate of existing site generated trips; total new site generated trips and an analysis of existing traffic volumes in the surrounding area.
- We estimate that the proposed development will add a total of 72 new trips on the AM peak hour period and 73 new trips in the PM peak hour period after an adjustment for Pass-By Trips for the retail component.
- The close proximity to numerous key transit routes may reduce the estimate traffic generated by the rental apartments as provided in the report bases on ITE rates.
- New site generated traffic will most likely follow existing trip distribution patterns in the area on Herring Cove Road during the AM and PM peak hour periods.

# SUPPLEMENTARY MATERIALS FOR PLANNING APPLICATION

383 HERRING COVE ROAD,  
SPRYFIELD, NS

## ENCLOSED:

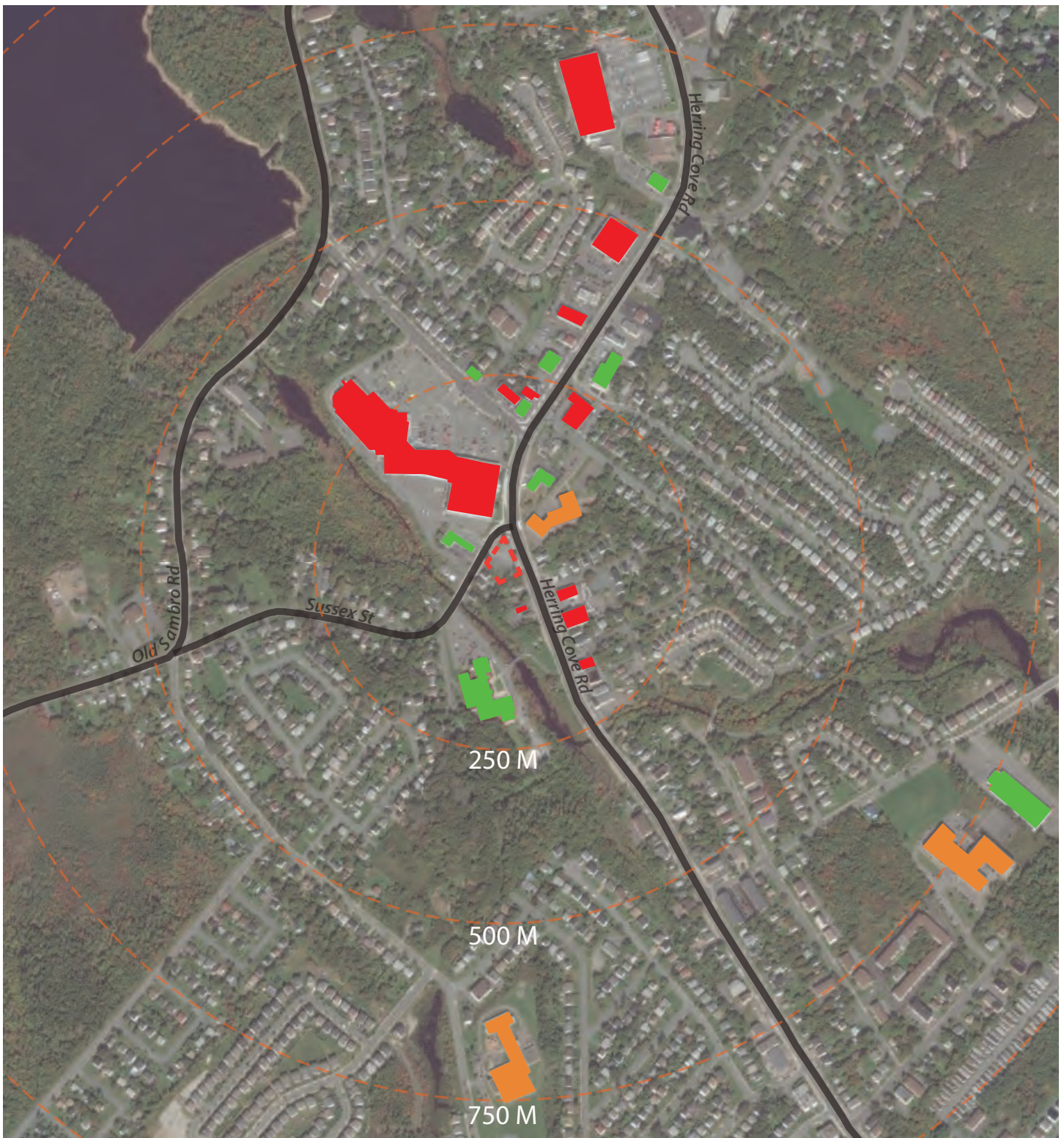
MAP OF STUDY AREA AND NEARBY DESTINATIONS

