



Town of Amherst  
Planning Advisory Committee Meeting  
Agenda

Date: **Tuesday, September 6, 2022**  
Time: **4:00 pm**  
Location: **Council Chambers, Town Hall**

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	Pages
1. Call to Order	
1.1. Approval of Agenda	
1.2. Approval of Minutes - June 6, 2022	1 - 2
2. 112 Cordova Street Recommendation	3 - 12
3. Flemming / Paradise Avenue Rezoning Application Recommendation	13 - 21
4. Mosher / Brown Street DA Recommendation	22 - 160
5. Adjournment	

**Town of Amherst  
Planning Advisory Committee  
Minutes**

**Date:** June 6, 2022  
**Time:** 4:00 pm  
**Location:** Council Chambers, Town Hall

**Members Present** Deputy Mayor Sheila Christie  
Councillor Leon Landry  
Citizen Representative Ronald Wilson, Chair  
Citizen Representative Larry Pardy  
Citizen Representative Creighton McCarthy

**Members Absent** Councillor Hal Davidson

**Staff Present** Andrew Fisher, Director of Planning & Strategic Initiatives  
Marc Buske, Building Official  
Natalie LeBlanc, Deputy Clerk  
Emily Wainwright, Dangerous/Unsightly Premises Administrator  
Cindy Brown, Administrative Assistant

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**1. Call to Order**

The Chair called the meeting to order at 4:00 p.m.

**1.1 Approval of Agenda**

**Moved By: Deputy Mayor Christie**

**Seconded By: Creighton McCarthy**

**That the agenda be approved as circulated.**

**Motion Carried**

**1.2 Approval of Minutes**

**Moved By: Deputy Mayor Christie**

**Seconded By: Creighton McCarthy**

**That the minutes of the May 2, 2022 Planning Advisory Committee be approved as circulated.**

**Motion Carried**

**2. 112 Cordova Street - Demolition**

**2.1 Staff Report**

Ms. Wainwright reviewed the staff report included as part of the agenda package. Of note was that the property recently sold to new owners. Information item only at this time; staff will be looking for a recommendation at a future meeting.

**2.2 Committee Questions to Staff**

Deputy Mayor Christie asked if the new owners are aware of this matter. Ms. Wainwright replied yes.

**2.3 Complainant Comments**

Lori Mosley, whose property neighbors the subject property, was in attendance. She stated that people were using drugs and living in the accessory buildings, and that she had to call the police on different occasions. She also noted the accessory buildings were erected in violation of the minimum yard setbacks and are too close to the property line.

**2.4 Owner Comments**

The owner was not in attendance.

**3. 14/16 Cornwall Street Recommendation**

**Moved By: Deputy Mayor Christie**

**Seconded By: Creighton McCarthy**

**That the Planning Advisory Committee order that all contents be removed from the building at 14-16 Cornwall Street (PID: 25016197 & 25016213) and the building, and accessory building, be demolished, and back fill the hole by September 30, 2022 with all work to be done by the property owner. Failure by the property owner to do the work may result in the Town completing the work and sending all contents of the building to an appropriate solid waste facility, with all costs charged to the property owner's tax account.**

**Motion Carried**

**4. 2 Pearl Place Recommendation**

Mr. McCarthy asked why there is still power connected to the property. Ms. Wainwright replied that the owners are still moving contents out of the building.

**Moved By: Creighton McCarthy**

**Seconded By: Deputy Mayor Christie**

**That the Planning Advisory Committee order that all contents be removed from the building at 2 Pearl Place (PID: 25025966) and the building be demolished, and back fill the hole within 90 days of this meeting, with all work to be done by the property owner. Failure by the property owner to do the work will result in the Town completing the work and sending all contents of the building to an appropriate solid waste facility, with all costs charged to the property owner's tax account.**

**Motion Carried**

**5. Updates**

Mr. Fisher gave an update on matters recently dealt with by the Planning Advisory Committee, included as part of the agenda package.

**6. Adjournment**

**Moved By: Councillor Landry**

**Seconded By: Deputy Mayor Christie**

**To adjourn the meeting.**

**Motion Carried**

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Ron Wilson  
Chair

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Andrew Fisher  
Director of Planning and Strategic Initiatives



TO: Planning Advisory Committee  
FROM: Emily Wainwright, Dangerous & Unsightly Premises Administrator  
DATE: September 6, 2022  
RE: 112 Cordova Street (PID: 25015843)

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**Registered Owner (updated):** Mark & Jolene Hansen  
8505 Highway 209  
Parrsboro, Nova Scotia  
B0M 1S0

**Background:**

The lack of maintenance over the years has left two accessory buildings in a state of serious disrepair. As articulated in the inspection report by the Dangerous and Unsightly Premises Administrator, there are various structural and safety concerns, including the ruinous and dilapidated condition, of the accessory buildings. In addition, complaints received about the accessory structures noted that they are located too close to the property line.

Upon further investigation, staff found evidence that indicates that the two accessory buildings were erected or located on the subject property without first obtaining a Development Permit, which violates Section 3.3 (a) of the Land Use Bylaw. The evidence indicates that the subject buildings were constructed between August 2009 and July 2013. No permits exist on file for the subject buildings. The subject buildings also appear to violate the minimum 1.2m (4ft) yard setback required between property lines and accessory buildings.

The Planning Advisory Committee held a meeting on June 6, 2022 where they heard a staff report on the subject property. At this meeting, the committee had the opportunity to listen and ask questions to the owner, who was invited but did not attend. Since this meeting, the circumstances around the subject property remain the same. On June 8, 2022 staff were advised by the property owner of his plan to renovate both buildings, and move them so they do not violate the minimum setback requirements. He estimated that all work will be completed in three months, which also includes renovations to the main structure.

Option #1 below reflects a date which allows the owner time to complete the renovation and moving of the accessory buildings.





Attached is the Staff report from the June 6, 2022 Planning Advisory Committee meeting that details the dilapidated state of the subject buildings.

**Options:**

- 1) That the Planning Advisory Committee order that all contents be removed from the two accessory buildings at 112 Cordova Street (PID: 25015843) and the buildings be demolished, and back fill the hole within 60 days of this meeting, with all work to be done by the property owner. Failure by the property owner to do the work will result in the Town completing the work and sending all contents of the building to an appropriate solid waste facility, with all costs charged to the property owner's tax account.
- 2) That the Planning Advisory Committee order that the accessory buildings be relocated so they no longer violate minimum yard setbacks required between property lines and accessory buildings under the Land Use Bylaw, P-2, and require the accessory buildings to be weathertight and no longer unsightly within 30 days of this meeting. Failure by the property owner to do the work will result in the Town ordering demolition of both accessory buildings within 60 days of this meeting. If the owner fails to complete the demolitions, this will result in the Town completing the demolitions and sending all contents of the building to an appropriate solid waste facility, with all costs charged to the property owner's tax account.
- 3) That the Planning Advisory Committee order staff to hire a contractor to access the condition of the buildings, and a qualified surveyor to survey the property to determine the property lines and submit the reports back to the PAC, with all costs charged to the property owner's tax account.
- 4) That the Planning Advisory Committee order staff to continue to monitor the property and bring any new issues that arise back to the committee.

Staff are recommending **Option 1**.





TO: Planning Advisory Committee  
FROM: Emily Wainwright, Dangerous & Unsightly Premises Administrator  
DATE: June 6, 2022  
RE: 112 Cordova Street (PID: 25015843)

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**Registered Owner:** The Bank of Nova Scotia  
90 Wynford Drive, 3<sup>rd</sup> Floor  
Toronto, Ontario  
M3C 0N5

**Issue:**

The lack of maintenance over the years has left two accessory buildings in a state of serious disrepair. As articulated in the inspection report by the Dangerous and Unsightly Premises Administrator below, there are various structural and safety concerns, including the ruinous and dilapidated condition, of the accessory buildings.

It had also come to the attention of staff that these two accessory buildings located at the subject property are in violation of Section 3.3 (a) of the Land Use Bylaw:

*Unless otherwise stated in this Bylaw, no development shall be undertaken in the Town of Amherst unless a development permit has been granted by the Development Officer.*

We believe that these accessory buildings were constructed without first obtaining a permit, sometime between August 2009 and July 2013. The subject buildings also appear to violate minimum yard setbacks required between property lines and accessory buildings.

**History:**

April 12, 2021 – Complaint received by the Town

May 27, 2021 – 1<sup>st</sup> Letter to owner to remove all solid waste by June 17, 2021

May 28, 2021 – Property secured by representatives for Bank of Nova Scotia

June 3, 2021 – Order placed to remove all solid waste by June 6, 2021

Request by representatives for Bank of Nova Scotia for extension of two weeks on Order.





Order extension denied by Interim CAO due to extensive amount of waste and drug paraphernalia.

Request by representatives for Bank of Nova Scotia for extension until June 9, 2021 for Order.

June 4, 2021 – Order extension granted until the end of day June 9, 2021 by Interim CAO

Revised Order placed to remove all solid waste and maintain lawn by June 9, 2021

June 10, 2021 – Site visit, owners complied with Order

June 21, 2021 – File Closed. Complainant and Property Owner notified.

May 12, 2022 – Complaint received by the Town

May 12, 2022 – Inspected property and accessory buildings, both buildings were left unsecured. Received approval for immediate securing of both buildings (interior inspections of the accessory buildings occurred with the assistance of APD to ensure they were vacant).

May 26, 2022 – Notice of June 6, 2022 PAC meeting posted to property and sent to owner. Letter included information on LUB violations and dangerous/unsightly nature of accessory buildings.

### **Inspection Report:**

An inspection of two accessory buildings located at 112 Cordova Street was completed by the Dangerous and Unsightly Premises Administrator on May 12, 2022. The following was noted and photographed:

- The main residence appears to be vacant;
- Both accessory buildings were unsecured and doors open;
- Building #1 exterior is in an unsightly condition, interior is missing floor boards, graffiti is present;
- Building #2 exterior is in an unsightly condition and is not weathertight;
  - Missing shingles, rotten/missing soffit, partial collapse of the right rear roof, large holes in the floor boards
- Both buildings are showing signs of rot and deterioration, internally and externally.



**Discussion:**

The inspection of the two accessory buildings by the Dangerous and Unightly Premises Administrator not only showed unsecured buildings, but also rot and deterioration. There has also been a partial collapse of the roof in one of the buildings, which will continue to deteriorate as water enters. As shown in the history above, the buildings had been left unsecured in the past which has also caused transient activity on the property, and can be considered an allurement to children.

Given the ruinous and dilapidated state of the subject accessory buildings detailed in report by the Dangerous and Unightly Premises Administrator, neglect by the property owner, and in accordance with the Land Use Bylaw, it is appropriate to consider removing this risk to health and safety by ordering demolition to the two accessory buildings.

The property owner, or their representative, have been invited to the PAC meeting to discuss the state of these buildings. Staff have provided three options for the PAC to consider; however, the PAC will be asked to make a decision at a subsequent meeting.

It is important to note that this property is currently for sale, with a pending closing date of May 31, 2022.

**Municipal Government Act**

The staff report, and pictures, for the accessory buildings located at the subject property will have consideration for the sections of the Municipal Government Act highlighted below.

**Definition:**

(r) “dangerous or unsightly” means partly demolished, decayed, deteriorated or in a state of disrepair so as to be dangerous, unsightly or unhealthy, and includes property containing

- (i) ashes, junk, cleanings of yards or other rubbish or refuse or a derelict vehicle, vessel, item of equipment or machinery, or bodies of these or parts thereof,
- (ii) an accumulation of wood shavings, paper, sawdust, dry and inflammable grass or weeds or other combustible material,
  - (iia) an accumulation or collection of materials or refuse that is stockpiled, hidden or stored away and is dangerous, unsightly, unhealthy or offensive to a person, or
- (iii) any other thing that is dangerous, unsightly, unhealthy or offensive to a person, and includes property or a building or structure with or without structural deficiencies**
- (iv) that is in a ruinous or dilapidated condition,**
- (v) the condition of which seriously depreciates the value of land or buildings in the vicinity,**
- (vi) that is in such a state of non-repair as to be no longer suitable for human habitation or business purposes,



- (vii) that is an allurement to children who may play there to their danger,
- (viii) constituting a hazard to the health or safety of the public,
- (ix) that is unsightly in relation to neighbouring properties because the exterior finish of the building or structure or the landscaping is not maintained,
- (x) that is a fire hazard to itself or to surrounding lands or buildings,
- (xi) that has been excavated or had fill placed on it in a manner that results in a hazard, or
- (xii) that is in a poor state of hygiene or cleanliness;

Section 346:

- (1) Where a property is dangerous or unsightly, the council may order the owner to remedy the condition by removal, demolition or repair, specifying in the order what is required to be done.

**May 12, 2022**



**Accessory Building #1**



**Accessory Building #2**







**Options:**

At a later date, given the information available at this time, staff will be recommending **Option 1.**

- 1) That the Planning Advisory Committee order that all contents be removed from the two accessory buildings at 112 Cordova Street (PID: 25015843) and the buildings be demolished, and back fill the hole within 30 days of this meeting, with all work to be done by the property owner. Failure by the property owner to do the work will result in the Town completing the work and sending all contents of the building to an appropriate solid waste facility, with all costs charged to the property owner's tax account.
- 2) That the Planning Advisory Committee order staff to hire a contractor to access the condition of the buildings, and a qualified surveyor to survey the property to determine the property lines and submit the reports back to the PAC, with all costs charged to the property owner's tax account.
- 3) That the Planning Advisory Committee order staff to continue to monitor the property and bring any new issues that arise back to the committee.



# MEMO

**TO:** Planning Advisory Committee

**FROM:** Andrew Fisher, Director of Planning & Strategic Initiatives

**DATE:** September 6, 2022

**RE:** **Land Use Bylaw Zoning Map Amendment – Fleming Avenue**

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**ISSUE:**

An application to amend the Land Use Bylaw Zoning Map to change the zoning designation of a portion of PID 25001926 located at Flemming Street and Paradise Avenue from Low Density Residential to General Residential.

**BACKGROUND INFORMATION:**

The subject vacant property is approximately 9,680m<sup>2</sup> (2.4 acres) in area. As shown on the attached sketch, it has frontage on Paradise Avenue where Flemming and Paradise intersect. The subject property is part of a larger vacant property known colloquially as Coates' Field. Development in the immediate area consists of single detached dwellings to the north along Fleming Avenue, which is located in the Low Density Residential Zone. Four-unit townhouses exist to the west on Paradise Avenue and Sandstone Crescent, which are zoned General Residential.

Attached are excerpts from the Land Use Bylaw (LUB) showing the permitted uses for the General Residential and Low Density Residential Zones.

The Low Density Residential Zone, applied to mostly vacant lands at the northern end of town, permits a range of residential use limited to Single Detached, Double Dwellings and a few accessory uses such as home occupations and B&Bs. Most importantly, this zone does not permit multi-unit dwellings.

The applicant has expressed an interest in developing 4-unit townhouses on the subject property, similar to those located to the west. Doing so would require that the zoning be changed to the General Residential Zone that allows a full range of residential types. Attached is a preliminary plan showing how four, 4-unit townhouses could fit on individual properties and meet all minimum requirements of the General Residential Zone.

**PUBLIC PARTICIPATION OPPORTUNITY:** An advertised Public Participation Opportunity was held on July 20, 2022. The only members of the public in attendance were the applicant and the two current property owners.

## **RELEVANT POLICY AND DISCUSSION:**

The following MPS polices are relevant to this issue.

### General Residential Zone

RP-3 It shall be the intention of Council to include in the Land Use Bylaw a General Residential zone. This zone shall permit a range and density of residential development subject to the policies of this Plan and regulations of the Land Use Bylaw. Council shall zone all areas designated Residential to the General Residential Zone, except where other specific zones are applied.

### Low Density Residential Zone

RP-4 It shall be the intention of Council to include in the Land Use Bylaw a Low Density Residential Zone. This zone shall permit low density residential development subject to the policies of this Plan and regulations of the Land Use Bylaw. This zone will be applied to areas designated Residential where Council feels medium and high density residential development is inappropriate.

### Amendment Criteria

A-5 It shall be the intention of Council, when considering an amendment to this or any other planning document, including the entering into or amendment of a development agreement, to consider the following matters, in addition to all other criteria set out in the various policies of this planning strategy:

- (a) That the proposal conforms to the general intent of this plan and all other municipal bylaws and regulations.
- (b) That the proposal is not premature or inappropriate by reason of:
  - (i) the financial capability of the Town to absorb any costs relating to the development;
  - (ii) the adequacy of municipal water, sanitary sewer and storm sewer services;
  - (iii) the adequacy of road networks, in, adjacent to, or leading to the development;
- (c) That consideration is given to the extent to which the proposed type of development might conflict with any adjacent or nearby land uses by reason of:
  - (i) type of use;
  - (ii) height, bulk and lot coverage of any proposed building;
  - (iii) parking, traffic generation, access to and egress from the site;
  - (iv) any other matter of planning concern outlined in this strategy.

In review of RP-3 and RP-4 above that create the residential zones, the only significant difference between them is that the Low Density zone has been applied to areas where medium and high density development is considered 'inappropriate'. However, there are several examples where medium density townhouse developments have been mixed among detached dwellings. The two building types do not conflict with each other.

## **CONCLUSIONS:**

Staff feel this rezoning request conforms to general intent of the MPS and other regulations and does not represent a significant potential impact on the surrounding area over and above the current situation.

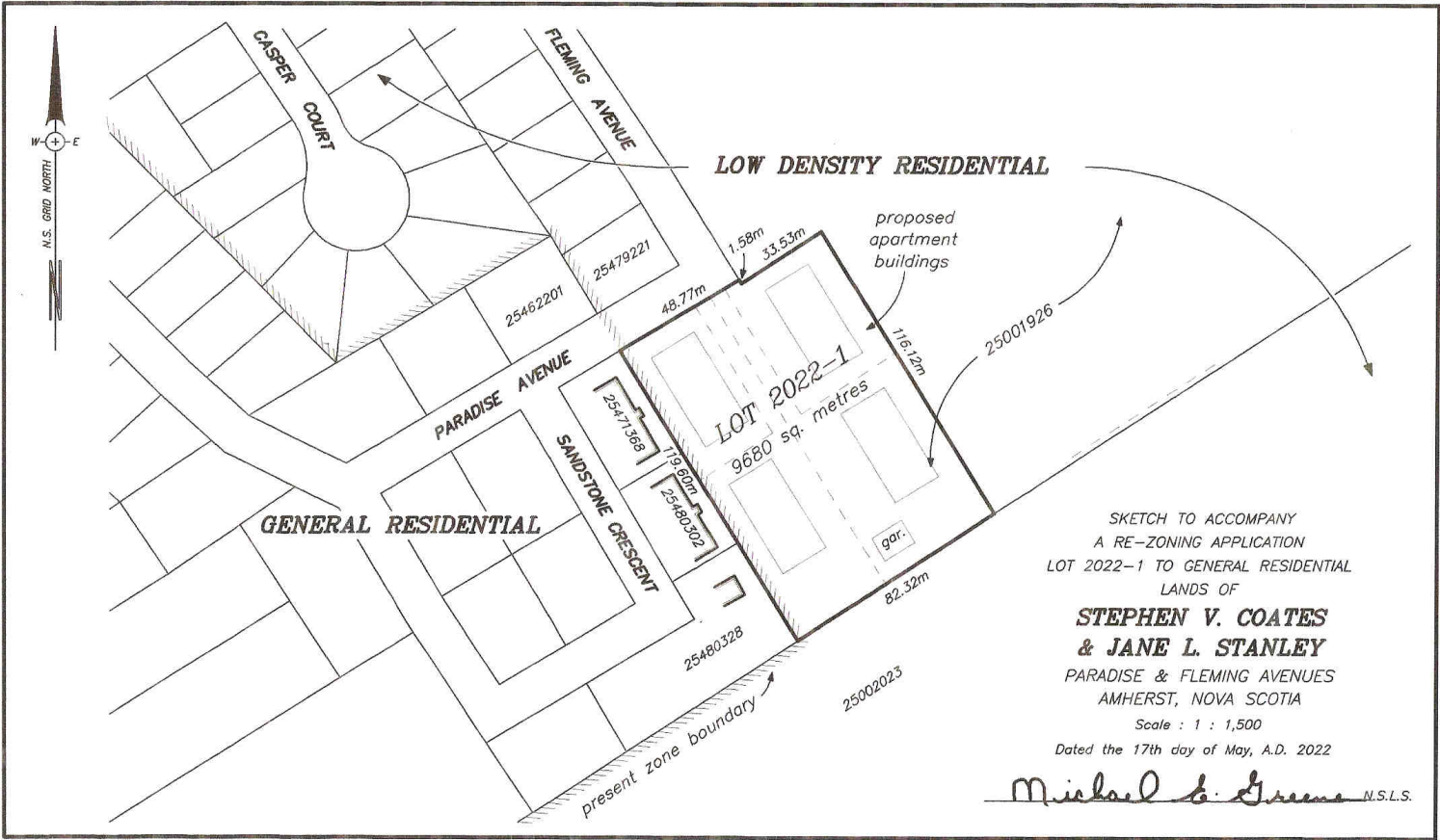
**MOTION OPTIONS:**

Option One: I move that the Planning Advisory Committee recommend that Council amend the Land Use Bylaw Schedule 'A' Zoning Map by changing the zoning of a portion of PID 25001926 located at Flemming Street and Paradise Avenue from Low Density Residential to General Residential.

Option Two: I move that the Planning Advisory Committee recommend that Council **not** amend the Land Use Bylaw Schedule 'A' Zoning Map by changing the zoning of a portion of PID 25001926 located at Flemming Street and Paradise Avenue from Low Density Residential to General Residential.

Option Three: I move that the Planning Advisory Committee defer the application and instruct Staff to provide more information.

**STAFF RECOMMENDATION: Option One.**



**LOW DENSITY RESIDENTIAL**

**GENERAL RESIDENTIAL**

proposed apartment buildings

LOT 2022-1  
9680 sq. metres

gar.

SKETCH TO ACCOMPANY  
A RE-ZONING APPLICATION  
LOT 2022-1 TO GENERAL RESIDENTIAL  
LANDS OF

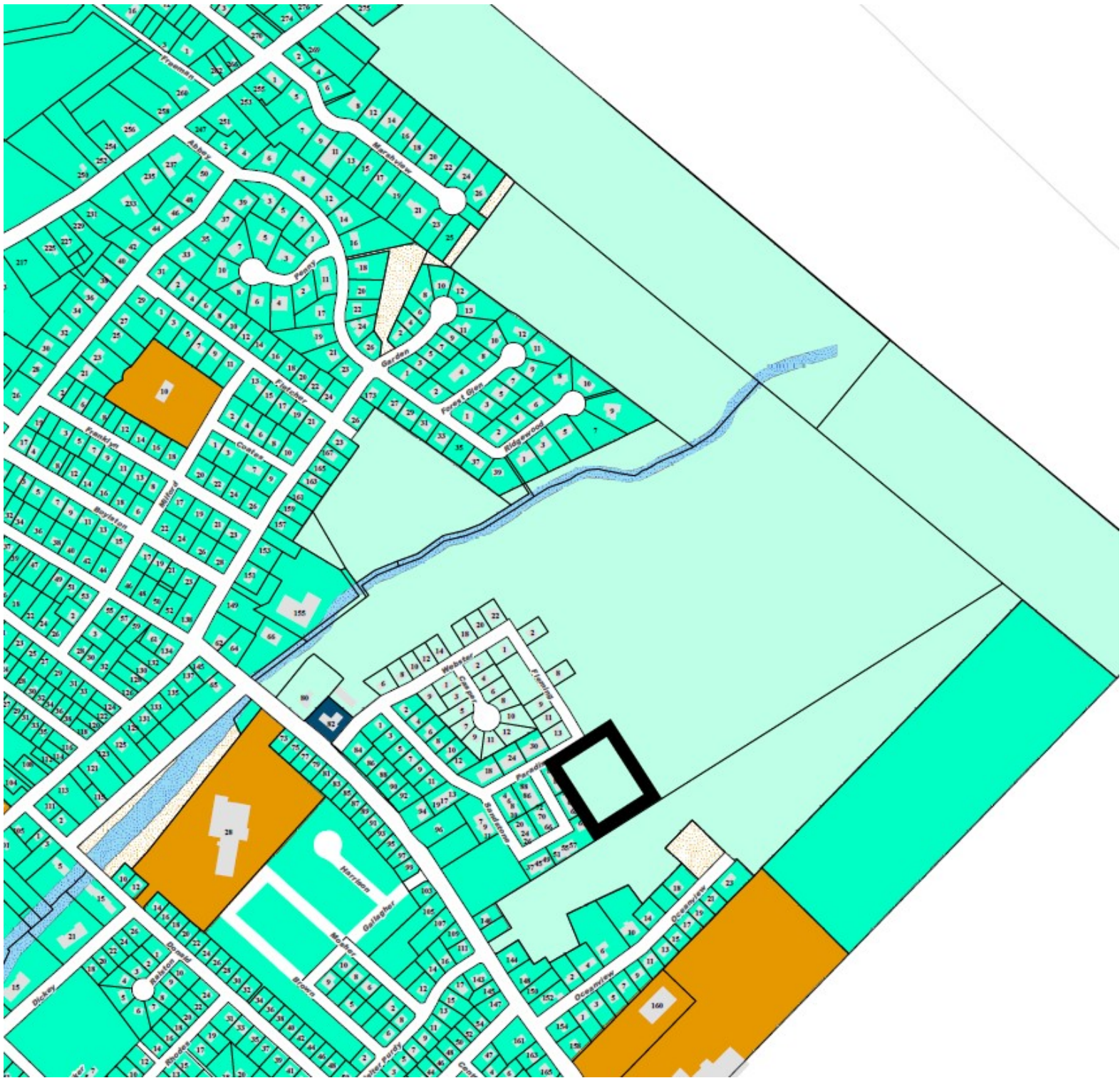
**STEPHEN V. COATES  
& JANE L. STANLEY**

PARADISE & FLEMING AVENUES  
AMHERST, NOVA SCOTIA

Scale : 1 : 1,500

Dated the 17th day of May, A.D. 2022

*Michael G. Greene* N.S.L.S.



## **7.2 General Residential Zone**

### **7.2.1 General Residential Zone Uses Permitted**

In the General Residential Zone, the following uses shall be permitted:

- (a) Single Detached Dwellings
- (b) Double Dwellings
- (c) Apartment Buildings (less than 5 units)
- (d) Converted Dwellings (subject to section 7.1.3)
- (e) Townhouses
- (f) Boarding houses
- (g) Bed and Breakfast Establishments
- (i) Home Occupations
- (j) Residential Day Care Centres
- (k) Parks, Open Spaces, and Public Trails
- (l) Existing trucking operation at 76 East Pleasant Street (PID 25026626)

### **7.2.2 Permitted Uses by Development Agreement**

In a Residential Zone, an application for the following uses shall be considered by development agreement in accordance with the applicable Municipal Planning Strategy (MPS) Policy:

- (a) A restaurant as part of bed and breakfast establishment in accordance with Policy RP-16 of the MPS.
- (b) A group home or boarding house in accordance with Policy RP-13 of the MPS.
- (c) A garden suite in accordance with Policy RP-14 of the MPS.
- (d) Apartment buildings greater than 4 units in accordance with Policy RP-9 of the MPS.
- (e) Long Term Care Facilities and Homes for Special Care in accordance with Policy RP-19.

### 7.2.3 Zone Requirements

In any Residential Zone, all development permits shall be issued in conformity with the following requirements:

<b>(a) Single Detached Dwelling</b>		
Minimum lot area		450 m <sup>2</sup>
Minimum lot frontage		15 m
Minimum front yard		6 m
Minimum rear yard		6 m
Minimum side yard	One side	1.3 m
	Other side	3 m
Minimum flanking yard		6m
Maximum height		11 m

<b>(b) Multiple Unit Dwellings</b>		
Minimum lot area	Apartment Building	300 m <sup>2</sup> per unit
	Townhouse	300 m <sup>2</sup> per unit
	Converted/Duplex/Semi-Detached/Other	560 m <sup>2</sup>
Minimum lot frontage	Apartment Building	10 m per unit
	Townhouse	6 m per unit
	Converted/Duplex/Semi-Detached/Other	20 m
Minimum front yard	Townhouse	10 m
	All Other Types	6 m
Minimum rear yard	All Types	8 m
Minimum side yard	Apartment Building	One side 2 m
		Other side 3 m
	Townhouse	Common Wall 0 m
		Outside Wall 3 m
Minimum flanking yard		6 m
Maximum height		11 m

#### 7.2.4 Special Requirement - Existing trucking operation at 76 East Pleasant Street (PID 25026626)

- Any ground surface not covered by vegetation to be treated so as to be dust free;
- No storage aggregate (sand or gravel) be permitted on the property;
- The storage of petroleum products on the site be in compliance with any and all relevant provincial regulations.

