

March 23, 2022

Wellings 2019 Inc
2962 Carp Road
Carp ON, K0A 1L0

Attention: Angela Mariani

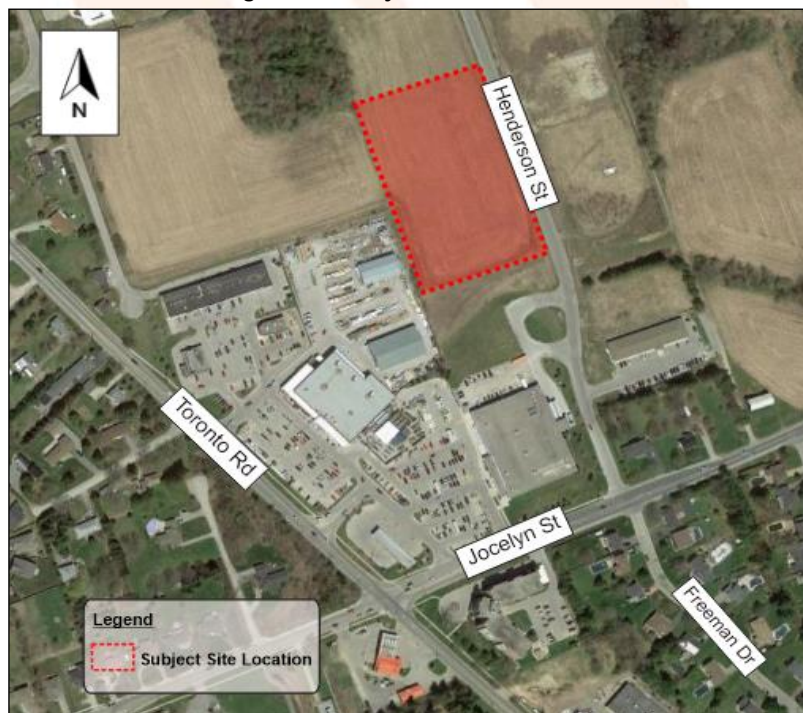
**Re: Engineering Service – Traffic Brief
Proposed Residential Development
Wellings of Port Hope, Municipality of Port Hope
Our Project No. NT-21-313**

1.0 INTRODUCTION

Nexttrans Consulting Engineers (A Division of NextEng Consulting Group Inc.) was retained by Wellings 2019 Inc. (the Client) to prepare a Traffic Brief in support of a Site Plan Approval application for a proposed residential development. The subject property is located north of the intersection of Jocelyn Street and Henderson Street, in the Municipality of Port Hope.

The location of the proposed development is illustrated in **Figure 1-1**.

Figure 1 – Subject Site Locations



The subject site is currently vacant. Based on the preliminary site plan prepared by Wellings 2019 Inc, dated February, 2021, the development proposal is to develop the subject lands and build a four (4)-storey mid-rise residential building development with 74 dwelling units and 36 townhouse units with two (2) bedroom units and one (1) bedroom units. 98 vehicular parking spaces at-grade are proposed on-site for the residential building and 56 vehicular parking spaces are proposed on-site for the townhouses, totalling 154 vehicular parking spaces. Vehicular access to the site is proposed via two (2) full movement driveways onto Henderson Street.

The proposed site plan is provided in **Figure 1-2**, the site statistics are provided in **Table 1.1**, and **Appendix A** provides the site plan in full detail.

Figure 1-2 – Proposed Site Plan



Table 1.1 – Proposed Site Statistics

Residence	Unit Type	Unit Count	Parking Supply Breakdown	Vehicular Access
Mid-Rise Building	1-Bedroom	34	98 vehicular parking spaces at-grade for building and 56 parking spaces for townhouses	2 full movement accesses onto Henderson Street
	2-Bedroom	40		
Townhouse	1-Bedroom	16		
	2-Bedroom	20		
Total	-	110		