MAP OF HOUSING TYPES WITHIN 1000 METRES OF STUDY AREA

MAPS OF APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA

IMAGES OF NEARBY APARTMENT BUILDINGS

## STUDY AREA AND NEARBY DESTINATIONS - MAP



Project Site:



250 M

500 M

750 M

1000 M



## STUDY AREA AND NEARBY DESTINATIONS - DESCRIPTION

The project site is a unique location that is very prominent. Due to the local topography and the acute angle of the intersection at Herring Cove Road and Sussex Street, any development on the site will be highly visible to people living nearby or traveling along Herring Cove Road.

Another factor that makes this site unique is that there are many destinations within walking distance (shown on the previous map and listed in the legend below). Businesses (red), community/health services (green), and schools (orange) are all located within 250 metres of the site. Many of these destinations offer essential goods and services that residents would likely need to visit on a weekly or daily basis (e.g. grocery, hardware, drug store, recreation centre, schools, child care centre).

Within the broader area (1000 metres from the project site), there is no site that shares the same proximity to such a variety of destinations. The following maps (see pages 4, 6 & 9) show other apartment buildings in the area. None of the other apartment buildings are located in such an ideal location for residents, families in particular.

The following destinations and their proximity to the project site are shown on the previous map:

### Within 250 metres:

-  Captain Spry Centre
-  Central Spryfield Elementary
-  Royal Canadian Legion
-  South Centre Mall
-  YWCA Child Care Centre
-  Spryfield Physiotherapy
-  Blooming Cafe Restaurant
-  Jesse's Pizza
-  Other Commercial

### Within 500 metres:

-  Spryfield Dental Centre
-  Eye Clinic
-  Tim Horton's Restaurant
-  Salvation Army Family Resource Centre
-  Shoppers Drug Mart
-  RBC Bank

### Within 750 metres:

-  J.L. Isley High School
-  Elizabeth Sutherland School
-  Herring Cove Community Dentistry
-  Sobey's
-  Spryfield Lions Rink and Recreation Centre



A number of essential destinations are located within South Centre Mall, including a grocery store, drug store, and hardware store. Additionally, there is a Capital Health Community Wellness Centre.

## HOUSING TYPES WITHIN 1000 METRES OF STUDY AREA - MAP



### Housing Types:

- Single Detached Home
- Mobile Home
- Multi (townhouse, duplex, converted house)
- Multi (apartment-style)



## HOUSING TYPES WITHIN 1000 METRES OF STUDY AREA - DESCRIPTION

The majority of residential buildings near the project site are single-unit dwellings (yellow), mainly located on residential and local-collector streets rather than Herring Cove Road itself. There are some streets with primarily duplex and townhouse-style dwellings (orange), while in other areas, these housing types are interspersed among single-unit dwellings. Some apartment buildings (pink) are found to the north of the site, particularly along Old Sambro Road and Spencer Avenue. The majority of apartment buildings are located southeast of the site, along Herring Cove and River Roads. Still more apartment buildings can be seen further down Herring Cove Road, approximately 1.5 kilometres from the site. Along Herring Cove Road specifically, residential buildings are a mix of single-unit dwellings, converted multi-unit houses, and apartment buildings.

The following pages show locations and images of all apartment buildings within 1000 metres of the project site.

In the area to the north, apartment buildings range in size from 6 units at 229 Spencer Ave. to 113 units at 132 Old Sambro Rd. Apartment buildings to the south of the site range in size from five units at 69 Ardwell Ave. to 122 units at Foxwood Terrace.