For the purposes of this section the existing trucking operation includes: the parking, storage and maintenance of up to four commercial motor vehicles; the parking, storage and maintenance of up to 4 additional passenger vehicles associated with the business; the operation of an office within the existing single detached dwelling on the property used to coordinate the day to day operation of the business as well as usual bookkeeping and business functions; the storage of various hand tools and maintenance equipment; the use of the existing garage on the property for the trucking business; up to six persons employed on the site.

## 7.3 Low Density Residential Zone

### 7.3.1 Low Density Residential Zone Uses Permitted

In the Low Density Residential Zone, the following uses shall be permitted:

- (a) Single Detached Dwellings
- (b) Double Dwellings
- (c) Bed and Breakfast Establishments
- (d) Home Occupations
- (e) Residential Day Care Centres
- (f) Parks, Open Spaces, and Public Trails

### 7.3.2 Permitted Uses by Development Agreement

In a Residential Zone, an application for the following uses shall be considered by development agreement in accordance with the applicable Municipal Planning Strategy (MPS) Policy:

- (a) A restaurant as part of bed and breakfast establishment in accordance with Policy RP-16 of the MPS.
- (b) A garden suite in accordance with Policy RP-14 of the MPS.

### 7.3.3 Zone Requirements

In any Residential Zone, all development permits shall be issued in conformity with the following requirements:

<b>(a) Single Detached Dwelling</b>		
Minimum lot area		450 m <sup>2</sup>
Minimum lot frontage		15 m
Minimum front yard		6 m
Minimum rear yard		6 m
Minimum side yard		1.3 m
		3 m
Minimum flanking yard		6m
Maximum height		11 m

<b>(b) Two Unit Dwellings</b>		
Minimum lot area		360 m <sup>2</sup> per unit
Minimum lot frontage		24 m
Minimum front yard		6 m
Minimum rear yard		6 m
Minimum side yard		4 m
Minimum flanking yard		6 m
Maximum height		11 m



**Lot Size (Without Pole)**

- Lot #1 = 1,860 sq. meters
- Lot #2 = 2,410 sq. meters
- Lot #3 = 2,170 sq. meters
- Lot #4 = 2,590 sq. meters

# MEMO

**TO:** Planning Advisory Committee

**FROM:** Andrew Fisher, Director of Planning & Strategic Initiatives

**DATE:** September 6, 2022

**RE:** Development Agreement – Lot 2021-2R Brown/Mosher Apartment Complex

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## **PROPOSAL:**

An application by Paul Skerry Architects on behalf of the property owner, NovaView Developments Ltd., for a development agreement to allow construction of three, 54-unit apartment dwellings on Lot 2021-2R (PID 25002122), located south of E.B. Chandler School, adjacent to Brown and Mosher Streets.

## **BACKGROUND INFORMATION:**

Committee members are referred to the February 7, 2022 staff report on this item that includes the original Application Briefing, Proposal Details, and public input from the January 26, 2022 Public Participation Opportunity. Please note that although a written submission from Mr. Giles Beland was reviewed by staff for the February staff report, it was mistakenly omitted from the February meeting information package. As such, Mr. Beland's comments were provided to PAC members and the applicant via email and are provided separately in this package.

At the February 7, 2022 meeting, the PAC requested that the applicant provide further information and/or address the following items:

1. Shadow Analysis – request to provide a shadow analysis, particularly on Buildings A and C.
  - A shadow study is attached to this report.

Staff Comment: Unlike many larger jurisdictions, the town does not have set criteria for shade analysis. However, the shadow analysis provided does show that during the winter solstice when the sun casts the longest shadow, the adjacent dwellings will still have at least 6 hours without shade on them, which is a common criterion in other jurisdictions with established guidelines. Diagram 3 of the shadow study does show significant shade on the school building at 10 AM during Winter Solstice; however, this is unlikely to significantly impact operation of the school.

2. Perspective View –provide perspective views of the proposed buildings and existing adjacent structures.
  - Perspective views of the three buildings is attached to this report.
3. Building C – concerns were raised about the closer proximity of this building to adjacent properties along Willow Street.

- Building C and its adjacent parking lot have been flipped to reduce the mass near the Willow Street properties.

Staff Comment: changing the position of Building C increases the setback to approximately 50 m (164 ft) to the rear property line of the nearest dwelling on Willow Street.

4. Parking – the proposed parking provides 198 spaces or 1.2 spaces/unit. Concerns were raised that most units will have two vehicles. The Land Use Bylaw standard is 1.25 spaces/unit. Adding 8 spaces would satisfy the LUB 1.25/unit ratio.

- Additional parking spaces to meet the LUB 1.25 spaces/unit standard have been provided in the revised site plan.

Staff Comment: The development now meets the LUB standard and is configured such that a shortage of parking is unlikely to impact the surrounding neighborhood due to the distance to the proposed buildings. The development agreement will contain a requirement that any additional parking shall not be located closer to adjacent properties.

5. Traffic Impact Statement – request to provide a traffic impact statement by a traffic Engineer licensed to practice in N.S. that will estimate trip generation and the impact on traffic levels on the surrounding street network, including: Willow Street, Donald Avenue, Brown Street, Mosher Street, Walter Purdy Drive, and the new connection to Willow Street from the development. The statement will address the extent to which the traffic generated from the proposed development will impact the performance of streets and intersections in the vicinity in relation to the current standards for traffic volumes on local and arterial streets, as set out in the ‘TAC Manual’. If estimated trip generation exceeds surrounding capacity, estimate the number of added dwelling units that would not result in exceeding the standard.

- A Traffic Impact Study is attached to this report. Conclusions & Recommendations are listed in Section 5 on Page 39. The study estimated that the development would generate 60-64 new vehicle trips during the AM and PM peak hours, and 726 trips on a weekday. Approximately 80% of the new traffic will access Willow Street via the extension of Gallagher, with the balance using Donald Avenue via Brown/Mosher and Walter Purdy.
- The study recommended the installation of stop signs where Brown and Mosher intersect with Gallagher. It also recommended a review of the internal road network, the installation of a sidewalk along Gallaher to Willow, and a marked crosswalk on willow.
- The study also concluded that the traffic created by the proposed development ‘can be introduced safely and efficiently into the existing transportation network with the recommendations outlined’.

Staff Comment: The development agreement will require that the developer implement the recommendations from the report.

6. Landscaping Plans – request to provide more information regarding landscaping of the site and the use of vegetation and/or visual barriers to provide buffering to adjacent residential properties. Perhaps the use of opaque fencing could be used.

- A landscaping plan is attached to this report.

Staff Comment: The development agreement will require submission of a detailed Landscaping Plan, generally as shown on the Landscape Concept Plan. In particular, the developer shall erect fencing at least 6 feet in height as shown on the western side of the Landscape Concept Plan

before Building C is occupied, and shall be erected on the eastern side before Building C is occupied.

7. Propane Tanks – request to address the location of these tanks. Is there a willingness to move the tanks away from adjacent properties? If not, please provide an explanation of why this is not possible or preferred.
  - Propane tanks have been replaced with connection to natural gas.
8. Servicing Statement – confirmation from an engineer licensed in N.S. that the existing town water and sanitary sewers are of sufficient size/capacity to accommodate the development.

Staff Comment: Operations staff are confident that existing services can accommodate the development. Furthermore, the development agreement will require that the developer satisfy the Town’s Infrastructure Development Standards provided as Schedule “F” of the Town of Amherst Subdivision Bylaw. These standards apply to water, sanitary and storm services and obligate the developer to assess the impact of the development on all existing infrastructure in a manner acceptable to the Town Engineer.

9. Stormwater Management – a recent storm event resulted in significant flooding within the existing drainage ditch that runs through the subject property and extends from the northwest corner across the E.B. Chandler School property and into Dickey Brook. The proposed development will result in a significant increase in impervious surfaces and therefore the peak stormwater flows into that ditch. The Site Servicing Schematic does include some details around drainage but further analysis is required to ensure that onsite stormwater management will not exacerbate this issue.
10. Civil drawings for Building A includes a master stormwater management plan for the entire project lands. The proposed stormwater management will balance and reduce the stormwater run off generated by the project. Stormwater will be temporarily held back on site and released at a lesser rate.

Staff Comment: The Development Agreement will require that the developer’s engineer provide a design brief of the Stormwater Management Plan that explains how the plan will not result in an increase of peak flows over existing conditions

## **PUBLIC PARTICIPATION OPPORTUNITY**

A virtual public participation opportunity advertised in accordance with the Policy for Public Participation and Notification was held on January 26, 2022. A video of the meeting has been made available, and a summary is provided as part of the information package. Written submissions are also part of the information package. Some of the concerns raised at the meeting could be summarized as follows:

- Too many units and buildings are out of scale with adjacent detached dwellings.
- Traffic increase in frequency and speed
- School children safety
- Impact on school system, health care system, emergency responders, power grid, security
- Propane tank locations

- Fencing is needed
- Loss of privacy
- Construction noise and disruption
- Removal of green space and natural habitat
- Property values
- Loss of small town, established neighbourhood character
- Lack of parking

## **RELEVANT POLICY**

The following provides the Municipal Planning Strategy Policies relevant to this issue.

Land Use Bylaw: Section 7.2.2 of the Bylaw requires that residential developments with over four dwelling units are subject to a development agreement in accordance with Policy RP-9 of the Municipal Planning Strategy (MPS).

Municipal Planning Strategy:

### **Policy RP-9 Medium and High Density By Development Agreement**

*It shall be the intention of Council to ensure medium and high-density residential development occur in a manner compatible with a low-density residential neighbourhood. Specifically, Council shall require that all residential developments greater than 4 dwelling units per property, be subject to a Development Agreement. In negotiating such an agreement Council shall ensure that:*

- a) the structure is located on the lot in such a manner as to limit potential impacts on surrounding low density residential developments;*
- b) the development provides sufficient on-site parking, and appropriate access to, and egress from the street;*
- c) the location of the parking facilities does not dominate the surrounding area, including the utilization of vegetation and fences to mitigate the aesthetic impacts of parking lots;*
- d) any on site outdoor lighting does not negatively impact the surrounding properties;*
- e) any signage on the property is sympathetic to the surrounding residential properties;*
- f) vegetation is used to improve the aesthetic quality of the development;*
- g) the architecture of the building is sympathetic to any existing development in the surrounding area.*

The proposed development consists of three 4-storey buildings, which represents a significant increase in the intensity of the subject property over the single-detached dwelling lots that surround the subject property on three sides. In an effort to mitigate the impact on the neighborhood, the applicant has positioned the proposed buildings such that they have relatively large setbacks to adjacent residential properties. In response to public comment, Building C and its associated parking area were repositioned such that the setback is increased to approximately 50 m (164 ft) from the rear property line of the nearest property that fronts on Willow Street.

At the PAC's request, the developer provided a Shadow Study indicating that shadow cast will have a minimal impact on adjacent residential uses, although the adjacent school would experience shade.

Regarding parking, the proposal was revised to provide additional parking spaces to meet the LUB standard of 1.25 spaces/unit. While the developer did not provide a site plan with an optional expanded parking area(s), there is ample space within the development to expand the parking. In addition, given the relatively insular character of the development, spillover parking is unlikely to impact surrounding neighbourhood. In other words, significant street parking in the surrounding neighbourhood is unlikely given the distance to the proposed buildings.

Limiting impacts from outdoor lighting and signage can be easily dealt with under the terms and conditions of the development agreement. At the request of the PAC, the applicant provided Landscape Concept plan that includes perimeter fencing along the west and east property lines. Installation of the fencing and a detailed landscaping plan will be stipulated in the development agreement.

With regard to the architecture being sympathetic to 'any existing development in the surrounding area', the proposed buildings are clearly larger in both bulk and height in comparison to the adjacent detached dwellings. On the other hand, each building is approximately half the footprint and roughly 20 feet greater in height in comparison to E.B Chandler School located immediately to the north of the property. Further afield, there are existing three storey apartment buildings along Dickey Street to the west and Spring Street to the north.

### **GP-7 Compatibility**

*It shall be the intention of Council to allow a mix of compatible land uses to minimize their impacts by:*

- (a) requiring adequate buffering and setbacks;*
- (b) screening development by the use of visual barriers; and,*
- (c) regulating the location of parking, storage buildings and other accessory uses or facilities.*

The matters noted in GP-7 are for the most part included in the discussion above regarding RP-9. In addition, the location of accessory features such as storage facilities for solid waste can be addressed by the applicant and provided for in the development agreement.

### **GP-8 Density**

*It shall be the intention of Council to allow development at a density appropriate to the overall desired character of the town.*

While the relatively high density of the proposed development is a concern, particularly to many residents in the nearby area, the proposal does represent a mix of housing type and densities, which corresponds to the general intent other MPS policies noted in this report.

### **RP-8 Housing Mix**

*It shall be the intention of Council to encourage a mix of housing densities in all residential areas of town to encourage a mix of housing types and income groups in all residential areas.*

The proposal would significantly increase the overall housing density in the area.

### **RP-10 Neighbourhood Stabilization**

*It shall be the intention of Council to provide for the stabilization of existing residential neighbourhoods by: (b) discouraging the encroachment of non-compatible land uses.*

The application is for a multi-unit residential development surrounded by other residential uses and an institutional use. When compared to an industrial use, it could be argued that the existing and proposed uses are all compatible. Where this policy may be relevant is the extent to which the proposed development is so intense as to be non-compatible with its surroundings. Mitigating factors include the building design and location, site layout, the use of vegetative or fencing buffers, as well as, an analysis of the impact of the proposal on shadow casting and the transportation network. These factors have all been addressed to some degree by the applicant.

### **RP-11 Affordable Housing**

*It shall be the intention of Council to encourage and promote the provision of affordable housing units within all residential areas of the Town by:(a) encouraging a mix of housing types and densities;*

The proposal would significantly contribute to the ‘mix of housing types and increase the overall density in the area. Currently, the shortage of housing across the spectrum of housing types has had a significant negative impact on housing affordability. Additions of these multi-unit dwellings addresses this shortage and can potentially increase affordability.

### **RP-12 Residential Area Design**

*It shall be the intention of Council to ensure that new residential areas:*

- a) provide for the efficient use of land;*
- b) provide for the efficient and economic extension of existing water, storm sewer and sanitary sewer systems and other utilities;*
- c) incorporates a hierarchy of streets that efficiently and safely accommodates traffic flows and proper access to other areas of Town;*
- d) provides for the efficient and safe movement of pedestrians and cyclists;*
- e) minimizes adverse effects on the environment;*
- f) provides for parks and other community uses in safe and central locations.*

The proposal is an infill development, which speaks to the efficient use of land that does not require extension of existing town infrastructure. Vehicle and active transportation connectivity is relatively high, with two existing street accesses via Brown and Mosher Streets to Walter Purdy Drive. The most important connection will be direct access to Willow Street via a newly constructed public access. The development is within close walking distance to three schools, providing easy pedestrian access for children, and it is in close proximity to the trail that runs along Dickey Brook that connects to parks to the west and the marsh trail to the northwest. Dickey Park is within short walking distance.

As noted previously, the Traffic Impact Study found that the estimated new vehicle and pedestrian traffic can be ‘safely and efficiently’ introduced into the existing transportation network with recommended actions that include a marked crosswalk on Willow Street.

#### **MS-4 Service Standards**

*It shall be the intention of Council to maintain a ‘Development Standards Bylaw’ in order to establish the required servicing standards for development within the town...*

The applicant has been provided with the town’s Development Standards, which are part of the Subdivision Bylaw. Town engineering have indicated that existing service connections can accommodate the proposal. Preliminary servicing and storm drainage plan have been submitted. A standard development agreement would require the submission of a storm water drainage plan as part of the development. Principal requirements of the drainage plan will be not increase runoff onto adjacent properties, and not increase peak flows into Dickey Brook through the installation of retention infrastructure.

#### **MS-11 In-fill Development**

*It shall be the intention of Council to encourage and facilitate the development of vacant land located on existing municipal services in order to make more efficient use of such services.*

As previously stated, the proposal satisfies the above policy.

#### **R-21 High Density Open Space**

*It shall be the intention of Council to require multiple unit residential properties to provide usable open space for use of residents on the site.*

In addition to the individual balconies, the proposal provides significant common open space, including over an acre in the center of the development.

#### **A-5: Amendment Criteria**

*It shall be the intention of Council, when considering [...] entering into a development agreement, to consider the following matters, in addition to all other criteria set out in the various policies of this planning strategy:*

- (a) That the proposal conforms to the general intent of this plan and all other municipal bylaws and regulations.*
- (b) That the proposal is not premature or inappropriate by reason of:
  - (i) the financial capability of the Town to absorb any costs relating to the development;*
  - (ii) the adequacy of municipal water, sanitary sewer and storm sewer services;*
  - (iii) the adequacy of road networks, in, adjacent to, or leading to the development;**
- (c) That consideration is given to the extent to which the proposed type of development might conflict with any adjacent or nearby land uses by reason of:
  - (i) type of use;*
  - (ii) height, bulk and lot coverage of any proposed building;*
  - (iii) parking, traffic generation, access to and egress from the site;*
  - (iv) any other matter of planning concern outlined in this strategy.**

While it could be argued that the proposal generally conforms to the general intent of the MPS policies, there is legitimate cause for concern with regard to traffic generation and the extent to which the number of dwelling units and the height, bulk of the buildings may impact the surrounding neighbourhood. The applicant has attempted to address these concerns by providing a Shadow Study, changed building and parking locations to increase separation, and proposed privacy fencing to mitigate the impact of the parking lots on adjacent residential uses to the east and west.

A traffic impact study conducted by a traffic engineer licensed to practice in Nova Scotia was conducted to provide an analysis of the capacity impact of the surrounding street network as a result of the estimated traffic generated from the development. As outlined previously, the study concluded that the new traffic generated from the development could be accommodated into the existing transportation network.

### **CONCLUSIONS:**

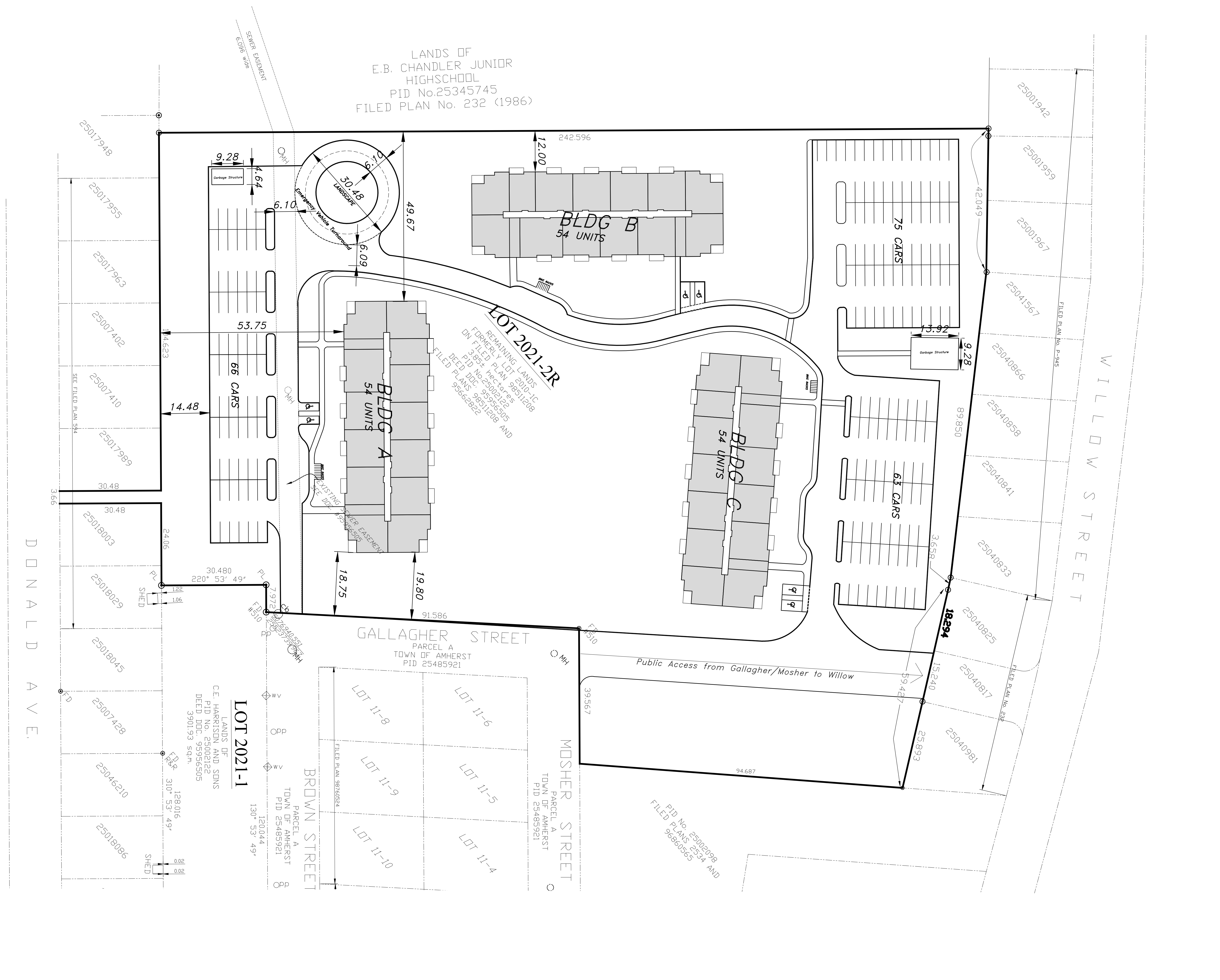
As discussed above, the proposal meets the general intent of MPS policies. The development agreement process has given the public an opportunity to provide input that is detailed in this package. Should Council decide to give First Reading of the agreement, the public will have another opportunity to provide input at a public hearing before Council. The PAC, after reviewing the material, requested additional information and changes that the applicant has for the most part provided. With regard to addressing and/or mitigating the potential negative impacts, reasonable attempts have been made to address these issues and have been incorporated into the draft development agreement.

Staff recognize the scale of the proposed development is cause for concern; however, there is no specific MPS policy that would prohibit or significantly reduce the proposal's scale. Policies that relate to traffic impacts, separation distances, parking provisions, use of fencing and landscaping, shadow casting, engineering analysis for servicing, and other measures have all been addressed. When compared to other urban centres, it is difficult to argue that 4-storey apartment buildings cannot be compatible with single-detached dwellings.

### **OPTIONS:**

- Option One: Recommend that Council enter into the Development Agreement for Lot 21-2R as drafted.
- Option Two: Recommend that Council enter into the Development Agreement for Lot 21-2R with specific changes to the draft agreement as follows:
- Option Three: Recommend to Council not to enter into the Development Agreement for Lot 21-2R, siting specific policies with which the proposal does not conform.

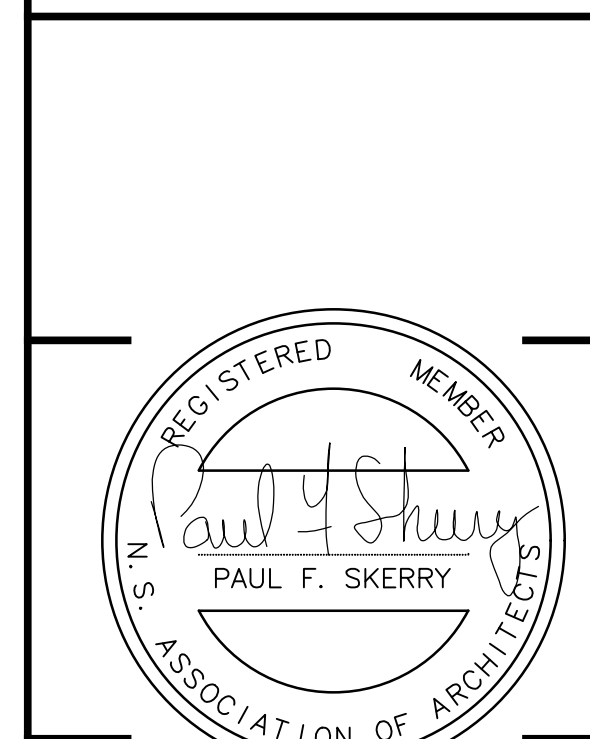
**STAFF RECOMMENDATION: Option One.**



NOTES:

- 1) THE CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL DIMENSIONS ON SITE & REPORTING ANY DISCREPANCY TO THE ARCHITECT BEFORE PROCEEDING.
- 2) DO NOT SCALE FROM DRAWINGS. USE FIGURED DIMENSIONS.
- 3) DRAWING REPRESENTATIONS MAYBE IN VARIANCE W/ DETAILED SPECS. & SCHEDULES, IN WHICH CASE SPECS. & SCHEDULES OVERRIDE THE DRAWINGS.
- 4) CHANGES FROM THESE PLANS & SPECS. MUST BE AGED TO IN WRITING, & APPROVED BY THE ARCHITECT & OWNER, BEFORE PROCEEDING.
- 5) ONLY THOSE DRAWINGS MARKED APPROVED FOR CONSTRUCTION, SIGNED & DATED BY THE ARCHITECT ARE TO BE USED FOR CONSTRUCTION.
- 6) THESE DRAWINGS ARE TO BE READ IN CONJUNCTION W/ THE SPECS.

Paul Skerry Associates Ltd.  
**ARCHITECTS**  
5514 LIVINGSTONE PLACE  
HALIFAX N.S. B3K 2B9  
PHONE: 902-455-4361  
FAX: 902-455-7778  
EMAIL: pskerry@ns.sympatico.ca



No.	DESCRIPTION	Date
09	Repositioned BLD C	4/26/22
08	Removed Propane Tanks	4/26/22
07	Added Propane Tanks	10/29/21
06	Increased Turing Circle Size	10/13/21
05	Added Garbage Structures	10/05/21
04	Revised Site Plan per Civil	10/05/21
03	Revised Site Plan	9/21/21
02	Revised Public Access Road	4/29/21
01	Revised Site Plan	4/22/21

REVISIONS

PROJECT  
PROPOSED PROJECT  
Lot 2021-2R  
BROWN/GALLAGHER/MOSHER  
STREETS  
AMHERST, NS.

TITLE:  
SITE PLAN

drawn by:  
CM

checked:  
PS

date:  
April 26/2022

approved:  
PS

scale:  
1:500

dwg #:  
A1.0

project #:  
3128

Case No: DA-2022-XX

This Agreement made this \_\_\_\_\_ Day of \_\_\_\_\_ 2021.

Between:

**NovaView Developments Ltd.** (owner of property located at Lot 2021-2R Walter Purdy Avenue [PID 25002122], hereinafter called the "Owner"),

of the one part, and

**The Town of Amherst** (a body corporate in the Province of Nova Scotia, hereinafter called the "Town"),

of the other part.

WHEREAS the Owner wishes to obtain permission pursuant to Policy RP-9 of the Municipal Planning Strategy of the Town of Amherst, to construct three 54-unit apartment dwellings on property located at Lot 2021-2R Walter Purdy Avenue (PID 25002122).

AND WHEREAS a condition of the granting of approval of Council is that the Owner enter into an Agreement with the Town;

AND WHEREAS the Council of the Town, at its meeting on the \_\_\_\_<sup>th</sup> Day of \_\_\_\_\_ 2022, approved the said Development Agreement, subject to the registered Owner of the land described herein entering into this Agreement;

AND WHEREAS the following Schedules shall be attached to and form part of this Agreement:

- (a) Schedule 'A' - Terms and Conditions
- (b) Schedule 'B' - Property Location Map
- (c) Schedule 'C' - Site Plan
- (d) Schedule 'D' - Building Elevation

NOW THEREFORE THIS AGREEMENT WITNESSETH THAT in consideration of the granting by the Town of the Development Agreement requested by the Owner, the Owner agrees as follows:

- 1) That the Owner is the registered owner of the aforesaid Lands in the Town of Amherst, hereinafter called the "Lands". The aforesaid Lands are the only lands in the Town of Amherst to which this Agreement applies, and the Lands are illustrated in the plan shown on Schedule B attached.
- 2) That the Owner may construct three (3) Apartment Buildings, each with fifty-four (54) dwelling units on the said Lands, subject to Schedules A, B, C, and D attached.
- 3) Nothing in this Agreement shall exempt or be taken to exempt the Owner or any other person from complying with the requirements of any Bylaw of the Town applicable to the Property (other than the Land Use Bylaw to the extent varied by this Agreement) or any Provincial or Federal statute, act, or regulation.