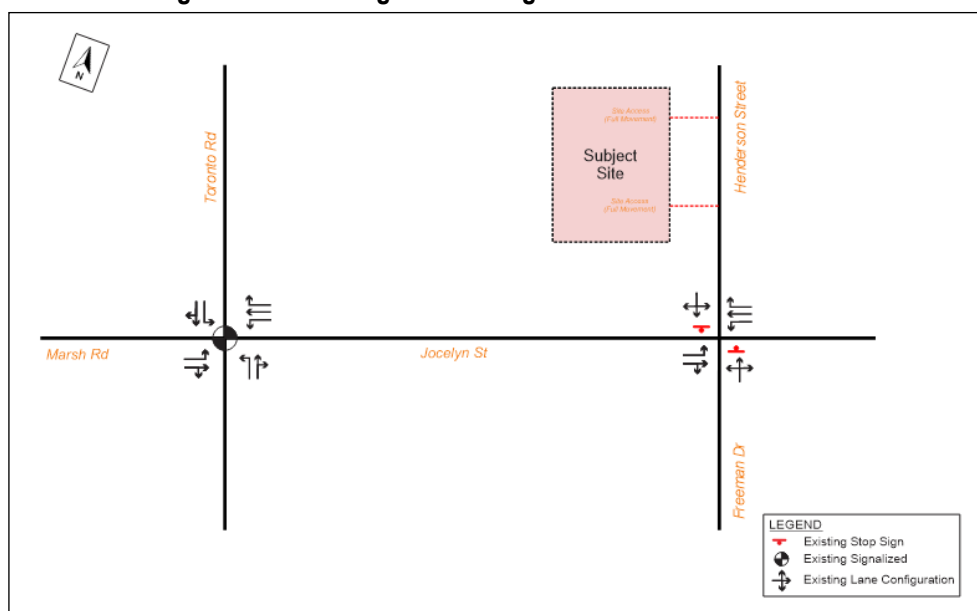
2.0 EXISTING CONDITIONS

2.1 Existing Road Network

As previously indicated, the proposed development is located north of the intersection of Henderson Street and Jocelyn Street, in the Municipality of Port Hope. The existing road network, lane configuration and existing traffic control for the study are illustrated in **Figure 2-1** and detailed below:

- **Toronto Road** is a north-south county road under the jurisdiction of the County of Northumberland. Toronto Road also known as County Road 2 has an existing three (3) lane cross-section (one (1) travel lane per direction) with a two way left turn lane and maintains a posted speed limit of 60 km/h near the subject site. Toronto Road runs between Dale Road to the north and Ridout Street to the south.
- **Jocelyn Street** is an east-west county road under the jurisdiction of the County of Northumberland. Jocelyn Street also known as County Road 70 has an existing two (2) lane cross-section (one (1) travel lane per direction) and maintains a posted speed limit of 50 km/h near the subject site. Jocelyn Street runs between Ontario Street to the east and Toronto Road to the west.
- **Henderson Street** is a north-south local road under the jurisdiction of the Municipality of Port Hope. Henderson Street has an existing two (2) lane cross-section (one (1) travel lane per direction) and maintains an assumed and unposted speed limit of 50 km/h near the subject site. Henderson Street runs between Jocelyn Street to the south and terminates approximately 100 m north of the intersection of Pemberton Drive and Henderson Street.
- **Freeman Drive** is a generally east-west local road under the jurisdiction of the Municipality of Port Hope. Freeman Drive has an existing two (2) lane cross-section (one (1) travel lane per direction) and maintains an assumed and unposted speed limit of 50km/h near the subject site. Freeman Drive runs between Jocelyn Street to the northwest and Victoria Street to the southeast.

Figure 2-1 – Existing Lane Configuration and Traffic Control



2.2 Existing Active Transportation Network

Sidewalks

Currently, concrete sidewalks available as follows:

- On the east side of Toronto Road; and
- On the north side of Jocelyn Street.