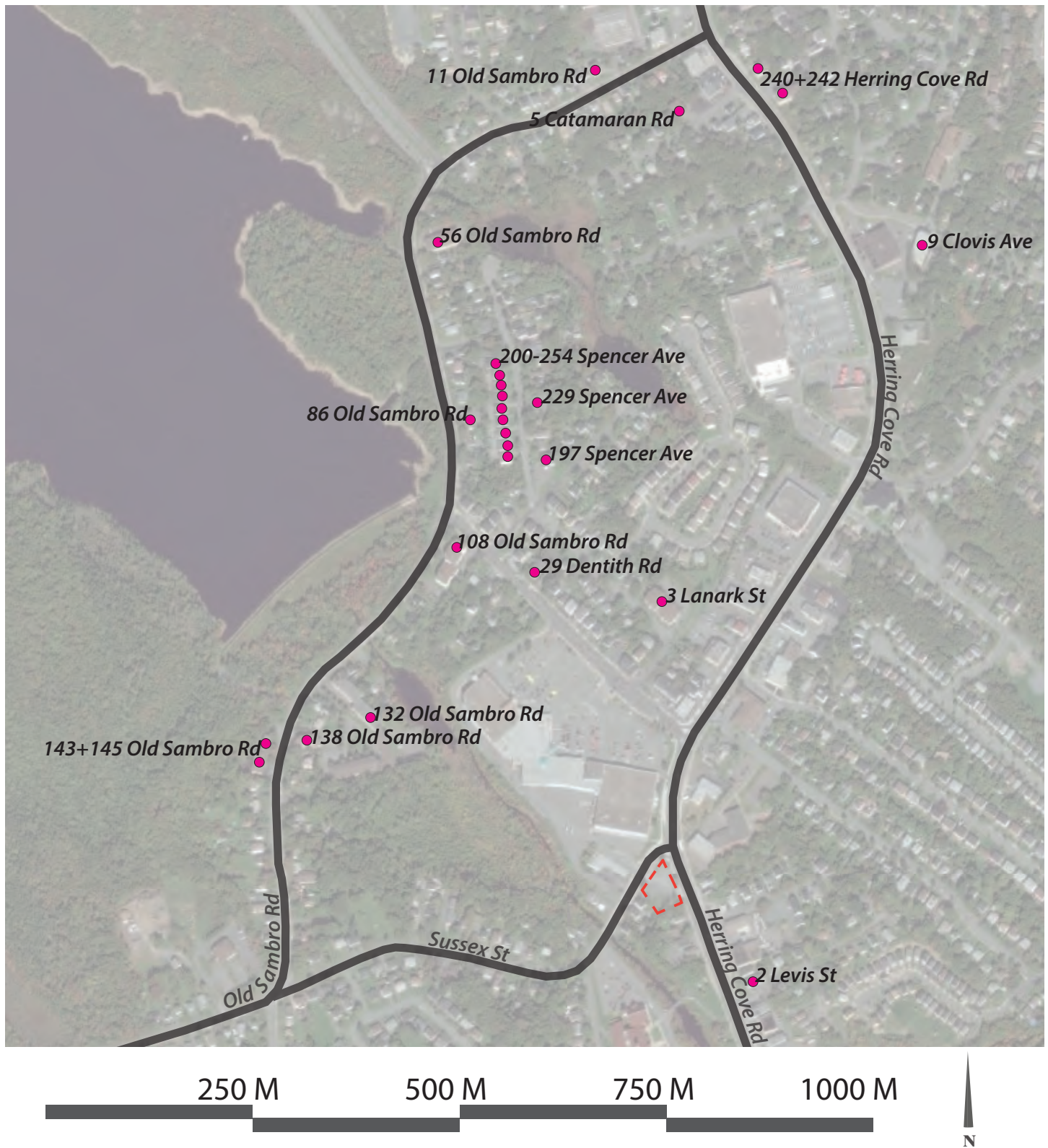
Of all the apartment buildings within 1000 metres of the site, none are mixed-use buildings but are residential only. Generally, the buildings are set back from the sidewalk and offer little in the way of landscaping or other visual appeal that would contribute to an attractive and inviting pedestrian environment.