- 4) Any failure of the Town to insist upon strict enforcement of any requirements or conditions contained in this Agreement shall not be deemed a waiver of any rights or remedies that the Town may have and shall not be deemed a waiver of any subsequent breach or default in the conditions or requirements contained in this Agreement.
- 5) Should the Owner fail to act in accordance with any aspect of this Agreement, the Town shall retain the right to discharge the Agreement upon 30 days notification and / or enter the property and conduct the required work. The cost of the said work will become a lien on the property tax bill.
- 6) The Town shall issue the necessary Development Permit for the development upon expiration of the appeal period specified for Development Agreements under Section 249 of the *Municipal Government Act*, as the same may be amended from time to time, or upon the withdrawal or dismissal of any appeal which may be taken.
- 7) The Agreement shall be binding upon the parties hereto and their heirs, executors, administrators, successors and assigns, and shall run with the land which is the subject of this Agreement until such time as it is discharged by the Town in accordance with Section 229 of the *Municipal Government Act*.

**SIGNED, SEALED AND DELIVERED**

In the presence of

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**THE TOWN OF AMHERST**

---

David Kogon MD, Mayor

---

Jason MacDonald, MCIP, LPP, CAO

**FOR THE OWNER**

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Mounir Daaboul  
NovaView Development Ltd.

## Schedule A

## Lot 2021-2R (PID 25002122) - Development Agreement

### Terms and Conditions:

#### 1.0 USE OF LAND AND BUILDINGS

- 1.1 The use of the property shall be limited to three (3) Apartment Buildings each with fifty-four (54) dwelling units for a total of one-hundred-sixty-two 162 dwelling units on property shown on Schedule 'B'.
- 1.2 Each Apartment Dwelling shall consist of no more than 4 levels and shall generally conform to the designs shown on Schedule 'D'. Minor variations to the architectural details and footprint of the dwellings may be permitted, to the satisfaction of the Development Officer. Such changes shall not be considered substantial.
- 1.3 The location of each Apartment Dwelling, driveway, parking area shall generally conform the Site Plan shown on Schedule 'C'.
- 1.4 A minimum of 1.25 parking spaces shall be provided for each dwelling unit for a total of 203 spaces on the Lands and shall be generally configured as shown on Schedule 'C'.
- 1.5 Should the provision of additional parking spaces be deemed necessary, such parking facilities shall be located no closer to adjacent properties that front onto Donald Avenue and Willow Street. Additional parking spaces shall be subject to the approval of the Development Officer and shall not be considered a substantial change to this agreement.
- 1.6 Prior to issuance of a Development Permit for any building, the Owner shall submit a detailed landscaping plan generally based on the Landscape Concept Plan shown on Schedule 'C'. The detailed landscaping plan shall include but not be limited to the following:
  - 1.6.1 Specify the type of treatment of all areas during all phases of the development. Areas of the Lands not part of initial phases must be kept as grass or otherwise treated so as to minimize dust.
  - 1.6.2 Placement of a privacy fence approximately 1.8 m (6 ft) in height in the general location and extent as shown on the Landscape Concept in Schedule 'C'. Fencing must be installed before the nearest parking area is used by residents.
- 1.7 The Owner shall be responsible for maintaining screened solid waste containment areas, generally in the locations shown on Schedule 'C'.
- 1.7 Paving of the driveways and parking areas shall be completed for each nearest corresponding Apartment Building before an Occupancy Permit is issued for that dwelling.
- 1.8 The Owner shall be responsible for access to and within the Lands in the following ways:
  - 1.8.1 Prior to issuance of a Development Permit for any dwelling, the Owner shall be responsible for the extension of Gallagher Street to intersect with Willow Street and shall be constructed with base gravel in accordance with the Town of Amherst Infrastructure Development Standards.
  - 1.8.2 The Gallagher Street extension to Willow Street shall be used as the primary construction access.

- 1.8.3 Prior to issuance of an Occupancy Permit for any dwelling, the Owner shall install an asphalt driving surface over the extension of Gallagher Street to Willow Street in accordance with Town of Amherst Infrastructure Development Standards.
- 1.8.4 Prior to issuance of an Occupancy Permit for any dwelling, the Owner shall install a concrete sidewalk along the easter side of Gallagher Street to Willow Street accordance with Town of Amherst Infrastructure Development Standards.
- 1.8.5 The Site Plan shown on Schedule 'C' and the internal road network shall be reviewed to ensure emergency and larger service vehicles can be accommodated, according to Transportation Association Canada and Town of Amherst Guidelines.

1.9 The Owner shall satisfy the Town of Amherst Infrastructure Development Standards provided as Schedule "F" of the Town of Amherst Subdivision Bylaw.

1.10 The Owner's Engineer shall revise the Stormwater Management Plan shown on Schedule "F" to reflect the revised location of Building C, and shall provide a design brief of the revised Stormwater Management Plan confirming that said Plan will not result in an increase of peak flows over existing conditions.

## 2. GENERAL REQUIREMENTS

2.1 The Owner shall keep the Lands and buildings and any portion thereof clean and in good repair. All elements of the development on the Lands shall be regularly maintained and kept in a tidy state, and free from unkept materials of any kind.

2.2 In addition to *Part 5 – Hours of Construction* under the Town of Amherst Building Bylaw D-6, operation of heavy equipment and electrical generators shall not take place on the property from 8:00 P.M. to 7:00 A.M.

2.3 Signage on the property shall conform to the Town of Amherst *Land Use Bylaw*.

2.4 The Owner shall ensure that exterior lighting does not shine directly onto adjacent properties.

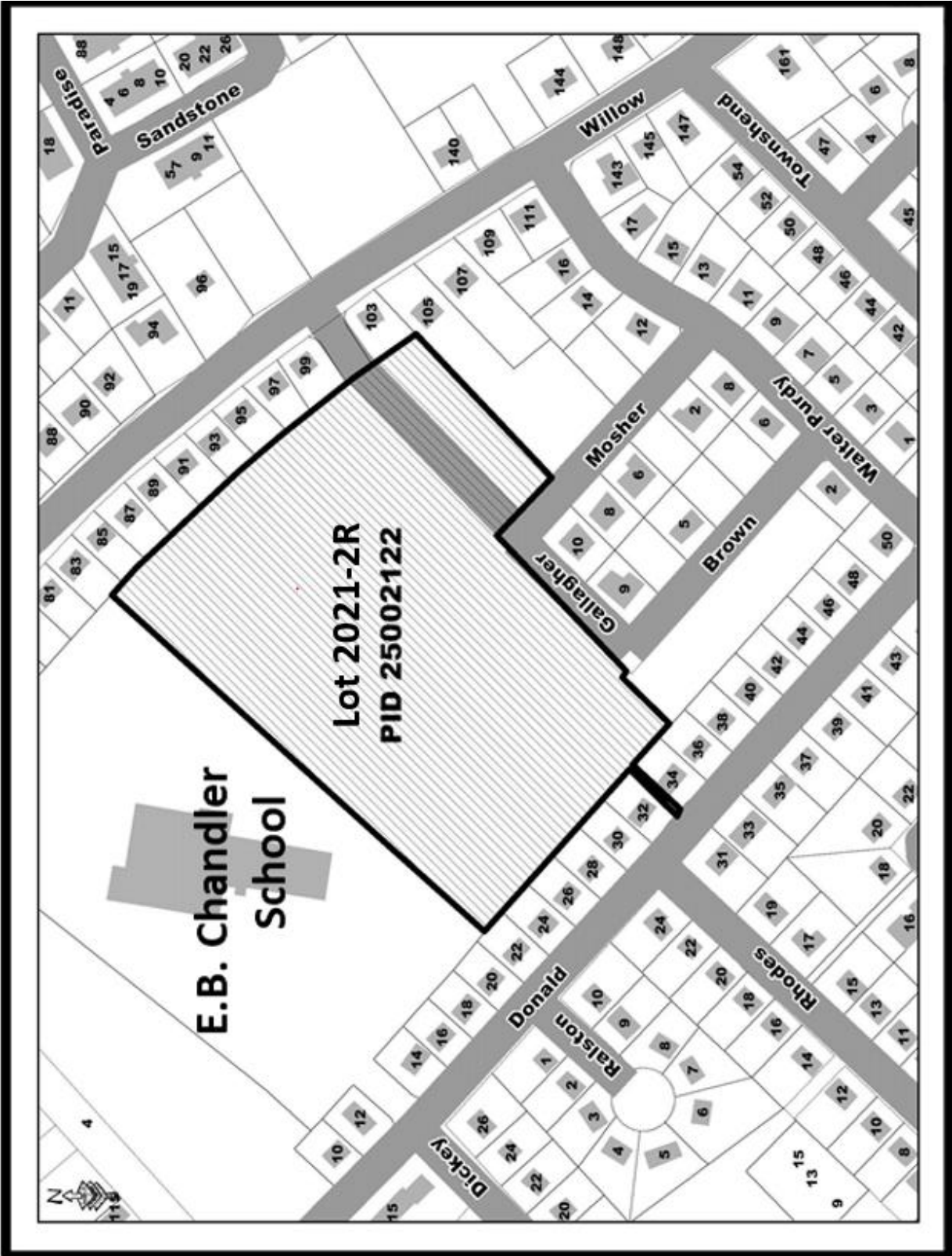
2.5 Solid waste management shall be in conformance with the Town of Amherst *Solid Waste Bylaw*.

2.6 The Owner shall be responsible for storm water management during and after construction.

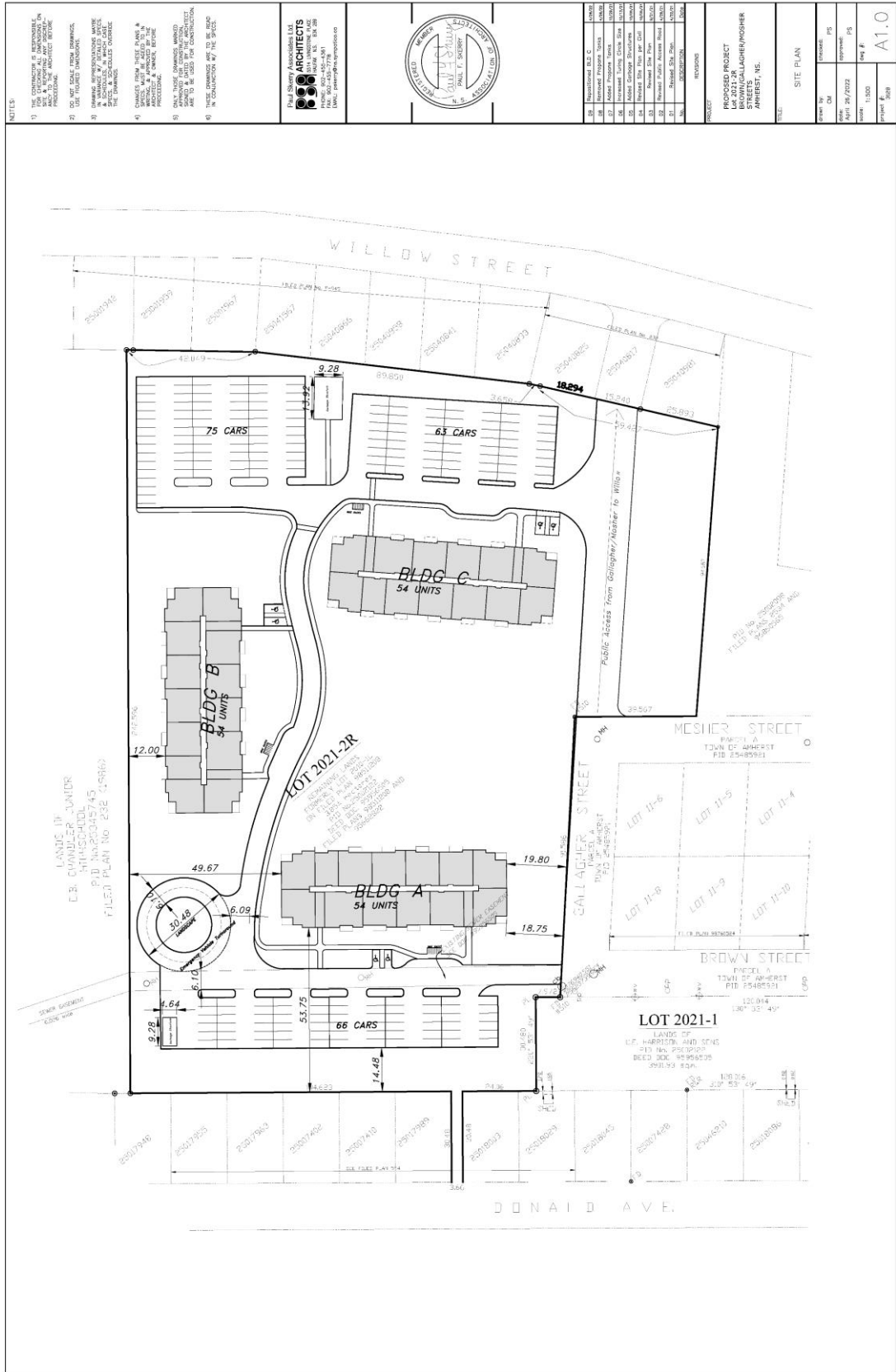
2.7 The Owner shall take all reasonable steps to maintain a clean worksite during construction by picking up building material waste, and taking all reasonable measures to minimize dust.

2.8 Accessory buildings may be permitted on the Lands in accordance with the Town of Amherst Land Use Bylaw.

**SCHEDULE "B"**



# SCHEDULE "C"



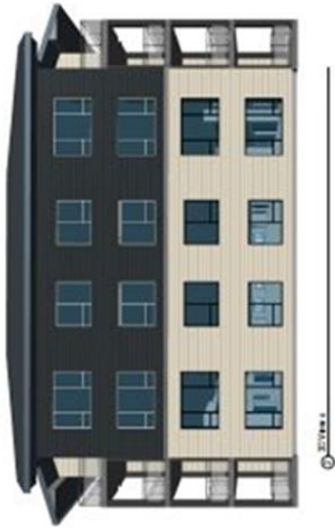


# SCHEDULE "D"



PRELIMINARY  
NOT FOR CONSTRUCTION

# SCHEDULE "D"



**PRELIMINARY  
NOT FOR CONSTRUCTION**





## Andrew Fisher

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**From:** Kim Jones  
**Sent:** January 21, 2022 1:49 PM  
**To:** Andrew Fisher  
**Subject:** FW: Questions for Dev. Agreement Application - Multi-Unit Brown/Mosher Streets  
**Attachments:** Side Set Elevation - back 97 willow.pdf

FYI

**From:** Giles Beland - Bowers' Construction <[REDACTED]@gmail.com>  
**Sent:** January 21, 2022 10:52 AM  
**To:** Kim Jones <KJones@amherst.ca>  
**Subject:** Questions for Dev. Agreement Application - Multi-Unit Brown/Mosher Streets

Good morning.

The following are some of my questions for the meeting scheduled on Jan 26, 2022.

- What is the developer's history? If it is a new partnership, what are the individual principles development histories?
- What other projects have the developer built & where?
- How have the neighbourhoods where this developer built reacted to their projects?
- Who is the target market for these residential apartments?
- What will be the monthly rental rates for these apartments - range, please.
- Will there be inclusionary housing units provided within these apartments? If so, how many or percentage?
  
- Bldg's A & B enjoy a parking lot buffer between their structures and the property boundaries, but Bldg C does not - this is **not** acceptable.  
BUILDING C should be located where the proposed parking lot is located and the parking lot where Bldg C is currently being offered.  
I have attached a side elevation of the shadow cast by the proposed building location vs where I suggest it is relocated. (40' high apartment block, 14' high residence)
  
- Is there a plan or time frame for construction? Start date? Which structure will be built first? Or, will they all be built at the same time?
- What privacy designs are being proposed between property owners and the new development? Fence? Style, height, etc.
- Will there be pedestrian access along the three sides not accessed by a road? EB Chandler, for example.
- What is the ground lighting plan? What consideration of light pollution has been given to existing property residents?
- What is the plan for crosswalk provisions at the intersection of Gallagher & Willow?
- Will there be a sidewalk along Gallagher street? If so, what side?
- What will be the finish grade elevation of the property concerning the existing elevation?
- Are the current municipal services, water, sewer & storm adequate for this proposal? If not, what are the expected costs to enhance to meet the requirements? Who will pay for these enhancements? The developer or the town? Where will the money come from?
- How will garbage be collected? Will there be dumpsters? If so, where will they be located? With what frequency will they be serviced, and at what time of the day?
- How will recycling (as currently participating residents follow) be collected? Where will these recyclables be located? With what frequency will they be serviced, and at what time of the day?

- Where will the snow be stockpiled? What are the plans to minimize runoff into adjacent properties?
- What are the proposed tree planting requirements? Where will trees be planted? What kind of trees will be planted?

Will all these questions be asked at this meeting? If not, why? When will they be answered?

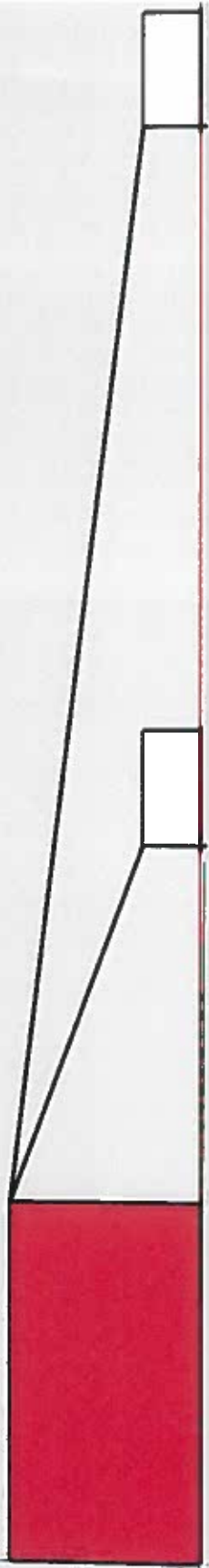
Regards,  
Giles Beland  
97 Willow Street  
Amherst NS

--  
Giles Beland, M.Pl.  
Bowers' Construction Ltd.  
25 Lorne Street  
Sackville, NB E4L 3Z8

  
[www.bowersconstruction.com](http://www.bowersconstruction.com)

*"a jack of all trades is a master of none, but oftentimes better than a master of one"*

This e-mail message (including attachments, if any) contains confidential information for the person(s) named above. Any unauthorized distribution, copying or disclosure is prohibited. Please notify us and delete it and any attachments from your computer system and records if received in error. Thank you for your assistance.



# MEMO

**TO:** Planning Advisory Committee

**FROM:** Andrew Fisher, Director of Planning & Strategic Initiatives

**DATE:** February 7, 2022

**RE:** **Development Agreement – Lot 2021-2R Brown/Mosher Apartment Complex**

---

## **PROPOSAL:**

An application by Paul Skerry Architects on behalf of the property owner, Nova View Developments Ltd., for a development agreement to allow construction of three, 54-unit apartment dwellings on Lot 2021-2R (PID 25002122), located south of E.B. Chandler School, adjacent to Brown and Mosher Streets.

## **BACKGROUND INFORMATION:**

The attached Application Briefing provides the Site Details, Neighbourhood Context, and Proposal Details.

## **PUBLIC PARTICIPATION OPPORTUNITY**

A virtual public participation opportunity advertised in accordance with the Policy for Public Participation and Notification was held on January 26, 2022. A video of the meeting has been made available, and a summary is provided as part of the information package. Written submissions are also part of the information package. Some of the concerns raised at the meeting could be summarized as follows:

- Too many units and buildings are out of scale with adjacent detached dwellings.
- Traffic increase in frequency and speed
- School children safety
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- Propane tank locations
- Fencing is needed
- Loss of privacy
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- Loss of small town, established neighbourhood character
- Lack of parking

## **RELEVANT POLICY**

The following provides the relevant Municipal Planning Strategy Policies

Land Use Bylaw: Section 7.2.2 of the Bylaw requires that residential developments with over four dwelling units are subject to a development agreement in accordance with Policy RP-9 of the Municipal Planning Strategy (MPS).

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- a) the structure is located on the lot in such a manner as to limit potential impacts on surrounding low density residential developments;*
- b) the development provides sufficient on-site parking, and appropriate access to, and egress from the street;*
- c) the location of the parking facilities does not dominate the surrounding area, including the utilization of vegetation and fences to mitigate the aesthetic impacts of parking lots;*
- d) any on site outdoor lighting does not negatively impact the surrounding properties;*
- e) any signage on the property is sympathetic to the surrounding residential properties;*
- f) vegetation is used to improve the aesthetic quality of the development;*
- g) the architecture of the building is sympathetic to any existing development in the surrounding area.*

The proposed development consists of three 4-storey buildings, which represents a significant increase in the intensity of the subject property over the single-detached dwelling lots surround the subject property on three sides. In an effort to mitigate the impact on the neighborhood, the applicant has positioned the proposed buildings such that they have relatively large setbacks to adjacent residential properties. One way to evaluate the degree to which the setbacks are adequate to limit potential impacts is to conduct a shadow study, which will show how adjacent properties may or may not be shaded from the sun by the proposed buildings. While the intention of the shade study would not be to eliminate any shade cast to adjacent properties, it could result in adjustments to the proposal to reduce potential impacts.

The proposal includes 1.2 parking spaces per unit totaling approximately 200 spaces. The lots spread over three areas to mitigate against dominating the property. Given the somewhat insular configuration of the proposal it is unlikely that a shortage of parking spaces would impact adjacent properties; however, the agreement could require that the developer provide a site plan showing where additional parking spaces could be provided onsite should they be found necessary once all three buildings are occupied. In addition, it may be prudent to move the 56-space parking area such that it is located between Building C and the adjacent properties that front on Willow Street. The shadow study noted above could inform that decision.

Limiting impacts from outdoor lighting and signage can be easily dealt with under the terms and conditions of the development agreement. With regard to the use of vegetation, it is reasonable to request that the proponent provide detail around how the use of vegetation and or fencing might be used to improve the aesthetic quality of the development, as well as, mitigate the potential

impacts on adjacent properties. It is also reasonable to recommend that Council enter into a development agreement, subject to the submission of a detailed landscaping plan.

With regard to the architecture being sympathetic to ‘any existing development in the surrounding area’, the proposed buildings are clearly larger in both bulk and height in comparison to the adjacent detached dwellings. On the other hand, each building is approximately half the footprint and roughly 20 feet greater in height in comparison to E.B Chandler School located immediately to the north of the property. Further afield, there are existing of three storey apartment buildings along Dickey Street to the west and Spring Street to the north.

### **GP-7 Compatibility**

*It shall be the intention of Council to allow a mix of compatible land uses to minimize their impacts by:*

- (a) requiring adequate buffering and setbacks;*
- (b) screening development by the use of visual barriers; and,*
- (c) regulating the location of parking, storage buildings and other accessory uses or facilities.*

The matters noted in GP-7 are for the most part included in the discussion above regarding GP-9. In addition, the location of accessory features such as storage facilities for propane and solid waste can be addressed by the applicant and provided for in the development agreement.

### **GP-8 Density**

*It shall be the intention of Council to allow development at a density appropriate to the overall desired character of the town.*

While the relatively high density of the proposed development is a concern, particularly to many residents in the nearby area, the proposal does represent a mix of housing type and densities, which corresponds to the general intent other MPS policies noted in this report.

### **RP-8 Housing Mix**

*It shall be the intention of Council to encourage a mix of housing densities in all residential areas of town to encourage a mix of housing types and income groups in all residential areas.*

The proposal would significantly increase the overall housing density in the area.

### **RP-10 Neighbourhood Stabilization**

*It shall be the intention of Council to provide for the stabilization of existing residential neighbourhoods by: (b) discouraging the encroachment of non-compatible land uses.*

The application is for a multi-unit residential development surrounded by other residential uses and an institutional use. As such, all such uses are intrinsically compatible. Where this policy may be relevant is the extent to which the proposed development is so intense as to be non-compatible with its surroundings. Mitigating factors include the building design and location, site layout, the use of vegetative or fencing buffers, as well as, an analysis of the impact of the proposal on shadow casting and the transportation network.

**RP-11 Affordable Housing**

*It shall be the intention of Council to encourage and promote the provision of affordable housing units within all residential areas of the Town by:(a) encouraging a mix of housing types and densities;*

The proposal would significantly contribute to the ‘mix of housing types and increase the overall density in the area.

**RP-12 Residential Area Design**

*It shall be the intention of Council to ensure that new residential areas:*

- a) provide for the efficient use of land;*
- b) provide for the efficient and economic extension of existing water, storm sewer and sanitary sewer systems and other utilities;*
- c) incorporates a hierarchy of streets that efficiently and safely accommodates traffic flows and proper access to other areas of Town;*
- d) provides for the efficient and safe movement of pedestrians and cyclists;*
- e) minimizes adverse effects on the environment;*
- f) provides for parks and other community uses in safe and central locations.*

The proposal is an infill development, which speaks to the efficient use of land that does not require extension of existing town infrastructure. Vehicle and active transportation connectivity is relatively high, with two existing street accesses via Brown and Mosher Streets to Walter Purdy Drive. The most important connection will be direct access to Willow Street via a newly constructed public access. The development is within close walking distance to three schools, providing easy pedestrian access for children, and it is in close proximity to the trail that runs along Dickey Brook that connects to parks to the west and the marsh trail to the northwest. Dickey Park is within short walking distance.

**MS-4 Service Standards**

*It shall be the intention of Council to maintain a ‘Development Standards Bylaw’ in order to establish the required servicing standards for development within the town...*

The applicant has been provided with the town’s Development Standards, which are part of the Subdivision Bylaw. Town engineering have indicated that existing service connections can accommodate the proposal. Preliminary servicing and storm drainage plan have been submitted. A standard development agreement would require the submission of a storm water drainage plan as part of the development. Principal requirements of the drainage plan will be not increase runoff onto adjacent properties, and not increase peak flows into Dickey Brook through the installation of retention infrastructure.

**MS-11 In-fill Development**

*It shall be the intention of Council to encourage and facilitate the development of vacant land located on existing municipal services in order to make more efficient use of such services.*

As previously stated, the proposal satisfies the above policy.

### **R-21 High Density Open Space**

*It shall be the intention of Council to require multiple unit residential properties to provide usable open space for use of residents on the site.*

In addition to the individual balconies, the proposal provides significant common open space, including over an acre in the center of the development.

### **A-5: Amendment Criteria**

*It shall be the intention of Council, when considering [...] entering into a development agreement, to consider the following matters, in addition to all other criteria set out in the various policies of this planning strategy:*

- (a) That the proposal conforms to the general intent of this plan and all other municipal bylaws and regulations.*
- (b) That the proposal is not premature or inappropriate by reason of:
  - (i) the financial capability of the Town to absorb any costs relating to the development;*
  - (ii) the adequacy of municipal water, sanitary sewer and storm sewer services;*
  - (iii) the adequacy of road networks, in, adjacent to, or leading to the development;**
- (c) That consideration is given to the extent to which the proposed type of development might conflict with any adjacent or nearby land uses by reason of:
  - (i) type of use;*
  - (ii) height, bulk and lot coverage of any proposed building;*
  - (iii) parking, traffic generation, access to and egress from the site;*
  - (iv) any other matter of planning concern outlined in this strategy.**

While it could be argued that the proposal generally conforms to the general intent of the MPS policies, there is legitimate cause for concern with regard to traffic generation and the extent to which the number of dwelling units and the height, bulk of the buildings may impact the surrounding neighbourhood. As noted above in the RP-9 discussion, a shadow cast analysis would show the degree to which the proposed buildings would shadow adjacent properties, if at all. This information would help inform the review of the proposal.

With regard to traffic generation, there is little doubt the development will increase traffic in the area. A traffic impact study conducted by a traffic engineer licensed to practice in Nova Scotia would provide an analysis of the capacity impact of the surrounding street network as a result of the estimated traffic generated from the development. The study would answer whether or not the combined traffic generated from the existing and proposed development will be within the current capacity standards as established by the Transportation Association of Canada. The study scope would include Willow, Donald, Brown, Mosher, and Walter Purdy Drive.

**CONCLUSION:**

As discussed above, the proposal meets the general intent of town policies, but more information would help making an informed a decision on the application. As per the development agreement process, the public have been given an opportunity to provide input. It would be prudent for the PAC to give their feedback to the applicant, request more information in the form of a shadow and traffic impact analysis, and give the applicant an opportunity to respond.

**OPTIONS:**

Option One: Defer a recommendation to Council and request that the applicant provide a shadow study of the proposed buildings, a traffic impact analysis to the satisfaction of the Development Officer, and attempt to address concerns raised by the public and the PAC.