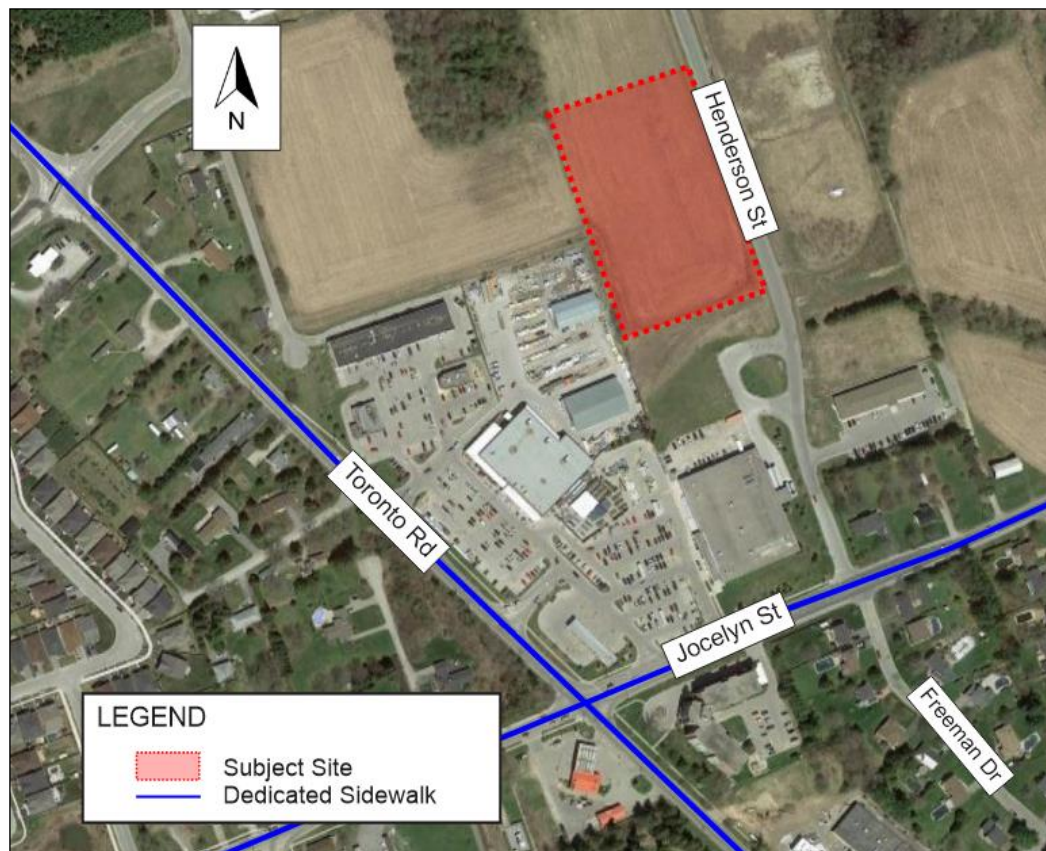
In addition, sidewalks are adequately maintained, and no improvements are required at this time.

Cycling

There are currently no dedicated cycling facilities within the immediate area of the subject site.

Sidewalk provisions are illustrated in **Figure 2-2**.

Figure 2-2 – Existing Sidewalk Provisions



2.3 Transit Mode Assessment

Based on the study prepared by the Ministry of transportation of Ontario (MTO) entitled: 'Transit Supportive Guidelines', dated January 2012, transit users are generally willing to walk 400 meters to a local stop or 800 meters to a transit station. The nearest bus stops providing regular scheduled service are located at the Independent Grocer, approximately 250m from the subject site.

The route service in the immediate area are described below and illustrated in **Figure 2-3**, and provided in full detail in **Appendix B**.

- **MPH Bus Route A** – The MPH Bus Route A operates generally in an east-west direction and operates along Jocelyn Street near the subject site. This route operates everyday except Sunday with headways of approximately 30 minutes all day. The nearest bus stop to the subject site is located at the Independent Grocer, approximately 250m from the subject site.

Transit provisions are illustrated in **Figure 2-3**.

Table 2.3 – Transit Provisions in Subject Area



3.0 SITE TRAFFIC

3.2 Site Trip Generation

Trip rates and site generated trips were derived from the information contained in the Trip Generation Manual, 10th edition, published by the Institute of Transportation Engineers (ITE) for "Multi-Family Housing (Low-Rise)" (LUC 220) and "Multi-Family Housing (Mid-Rise)" (LUC 221). The trip generation summary is shown in **Table 3.2**.

Table 3.2 – Site Traffic Trip Generation

ITE Land Use	Parameter	Morning Peak Hour			Afternoon Peak Hour		
		In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise) (LUC 220)	Gross New Trips	4	14	18	15	9	24
	Gross Rate	0.11	0.39	0.50	0.42	0.24	0.66
	Net New Trips	4	14	18	15	9	24
Multifamily Housing (Mid-Rise) (LUC 221)	Gross New Trips	7	20	27	24	14	38
	Gross Rate	0.09	0.28	0.37	0.33	0.18	0.51
	Net New Trips	7	20	27	24	14	38
Grand Total		11	34	45	39	23	62

The proposed development is expected to generate 45 new auto trips (11 inbound and 34 outbound) during the AM peak period, and 62 new auto trips (39 inbound and 23 outbound) during the PM peak period. **Based on the expected number of trips that the proposed development is expected to generate, it is our opinion that the proposed development will have a negligible impact on the adjacent road network.**

4.0 PARKING ASSESSMENT

4.1 Vehicular Parking Requirements

The subject lands are zoned as COM2 – General Commercial under the Municipality of Port Hope Zoning By-law 20/2010. The parking requirements in accordance with By-law 20/2010 are summarized in **Table 4.1**.