The majority of apartment-style units are located a kilometre or more from essential destinations identified on the first map. The site at 383 Herring Cove Road is an opportunity for apartment-style housing with a high degree of walkability, offering a higher quality of living and concentrating density in the most appropriate location.



Captain William Spry Community Centre and Central Spryfield Elementary School are two destinations that offer essential services for families with young children.

## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (NORTH AREA)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (NORTH AREA)

11 Old Sambro Rd (9 units)



9 Clovis Ave (14 units)



5 Catamaran Rd (10 units)



200-254 Spencer Ave (54 units)



240 + 242 Herring Cove Rd (24 units)



229 Spencer Ave (6 units)



56 Old Sambro Rd (26 units)

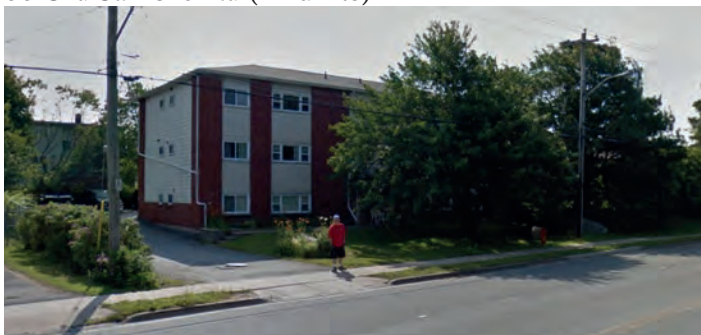


197 Spencer Ave (9 units)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (NORTH AREA)

86 Old Sambro Rd (11 units)



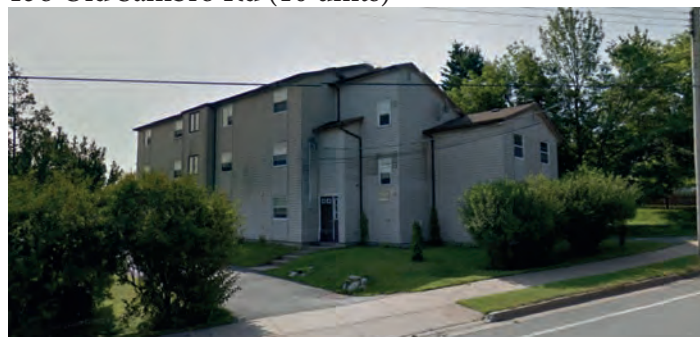
132 Old Sambro Rd (113 units)