Option Two: Recommend to Council not to enter into the Development Agreement for Lot 21-2R, siting specific policies with which the proposal does not conform.

**STAFF RECOMMENDATION: Option One.**

# Application Details

**Applicant:** Connor Manson, Paul Skerry Architects Ltd.

**Owner:** Nova View Developments Ltd.

**Summary of Proposal:** Three, 54-unit Apartment Buildings.

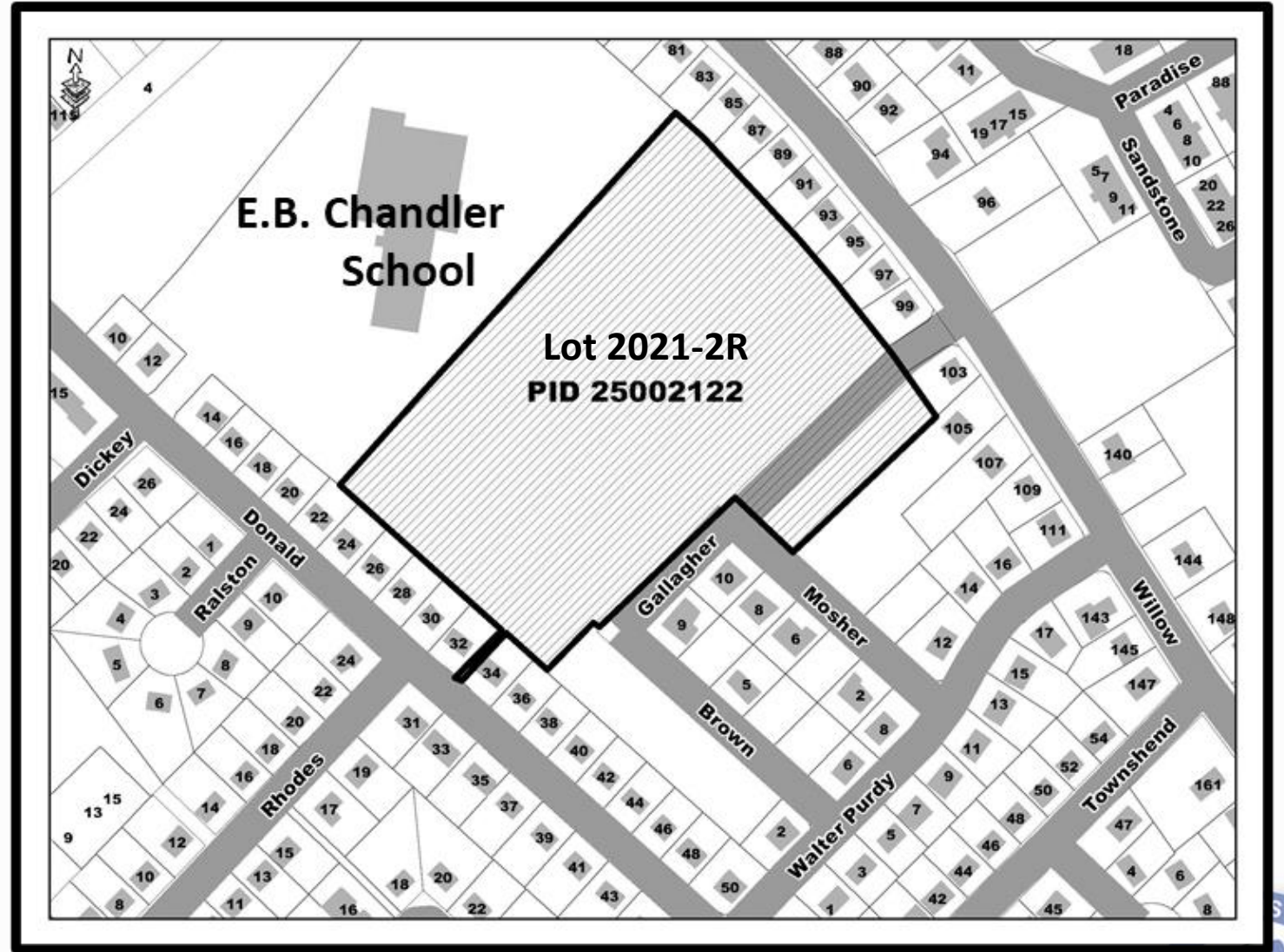
**Location:** Lot 2021-2R south of E.B. Chandler School, adjacent to Brown and Mosher Streets.

**Property Size:** 38,500 m<sup>2</sup> (9.5 acre)

**Street Frontage:** 91.5 m at Gallagher, 15 m at Willow.

**Existing Land Use:** vacant field.

**Existing Zoning:** General Residential



# Neighbourhood Context

- The Subject property is immediately surrounded on three sides by single-detached dwellings.
- Several existing multi-unit developments exist within the general area, including but not limited to:
  - Two 24-unit buildings on Dickey St.
  - 12-unit apartment on Willow St.
  - 33-unit apartment on Spring St.
  - Several 4-unit townhouses to the east in the Sandstone Crescent area and 4-6 unit townhouses to the west in the Dickey/Rupert Street area.
- E.B. Chandler Junior Highschool is immediately adjacent to the north. Spring Street Academy and Amherst Regional High School is approximately 500 metres away.
- Centennial Trail, and Dickey Park are some of the recreational spaces within short walking distance of the subject property.



# Proposal Details

**General Description:** Construct three, 54-unit four storey apartment buildings of identical size, architectural design, and features.

**Number of Units:** 54 / building x 3 = 162 total

**Property Area:** 38,500 m<sup>2</sup> (9.51 acre)

**Density:** 17 units/acre

**Parking:** 198 spaces on 3 lots (1.2 spaces/unit)

**Access:** vehicle access from Brown and Mosher Streets, and connection of Gallagher Street to Willow Street. Pedestrian access to Donald Ave.

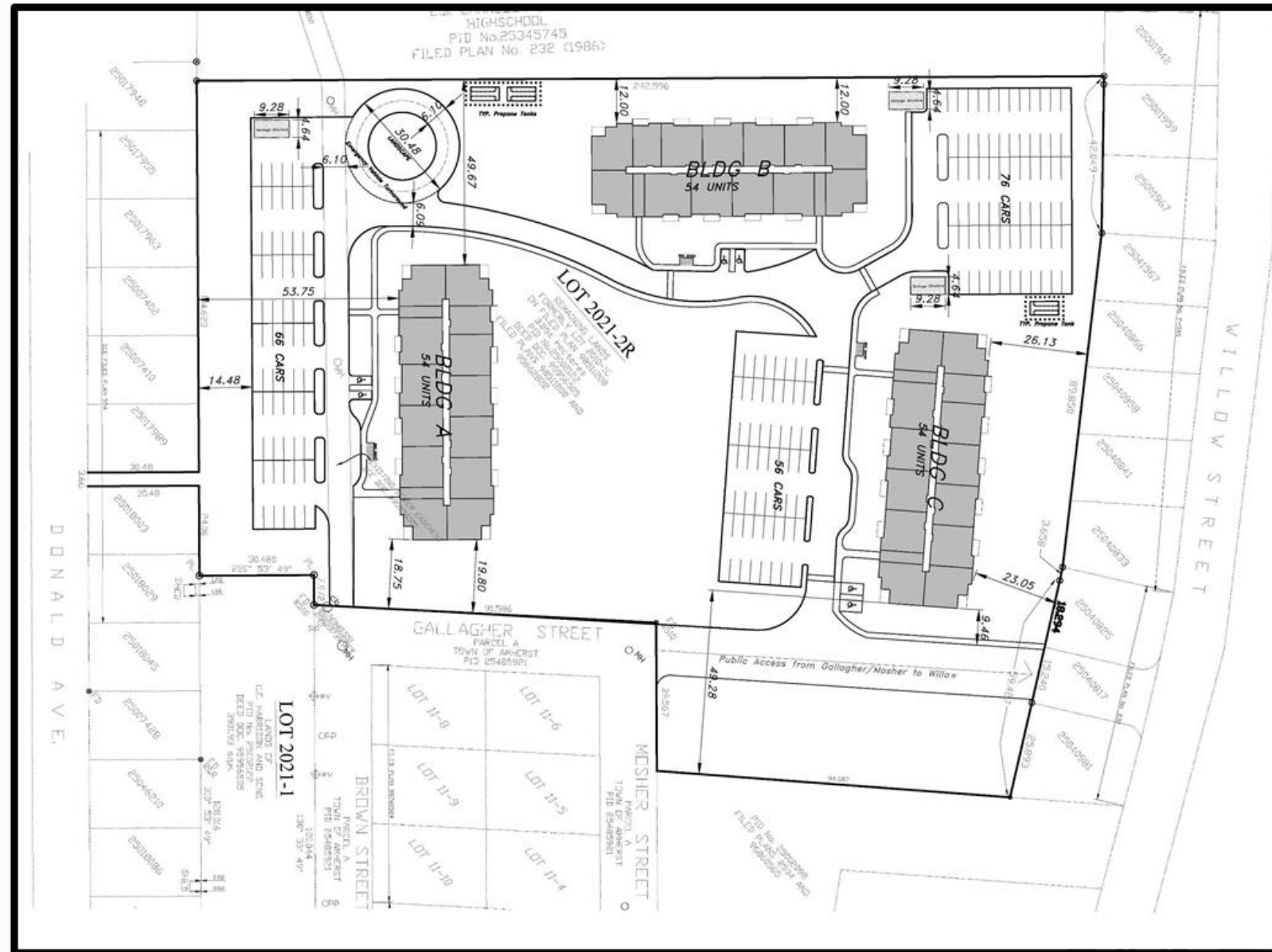
**Building Dimensions:** 76 feet x 240 feet

## Setbacks:

**Building A** – 54 metres (176 ft.) to lots fronting Donald Ave. 34 metres (112 ft.) to nearest lot on Brown Ave.

**Building B** – 12 metres (39 ft.) to EB Chandler School lot.

**Building C** – approx. 25 metres (80 ft.) to lots fronting on Willow Street.



# Building Details

**Building Dimensions:** 23.2 m (76 ft.)  
x 73.2 m (240 ft.)



3D View 1



3D View 2

**PRELIMINARY  
NOT FOR CONSTRUCTION**

# Building Details

**Building Dimensions:** 23.2 m (76 ft.) x 73.2 m (240 ft.)

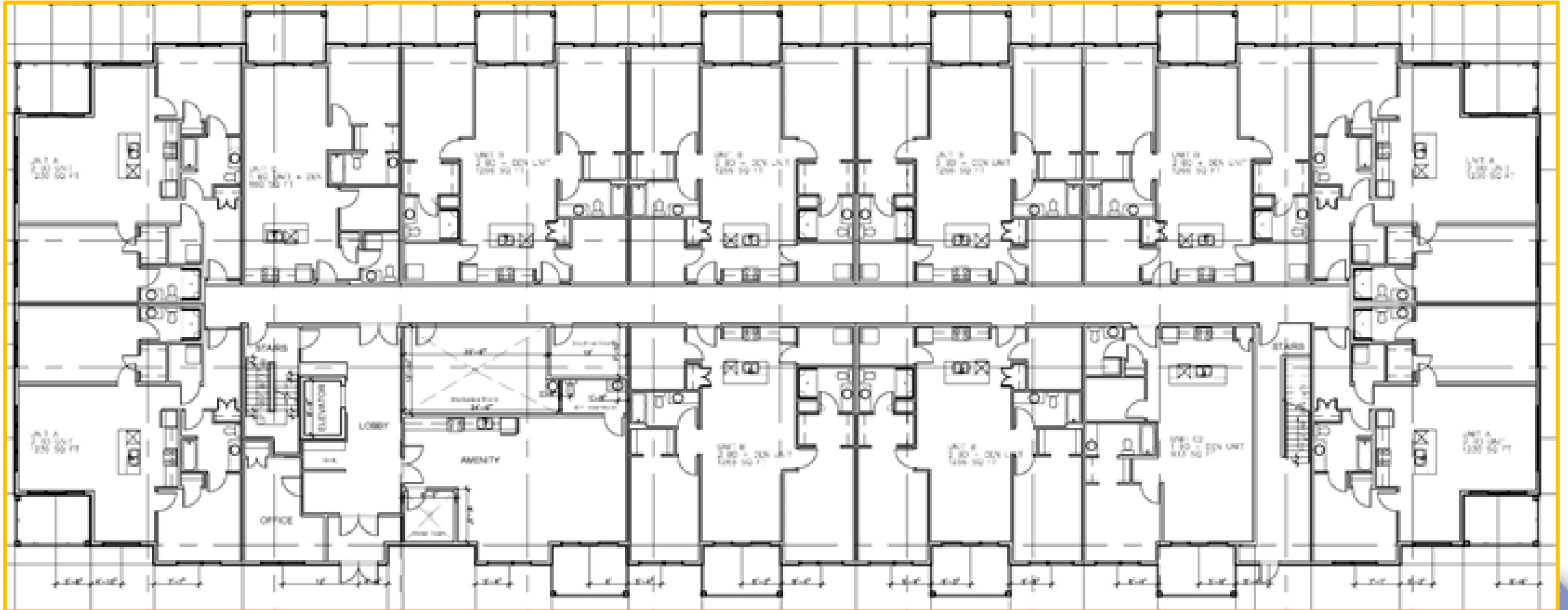


**PRELIMINARY  
NOT FOR CONSTRUCTION**

# Ground Floor

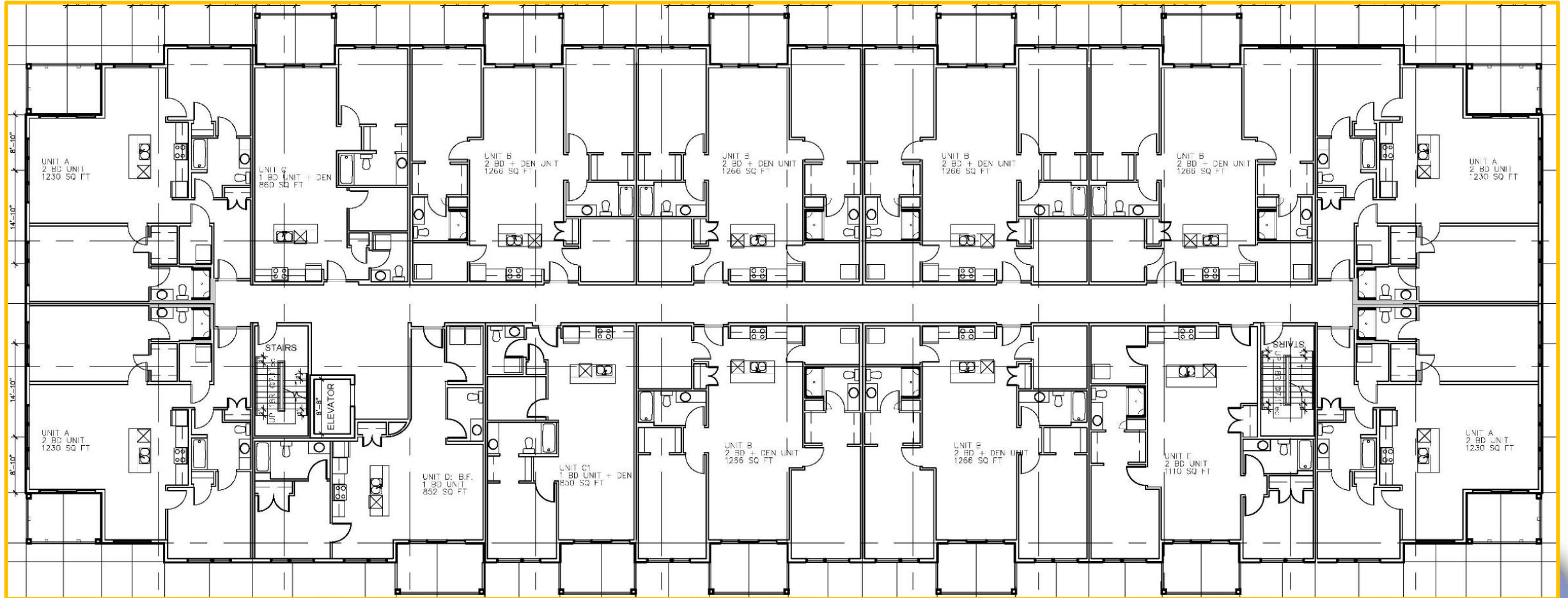
- Ten 2 bedroom units (1,230 – 1,266 sqft)
- Two 1 bedroom units (850 – 860 sqft)
- All units include a den and 96 sqft outdoor patio

Common Amenity Space (approx. 500 sqft)



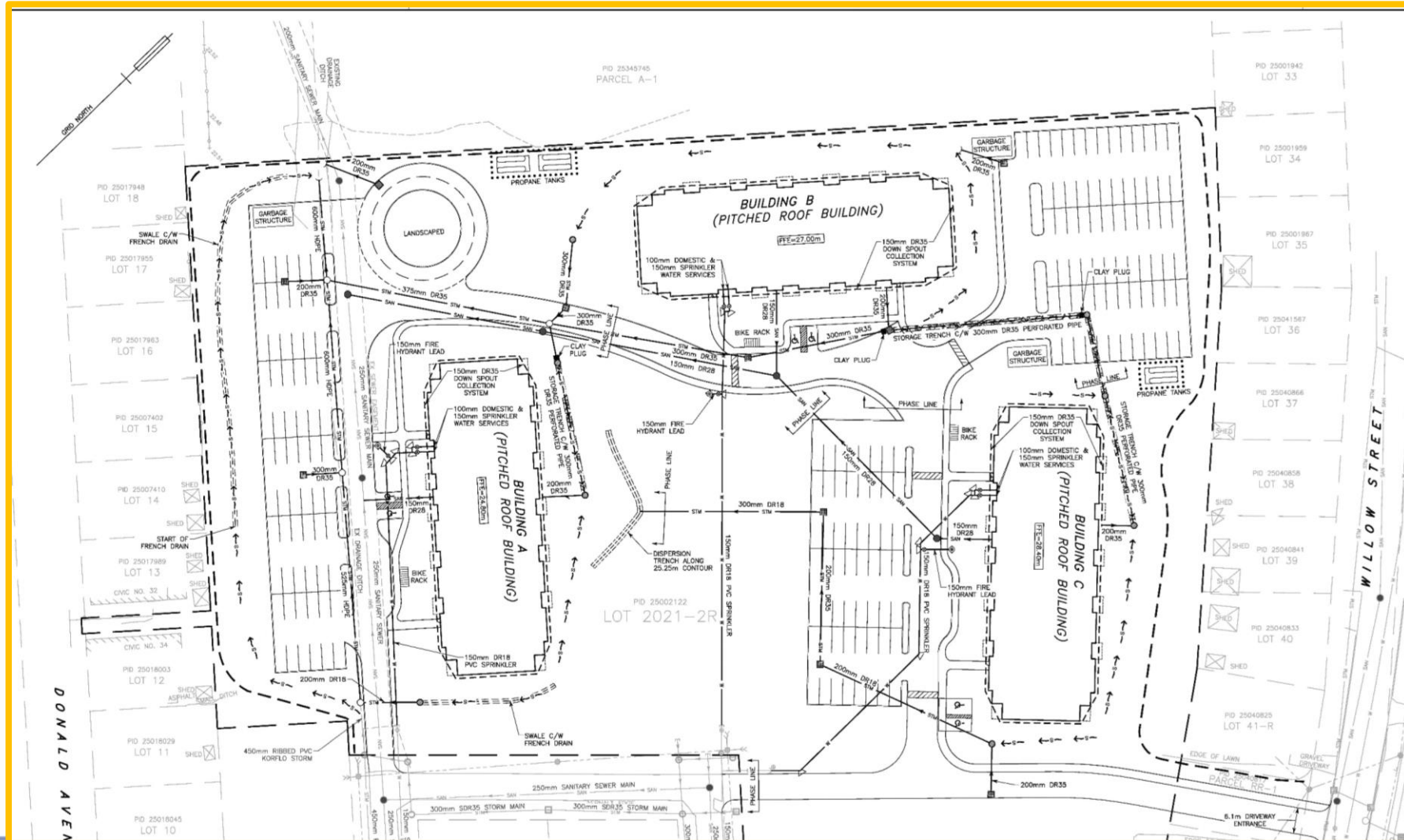
# Floors 2-4

- Eleven 2 bedroom units (1,230 – 1,266 sqft)
- Three 1 bedroom units (860 – 933 sqft)
- All units have a den and a 96 sqft outdoor patio

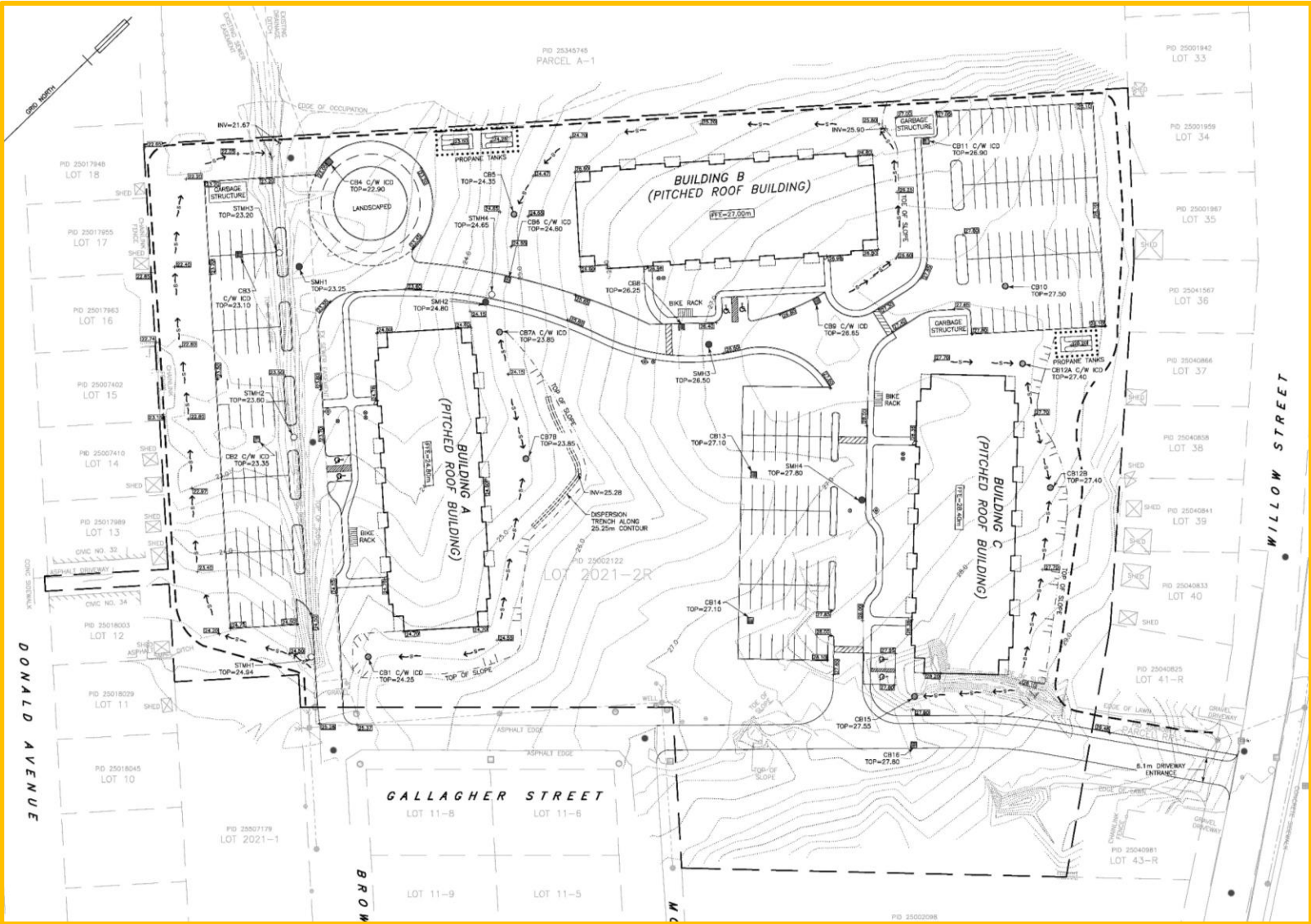


# Site Servicing

- Preliminary design developed in coordination with town engineering based on Town Servicing Standards
- Utilizes existing water and sanitary service mains



# Surface Drainage



**From:** Jeff Smith <[jeff@jeffsmith.me](mailto:jeff@jeffsmith.me)>  
**Sent:** January 14, 2022 12:20 PM  
**To:** Kim Jones <[KJones@amherst.ca](mailto:KJones@amherst.ca)>  
**Cc:** Andrew Fisher <[AFisher@amherst.ca](mailto:AFisher@amherst.ca)>  
**Subject:** Feedback on Lot 2021-2R (PID 25002122) Brown/Mosher Streets  
**Importance:** High

Good afternoon,

I reside at 88 Willow Street and this morning received notification of the proposed plans for Lot 2021-2R Brown/Mosher Streets.

I must state that I am honestly appalled that Amherst Town Council would consider rezoning this land and supporting this project. Willow Street already has a very high volume of traffic without adding the possibility of another 198 vehicles to traffic in the area as well as the heavy equipment and increased construction traffic during development. This will create a very dangerous situation for children that live in the area as well as all children that are walking to Amherst Regional High School, EB Chandler Junior High, and Spring Street Academy. There are already close calls with traffic and kids crossing Willow Street due to the high rate of speed of many vehicles, especially during higher traffic times in the morning, noon time, and after school and work. Given that I have three young children myself, the thought of potentially doubling the traffic in this area is not only terrifying as a parent, but as a homeowner in the area the significant noise, traffic, and disruption that will be added will make this area of town very undesirable to live.

I am already hesitant to allow my children to play in our front yard due to the volume of traffic that is already present on Willow Street.

In addition to these *significant* safety concerns, the proposed buildings are entirely out of character and scale with existing architecture in the area. These buildings will be towering over surrounding houses, reducing the amount of natural light these properties receive. Privacy of existing dwellings will also be significantly impacted due to the height and scale of this proposed development.

## Questions

- Has there been consideration of school zoning with the addition of 162 residential units in the area? EB Chandler and Spring Street Academy are already jammed full with students, where do extra children attend school? How does this impact the level of education that children already attending these schools receive?
- How will the additional traffic and noise in the area be handled?
- Will traffic policing be increased in the area?
- Is there sufficient staffing for emergency services coverage for such a development?
- Does Cumberland Regional Health Care Centre have staffing to cover the potential of 162 new families moving into the area?
- How will this new development impact property values and taxes in the area?

- The site plan illustrates 4 large propane tanks that will be positioned in close proximity to EB Chandler Junior High. Is this not a safety concern?

In closing, I appreciate the opportunity to submit comments and questions and look forward to continued dialogue about this development. I feel strongly that it changes the nature, character and safety of our community. I certainly hope that the Planning Advisory Committee and Town Council put the safety and comfort of residents ahead of any potential tax income that would come from such a development.

Thank you,

Jeff Smith

**RE: Lot 21-2R Apartment Complex**

**Received via email 20220202**

We received your invite in the mail and I guess our only concern is if the area will be fenced in or will the residents be walking willy nilly through peoples yards? These are not going to be low rental I hope.

We knew the land would be developed into some sort of apartments but we're expecting ones similar to the ones off Gladstone.

Thank you,

Barb March

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220120**

Questions and concerns re proposed multi-unit development re lot 2021-2R PID 25002122  
Brown/Mosher streets.