Table 4.1 – Municipality of Port Hope Zoning By-law 20/2010

Land Use	Unit Type	No. of Units	Parking Rates	Parking Requirement	Parking Provided	(+) Surplus / (-) Shortfall
Dwelling, Apartment	Residential	74	1.25 spaces per unit	93 spaces	98 spaces	-14
	Visitor		0.25 spaces per unit	19 spaces		
Dwelling, Street Townhouse	Residential	36	3 spaces for every 2 dwelling units	54 spaces	56 spaces	+2
Total	-	110	-	166 spaces	154 spaces	-12

In accordance with by-law 20/2010, the site requires 166 vehicular parking spaces for the proposed land use. In comparing the parking requirement with the proposed provision of 154 vehicular parking spaces, there is a shortfall of 12 parking spaces.

4.2 Parking Justification

4.2.1 Planning Policy

Nextrans has conducted a review of the planning and development goals and policies of the Municipality and County to justify how the proposed parking reduction is acceptable and aligns with those goals. The Municipality and the County provide development guidelines with respect to future transportation planning. Section B10 of the Port Hope Official Plan communicates the need to prioritize multimodal transportation, facilitating walkability and transit accessibility. Section B10 of the Official Plan states the following objectives:

- To develop transportation and utility corridors that minimize disruption to adjacent communities, land uses and environmentally sensitive areas;
- To ensure the co-operation of design and placement of utility infrastructure of all utilities;
- To provide for the efficient movement of people and goods throughout the Municipality and surrounding region;

- To provide a transportation system that will accommodate all surface modes of travel including trains, boats, automobiles, truck, transit and active transportation.

In conjunction with prolonged investment in alternative modes of transportation, parking reduction is a highly effective solution for reducing single occupant vehicle trips and associated parking demand and is consistent with the Municipality and County planning and development principles.

4.2.2 Transportation Demand Management

As previously stated, TDM is strongly endorsed by the Municipal and County Official Plans. The reduction in single occupant vehicle trips resulting from the implementation of TDM measures will also result in a decrease in residential parking demand. Given the located of the subject site, TDM measures pertaining to walkability, cycling and transit are expected to be highly effective. A comprehensive review of TDM measures and a TDM plan are detailed in Section 6.0.

5.0 ON-SITE CIRCULATION

AutoTURN software was used to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed study area. The AutoTURN analysis demonstrates that an HSU TAC 2017 vehicle can access the site and maneuver internally without conflict. AutoTurn analysis is shown in full detail in **Figure 5-1**.

6.0 TRANSPORTATION DEMAND MANAGEMENT

Transportation demand management (TDM) refers to variety of strategies to reduce congestion, minimize the number of single-occupant vehicles, encourage non-auto modes of travel, and reduce vehicle dependency to create a sustainable transportation system.

The primary objectives of this TDM plan are as follows:

- Provision of facilities / operations to promote behavioural change for reduced automobile uses and encourage the use of alternative sustainable transportation modes aside from single-occupancy vehicle (SOV).
- Maximize average auto occupancies, with the intent of a net minimization of site-related auto trips.
- Create and support opportunities for an inclusive transportation system to accommodate and facilitate all potential road users in a safe and efficient manner.

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

TDM strategies have multiple benefits including the following:

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

It is recommended that the following TDM measures be considered:

Walkability:

Walkability reflects overall walking conditions in an area. It considers the quality of pedestrian facilities, roadway conditions, land use patterns, community support, security and comfort for walking.

Generally, walkability can be evaluated at various scales:

- Site scale – affected by the quality of pathways, building accessways and related facilities;
- Street or neighborhood level – affected by the existence of sidewalks and crosswalks, and roadway conditions (road widths, traffic volumes and speeds); and,
- Community level – affected by land use accessibility, such as the relative location of common destinations and the quality of connections between them.