108 Old Sambro Rd (37 units)



138 Old Sambro Rd (10 units)



29 Dentith Rd (13 units)



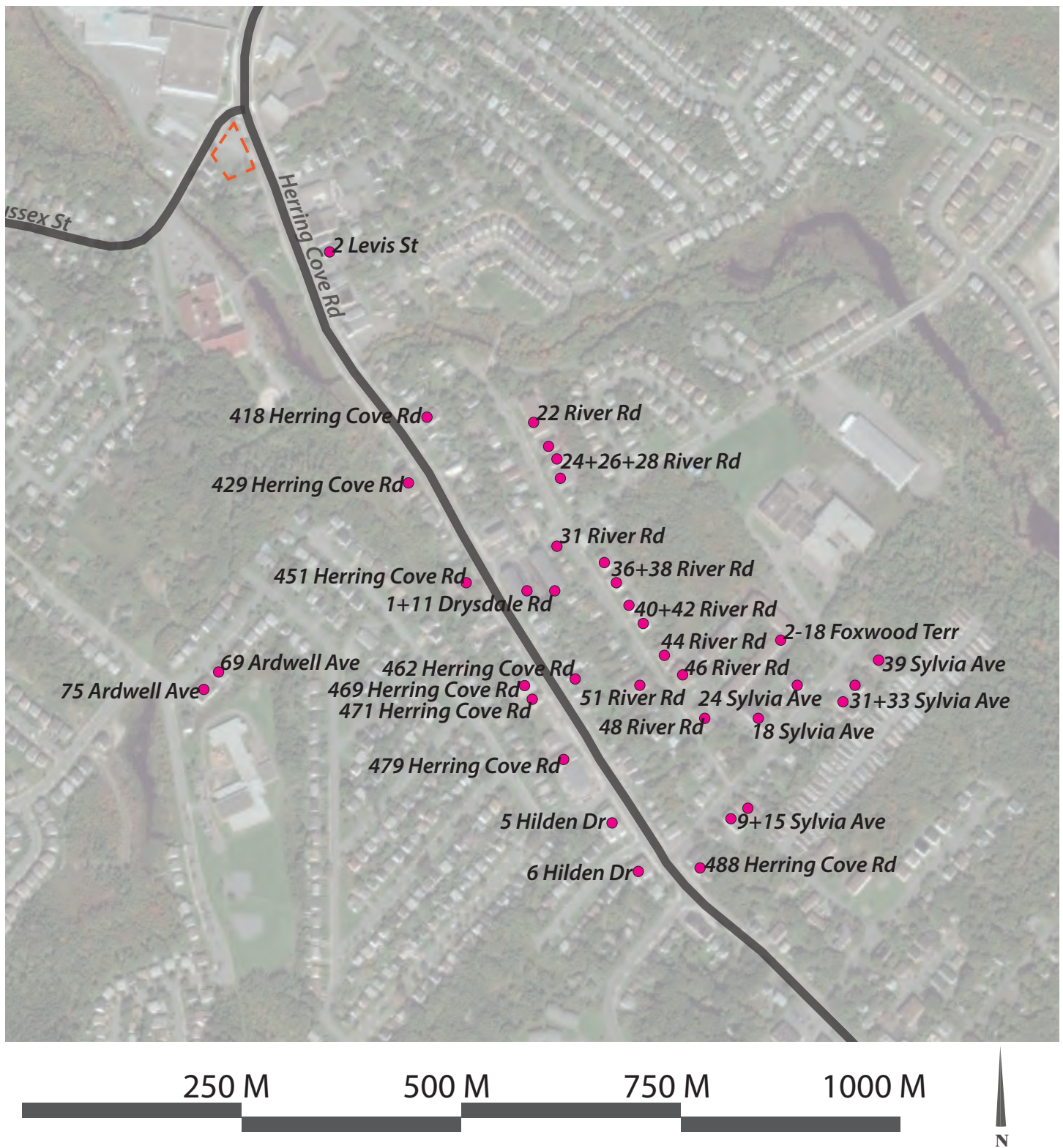
143 + 145 Old Sambro Rd (16 units)



3 Lanark St (30 units)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (SOUTH AREA)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (SOUTH AREA)

2 Levis St (6 units)



462 Herring Cove Rd (7 units)



418 Herring Cove Rd (12 units)



469 Herring Cove Rd (12 units)



429 Herring Cove Rd (24 units)



471 Herring Cove Rd (12 units)



451 Herring Cove Rd (15 units)



479 Herring Cove Rd (12 units)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (SOUTH AREA)

488 Herring Cove Rd (6 units)



5 Hilden Dr (18 units)



6 Hilden Dr (18 units)



75 Ardwell Ave (15 units)



22 River Rd (33 units)



69 Ardwell Ave (5 units)



24 + 26 + 28 River Rd (25 units)



1 + 11 Drysdale Rd (50 units)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (SOUTH AREA)

31 River Rd (6 units)



46 River Rd (12 units)



36 + 38 River Rd (16 units)



51 River Rd (18 units)



40 + 42 River Rd (19 units)



48 River Rd (18 units)



44 River Rd (14 units)



24 Sylvia Ave (9 units)



## APARTMENT HOUSING WITHIN 1000 METRES OF STUDY AREA (SOUTH AREA)

18 Sylvia Ave (15 units)



9 + 15 Sylvia Ave (15 units)



31 + 33 Sylvia Ave (19 units)



39 Sylvia Ave (9 units)



2-18 Foxwood Terr (122 units)