1. Why was this proposal not distributed to all residents on both sides of the following streets: Donald Avenue, Walter Purdy Avenue and Willow Street? Such a huge development will impact them in terms of increased vehicle traffic, pedestrian traffic, possible increase in infrastructure: sidewalks, water/ sewage development, more police presence, possible increase in unsanctioned activities ie: criminal.
2. What is the Town of Amherst going to do to control traffic in these areas above? Already traffic has increased especially on Willow Street, with increased noise and speeders (including school busses). With this development there is a potential of 210 cars using basically streets that are one car lanes save for Willow Street. {3 x 54 units = 162 + 1/3 of 162 = 50 may have a second car =210}.
3. Should the development go through, what is the Town's position with increased vehicle and pedestrian traffic?
4. The 162 units will increase the population in an established quiet and quaint neighbourhood. What is the Town and Developers going to do especially for families with young children and teens to keep them occupied and out of trouble?
5. What is the makeup of the residents expected?
6. Concern: With more people, it is expected some of these residents will have pets. It can be anticipated the pets owners will allow cats to roam free and dog owners to allow their dogs to defecate in the soccer field and surrounding area without picking up after their pets. Lots of soccer families and E.B Chandler school children use this field. Already in the area, cats are roaming free.
7. Will the Town or Developers build fences for the established residents in the area as it is expected development residents will want to 'short cut' through people's property.
8. Do established residents have a say in this proposal or is it an already done deal?
9. Are there no other sites that can withstand such a large development?
10. Concern: Is such a large influx of people and apartments a good fit of land development for the quaint and quiet established neighbourhood?
11. Concern: Will not a high density population in a small area encourage less health and well-being for the area?
12. Why such a large development in a quaint and quiet established neighbourhood?
13. What is the Town's and Amherst Fire Marshal's position and emergency plan to meet the needs of the local residents and proposed development should an evacuation need to take place i.e. fire?
14. Will the Town and Developers build areas of a green buffer zone(s) and beauty to accommodate all residents?
15. If there is an influx of families, will not this increase an already overburdened school system? What is the plan to handle this issue besides wait until it happens?
16. Concern: With increased traffic and population, already waste is thrown from vehicles to lie on the street/property and wind-blown garbage is left for others to pick up.

17. Is there a better 'win win' situation such as slab-on-grade type buildings as found behind the Pharmasave Amherst?
18. Is this a development that is consistent with any applicable comprehensive plan for the area? Is this a zone usage/change that is consistent for the area and for the development of public services?

W.R. Nicholls

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220126**

I wish to thank you for the opportunity to join the zoom session tonight and object to this development for following reasons:

Too many apartments for the space. There will be 162 units, 138 of them 2 bedrooms containing approx 350 residents, most of which will have cars, way to many for the parking spaces.

The auto traffic on Willow St and Donald ave will be unbelievable and fast considering three schools in this area.

I am glad there will be only a walkway and not a road to Donald Ave.

This town needs affordable housing and these units certainly will not be affordable to most residents.

These bldgs may have an adverse effect on our house value.

Charlie & Judy Tooke  
18 Donald Ave

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220127**

Hello and thank you for the opportunity to express our concerns over the proposed apt developments. As was spoken many times last evening we dread the lack of privacy these apts will present to our yards and even in windows. Apts above the first floor will be directly over our back yards thus reducing our privacy in our yards to none. Even construction of a fence will provide no privacy.

The traffic is another great concern as mentioned the kids driving cars on these streets at great speeds are a huge problem to which we have called town police a few times. There is simply not enough resources to monitor this continuously.

We have a lovely residential area with the added blessing of some open space that will become a concrete jungle.. This in all respect is not the city, we enjoy our quiet way of life..many cats hunt in these fields for survival , I have personally watched ducks in the brook when water runs high..birds make their home in our trees.. All reasons we purchased this home last year. Garbage at the school is allready a disgrace in the brook that runs there let's not add 160 odd apts to add to that problem. Has any review been taken to see if the citizens of Amherst can afford this rent.

Noone in our area or surrounding want or support the building of this nature here.As someone pointed out there are better spots to build that is not in the back yards of a block of citizens who.have strived to maintain a quiet place to live.

Will this drop the value of our homes? I fear we know the answer to this.

Also the power grid. As everyone knows we lose power on a regular basis here in amherst. This will only add to the pressure put on a weakening grid system.

I respect that a developer would want to build likely needed apts in our town but at the cost of people who have lived here for most of our lives.

Thank you for reading Kelly Gallant @

24 Donald Ave

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220127**

I live at 40 Donald Avenue, when we moved here just over four years ago, we thought we bought in a residential area that was designated for single dwelling homes. The proposal to put 3 large structural units in this area that would dwarf the surrounding homes seems to take away not only from the residential feel, but I believe brings down our property values. At various times during the day Donald Avenue is a very busy street with both vehicle traffic and school children. The added vehicle and foot traffic generated by the units on the narrow streets in the surrounding area will create a more dangerous environment. We have vehicles speeding up and down the street, especially when the Highschool gets out. At times during the day this is a noisy street, we have two bumps near my home that were created because of sewer repair and when cars and especially the heavy traffic hit them it's loud. The extra traffic will only increase the noise as will the construction of the units. As mentioned during the meeting last night is there no area in the town of Amherst more suited for these types of structures, someone did mention Robert Angus Drive. It's only my opinion but I don't believe these size units should be in this residential area of town.

Mike O'Brien  
40 Donald Avenue

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220128**

Good afternoon Kim,

Thank you for the opportunity to submit written comments to the Planning Advisory Committee (PAC) regarding the proposed apartment buildings in our neighborhood. Kudos to you for facilitating the virtual public session on January 26th. I have 6 points I would like to present in my comments.

1. Is there a need in Amherst for 162 new rental units? What is the vacancy rate in the apartments already in town? Many new families have relocated to our town in the past two years. However, these families and others who follow them are mostly buying single family dwellings.
2. The proposed four storey buildings would tower over the single family dwellings surrounding them. As mentioned in the virtual session the buildings would block the sun for many homeowners. Most of the homes bordering the apartments would suffer a lack of privacy as unit residents would be looking down on them from a height of four storeys. There are many apartments already in our section of town. If the buildings are deemed necessary perhaps they could be reduced to a maximum of two storeys. Placing such high buildings in a lot surrounded on three sides by detached one or two storey homes is not acceptable to the local community. Most buildings of this height are located at the edge of residential areas, not in the centre of them.
3. We were informed at the session there would be 1.2 parking spaces for each unit. Most couples today own two vehicles plus there are always visitors and delivery vehicles coming and going. For 162 units probably at least 300 parking spaces would be required. Where would all the extra vehicles park? On surrounding streets? Our property is on Brown Street. It is a narrow street. Would there be an overflow of parked vehicles infringing on our front lawn?
4. The main concern expressed at the virtual session was increased traffic. Presently there are three houses on Brown Street. We chose to build our new home in this area because it was such a quiet neighborhood. Our son is a wheelchair user and there are no sidewalks on the street. However, he safely wheels around the immediate area because there is low traffic. Having 300 plus vehicles traveling on Brown Street to access the apartment buildings behind us would drastically change that situation. Even half that number of vehicles would greatly increase the risk of pedestrian injury or death.
5. Having 162 additional families in such close proximity is another concern. Would there be an increase in noise? In vandalism? Would the existing families on the surrounding streets still be able to enjoy their own properties?
6. Having a complex of large apartment buildings in such close proximity would undoubtedly adversely affect the property values of the surrounding homes. Not only would that be detrimental to the property owners, but would result in reduced revenue for the town in property taxes.

In conclusion, we feel the proposed buildings are not a good fit for our neighborhood. If the town deems additional rental units are required in our area, perhaps a smaller project could be

considered. One that complements the surrounding homes and does not decrease the enjoyment and safety of others.

Evelyn and John Bradford  
3 Brown Street

**RE: Lot 21-2R Apartment Complex**

**Received via email 20220130 from Mary Jane Weeks**

Will, I still do not see any form to fill out so I will write how I feel about the new building.

This is a nice quiet Street to live on summer, spring, fall and, winter

Except they do not blow the street very wide, which will make a really big difference if 162 new family's move in. First you will have the noise from them building the 3 apartments building early in the morning to late at night. The traffic will be heavy on Walter Purdy Ave. and don't say they are building a new road, because you and I know they will be using Brown, Mosses and Walter Purdy Ave. also, and by the look of things you are also building a road through to Donald.

Now that is 162 new families which is a lot of new people to add to one neighborhood, 162 plus new cars in the neighborhood, so 162 with an average of 2 people per unit and that brings it up to 445 new people in one neighborhood. ( and that is just approximate amount of people ) that is a lot of people to bring in one neighborhood all at once. People on this street keep their places looking nice, sad to say you cannot not say that about apartment buildings.

Look you want to put in 4 by 4 units I call them senior units, that is fine but not 162 units.

There is lots of land around Amherst, what about out there by where steam boat was on the right side going out of town. Lots of

land there.

Now people on Donald, Walter Purdy and Willow st. all should had been notified about this built because it affects all of us not just a few.

**PLEASE DO NOT BUILD THE 162 UNITS.**

Weeks'

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220131**

Jeff & Marilyn Campbell - 8 Mosher Street

Our concerns:

- Has an environmental impact study been completed? What were the results?
- Has a traffic study been completed? What were the results?
- Mosher and Brown were not meant for that amount of traffic. They are small streets and in winter, poorly cleaned, and often down to one lane. Walter Purdy as well.
- Mosher, Brown, and Walter Purdy don't have sidewalks. As well as Willow between EB and the high school. With an increased amount of kids walking through, are sidewalks planned? How much property will that eat into?
- Parking: most apartments will have 2 or more cars per household. There is not enough parking for them. What is the plan for overflow parking? Brown, Mosher and Walter Purdy do not have room for overflow parking. There will be dual adult households as well as there will no doubt be Mount A students living 2-4 per apartment and having multiple cars. The 1.2 spots planned for these complexes can not accomodate that.
- Are these low income apartments like on Dickey Street and Willow? Crime rate will increase. Our property value will go down. Will there be compensation for that?
- Has the town researched other properties by this owner and developer? Are they consider "slum lord properties" or well taken care of?
- Where will the dumpsters be stored on the property? What is the plan to not attract rodents to the area?
- Spring Street Academy is already at max capacity and they've taken over the library to use as an extra classroom. Where will all these kids go to school? What about EB's capacity and ARHS?
- Has a policing impact study been done? Does APD have the manpower to cover off this influx of people? How will this effect their budget and town taxes?
- Has a firefighting impact study been done? Amherst FD is supported by volunteers and neighbouring volunteer fire departments. Are they trained to fight a fire in a 4 storey apartment building? Most fires fought by volunteers are fought in a "surround and drown" type response - this is not possible in a 4 storey apartment building. Do they all have the necessary equipment to fight a fire in a 4 storey apartment building? How will this effect their budget and town taxes?

- How will this effect water pressure? Donald seems to have frequent water line breaks. Is there capacity for this on the current system?
- Does NS Power have the capacity to supply this set-up? Our power tends to fail with any/every storm. I know through someone locally who works for NS Power that this area is on one of the oldest and most instable grids - 3 large apartment buildings would not help the issue.
- What about parks? A complex of this nature should have the responsibility of having playground equipment nearby. Otherwise kids will have nowhere to play. The closest areas to play would be behind SSA and Dickey park - which are not considered nearby for young kids to play.
- Bottom line: we were told when we built here that the neighbouring properties would consist of houses of similar style to ours or the duplex-style ones (mostly for seniors). We would never have built here if we knew we'd be on the direct exit for a 3-building apartment complex. If this is built, we will be moving for sure. I know of at least 3 households on Mosher, Brown and Walter Purdy that will sell and move. A realtor recently told us what the approximate selling price of our house would be - now with this in the works, that will no doubt decrease. Will Nova View Developments Ltd be compensating us for the loss in our selling potential? Honestly, if this is going forward, the developer might as well buy out all of Mosher and Brown, tear down the houses and put in a park and extra parking.

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220131**

Good afternoon Kim,

Thank you for the opportunity to attend your virtual meeting as well as submit written comments to the Committee regarding the 3 proposed apartment buildings in our neighborhood.

I live at 1 Walter Purdy Avenue and co-own the property at 3 Brown Street. I am very concerned about the extra traffic that these units will create.

We built the house on Brown Street for our sons with disabilities - one using a wheelchair and one with Down Syndrome and a lady with another disability. This property was more expensive than others in Amherst at the time but this has always been a quiet and safe neighborhood. This will undoubtedly change with an additional 300 - 400 people moving about. Safety is our number one priority.

I understand there is a need for new apartments in Amherst however, these are large intrusive proposed units. There has to be other property in Amherst where these buildings and additional people and vehicles would be more appropriate rather than in the middle of such a long-established single family home area where total privacy will be lost. I feel confident that this will lower the value of these homes. Personally, I have never and would never consider purchasing a property with apartment buildings overlooking it.

We have most of our young people from Amherst, as well as many foreign exchange students walking and/or driving to the three schools in our area. There is no doubt that the additional traffic will cause many safety issues.

I trust the Committee will consider our concerns when making their decision.

Thank you,

Nancy Park

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220131**

To whom this may concern;

Being a resident of Brown St for 8 yrs now I have concerns regarding this new phase that is being implemented.

As I'm sure the rest of my neighbours have expressed their opinions , I also stand together with them and not in favour for these apartment buildings.

- 1- this will depreciate our value of our homes
- 2- assuming for low income housing
- 3- why not relocate these buildings to LaPlanche st - that would be a great spot
- 4- why not build houses instead ?
- 5- assuming our opinions won't matter on this topic, what is the date this will be going through ?

Thank for entertaining my opinion, again I am 100% NOT in favour for these apartments to be built in my neighborhood.

Sincerely  
Tanya Musseau

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220201**

Dear Sir or Madam,

I am writing to voice my concerns about the proposed Lot 21-2R Apartment Complex PID 25002122 Brown and Mosher Streets.

I am a resident and property owner at 2 Walter Purdy Ave. I have the following points of concern regarding the proposed development noted above:

1. Safety & Traffic - At present, Walter Purdy Ave. is already used as a thoroughfare by drivers who wish to bypass heavier traffic on Spring St. and East Pleasant St. Drivers are frequently in a hurry, rolling through stop signs, taking turns too tightly and driving too fast for the narrow, winding street. Our snow banks are often enormous and in the winter our narrow street is inevitably more narrow due to the real-life limitations of snow removal. Young children play in their front yards during all seasons and people park their vehicles along the road due to limited driveway space, which results in near-miss accidents on a regular basis. Walter Purdy Ave., Brown St., and Mosher St. are simply not equipped to handle the increase in traffic that a 3 building apartment complex would cause.
2. Space - The Lot is simply too small to comfortably house the proposed apartment complex. The proposed plans literally cram the buildings into the space with zero room for flexibility/leeway (i.e., green space, snow removal, etc.). This leads me to believe that the proposal is 100% financially motivated, and does not consider the well-being of the occupants, the neighbourhood, or the town overall.
3. Educational Impact - As mentioned above, the proposal places Building B a mere 12 metres (39 feet) away from EB Chandler Jr. High School. As an educator and school psychologist (R. Psych.), I have significant concerns regarding a multi-storey building being that close to a school. Students who attend EB Chandler are in grades 7 and 8 - these are challenging years for children, not only academically but also developmentally. During these 2 years, every child in the Amherst area attends this school, and it is vital that they are able to secure strong connections with their teachers and friends, and sustain focus/concentration on their academic learning. Not only will the construction of the proposed buildings result in noise and visual distractions for students, but once completed the reality of housing hundreds of people only a few metres away is going to create ongoing barriers to their learning (e.g., residents are free to play music at a high volume with their windows open, work on their car engine in the parking lot, smoke marijuana on their balcony, etc. - all well within view/earshot of hundreds 11-13 years olds in the middle of the school day).
4. Infrastructure - What guarantee is the town of Amherst able to make that our water, sewer, snow removal, electricity, and internet systems are able to manage such a large increase in usage with respect to infrastructure? As it is, we have regular power interruptions and internet connectivity is barely satisfactory.
5. Neighbourhood Aesthetic - My husband and I chose to purchase a home on our street and in this neighbourhood because of the relative newness of the houses, the single-family nature of the homes, and the residential/suburban feel to the area (i.e., lots of green space, well-kept homes/yards, no tall buildings to be seen, etc.). While I can appreciate the desire to increase housing options, I feel as though single-family homes or duplex-style homes would be a better fit for this area, and would still meet the housing needs of many people looking for places to live near schools, parks, and friends. A multi-storey apartment complex in the middle of our neighbourhood would surely be an eyesore, not only from the

start but also as time goes on given the difficulty of properly maintaining such large structures and their surrounding landscapes without enormous financial commitment.

6. Property Value - Apartment complex housing will decrease my property value, which is a significant concern.

My husband and I are not originally from the Amherst area but we happily moved here and purchased our home on Walter Purdy in August 2008 after being offered jobs with the local school board. We love this town and are proud to call it home. The development of Lot 21-2R as it is currently proposed has created a lot of worry and resulting uncertainty for us. I sincerely hope the many concerns of our fellow neighbours will be taken into thoughtful consideration.

Many thanks for your time and consideration,  
Lisa Craig

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220201**

Dear Sir or Madam,

I am writing with regards to the proposed Lot 21-2R Apartment Complex PID 25002122 Brown and Mosher Streets.

I am a resident and property owner at 2 Walter Purdy Avenue and I have the following points of concern regarding the proposed development noted above:

1. Safety & Traffic - There are many children who currently live on Walter Purdy Ave., Brown St. and Mosher St. These children are often found playing or riding bikes on these streets. At present, Walter Purdy Ave. is already used as a thoroughfare by drivers who wish to bypass heavier traffic on Spring St. and East Pleasant St. Walter Purdy Ave., Brown St., and Mosher St. are simply not equipped to handle the increase in traffic that a 3 building apartment complex would cause.
2. Educational Impact - The proposal places Building B a mere 12 metres (39 feet) away from EB Chandler Jr. High School. As a teacher at EB Chandler, I have significant concerns regarding a multi-storey building being that close to a school. Students who attend EB Chandler are in grades 7 and 8 - these are challenging years for children, not only academically but also developmentally. During these 2 years, every child in the Amherst area attends this school, and it is vital that they are able to secure strong connections with their teachers and friends, and sustain focus/concentration on their academic learning. Not only will the construction of the proposed buildings result in noise and visual distractions for students, but once completed the reality of housing hundreds of people only a few metres away is going to create ongoing barriers to their learning (e.g., residents are free to play music at a high volume with their windows open, work on their car engine in the parking lot, smoke marijuana on their balcony, etc. - all well within view/earshot of hundreds 11-13 years olds in the middle of the school day).
3. Infrastructure - What guarantee is the town of Amherst able to make that our water, sewer, snow removal, electricity, and internet systems are able to manage such a large increase in usage with respect to infrastructure? As it is, we have regular power interruptions and internet connectivity is barely satisfactory.
4. Neighbourhood Aesthetic - My wife and I chose to purchase a home on our street and in this neighbourhood because of the relative newness of the houses, the single-family nature of the homes, and the residential/suburban feel to the area (i.e., lots of green space, well-kept homes/yards, no tall buildings to be seen, etc.). While I can appreciate the desire to increase housing options, I feel as though single-family homes or duplex-style homes would be a better fit for this area, and would still meet the housing needs of many people looking for places to live near schools, parks, and friends. A multi-storey apartment complex in the middle of our neighbourhood would surely be an eyesore, not only from the start but also as time goes on given the difficulty of properly maintaining such large structures and their surrounding landscapes without enormous financial commitment.
5. Property Value - Apartment complex housing will decrease my property value, which is a significant concern.

My wife and I are not originally from the Amherst area but we happily moved here and purchased our home on Walter Purdy in August 2008 after being offered jobs with the local school board. We love this town and are proud to call it home. The development of Lot 21-2R as it is currently proposed has

created a lot of worry and resulting uncertainty for us. I sincerely hope the many concerns of our fellow neighbours will be taken into thoughtful consideration.

Many thanks for your time and consideration,

Wade LeBlanc

**RE: Lot 21-2R Apartment Complex**

**Received via email 20220202**

Good Day

My name is Brad Delahunt I live on Donald Ave. I am very concerned about the proposal of a 54 unit apartments . The safety of my children walking to school. Increase crime in the neighborhood. With the apartments puts a lot more cars on the road. The schools are over crowded now. Where are all the kids going to go to school. The apartments are going to be an eye sore. My family chose to live in Amherst because it's a small town. If I wanted to look at apartments I would live in Halifax.

I watched your video on YouTube. No one answered one of the more important question. Is the apartments going to be low income? Could you send me the minutes of the meeting that was held on January 25 2022?

Thank you

Brad Delahunt

**RE: Lot 21-2R Apartment Complex**  
**Received via email 20220131**

To Whom it May Concern,

I am writing today with my concerns for the proposed apartments in the Donald Ave and Willow St areas.

My first concern as addressed during the public information session is the fact the proposed development is going to create a lot of excess traffic in an area that is already very congested during the school days. The amount of traffic in the Donald, Dickey and Willow street areas are a safety hazard on the best of days, let alone adding parking for almost 200 to the area. The amount of close calls and near misses is a frequent concern already along with the speed of traffic in the school zones.

My next concern is the size of the proposal! Living at 22 Donald Ave and having teenage daughters I worry about the privacy not only for neighbours who will have people looking into their windows and backyards from their balconies taking away all privacy but also for EB Chandler Jr High! Having this in the back of the school will take privacy away from the schools, it will create significant noise and these schools rely on opening their windows quite often as that school is older and a very warm building, as well as windows being open during Covid times. I feel the noise from construction as well as after construction would be very disturbing to the education of these child and create a harder learning environment.

My next concern is taking away of more green space in the area and the wildlife that currently occupy the area. There are many areas complexes like this could be built but right in the middle of a quiet residential area and in the back yard of a school is not the place.

Then there is the concern for safety. I do not feel a congested area like this would be ideal I'm the backyard of a school with 12-14 year olds. That is a lot of people with access to the school yard at all times, the small school grounds that currently has children in it all of the time. How can we ensure people are remaining off of the school property away from the children?

My next concern is for the schools, currently Spring St Academy is over capacity, they lost their library to make another classroom and grade 5&6 French immersion are bussed to another school because SSA can't handle capacity , a building of this size is surely going to have additional families move to this area and how is the elementary school expected to handle this.

Another concern I have is snow plowing in the winter months. Being that my property line is by one of the proposed parking lots I would like clarification on where the snow will be plowed in the winter months. I have children as do many neighbours that play in the back yards and I am not wanting the snow hills to be pushed back into my back yard but based on the layout I am unsure where else it could go. We get hefty snowfalls and that would also be a major concern.

Currently in Amherst housing is a major concern for many residents and the cost of living has jump significantly, I do not feel this looks like affordable housing and as someone mentioned how will this affect our already unstable power grid in the area on any given windy day, is the town prepared in make the surrounding streets a no parking on streets permitted area and enforce it because of the dangerous surrounding the schools when all of the cars that don't fit in the parking lot need an area to park, will

the APD be hiring additional members to ensure the safety of the kids who already come close to getting hit daily in the already busy area.

I am not opposed to the area being developed, however 3 buildings of this size in such a small quiet residential area and in a schools back yard is not in the best interest of anyone.

Amherst isn't a city and these structures are something you would find in an urban setting not in a small rural town.

I am asking you to not approve this proposal for the safety of the kids in the area! I feel this is not in the best interest of the kids or the residential area.

Thank you,

Melanie Sealy

# Lot 2021-2R Amherst Traffic Impact Study

July 2022

Prepared for  
NovaView Developments



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Prepared by

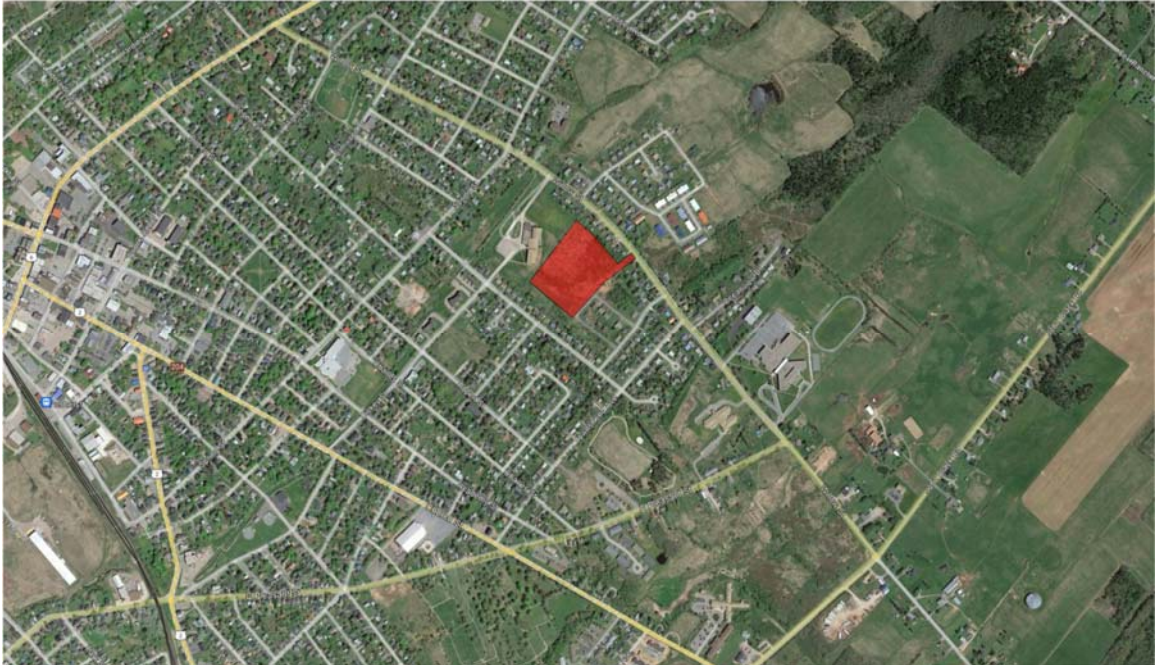
Jeff R. LeBlanc, P.Eng., PMP

# 1 Introduction

## 1.1 Background

NovaView Developments is working on a proposal to develop their property, identified as Lot 2021-2R, with three 54-unit apartment buildings in Amherst, Nova Scotia. Exhibit 1.1 shows the site in red in the context of the surrounding area in Amherst, Nova Scotia

Exhibit 1.1 – Lot 2021-2R in Amherst, Nova Scotia



Source: Google Earth

The site plan provided for the proposed development shows three new 54-unit residential apartment buildings with a total of 162 units with primary access from an extension of the existing Gallagher Street to Willow Street. One driveway to the property will be established from this extension and a second access point will be created at the western end of Gallagher Street at Brown Street. A new internal road will be constructed on the property to provide access to the apartment buildings and three surface parking areas that will contain 204 parking spaces. An emergency vehicle turnaround has been included on site.

The proposed development is located adjacent to EB Chandler Junior High School and approximately 500 meters west of Amherst Regional High School. The property is under the jurisdiction of the Town of Amherst and the surrounding transportation network is owned and maintained by the Town of Amherst.

Refer to Exhibit 1.2 for a view of the proposed development and surrounding road network, Exhibit 1.3 for a proposed site plan, Exhibit 1.4 for a typical floor plan and Exhibit 1.5 for renderings of a typical apartment building exterior as prepared by Paul Skerry Architects Ltd and as provided by NovaView Developments.

Exhibit 1.2 – Proposed Lot 2021-2R Development and Surrounding Road Network in Amherst





Exhibit 1.5 – Lot 2021-2R Typical Apartment Building Exterior Renderings



The Town of Amherst has reviewed the initial development application and they have requested that a Traffic Impact Statement be completed to *“estimate trip generation and the impact on traffic levels on the surrounding street network, including: Willow Street, Donald Avenue, Brown Street, Mosher Street, Walter Purdy Drive, and the new connection to Willow Street from the development. The statement will address the extent to which the traffic generated from the proposed development will impact the performance of streets and intersections in the vicinity in relation to the current standards for traffic volumes on local and arterial streets, as set out in the ‘TAC Manual’. If estimated trip generation exceeds surrounding capacity, estimate the number of added dwelling units that would not result in exceeding the standard.”*

We are pleased to submit this report that addresses the Town of Amherst comments above and also includes our findings and recommendations.

## 1.2 Study Area

The study area defined for this Traffic Impact Study consists of the transportation network in the immediate vicinity of the proposed development of Lot 2021-2R including the new connection on Willow Street along with the follow streets and key intersections:

- Donald Avenue at Walter Purdy Avenue
- Brown Street at Walter Purdy Avenue
- Mosher Street at Walter Purdy Avenue
- Willow Street at Walter Purdy Avenue
- Site Access (Gallagher Street Extension) at Willow Street

We have set a horizon period of 5 years for this development to allow it to be fully completed and occupied so we can assess future performance including applicable annual background traffic growth in the area.

## 1.3 Objectives

Given the background set out above, the objective of this Traffic Impact Study is to assess the impacts of the proposed development on the surrounding transportation network. Recommendations and solutions will then be provided to allow the traffic generated by the proposed development to be introduced to the existing transportation network safely and efficiently.