The proposed building fronts Henderson Street, which provides pedestrian-oriented at-grade street frontages that provide commercial and public amenities.

Cycling:

There are many specific ways to improve bicycle transportation, including the following:

- Improving paths and bike lanes;
- Correcting specific roadway hazards (potholes, cracks, narrow lanes, etc.);
- Improving road, road shoulder and path management and maintenance;
- Improving bicycling parking facilities;
- Develop a more connected street network and clustered development;
- Establish public bike systems that provide convenient rental bicycles for short utilitarian trips;
- Safety education, law enforcement and encouragement programs; and,
- Integration with transit.

The Bicycle Parking Guidelines, 2nd Edition, published by the Association of Pedestrian & Bicycle Professionals (APBP) states the following considerations with respect to bicycle parking:

Short-term and Long-term Bicycle Parking:

- “Short-term parking usually consists of bicycle racks located on the sidewalk or street in front of a building or destination. The site planning focus is on convenience, utility, and the attempt to improve security for the rack and the parked bicycle; and,
- Long-term parking uses a wider variety of fixture types and site plan layouts. It includes racks in cages and bicycle rooms, as well as lockers located in a variety of different settings, indoors and outdoors. Because long-term parking areas are frequently located in low pedestrian traffic areas or out-of-the-way locations, site design focus is on ensuring the safety of users while maintaining exclusive access to these areas.”

The proposed development will provide long-term bicycle parking at-grade level and six (6) short term bicycle parking spaces at-grade. All bicycle parking spaces should be provided at close proximity to the main building entrance for convenient access.

Based on Nextrans’ experience, excessive parking supply imposes environmental costs, contradicts community development objectives for more livable and walkable communities, and tends to increase driving and discourages the use of alternative mode of travel. It is anticipated that the combination of reduced parking supply and an efficient public transit system will encourage the use of alternative modes of travel.

Transit:

Although transit is not a primary transportation mode in the area, the proposed development should implement transit TDM measures in consideration of existing and proposed Municipal and Regional transit facilities in the area. The proposed development should provide an information package to residents which includes public transit information (i.e. transit system maps and schedules) to assist in trip planning and encourage dependency on transit.

7.0 CONCLUSION

The findings and conclusions of this analysis are as follows:

- The development proposal is to develop the existing subject lands and build a four (4)-storey mid-rise residential building with 74 dwelling units and 36 townhouse units with two (2) bedroom units and one (1) bedroom units. 98 vehicule parking spaces at-grade are proposed on-site for the residential building and 56 vehicular parking spaces are proposed on-site for the townhouses, totalling 154 vehicular parking spaces. Vehicular access to the site is proposed via two (2) full movement driveways onto Henderson Street.
- The proposed development is expected to generate 45 new auto trips (11 inbound and 34 outbound) during the AM peak period, and 62 new auto trips (39 inbound and 23 outbound) during the PM peak period. Based on the expected number of trips that the proposed development is expected to generate, it is our opinion that the proposed development will have a negligible impact on the adjacent road network.
- In accordance with by-law 20/2010, the site requires 166 vehicular parking spaces for the proposed land use. In comparing the parking requirement with the proposed provision of 154 vehicular parking spaces, there is a shortfall of 12 parking spaces.
- As part of the report, NexTrans has conducted a comprehensive review and analysis of various factors in the area that may support parking rate reduction such as existing MPH service, active transportation, as well as Transportation Demand Management opportunities.
- AutoTURN software was used to generate a vehicular turning template to confirm and demonstrate the accessibility of the proposed study area. The AutoTURN analysis demonstrates that a HSU TAC 2017 vehicle can access the site and maneuver internally without conflict.
- It is NexTrans' opinion that the justifications provided in this report are reasonable and consistent with the sustainability objectives and requirements in the Municipal and County Official Plans.

We trust the enclosed sufficiently addresses your needs. Should you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

Nextrans Consulting Engineers

A Division of NextEng Consulting Group Inc.