Detailed objectives are presented below:

- Complete a Site Review to review road width, lane markings, stopping sight distances, pedestrian facilities, active transportation and roadway signage within the study area
- Complete new AM and PM peak hour manual traffic counts at these intersections:
  - Willow Street at Walter Purdy Avenue
  - Donald Street at Walter Purdy Avenue
- Analyze the performance (2022) of the following key intersections using Synchro plus SimTraffic Version 10 and the procedures outlined in the Highway Capacity Manual and by the Transportation Association of Canada (TAC)
  - Willow Street at Walter Purdy Avenue
  - Donald Avenue at Walter Purdy Avenue
  - Brown Street at Walter Purdy Avenue
  - Mosher Street at Walter Purdy Avenue
- Review historic 24-hour traffic volumes from NSTIR to estimate annual background traffic growth in the area
- Analyze the future background traffic performance (2027) of key intersections using Synchro plus SimTraffic Version 10 and the procedures outlined in the Highway Capacity Manual and by the Transportation Association of Canada (TAC)
- Estimate the amount of traffic to be generated by the proposed development of 162 apartments using Trip Generation Rates and equations published by the Institute of Transportation Engineers (11<sup>th</sup> Edition)
- Distribute new site generated traffic to the network based on observed traffic distribution from manual traffic counts

- Analyze the future performance (2027) of the following key intersections including site generated traffic using Synchro plus SimTraffic Version 10 and the procedures outlined in the Highway Capacity Manual and by the Transportation Association of Canada (TAC)
  - Willow Street at Walter Purdy Drive
  - Donald Avenue at Walter Purdy Drive
  - Brown Street at Walter Purdy Drive
  - Mosher Street at Walter Purdy Drive
  - Site Access (Gallagher Street Extension) at Willow Street
- Assess the need for right and left turn auxiliary lanes at the proposed entrance to the development from Willow Street (Gallagher Street Extension)
- Complete a visual assessment of Stopping Site Distance at the proposed access from Willow Street (Gallagher Street Extension)
- Develop and list existing, potential and future problems or concerns along with recommendations to safely manage site generated traffic

## 2 Existing Traffic Conditions

### 2.1 Description

The principal routes affected by this proposed development are Willow Street, Walter Purdy Avenue, Donald Street, Brown Street, Mosher Street and Gallagher Street in Amherst, Nova Scotia. The proposed development is located adjacent to EB Chandler Junior High School and approximately 500 meters west of Amherst Regional High School.

Although this development is in the Town of Amherst we have included Halifax Regional Municipality's (HRM) Characteristics of Street Classes from HRM's Municipal Service System Guidelines in Exhibit 2.1 as a reference and we have also included Transportation Association of Canada's (TAC) Characteristics of Urban Roads in Exhibit 2.2.

Exhibit 2.1 – HRM's Characteristics of Street Classes

Characteristic	Arterial Street	Major Collector	Minor Collector	Local Industrial	Local Street
1. Traffic Service Function	First Consideration	Traffic movement primary consideration, land access secondary consideration, some parking	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				
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

Exhibit 2.2 – Transportation Association of Canada Characteristics of Urban Roads

	Public Lanes		Locals		Collectors		Arterials		Expressways	Freeways
	Residential	Commercial	Residential	Indust./Comm.	Residential	Indust./Comm.	Minor	Major		
traffic service function	traffic movement not a consideration		traffic movement secondary consideration		traffic movement and land access of equal importance		traffic movement major consideration	traffic movement primary consideration	traffic movement primary consideration	optimum mobility
land service / access	land access only function		land access primary function		traffic movement and land access of equal importance		some access control	rigid access control	no access	no access
traffic volume (veh/day) (typical)	<500	<1000	<1000	<3000	<8000	1000 – 12 000	5000 – 20 000	10 000 – 30 000	>10 000	>20 000
flow characteristics	interrupted flow		interrupted flow		interrupted flow		uninterrupted flow except at signals and crosswalks		uninterrupted flow except at signals	free-flow (grade separated)
design speed (km/h)	30 - 40		30 - 50		50 - 80		50 - 70	60 - 100	80 - 110	80 - 120
average running speeds (km/h) (off-peak)	20- 30		20 - 40		30 - 70		40 - 60	50 - 90	60 - 90	70 - 110
vehicle type	passenger and service vehicles	all types vehicles	passenger and service vehicles	all types vehicles	passenger and service vehicles	all types vehicles	all types	all types up to 20% trucks	all types up to 20% trucks	all types up to 20% trucks
desirable connections	public lanes, locals		public lanes, locals, collectors		locals, collectors, arterials		collectors, arterials, expressways, freeways		arterials, expressways, freeways	arterials, expressways, freeways
transit service	not permitted		generally avoided		permitted		express and local buses permitted		express buses only	express buses only
accommodation of cyclists	no restrictions or special facilities		no restrictions or special facilities		no restrictions or special facilities		lane widening or separate facilities desirable		prohibited	prohibited
accommodation of pedestrians	pedestrians permitted, no special facilities		sidewalks normally on one or both sides	sidewalks provided where required	sidewalks provided both sides	sidewalks provided where required	sidewalks may be provided, separation for traffic lanes preferred		pedestrians prohibited	pedestrians prohibited
parking (typically)	some restrictions		no restrictions or restrictions one side only		few restrictions other than peak hour		peak hour restrictions	prohibited or peak hour restrictions	prohibited	prohibited
min. intersection spacing <sup>1</sup> (m)	as needed		60		60		200	400	800	1600 (between interchanges)
right-of-way width (m) (typically)	6 - 10		15 - 22		20 - 24		20 <sup>2</sup> - 45 <sup>3</sup>		>45 <sup>3</sup>	>60 <sup>3</sup>

**Willow Street** is a two-lane arterial road that runs in an east-west direction from Victoria Street (Highway 6) to Route 204 in Amherst, Nova Scotia. It provides access to homes, businesses, apartments and schools and is a major transportation link in the town. There is a concrete sidewalk on its northern side near the proposed development and bike lanes are marked in both directions. The posted speed limit is 50 km/hr with a reduction to 30 km/hr in school zones to the east and west of the proposed development when children are present. Marked crosswalks are installed at the bus entrance to EB Chandler Junior High School and at Townshend Avenue.

**Donald Street** is a local/collector road that runs east-west between Spring Street and Townshend Avenue. There is a concrete sidewalk on its northern side. The posted speed limit is 50 km/h with a reduction to 30 km/h in the EB Chandler Junior High School Zone when children are present. Marked crosswalks are installed at the entrance to EB Chandler Junior High.

**Walter Purdy Avenue** is a short, local road (275 meters) that runs north-south between Willow Street and Donald Avenue. It provides access to single family homes. The posted speed limit is 50 km/h and there are no sidewalks.

**Brown Street** is a short, local road (140 meters) that runs east-west between Walter Purdy Avenue and Gallagher Street. It provides access to 3 single family homes. The posted speed limit is 50 km/h and there are no sidewalks.

**Mosher Street** is a short, local road (140 meters) that runs east-west between Walter Purdy Avenue and Gallagher Street. It provides access to 4 single family homes. The posted speed limit is 50 km/h and there are no sidewalks.

**Gallagher Street** is a short, local road (75 meters) that runs north-south between Brown Street and Mosher Street. The posted speed limit is 50 km/h and there are no sidewalks.

Refer to Exhibit 2.3 for photos of the Study Area.

Exhibit 2.3 – Study Area Photos



Lot 2021-2R Proposed Access from Willow Street



Lot 2021-2R viewed from Brown Street/Gallagher Street



Brown Street looking east to Walter Purdy Avenue at Gallagher Street



Gallagher Street looking north with proposed Development on left



Gallagher Street looking south with proposed development on right



Existing northern end of Gallagher Street to be extended to Willow Street



Moshier Street looking east to Walter Purdy Avenue at Gallagher Street



Brown Street at Walter Purdy Avenue looking east



Brown Street at Walter Purdy Avenue looking west



Walter Purdy Avenue at Brown Street looking south to Donald Street



Walter Purdy Avenue at Brown Street looking north



Walter Purdy Avenue at Mosher Street looking south to Brown Street



Moshers Street at Walter Purdy Avenue looking east



Moshers Street at Walter Purdy Avenue looking west to Gallagher Street



Walter Purdy Avenue at Donald Street looking south



Walter Purdy Avenue at Donald Street looking north



Donald Street at Walter Purdy Avenue looking east



Donald Street at Walter Purdy Avenue looking west



Walter Purdy Avenue at Willow Street looking north



Walter Purdy Avenue at Willow Street looking south



Willow Street at Walter Purdy Avenue looking east



Willow Street at Walter Purdy Avenue looking west



Willow Street at Proposed Site Access looking east



Willow Street at Proposed Site Access looking west

## 2.2 Existing Traffic Volumes

We completed AM (7am to 9am) and PM (4:00pm to 6:00pm) manual turning movement counts at the following intersections on Monday June 20, 2022

- Willow Street at Walter Purdy Avenue
- Donald Street at Walter Purdy Avenue

The AM peak hour is from 8:00 AM to 9:00 AM and the PM peak hour is from 4:15 PM to 5:15 PM

These counts at either end of Walter Purdy Avenue also allowed us to estimate existing traffic at these additional intersections in the study area.

- Brown Street at Walter Purdy Avenue
- Mosher Street at Walter Purdy Avenue

There are 21 single family homes on Walter Purdy Avenue/Brown Street/Mosher Street and we compared vehicle trip estimates from Institute of Transportation Engineers (ITE) Land Use 210 Single Family to observed traffic volumes entering and exiting Walter Purdy Avenue. Observed traffic in the AM peak hour was 19 vehicles higher (enter and exit) than ITE rates which shows that Walter Purdy Avenue is not a major shortcut and the additional traffic in the morning is likely related to schools in the area. The PM peak hour is outside of school dismissal and observed traffic is almost identical to ITE estimated traffic volumes. Refer to Exhibit 2.4.

Exhibit 2.4 – Observed Traffic Volumes vs ITE Estimated Vehicle Trips on Walter Purdy Avenue

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Single Family ITE Land Use 210	21	18	26%	74%	24	63%	37%
			5	13		14	8
Observed Traffic Volumes	21	37	43%	57%	23	61%	39%
			16	21		14	9
<b>VARIANCE</b>		<b>19</b>	<b>11</b>	<b>8</b>	<b>1</b>	<b>-</b>	<b>1</b>

We also reviewed estimated ITE vehicles trips for the 7 single family homes on Brown Street and Mosher Street to estimate traffic at their intersection with Walter Purdy Avenue. Refer to the following exhibits for existing traffic volumes in the study area.

Exhibit 2.5 – Donald Street at Walter Purdy Avenue Existing Traffic 2022

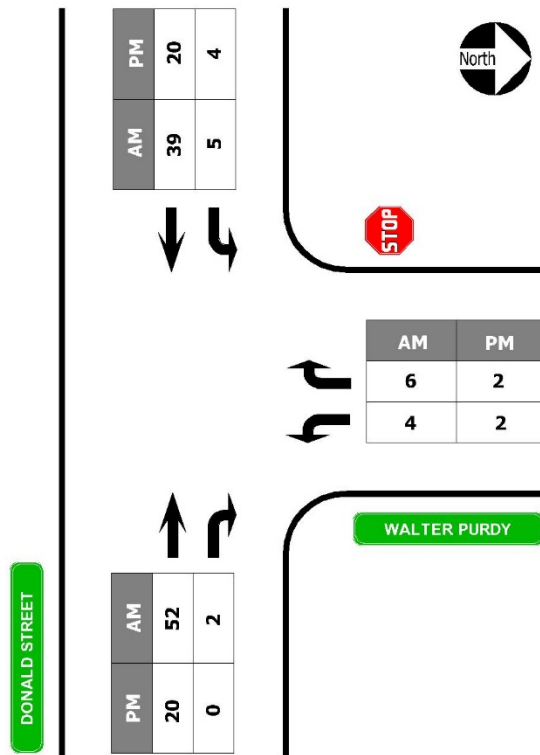


Exhibit 2.6 – Brown Street at Walter Purdy Avenue Existing Traffic 2022

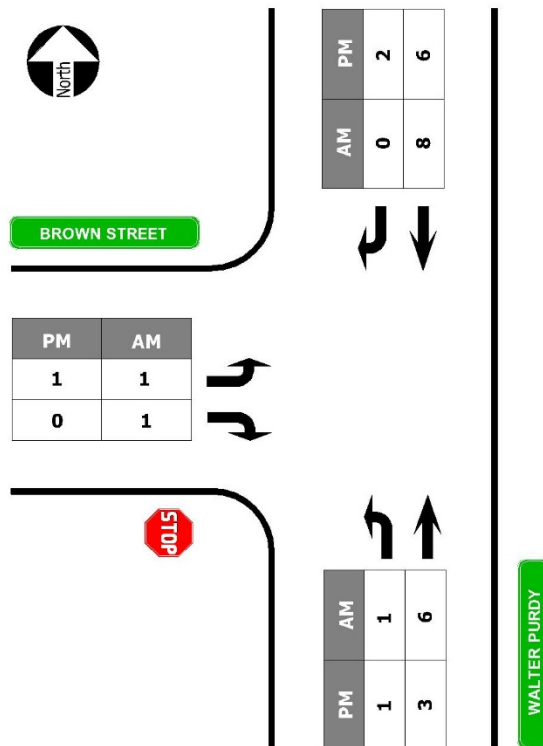


Exhibit 2.7 – Mosher Street at Walter Purdy Avenue Existing Traffic 2022

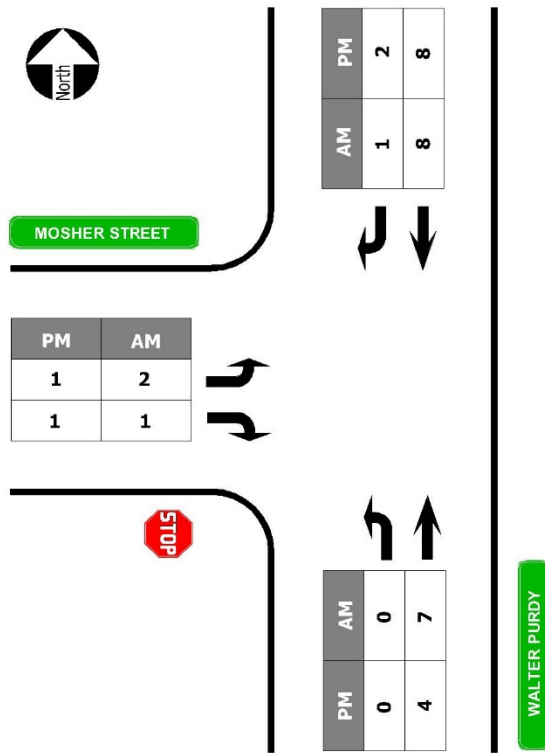
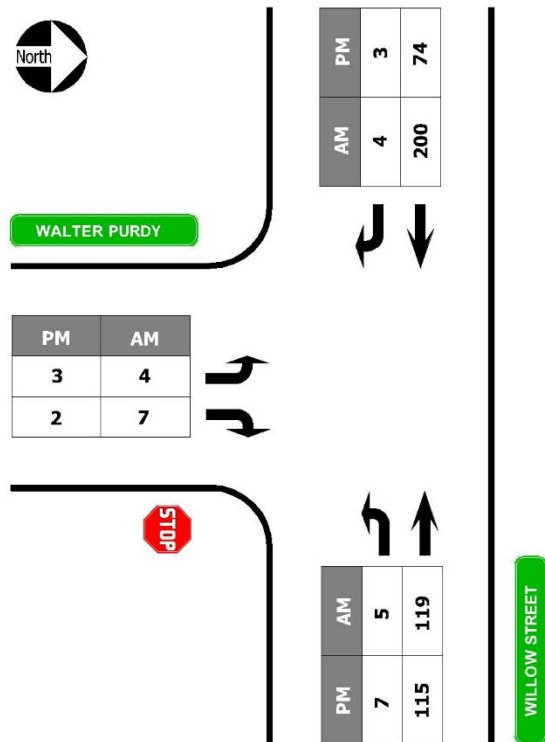


Exhibit 2.8 – Willow Street at Walter Purdy Avenue Existing Traffic 2022



### 2.3 Existing Trip Distribution

The AM peak hour had more traffic than the PM peak hour due to the impact of nearby schools and traffic on Willow Street was significantly higher than traffic observed on Donald Street and Walter Purdy Avenue.

In the AM peak hour we observed that 62% of traffic moves in an eastbound direction on Willow Street and the balance moves westbound. This reverses in the PM peak hour with 39% of traffic on Willow Street moving in an eastbound direction and 61% moving westbound

### 2.4 Background Changes in Traffic Conditions

We reviewed historical 24-hour Average Annual Daily Traffic (AADT) counts provided by NSTIR in the Amherst area and there was no clear pattern of background traffic growth over the past 20 years. Refer to Exhibit 2.9.

Exhibit 2.9 – NSTIR AADT Traffic Counts in Amherst, Nova Scotia

204-010		6-010		Tk2-240	
YEAR	AADT	YEAR	AADT	YEAR	AADT
1971	730	1973	2440	1971	2380
1972	740	1974	2460	1972	3410
1976	820	1976	2890	1974	3570
1977	960	1977	2540	1976	3770
1978	950	1982	3260	1980	3650
1980	1380	1983	2660	1982	3100
1982	1140	1984	3220	1986	3340
1986	1330	1986	3300	1988	3940
1988	1210	1988	4090	1991	3500
1991	1420	1991	4060	1995	3400
1995	1820	1995	2970	1998	3930
1998	2430	1998	2090	2001	3700
2001	2200	2001	3470	2004	3580
2004	2070	2004	2760	2007	2650
2007	1840	2007	1980	2010	4080
2011	2830	2016	2530	2013	3920
2013	1710	2019	3600	2016	3490
2014	2580			2019	3580
2016	2000				
2019	2380				

For this study, we applied an annual background traffic volume growth rate of 2% to observed 2022 traffic volumes as outlined in Section 2.2 to establish baseline traffic volumes in 2027 for analysis. Refer to Exhibits 2.10, 2.11, 2.12 and 2.13 for estimated 2027 background traffic volumes at all key intersections.

Exhibit 2.10 – Donald Street at Walter Purdy Avenue Estimated Background Traffic 2027

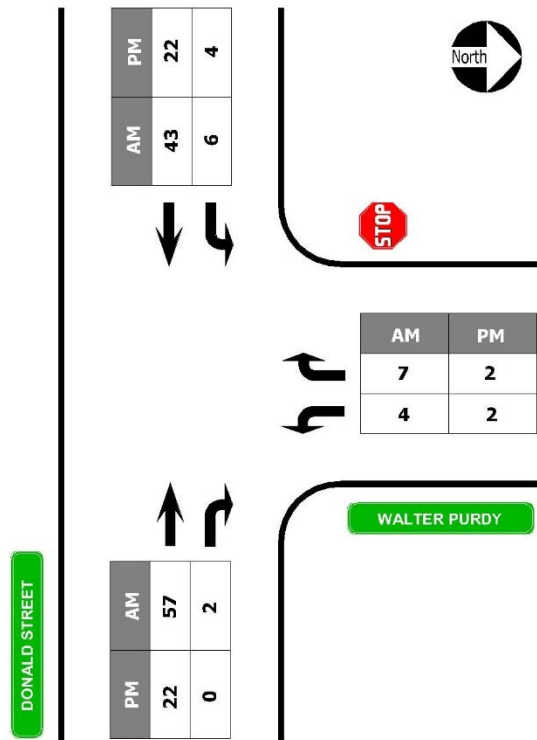


Exhibit 2.11 – Brown Street at Walter Purdy Avenue Estimated Background Traffic 2027

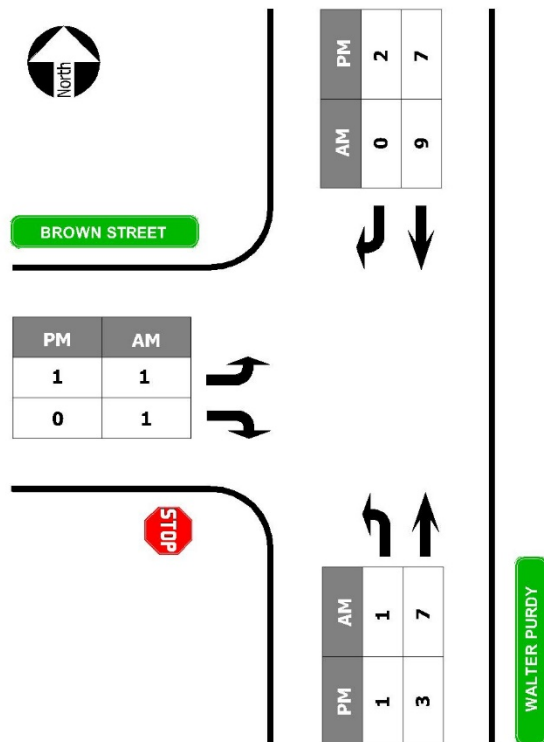


Exhibit 2.12 – Mosher Street at Walter Purdy Avenue Estimated Background Traffic 2027

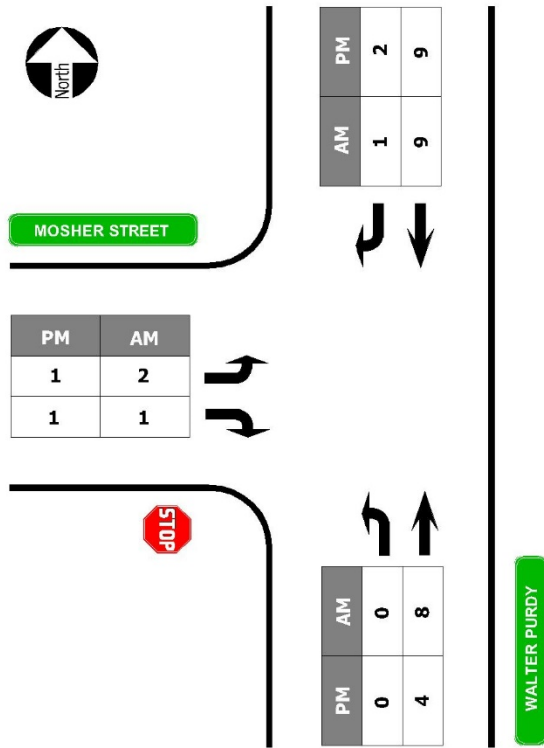
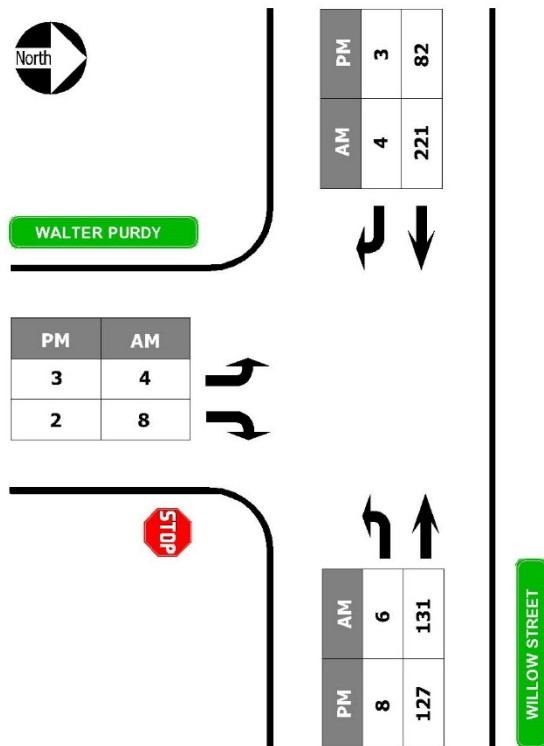


Exhibit 2.13 – Willow Street at Walter Purdy Avenue Estimated Background Traffic 2027



## 2.5 Transit, Pedestrians and Active Transportation

There is no transit in the area of the proposed development, however, with two schools nearby we did observe a number of school buses on Willow Street in the AM peak hour.

The pedestrian network in the area has been well established with sidewalks on the north side of Willow Street and Donald Street to provide safe access for walking. Marked crosswalks are installed on Willow Street at the bus entrance to EB Chandler Junior High School and at Townshend Avenue. Crosswalks are also installed at the entrance to EB Chandler Junior High School on Donald Street.

Willow Street was upgraded to include bike lanes on the both sides contributing to a pedestrian and bicycle friendly area which helps residents bike, walk and use other human power ways to move around the city.

In our manual traffic counts completed on Monday June 20<sup>th</sup> we observed 14 pedestrians in the AM peak hour using the sidewalk north of Willow Street and 1 pedestrian in the PM peak hour.

At the other intersection we observed 11 pedestrians in the AM peak hour using the sidewalk north of Donald Street and 1 pedestrian in the PM peak hour. These pedestrians cross Walter Purdy Avenue so they would have a minor impact on traffic entering or exiting this street.

For the detailed analysis in this report we have modeled 10 persons per hour for all intersection approaches in the study area.

### 3 Site Generated Traffic

#### 3.1 Trip Generation

The proposed development will have 162 apartments in three separate four-storey buildings. We completed trip generation estimates using equations provided in Institute for Transportation Engineer’s Trip Generation Manual 11<sup>th</sup> Edition.

- ITE Land Use 221 Multifamily Housing (Mid-Rise)

*"Mid-rise multifamily housing includes apartments and condominiums located within the same building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways."* The unit of measurement for average vehicle trip ends is dwelling units.

Exhibit 3.1 – Estimated Site Generated Traffic Volumes for Proposed Development

LAND USE	QUANTITY	AM PEAK			PM PEAK			WEEKDAY		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Apartments ITE Land Use 221	162	60	26%	74%	64	61%	39%	726	50%	50%
			16	44		39	25		363	363
<b>TOTAL</b>		<b>60</b>	<b>16</b>	<b>44</b>	<b>64</b>	<b>39</b>	<b>25</b>	<b>726</b>	<b>363</b>	<b>363</b>

We estimate that the proposed development will generate net new traffic volumes of **60** vehicles in the AM peak hour, **64** vehicles in the PM peak hour and **726** vehicles on a weekday.

#### 3.2 Trip Distribution and Assignment

We distributed and assigned the site-generated trips to the transportation network by analyzing our manual traffic counts and associated trip distribution.

In the AM peak hour we calculated that 77% of traffic in the area is captured on Willow Street with the balance of 23% on Donald Street. In the PM peak hour 82% of traffic in the area is captured on Willow Street and 18% on Donald Street. We used these percentages to distribute site generated traffic in the area. The proposed connection to Willow Street is a direct route for traffic and we don’t see site generated traffic heading towards Willow Street using Brown Street, Mosher Street or Walter Purdy Avenue. We also expect that most site generated traffic heading to/from Donald Street to use Brown Street as it will connect to the 2<sup>nd</sup> site access driveway.

#### 3.3 Total Traffic

The estimated distributed site-generated traffic was added to the estimated existing 2027 background traffic volumes to obtain the total estimated future traffic volumes at all key intersections in the study areas including the new connection to Willow Street from the extension of Gallagher Street to the proposed development. Please refer to the following Exhibits for a summary of total traffic volumes in 2027 and the Appendix for detailed summaries that show how site-generated traffic was distributed to and from the Lot 2021-2R residential development.

Exhibit 3.2 – Donald Street at Walter Purdy Avenue Estimated Total Traffic 2027

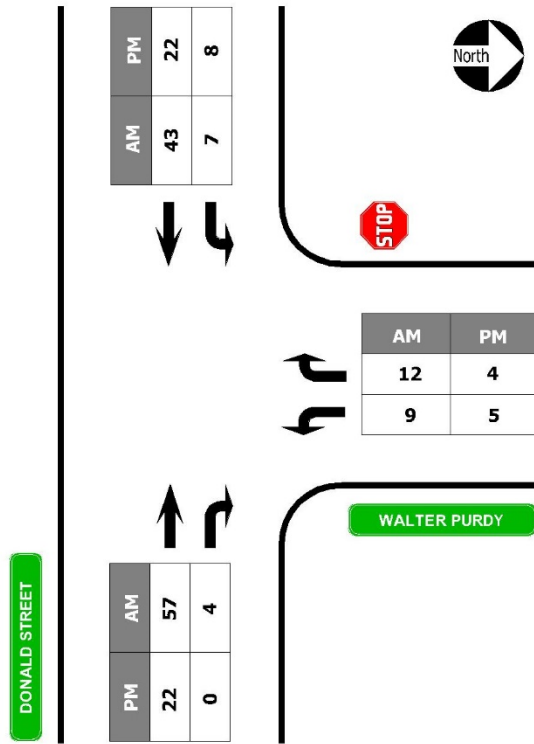


Exhibit 3.3 – Brown Street at Walter Purdy Avenue Estimated Total Traffic 2027

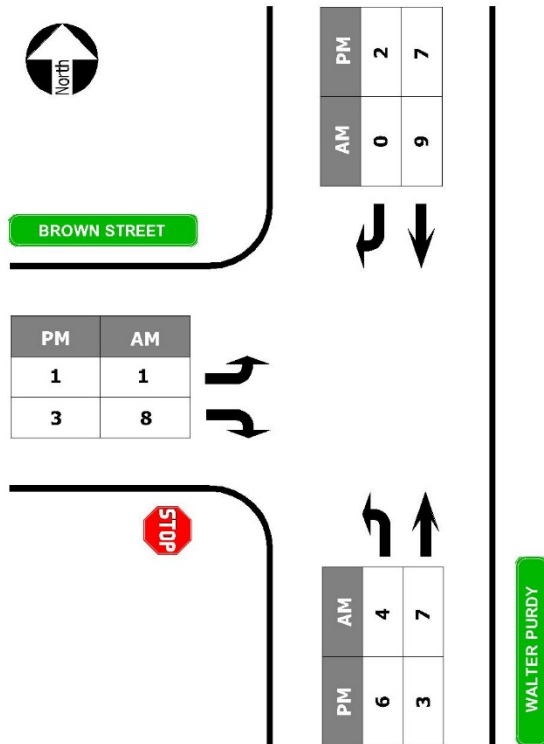


Exhibit 3.4 – Mosher Street at Walter Purdy Avenue Estimated Total Traffic 2027

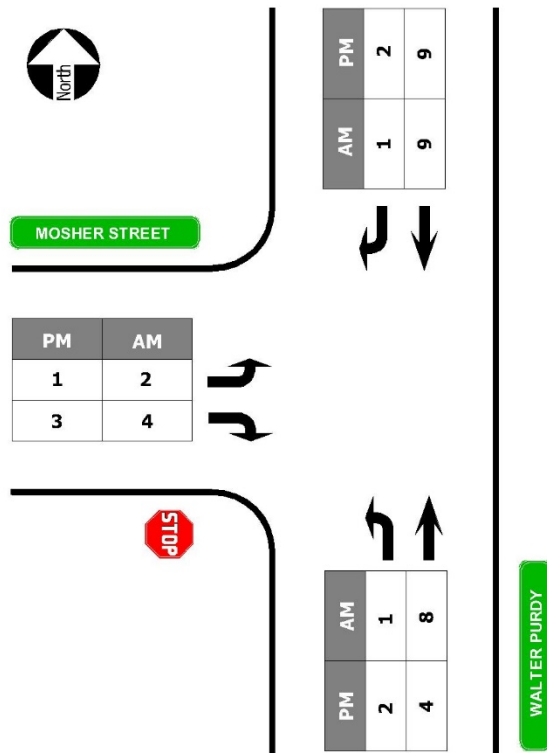


Exhibit 3.5 – Willow Street at Walter Purdy Avenue Estimated Total Traffic 2027

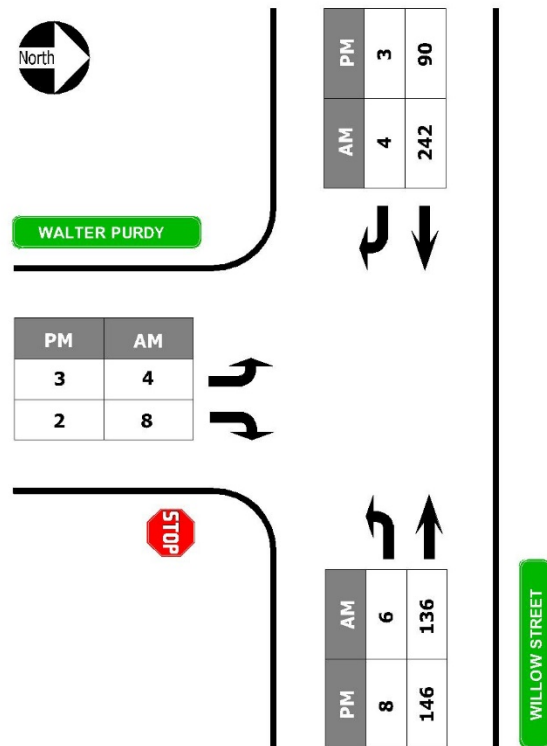
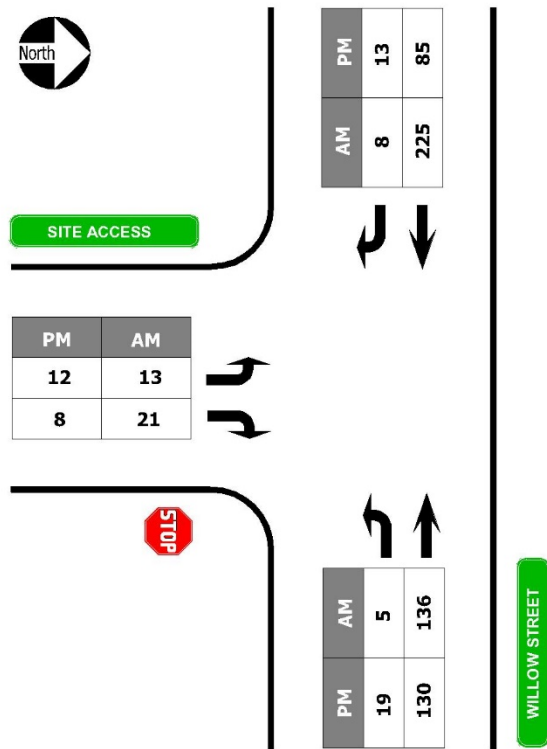


Exhibit 3.5 – Site Access (Gallagher Street) at Willow Street Estimated Total Traffic 2027



## 4 Evaluation of Impacts

### 4.1 Level of Service Analysis

As described in the Highway Capacity Manual *"the concept of levels of service used qualitative measures that characterize operational conditions within a traffic stream and their perception by motorists and passengers. The descriptions of individual levels of service characterize these conditions in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience."*

*Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst."*

As stated in the Highway Capacity Manual, *"analysis of signalized intersections focuses on the capacity and level of service of intersection approaches and the intersection as a whole. Capacity is evaluated in terms of the ratio of demand flow rate (volume) to capacity (v/c ratio) while the level of service is evaluated on the basis of average control delay per vehicle (in seconds per vehicle)." Exhibit 4.1 defines Level of Service for signalized intersections.*

The Highway Capacity Manual also states that *"the level of service is determined by the computed or measured control delay and is defined for each minor movement. Level of Service is not defined for the intersection as a whole."* LOS criteria for unsignalized intersections are summarized in Exhibit 4.2.

Exhibit 4.1 - Level of Service Criteria for Signalized Intersections

Level of Service	Description	Control, Delay Per Vehicle (Seconds)
A	Very low delay; most vehicles do not stop (Excellent)	≤ 10
B	Higher delay; more vehicles stop (Very Good)	≥ 10 and ≤ 20
C	Higher number of congestion; number of vehicles stopping is significant, although many still pass through intersection without stopping (Good)	≥ 20 and ≤ 35
D	Congestion becomes noticeable; vehicles must sometimes wait through more than one red light; Many vehicles stop (Satisfactory)	≥ 35 and ≤ 55
E	Vehicles must often wait through more than one red light; considered by many agencies to be the limit of acceptable delay	≥ 55 and ≤ 80
F	This level is considered to be unacceptable for most drivers; occurs when arrival flow rates exceed the capacity of the intersection (Unacceptable)	≥ 80

Exhibit 4.2 - Level of Service Criteria for Unsignalized Intersections

Level of Service	Delay Range (Seconds)
A	$\leq 10$
B	$\geq 10$ and $\leq 15$
C	$\geq 15$ and $\leq 25$
D	$\geq 25$ and $\leq 35$
E	$\geq 35$ and $\leq 50$
F	$\geq 50$

Traffic volumes are at their highest during the AM and PM peak periods so the impact of the trips generated by the proposed development during these hours will provide a worst case assessment of their impacts on the existing transportation network.

NSTIR’s Guide for the Preparation of Traffic Impact Studies states that:

*"for signalized and unsignalized intersections and overall LOS rating of "A" to "D" (based on delay), and a volume/capacity (v/c) ratio less than 0.90 for any individual movement, are normally considered acceptable. Where existing or horizon year levels of service are "E" or "F", or v/c ratios exceed 0.90, without the proposed development, LOS and v/c ratios equal to or better than existing levels may be acceptable as long as the average stopped delay per vehicle per movement is not increased after the development."*

Level of Service (LOS), Volume-to-Capacity ratios (v/c) and 95% Queue Length in vehicles (95%) results from all key movements at all intersections in the study area are provided in the following Exhibits and detailed Synchro reports have been included in the Appendix.

Exhibit 4.3 – Donald Street at Walter Purdy Avenue Level of Service Results

	Donald Street		Walter Purdy Avenue		Total
	EB-L	EB-T	SB-LR		
<b>AM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	7.4	-	9.2		1.2
LOS	A	A	A		
v/c	0.005		0.018		
95% Queue	0.0		0.1		
<b>AM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	7.5	-	9.2		1.2
LOS	A	A	A		
v/c	0.006		0.02		
95% Queue	0.0		0.1		
<b>AM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	7.5	-	9.4		1.9
LOS	A	A	A		
v/c	0.007		0.039		
95% Queue	0.0		0.1		
<b>PM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	7.4	-	8.8		1.2
LOS	A	A	A		
v/c	0.003		0.005		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	7.3	-	8.8		1.2
LOS	A	A	A		
v/c	0.003		0.005		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	7.3	-	8.9		2.2
LOS	A	A	A		
v/c	0.006		0.011		
95% Queue	0.0		0.0		

All key intersection movements will operate with acceptable LOS during the AM and PM peak with existing traffic in 2022 and will continue to do so with the addition of site generated traffic and background traffic estimates in 2027.

Exhibit 4.4 – Brown Street at Walter Purdy Avenue Level of Service Results

	Brown Street		Walter Purdy Avenue		Total
	EB-LR		NB-L	NB-T	
<b>AM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	8.7		7.3	-	1.4
LOS	A		A	A	
v/c	0.003		0.001		
95% Queue	0.0		0.0		
<b>AM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	8.7		7.3	-	1.3
LOS	A		A	A	
v/c	0.003		0.001		
95% Queue	0.0		0.0		
<b>AM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	8.6		7.3	-	3.7
LOS	A		A	A	
v/c	0.014		0.001		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	8.7		7.3	-	1.2
LOS	A		A	A	
v/c	0.001		0.004		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	8.8		7.3	-	1.1
LOS	A		A	A	
v/c	0.001		0.001		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	8.6		7.3	-	3.6
LOS	A		A	A	
v/c	0.005		0.005		
95% Queue	0.0		0.0		

All key intersection movements will operate with acceptable LOS during the AM and PM peak with existing traffic in 2022 and will continue to do so with the addition of site generated traffic and background traffic estimates in 2027.

Exhibit 4.4 – Mosher Street at Walter Purdy Avenue Level of Service Results

	Mosher Street		Walter Purdy Avenue		Total
	EB-LR		NB-L	NB-T	
<b>AM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	8.7		7.3	-	1.4
LOS	A		A	A	
v/c	0.005		-		
95% Queue	0.0		0.0		
<b>AM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	8.7		7.3	-	1.2
LOS	A		A	A	
v/c	0.005		-		
95% Queue	0.0		0.0		
<b>AM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	8.7		7.3	-	2.4
LOS	A		A	A	
v/c	0.009		0.001		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	8.7		7.3	-	1.2
LOS	A		A	A	
v/c	0.002		-		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	8.7		7.3	-	1.0
LOS	A		A	A	
v/c	0.002		-		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	8.6		7.3	-	2.3
LOS	A		A	A	
v/c	0.005		0.002		
95% Queue	0.0		0.0		

All key intersection movements will operate with acceptable LOS during the AM and PM peak with existing traffic in 2022 and will continue to do so with the addition of site generated traffic and background traffic estimates in 2027.

Exhibit 4.5 – Willow Street at Walter Purdy Avenue Level of Service Results

	Willow Street		Walter Purdy Avenue		Total
	WB-L	WB-T	NB-LR		
<b>AM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	8.0	-	11.1		0.5
LOS	A	A	B		
v/c	0.006		0.028		
95% Queue	0.0		0.1		
<b>AM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	8.1	-	11.4		0.5
LOS	A	A	B		
v/c	0.008		0.032		
95% Queue	0.0		0.1		
<b>AM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	8.1	-	11.8		0.5
LOS	A	A	B		
v/c	0.008		0.034		
95% Queue	0.0		0.1		
<b>PM PEAK HOUR – EXISTING TRAFFIC 2022</b>					
Delay	7.5	-	9.6		0.5
LOS	A	A	A		
v/c	0.006		0.008		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – BACKGROUND TRAFFIC 2027</b>					
Delay	7.5	-	9.8		0.5
LOS	A	A	A		
v/c	0.007		0.008		
95% Queue	0.0		0.0		
<b>PM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	7.5	-	9.9		0.4
LOS	A	A	A		
v/c	0.007		0.008		
95% Queue	0.0		0.0		

All key intersection movements will operate with acceptable LOS during the AM and PM peak with existing traffic in 2022 and will continue to do so with the addition of site generated traffic and background traffic estimates in 2027.

Exhibit 4.6 – Site Access (Gallagher Street) at Willow Street Level of Service Results

	Willow Street		Site Access		Total
	WB-L	WB-T	NB-LR		
<b>AM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	8.1	-	12.1		1.1
LOS	A	A	B		
v/c	0.007		0.095		
95% Queue	0.0		0.3		
<b>PM PEAK HOUR – TOTAL TRAFFIC 2027</b>					
Delay	7.5	-	10.1		1.3
LOS	A	A	B		
v/c	0.016		0.033		
95% Queue	0.0		0.1		

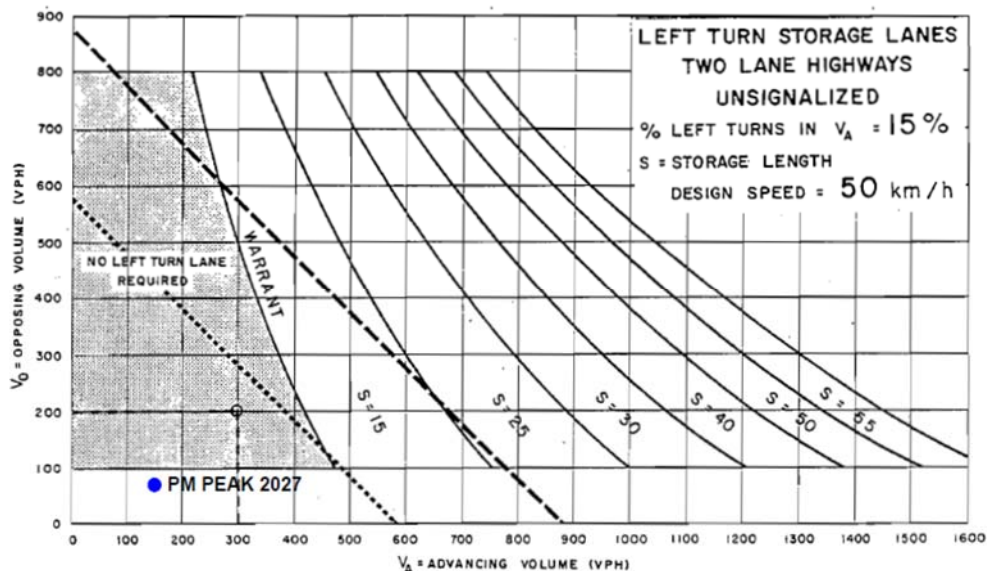
All key intersection movements will operate with acceptable LOS during the AM and PM peak with site generated traffic at this proposed connection to Willow Street.

#### 4.2 Turning Lane Assessments

Left turn warrants and storage lane lengths for unsignalized intersections are based on turning, advancing and opposing design hour volumes and to determine if turning traffic will impede through traffic to a level that will warrant a dedicated left turn lane.

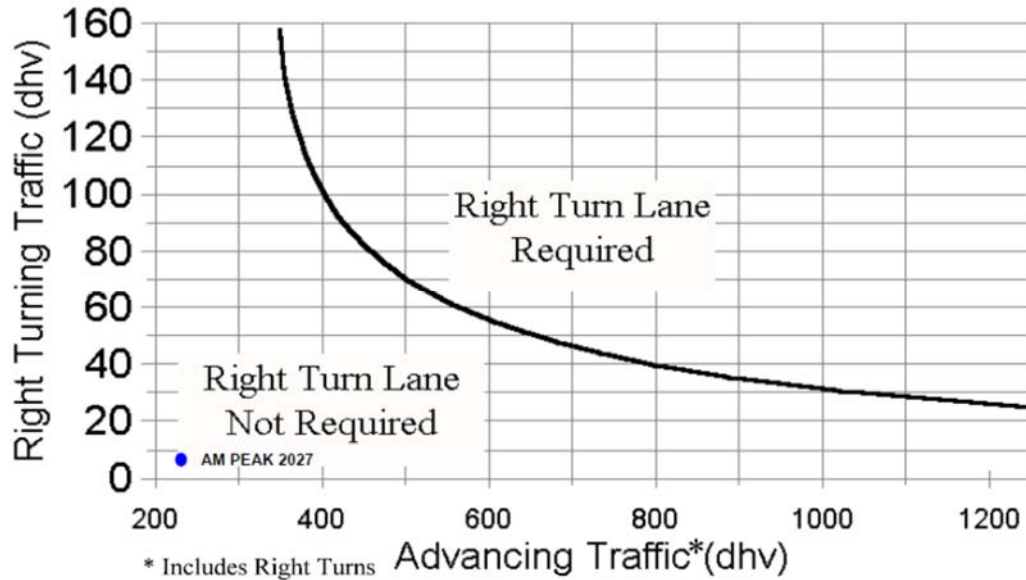
Ministry of Transportation for the Province of Ontario (MTO) procedures to determine the requirement for left turn lanes provide graphs that assess left turn volumes versus Opposing Volume for four-lane undivided highways. Westbound left turn traffic volumes are higher in the PM peak hour at the proposed site access (19 vehicles) and a dedicated left turn lane is not warranted as indicated in Exhibit 4.5.

Exhibit 4.5 – Left Turn Warrant on Willow Street at Site Access (Gallagher Extension)



Eastbound right turn traffic entering the development is also very low at 8 vehicles in the AM peak hour and as a result a right turn lane is not warranted based on procedures and graphs prepared by the Ohio Department of Transportation. Refer to Exhibit 4.6.

Exhibit 4.6 – Right Turn Warrant on Reeves Street at Site Access Driveway



### 4.3 Stopping Site Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping site distance *"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 70 km/h, the minimum stopping site distance is 110 m.

We completed a site review and didn't identify any red flags or concerns providing adequate stopping site distance on Willow Street at the proposed development as visibility is good at the site to the east and west as shown in site photos in Section 2.2. We did not complete a formal stopping site distance survey.

#### 4.4 Site Access

The site plan provided for the proposed development shows three new 54-unit apartment buildings for a total of 162 units with primary access from an extension of the existing Gallagher Street to Willow Street. A driveway to the property will be established from this extension and a second access point will be created at the western end of Gallagher Street at Brown Street. A new internal road will be constructed on the property to provide access to the apartment buildings and three surface parking areas that will contain 204 parking spaces. An emergency vehicle turnaround is included on site.

#### 4.5 Surrounding Street Network

Our manual traffic counts can help estimate 24-hour Average Annual Daily Traffic Volumes on the streets surrounding the proposed development. We reviewed 24-hour hourly counts (Average Annual Daily Traffic Volumes) provided by NSTIR that were completed in the area of the proposed development in 2019 on NS Highway 6 just west of Route 366. We assessed the AM and PM peak hours from these counts as we determined that these peak hours account for 14% of the total AADT volumes.

We applied this ratio to our observed manual traffic counts completed on June 20<sup>th</sup> to estimate AADT volumes on the key roads surrounding the proposed Lot 2021-2R development as summarized below in Exhibit 4.7.

Exhibit 4.7 – Estimates AADT Volumes Surrounding Proposed Lot 2021-2R Development

Street	2022 EXISTING TRAFFIC			2027 TOTAL TRAFFIC		
	AM PEAK	PM PEAK	AADT	AM PEAK	PM PEAK	AADT
Willow Street	339	204	3833	400	253	4608
Walter Purdy Avenue	37	23	424	55	34	624
Donald Street	108	48	1101	133	65	1395
Site Access (Gallagher Street)				46	33	560

Willow Street is a designated arterial street and existing and estimated future volumes with the proposed development are well under TAC’s guidelines for a residential minor arterial road of between 5,000 and 20,000 vehicles/day.

Estimated existing daily traffic volumes on Donald Street are relatively low and just exceed TACs guidelines for a local residential road at 1,000 vehicles per day while being well under TAC guidelines for a residential collector road of less than 8,000 vehicles per day. We also note that HRM guidelines for a local road are up to 3,000 vehicles per day. The impact of the proposed development plus background traffic only marginally increase daily traffic on Donald Street.

Estimated existing daily and future traffic volumes on Walter Purdy Avenue (and by extension on Brown Street and Mosher Street) are well below TAC guidelines for local roads. Future estimated daily traffic volumes on the proposed Gallagher Street extension to Willow Street are also below TAC’s guidelines for a local road.

## 4.6 Pedestrians

As highlighted in Section 2.5 the pedestrian network in the area has been well established with sidewalks on the north sides of Willow Street and Donald Street to provide safe access for walking. Marked crosswalks are installed on Willow Street at the bus entrance to EB Chandler Junior High School and at Townshend Avenue. Crosswalks are also installed at the entrance to EB Chandler Junior High School on Donald Street.

Willow Street was upgraded to include bike lanes on the both sides contributing to a pedestrian and bicycle friendly area which helps residents bike, walk and use other human power ways to move around the city.

The site plan for the proposed development shows a sidewalk network on site to connect the building and parking areas. We recommend that the extension of Gallagher Street include a sidewalk on its eastern side to connect the pedestrian facilities on site to the existing sidewalk on the northern side of Willow Street.

We reviewed Transportation Association of Canada's Pedestrian Crossing Control Guide which references a holistic approach where a *"complete street is one that adequately provides all road users including bicyclists, pedestrians, transit riders, and motorists, to the extent appropriate to the function and context of the street. Knowing and understanding the desire lines (i.e the walking paths that pedestrians will choose from an origin to a selected destination) that are typically created by land use type and location, roadway cross section and geometry, and traffic control devices, can lease to the effective and safer management of vehicular and pedestrian traffic. The complimentary relationship among transportation, land use planning and urban design creates walkable and healthier communities, with road systems that support walking as an important part of people's daily lives."*

This guide recommends that a pedestrian control device be considered for an average hourly pedestrian volume of 15 Equivalent Adult Units (EAUs). We note that adults are equivalent to 1.0 EAU's, unaccompanied children  $\leq 12$  years old are 2.0 EAU's, Seniors  $\geq 65$  years year are 1.5 EAU's and pedestrians with physical impairments are equivalent to 2.0 EAU's. This threshold is based on a minimum volume of 100 pedestrians over a 7-hour continuous counting period.

The minimum practical traffic volumes at which the installation of a pedestrian crossing control device should be considered is 1,500 vehicles per day. Additional consideration is given to proximity to other traffic control devices. Close proximity is any distance between 100 and 200 meters. The marked crosswalk at EB Chandler Junior High School is located approximately 295 meters from the proposed site access on Willow Street and the existing marked crosswalk at Townshend Avenue is located approximately 225 meters away.

After consideration of TAC's guidelines and the area we recommend that a pedestrian control device (marked crosswalk) be installed on Willow Street to connect the existing sidewalk to the proposed sidewalk on the site access (Gallagher Street Extension). A crosswalk with side mounted signs in accordance with TAC guidelines and Town of Amherst standards is appropriate here to provide a safe opportunity for pedestrians to cross Willow Street.

## 5 Conclusions and Recommendations

- This Traffic Impact Study has provided a detailed assessment of the potential traffic impacts of the proposed development of three 54 unit apartment buildings at Lot 2021-2R in Amherst, Nova Scotia.
- We estimate that the proposed development will generate **60** new vehicle trips (16 enter, 44 exit) in the AM Peak Hour **64** new vehicle trips (39 enter, 25 exit) in the PM Peak Hour and **726** vehicles on a weekday.
- New site generated traffic will most likely follow existing trip distribution patterns in the surrounding area with 77% of site generated traffic using Willow Street for access/egress in the AM peak hour with the balance of 23% using Donald Street/Walter Purdy Avenue. In the PM peak hour 82% of site generated traffic will use Willow Street for access/egress with 18% using Donald Street/Walter Purdy Avenue
- We recommend that the extension of Gallagher Street to Willow Street incorporates a sidewalk on its eastern side to connect the pedestrian facilities on site to the existing sidewalk on the northern side of Willow Street.
- We recommend that a pedestrian control device (marked crosswalk) be installed on Willow Street to connect the existing sidewalk on its northern side to the proposed sidewalk on the Gallagher Street Extension. A crosswalk with side mounted signs in accordance with Transportation Association of Canada and Town of Amherst Design Guidelines is appropriate
- New roads and sidewalks should be constructed in accordance with Transportation Association of Canada and Town of Amherst Design Guidelines.
- We recommend that the site plan and the proposed internal road network be reviewed to ensure that emergency vehicles and larger service vehicles can be accommodated. This internal road network should be designed to Transportation Association of Canada and Town of Amherst Design Guidelines
- A new stop sign will be required at the northern end of the proposed Gallagher Street Extension facing Willow Street. We also recommend that stop signs be installed at the eastern ends of Brown Street and Mosher Street facing Gallagher Street. All new signs and pavement markings should be installed in accordance with TAC's Manual of Uniform Traffic Control Devices for Canada (MUTCDC).
- A visual review of stopping site distance at the site didn't identify any concerns with providing adequate stopping site distance at the proposed site access from Willow Street (Gallagher Street extension) but we do recommend that vegetation be monitored and removed from the right-of-way to the west and east of the property to ensure the decision sight triangle is maintained for exiting vehicles.
- Traffic created by this proposed residential development can be introduced safely and efficiently into the existing transportation network in Amherst, Nova Scotia with the recommendations outlined in this section.