Prepared by:



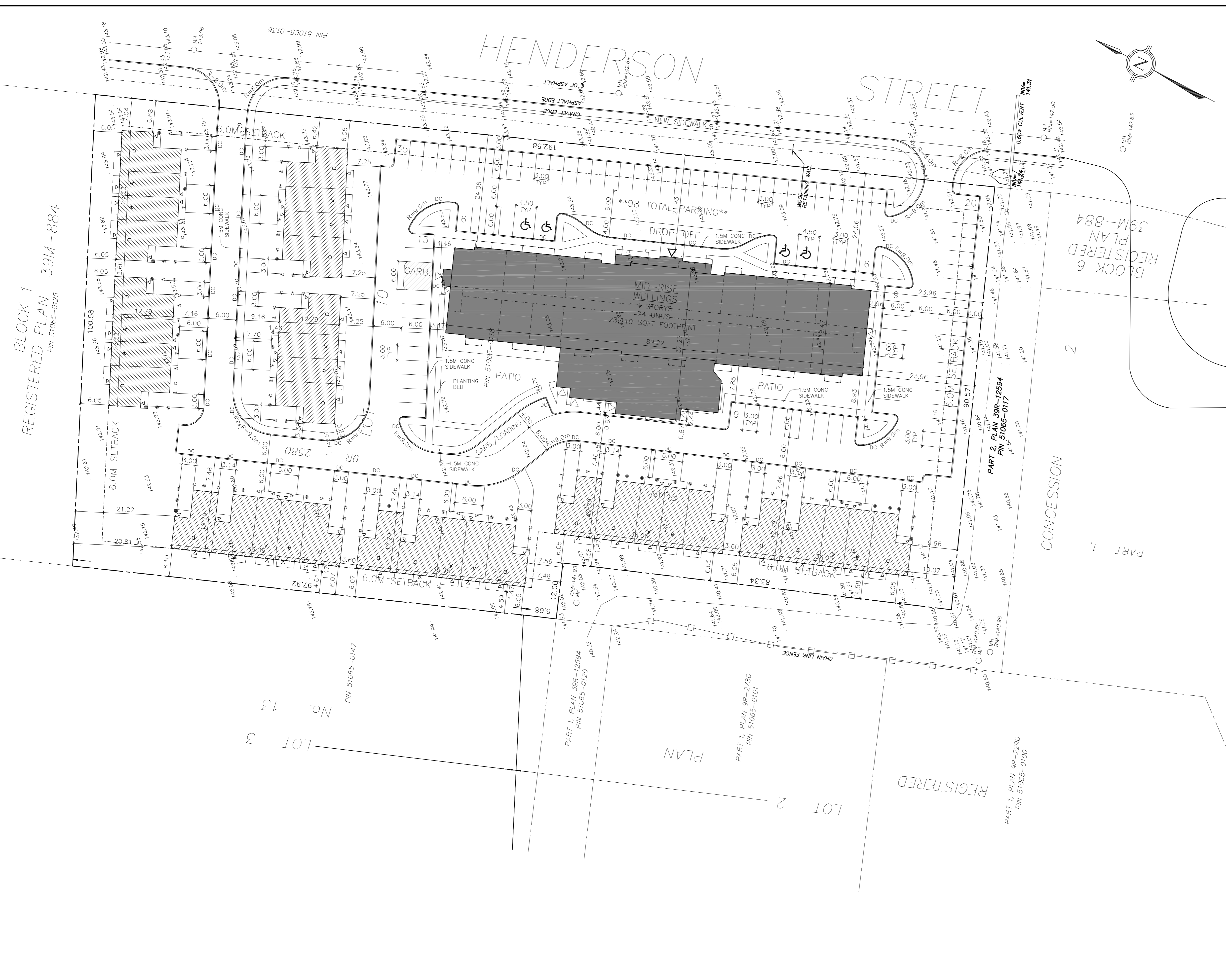
Marc Dimayuga
Transportation Analyst

Approved by:



Richard Pernicky, MITE
Principal

Appendix A - Proposed Site Plan



79 HENDERSON ST.
PORT HOPE, ON.
COUNTY OF NORTHUMBERLAND

ALL TOPOGRAPHICAL INFO SHOWN ON THIS PLAN IS DERIVED FROM TOPO PLAN PREPARED IN THE OFFICES OF SYLVESTER & BROWN LAND SURVEYING, 2021

PORT HOPE SITE STATS:
 LOT AREA = 18,218 SQM (4.5 AC)
 PARKING:
 APARTMENT BLDG = 98 SPACES
 TOWNHOUSES = 56 SPACES

MID-RISE RESIDENTIAL BUILDING INFO:
 - 4 STOREY
 - 13.5M BDG HGT.
 - 2148 SQM BDG AREA
 - 7223 SQM GFA
 - 74 UNITS PER HA.
 - 11.8% LOT COVERAGE

UNIT MIX:
 -- 2 BEDRM UNITS = 40 (52%)
 -- 1 BEDROOM UNITS = 34 (48%)
 TOTAL UNIT COUNT = 74

5 UNIT TOWNHOUSE BLOCK COUNT: = 4
 (8.8% LOT COVERAGE)
 - BLOCK AREA = 402 SQM
 - 2 BEDROOM UNITS = 12
 - 1 BEDROOM UNITS = 8
 TOTAL = 20

4 UNIT TOWNHOUSE BLOCK COUNT: = 4
 (6.8% LOT COVERAGE)
 - BLOCK AREA = 312 SQM
 - 2 BEDROOM UNITS = 8
 - 1 BEDROOM UNITS = 8
 TOTAL = 16

TOTAL TOWNHOUSE UNIT COUNT = 36
 (TOTAL TOWNHOUSE LOT COVERAGE = 15.6%)

TOWNHOUSE UNIT BREAK-DOWN:
 1) 20 TWO BEDROOM UNITS (55%)
 2) 16 ONE BEDROOM UNITS (45%)

ZONING MATRIX:			
ZONING	REQUIRED	PROPOSED	COMPLIANCE
MINIMUM LOT AREA	-	18,218sqm	-
MINIMUM LOT FRONTAGE	-	192.58m	-
MINIMUM FRONT YARD	-	6.0m	-
MINIMUM REAR YARD	-	6.0m	-
MINIMUM INTERIOR SIDE YARD	-	6.0m	-
MINIMUM EXTERIOR SIDE YARD	-	N/A	-
MAXIMUM BUILDING HEIGHT	-	13.8m	-
PARKING	-	APT. BLDG. - 1.32 SPACES PER DWELLING UNIT TOWNHOUSES - 1.55 SPACES PER DWELLING UNIT	-



DEVELOPER INFORMATION:
 NLGC Inc.
 2962 Carp Road, Ottawa, ON., K0A 1L0

OWNER INFORMATION:

ARCHITECT'S INFORMATION:

REVISIONS	
1	ISSUED FOR CONCEPTUAL REVIEW FEB12'21
2	ADJUSTED PER SURVEY AUG5'21
3	ZONING MATRIX ADDED JAN27'22
4	
5	
6	
7	
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PROJECT:
 WELLINGS OF PORT HOPE

DRAWING:
 PROPOSED SITE PLAN

ISSUE DATE:
 FEB2021

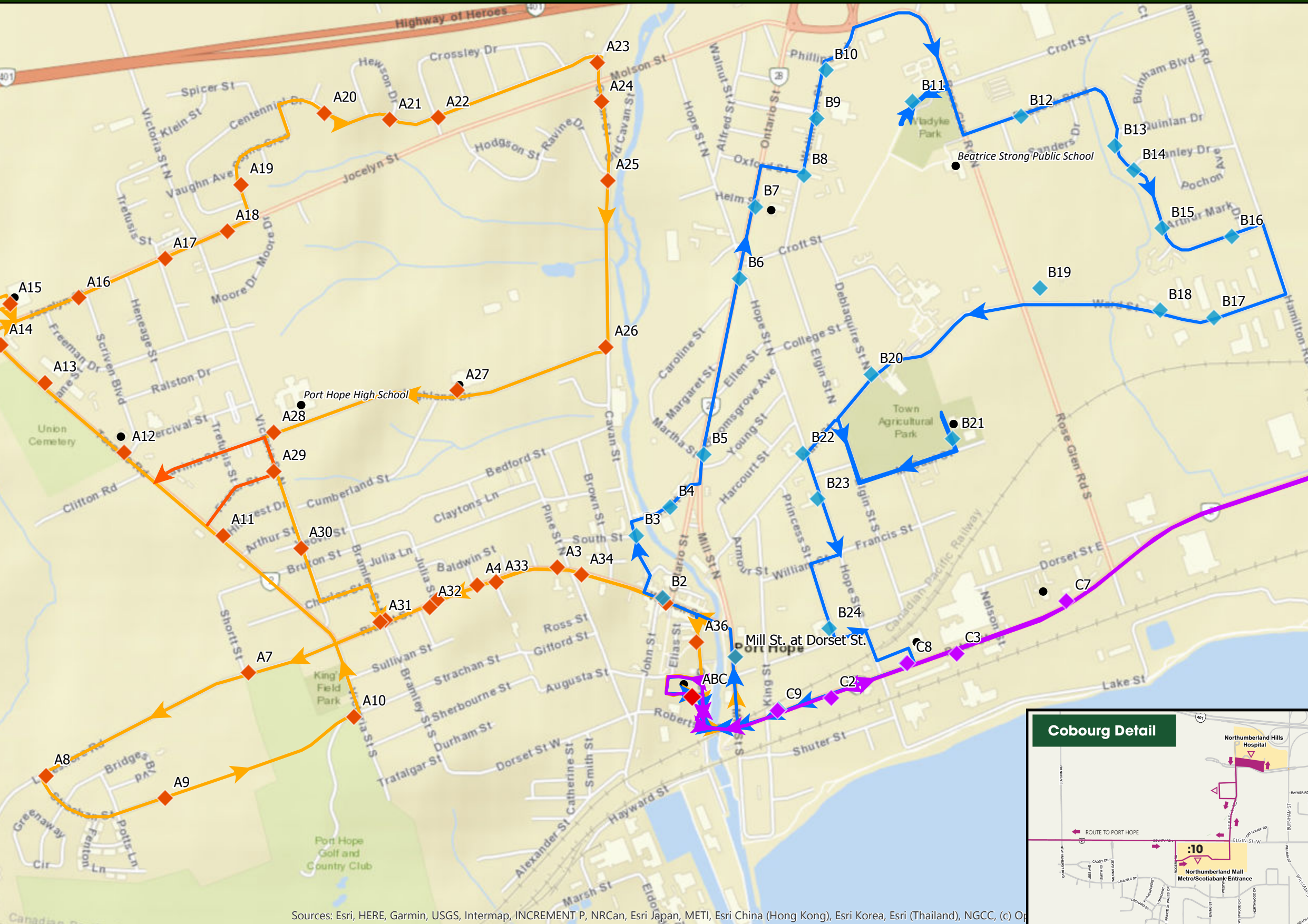
SCALE:
 1:400

DRAWN BY:
 M.W.

PROJECT NO.:
 1926

DRAWING NO.:
 A101

Appendix B – Existing Transit Information



Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Bus Fares • Exact cash fare system

Adults (18 to 64 years)	\$2.50
Children (4 to 17 years)	\$2.00
Seniors (65 and older)	\$2.00
Children under the age of 4	FREE

30-Day Pass

Adult Pass (18 to 64 years)	\$60.00
Student Pass (4 to 17 years)	\$30.00
Seniors Pass (65 and older)	\$30.00
Special Student Pass	\$15.00

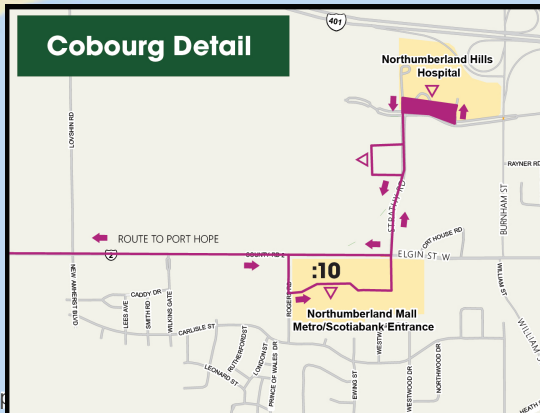
30 day passes are valid Monday - Friday.
***The special student pass is valid all day on Saturdays and on Monday to Friday from:**
7:00 a.m. to 9:00 p.m.
2:45 p.m. to 8:00 p.m.

Hours of Operation

Monday-Friday	7:00 a.m. to 8:00 p.m.
Saturday	9:00 a.m. to 4:00 p.m.

REGULAR ROUTES NO SERVICE SUNDAYS OR STATUTORY HOLIDAYS

Priority Seating
 Must be vacated for persons with disabilities



Bike on board

 Bicycles permitted on the bus

Bus patrons may bring two-wheel, conventional bicycles on the bus any time, on a first-come, first-served basis.

Eligible patrons call:
905-885-9891
 For reservations (24-hr notice appreciated)

R&LLS
 SPECIAL TRANSIT SERVICE

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