## APPENDIX

TRAFFIC COUNTS

TRIP GENERATION ESTIMATES

TOTAL TRAFFIC ANALYSIS

SYNCHRO 10 REPORTS

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## MANUAL TRAFFIC COUNTS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		WALTER PURDY AVENUE						DONALD STREET					
ENTER		SOUTHBOUND						EASTBOUND			WESTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R

2022													
07:00:00 AM	07:15:00 AM	1		1				1	2			0	0
07:15:00 AM	07:30:00 AM	1		1				0	3			3	0
07:30:00 AM	07:45:00 AM	2		1				0	3			5	0
07:45:00 AM	08:00:00 AM	1		1				0	4			3	0
08:00:00 AM	08:15:00 AM	2		1				0	2			4	1
08:15:00 AM	08:30:00 AM	1		2				0	8			13	0
08:30:00 AM	08:45:00 AM	0		1				4	20			27	1
08:45:00 AM	09:00:00 AM	1		2				1	9			8	0
2022													
08:00:00 AM	09:00:00 AM	4		6				5	39			52	2

PM PEAK		WALTER PURDY AVENUE						DONALD STREET					
ENTER	3	NORTHBOUND						EASTBOUND			WESTBOUND		
EXIT	6	L	T	R	L	T	R	L	T	R	L	T	R

2022													
04:00:00 PM	04:15:00 PM	0		2				1	5			5	0
04:15:00 PM	04:30:00 PM	1		1				1	6			4	0
04:30:00 PM	04:45:00 PM	1		0				2	6			7	0
04:45:00 PM	05:00:00 PM	0		0				1	3			1	0
05:00:00 PM	05:15:00 PM	0		1				0	5			8	0
05:15:00 PM	05:30:00 PM	0		0				1	1			6	0
05:30:00 PM	05:45:00 PM	0		2				2	1			3	0
05:45:00 PM	06:00:00 PM	0		2				0	1			2	0
2022													
04:15:00 PM	05:15:00 PM	2		2				4	20	0	0	20	0

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## MANUAL TRAFFIC COUNTS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		WALTER PURDY AVENUE						WILLOW STREET					
ENTER		NORTHBOUND						EASTBOUND			WESTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R
<b>2022</b>													
07:00:00 AM	07:15:00 AM	0		1					9	1	0	7	
07:15:00 AM	07:30:00 AM	0		0					17	0	0	5	
07:30:00 AM	07:45:00 AM	0		1					29	0	0	6	
07:45:00 AM	08:00:00 AM	1		0					34	0	0	6	
08:00:00 AM	08:15:00 AM	2		3					38	0	1	12	
08:15:00 AM	08:30:00 AM	0		0					61	0	2	36	
08:30:00 AM	08:45:00 AM	1		3					75	2	2	49	
08:45:00 AM	09:00:00 AM	1		1					26	2	0	22	
<b>2022</b>													
08:00:00 AM	09:00:00 AM	4		7					200	4	5	119	

PM PEAK		WALTER PURDY AVENUE						WILLOW STREET					
ENTER	3	NORTHBOUND						EASTBOUND			WESTBOUND		
EXIT	6	L	T	R	L	T	R	L	T	R	L	T	R
<b>2022</b>													
04:00:00 PM	04:15:00 PM	2		0					21	1	0	26	
04:15:00 PM	04:30:00 PM	0		0					18	0	3	35	
04:30:00 PM	04:45:00 PM	1		0					12	1	3	20	
04:45:00 PM	05:00:00 PM	0		1					17	0	1	31	
05:00:00 PM	05:15:00 PM	2		1					27	2	0	29	
05:15:00 PM	05:30:00 PM	0		0					16	0	1	34	
05:30:00 PM	05:45:00 PM	0		1					17	0	2	18	
05:45:00 PM	06:00:00 PM	0		2					19	0	0	28	
<b>2022</b>													
04:15:00 PM	05:15:00 PM	3		2					74	3	7	115	

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## TRIP GENERATION ESTIMATES

Source - ITE Trip Generation Manual 11th Edition

**Land Use 221** Multi Family Housing (Mid-Rise)  
**AM PEAK**  $T = 0.44(X) - 11.61$   
**PM PEAK**  $T = 0.39(X) + 0.34$   
**WEEKDAY**  $T = 4.77(X) - 46.46$

**Land Use 221** Multi Family Housing (Mid-Rise)  
**AM PEAK** 0.37 Average Rate  
**PM PEAK** 0.39 Average Rate  
**WEEKDAY** 4.54 Average Rate

**Land Use 210** Single Family Detached Housing  
**AM PEAK**  $\ln(T) = 0.91\ln(X) + 0.12$   
**PM PEAK**  $\ln(T) = 0.94\ln(X) + 0.27$   
**WEEKDAY**  $\ln(T) = 0.92\ln(X) + 2.68$

**Land Use 210** Single Family Detached Housing  
**AM PEAK** 0.7 Average Rate  
**PM PEAK** 0.94 Average Rate  
**WEEKDAY** 9.43 Average Rate

PROPOSED APARTMENTS										
LAND USE	QUANTITY	AM PEAK			PM PEAK			WEEKDAY		
		TOTAL TRIPS	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Apartment Mid Rise	162	60	26%	74%	64	61%	39%	726	50%	50%
			16	44		39	25		363	363
<b>TOTAL</b>		<b>60</b>	<b>16</b>	<b>44</b>	<b>64</b>	<b>39</b>	<b>25</b>	<b>726</b>	<b>363</b>	<b>363</b>

\* Fitted Curve Equations were used to estimate vehicle trips

EXISTING SINGLE FAMILY										
LAND USE	QUANTITY	AM PEAK			PM PEAK			WEEKDAY		
		TOTAL TRIPS	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Single Family	21	18	26%	74%	23	63%	37%	240	50%	50%
			5	13		14	8		120	120
<b>TOTAL</b>		<b>18</b>	<b>5</b>	<b>13</b>	<b>23</b>	<b>14</b>	<b>8</b>	<b>240</b>	<b>120</b>	<b>120</b>

\* Existing Single Family Homes located between Willow Street and Donald Street on Walter Purdy Avenue, Mosher Street, Gallagher Street and Brown Street

\* Fitted Curve Equations were used to estimate vehicle trips

# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

Vehicle Trip Ends vs: Dwelling Units  
 On a: Weekday,  
 Peak Hour of Adjacent Street Traffic,  
 One Hour Between 7 and 9 a.m.

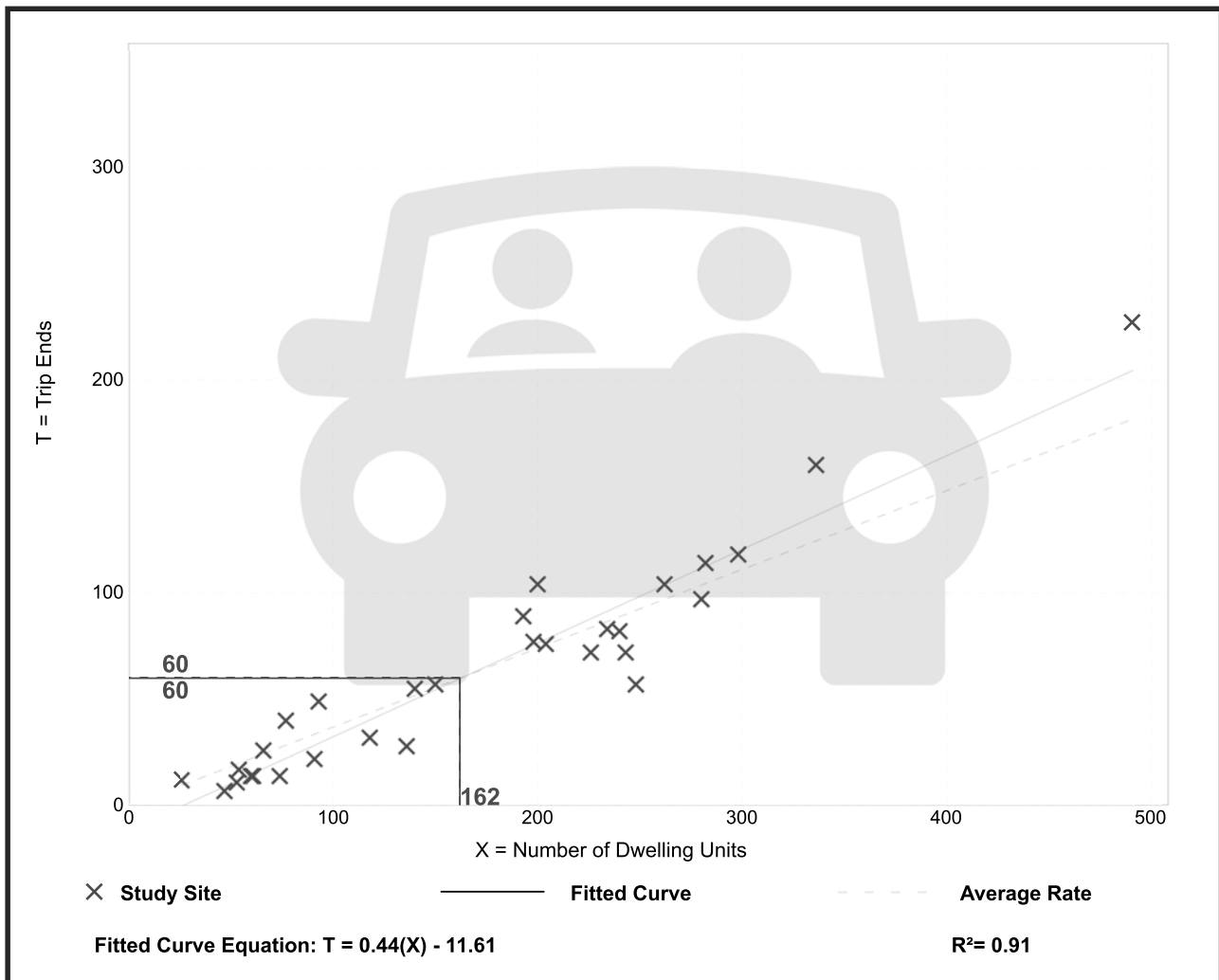
Setting/Location: General Urban/Suburban

Number of Studies: 30  
 Avg. Num. of Dwelling Units: 173  
 Directional Distribution: 23% entering, 77% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

## Data Plot and Equation



# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

**Vehicle Trip Ends vs: Dwelling Units**  
**On a: Weekday,**  
**Peak Hour of Adjacent Street Traffic,**  
**One Hour Between 4 and 6 p.m.**

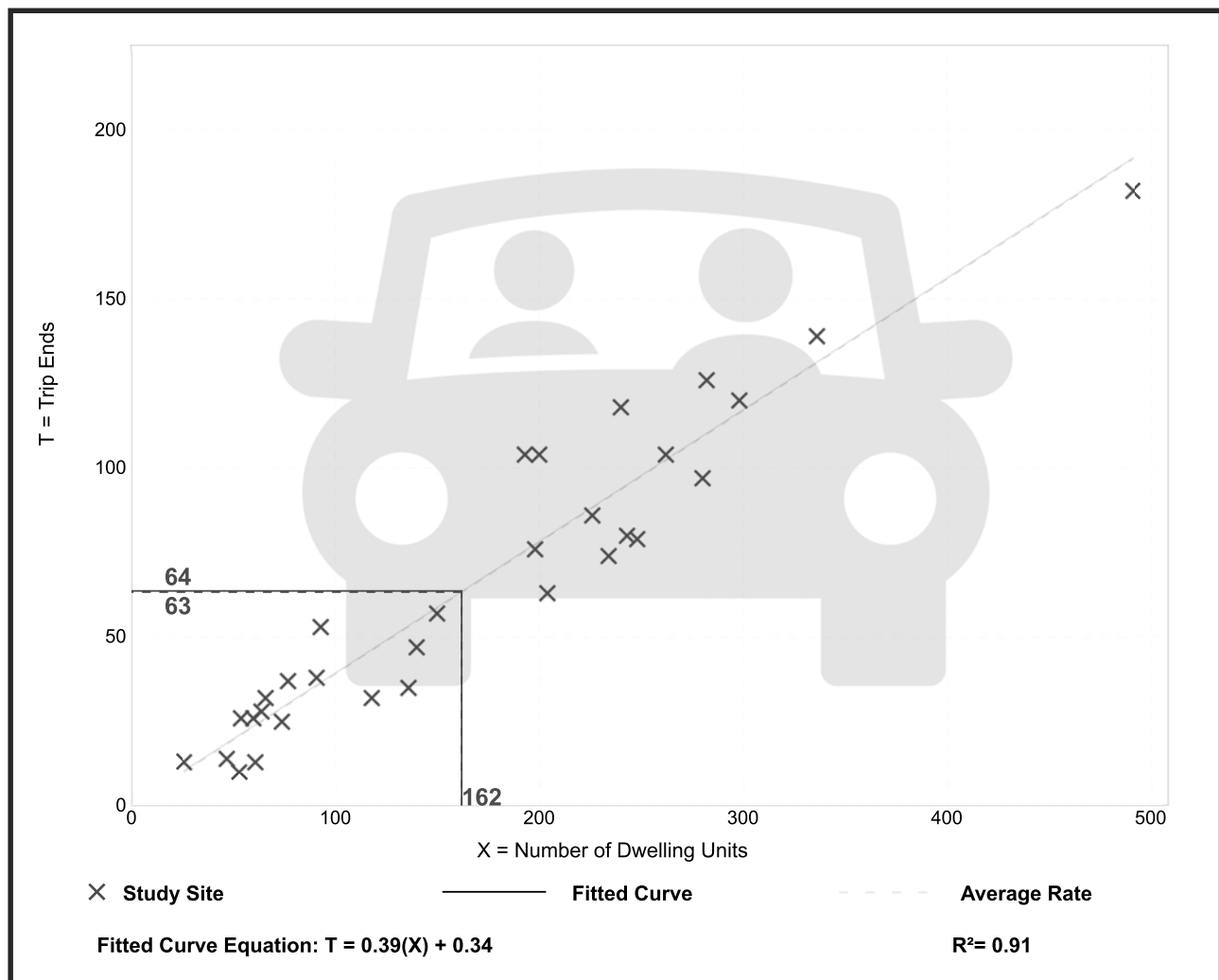
**Setting/Location: General Urban/Suburban**

Number of Studies: 31  
 Avg. Num. of Dwelling Units: 169  
 Directional Distribution: 61% entering, 39% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

## Data Plot and Equation



# Multifamily Housing (Mid-Rise) Not Close to Rail Transit (221)

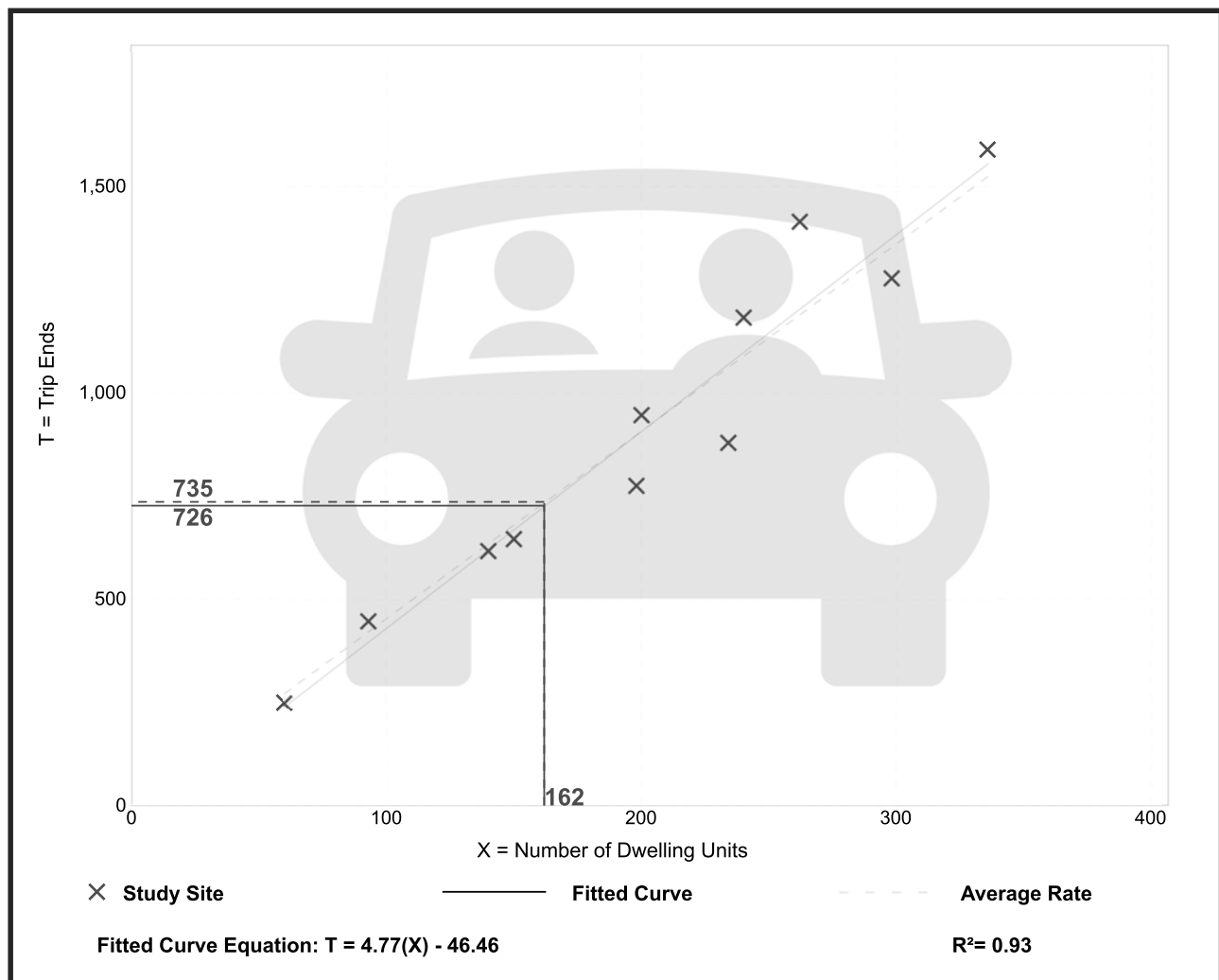
Vehicle Trip Ends vs: Dwelling Units  
On a: Weekday

Setting/Location: General Urban/Suburban  
Number of Studies: 11  
Avg. Num. of Dwelling Units: 201  
Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.76 - 5.40	0.51

## Data Plot and Equation



# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## TOTAL TRAFFIC ANALYSIS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		WALTER PURDY AVENUE						DONALD STREET					
ENTER	16	SOUTHBOUND						WESTBOUND			EASTBOUND		
EXIT	44	L	T	R	L	T	R	L	T	R	L	T	R

2022													
08:00:00 AM	08:15:00 AM	2		1					4	1	0	2	
08:15:00 AM	08:30:00 AM	1		2					13	0	0	8	
08:30:00 AM	08:45:00 AM	0		1					27	1	4	20	
08:45:00 AM	09:00:00 AM	1		2					8	0	1	9	
2022													
08:00:00 AM	09:00:00 AM	4		6					52	2	5	39	
2027													
08:00:00 AM	09:00:00 AM	4		7					57	2	6	43	
DISTRIBUTION													
08:00:00 AM	09:00:00 AM								55%			45%	
SITE GENERATED TRAFFIC													
08:00:00 AM	09:00:00 AM	5		6						2	2		
TOTAL TRAFFIC 2027													
08:00:00 AM	09:00:00 AM	9		12					57	4	7	43	

PM PEAK		WALTER PURDY AVENUE						DONALD STREET					
ENTER	39	SOUTHBOUND						WESTBOUND			EASTBOUND		
EXIT	25	L	T	R	L	T	R	L	T	R	L	T	R

2022													
04:15:00 PM	04:30:00 PM	1		1					4	0	1	6	
04:30:00 PM	04:45:00 PM	1		0					7	0	2	6	
04:45:00 PM	05:00:00 PM	0		0					1	0	1	3	
05:00:00 PM	05:15:00 PM	0		1					8	0	0	5	
2022													
04:15:00 PM	05:15:00 PM	2		2					20	0	4	20	
2027													
04:15:00 PM	05:15:00 PM	2		2					22	0	4	22	
DISTRIBUTION													
04:15:00 PM	05:15:00 PM								45%			55%	
SITE GENERATED TRAFFIC													
04:15:00 PM	05:15:00 PM	2		2						3	4		
TOTAL TRAFFIC 2027													
04:15:00 PM	05:15:00 PM	5		4					22	3	8	22	

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## TOTAL TRAFFIC ANALYSIS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		WALTER PURDY AVENUE						BROWN STREET					
ENTER		SOUTHBOUND			NORTHBOUND			WESTBOUND			EASTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R

2022													
08:00:00 AM	08:15:00 AM												
08:15:00 AM	08:30:00 AM												
08:30:00 AM	08:45:00 AM												
08:45:00 AM	09:00:00 AM												
2022			8	0	1	6					1		1
2027			9	0	1	7					1		1
DISTRIBUTION													
08:00:00 AM	09:00:00 AM												
SITE GENERATED TRAFFIC					2								7
TOTAL TRAFFIC 2027			9	0	4	7					1		8
08:00:00 AM	09:00:00 AM		9	0	4	7					1		8

PM PEAK		WALTER PURDY AVENUE						BROWN STREET					
ENTER		SOUTHBOUND			NORTHBOUND			WESTBOUND			EASTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R

2022													
04:15:00 PM	04:30:00 PM												
04:30:00 PM	04:45:00 PM												
04:45:00 PM	05:00:00 PM												
05:00:00 PM	05:15:00 PM												
2022			6	2	1	3					1		0
2027			7	2	1	3					1		0
DISTRIBUTION													
04:15:00 PM	05:15:00 PM												
SITE GENERATED TRAFFIC					5								3
TOTAL TRAFFIC 2027			7	2	6	3					1		3
04:15:00 PM	05:15:00 PM		7	2	6	3					1		3

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## TOTAL TRAFFIC ANALYSIS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		WALTER PURDY AVENUE						MOSHER STREET					
ENTER		SOUTHBOUND			NORTHBOUND			WESTBOUND			EASTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R
<b>2022</b>													
08:00:00 AM	08:15:00 AM												
08:15:00 AM	08:30:00 AM												
08:30:00 AM	08:45:00 AM												
08:45:00 AM	09:00:00 AM												
<b>2022</b>			8	1	0	7					2		1
<b>2027</b>			9	1	0	8					2		1
<b>DISTRIBUTION</b>													
08:00:00 AM	09:00:00 AM												
<b>SITE GENERATED TRAFFIC</b>					1								3
<b>TOTAL TRAFFIC 2027</b>			9	1	1	8					2		4
08:00:00 AM	09:00:00 AM		9	1	1	8					2		4

PM PEAK		WALTER PURDY AVENUE						MOSHER STREET					
ENTER		SOUTHBOUND			NORTHBOUND			WESTBOUND			EASTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R
<b>2022</b>													
04:15:00 PM	04:30:00 PM												
04:30:00 PM	04:45:00 PM												
04:45:00 PM	05:00:00 PM												
05:00:00 PM	05:15:00 PM												
<b>2022</b>			8	2	0	4					1		1
<b>2027</b>			9	2	0	4					1		1
<b>DISTRIBUTION</b>													
04:15:00 PM	05:15:00 PM												
<b>SITE GENERATED TRAFFIC</b>					2								2
<b>TOTAL TRAFFIC 2027</b>			9	2	2	4					1		3
04:15:00 PM	05:15:00 PM		9	2	2	4					1		3

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## TOTAL TRAFFIC ANALYSIS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		WALTER PURDY AVENUE						WILLOW STREET					
ENTER		NORTHBOUND						WESTBOUND			EASTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R
<b>2022</b>													
08:00:00 AM	08:15:00 AM	2		3				1	12			38	0
08:15:00 AM	08:30:00 AM	0		0				2	36			61	0
08:30:00 AM	08:45:00 AM	1		3				2	49			75	2
08:45:00 AM	09:00:00 AM	1		1				0	22			26	2
<b>2022</b>													
08:00:00 AM	09:00:00 AM	4		7				5	119			200	4
<b>2027</b>													
08:00:00 AM	09:00:00 AM	4		8				6	131			221	4
<b>DISTRIBUTION</b>													
08:00:00 AM	09:00:00 AM												
<b>SITE GENERATED TRAFFIC</b>													
08:00:00 AM	09:00:00 AM								5			21	
<b>TOTAL TRAFFIC 2027</b>													
08:00:00 AM	09:00:00 AM	4		8				6	136			242	4

PM PEAK		WALTER PURDY AVENUE						WILLOW STREET					
ENTER		NORTHBOUND						WESTBOUND			EASTBOUND		
EXIT		L	T	R	L	T	R	L	T	R	L	T	R
<b>2022</b>													
04:15:00 PM	04:30:00 PM	0		0				3	35			18	0
04:30:00 PM	04:45:00 PM	1		0				3	20			12	1
04:45:00 PM	05:00:00 PM	0		1				1	31			17	0
05:00:00 PM	05:15:00 PM	2		1				0	29			27	2
<b>2022</b>													
04:15:00 PM	05:15:00 PM	3		2				7	115			74	3
<b>2027</b>													
04:15:00 PM	05:15:00 PM	3		2				8	127			82	3
<b>DISTRIBUTION</b>													
04:15:00 PM	05:15:00 PM												
<b>SITE GENERATED TRAFFIC</b>													
04:15:00 PM	05:15:00 PM								19			8	
<b>TOTAL TRAFFIC 2027</b>													
04:15:00 PM	05:15:00 PM	3		2				8	146			90	3

# LOT 2021-2R AMHERST TRAFFIC IMPACT STUDY

## TOTAL TRAFFIC ANALYSIS

PEAK HOUR TRAFFIC COUNTS COMPLETED ON MONDAY JUNE 20, 2022

AM PEAK		GALLAGHER STREET						WILLOW STREET					
ENTER	16	NORTHBOUND						WESTBOUND			EASTBOUND		
EXIT	44	L	T	R	L	T	R	L	T	R	L	T	R

2022														
08:00:00 AM	08:15:00 AM													
08:15:00 AM	08:30:00 AM													
08:30:00 AM	08:45:00 AM													
08:45:00 AM	09:00:00 AM													
2022														
08:00:00 AM	09:00:00 AM								123			204		
2027														
08:00:00 AM	09:00:00 AM								136			225		
DISTRIBUTION														
08:00:00 AM	09:00:00 AM								38%			62%		
SITE GENERATED TRAFFIC														
08:00:00 AM	09:00:00 AM	13			21				5					8
TOTAL TRAFFIC 2027														
08:00:00 AM	09:00:00 AM	13			21				5	136			225	8

PM PEAK		GALLAGHER STREET						WILLOW STREET					
ENTER	39	NORTHBOUND						WESTBOUND			EASTBOUND		
EXIT	25	L	T	R	L	T	R	L	T	R	L	T	R

2022														
04:15:00 PM	04:30:00 PM													
04:30:00 PM	04:45:00 PM													
04:45:00 PM	05:00:00 PM													
05:00:00 PM	05:15:00 PM													
2022														
04:15:00 PM	05:15:00 PM								118			77		
2027														
04:15:00 PM	05:15:00 PM								130			85		
DISTRIBUTION														
04:15:00 PM	05:15:00 PM								61%			39%		
SITE GENERATED TRAFFIC														
04:15:00 PM	05:15:00 PM	12			8				19					13
TOTAL TRAFFIC 2027														
04:15:00 PM	05:15:00 PM	12			8				19	130			85	13

2022 AM PEAK EXISTING TRAFFIC  
5: Donald Street & Walter Purdy Avenue

07-09-2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	5	39	52	2	4	6
Future Vol, veh/h	5	39	52	2	4	6
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	61	81	3	6	9

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	94	0	-	0	180
Stage 1	-	-	-	-	93
Stage 2	-	-	-	-	87
Critical Hdwy	4.12	-	-	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	2.218	-	-	-	3.518
Pot Cap-1 Maneuver	1500	-	-	-	810
Stage 1	-	-	-	-	931
Stage 2	-	-	-	-	936
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1487	-	-	-	792
Mov Cap-2 Maneuver	-	-	-	-	792
Stage 1	-	-	-	-	918
Stage 2	-	-	-	-	929

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1487	-	-	-	873
HCM Lane V/C Ratio	0.005	-	-	-	0.018
HCM Control Delay (s)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

2027 AM PEAK BACKGROUND TRAFFIC  
5: Donald Street & Walter Purdy Avenue

07-15-2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	6	43	57	2	4	7
Future Vol, veh/h	6	43	57	2	4	7
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	67	89	3	6	11

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	102	0	-	0	196 111
Stage 1	-	-	-	-	101 -
Stage 2	-	-	-	-	95 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1490	-	-	-	793 942
Stage 1	-	-	-	-	923 -
Stage 2	-	-	-	-	929 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1477	-	-	-	776 926
Mov Cap-2 Maneuver	-	-	-	-	776 -
Stage 1	-	-	-	-	910 -
Stage 2	-	-	-	-	922 -

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	9.2
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1477	-	-	-	865
HCM Lane V/C Ratio	0.006	-	-	-	0.02
HCM Control Delay (s)	7.5	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

2027 AM PEAK TOTAL TRAFFIC  
5: Donald Street & Walter Purdy Avenue

07-09-2022

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	7	43	57	4	9	12
Future Vol, veh/h	7	43	57	4	9	12
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	67	89	6	14	19

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	105	0	-	0	201 112
Stage 1	-	-	-	-	102 -
Stage 2	-	-	-	-	99 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1486	-	-	-	788 941
Stage 1	-	-	-	-	922 -
Stage 2	-	-	-	-	925 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1473	-	-	-	769 925
Mov Cap-2 Maneuver	-	-	-	-	769 -
Stage 1	-	-	-	-	907 -
Stage 2	-	-	-	-	918 -

Approach	EB	WB	SB
HCM Control Delay, s	1	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1473	-	-	-	851
HCM Lane V/C Ratio	0.007	-	-	-	0.039
HCM Control Delay (s)	7.5	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

2022 PM PEAK EXISTING TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-09-2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	0	1	3	6	2
Future Vol, veh/h	1	0	1	3	6	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	1	4	7	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	34	28	19	0	0
Stage 1	18	-	-	-	-
Stage 2	16	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	979	1047	1597	-	-
Stage 1	1005	-	-	-	-
Stage 2	1007	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	962	1029	1583	-	-
Mov Cap-2 Maneuver	962	-	-	-	-
Stage 1	996	-	-	-	-
Stage 2	999	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1583	-	962	-	-
HCM Lane V/C Ratio	0.001	-	0.001	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 PM PEAK BACKGROUND TRAFFIC  
5: Donald Street & Walter Purdy Avenue

07-10-2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	4	22	22	0	2	2
Future Vol, veh/h	4	22	22	0	2	2
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	26	26	0	2	2

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	36	0	-	0	82 46
Stage 1	-	-	-	-	36 -
Stage 2	-	-	-	-	46 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1575	-	-	-	920 1023
Stage 1	-	-	-	-	986 -
Stage 2	-	-	-	-	976 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1562	-	-	-	903 1006
Mov Cap-2 Maneuver	-	-	-	-	903 -
Stage 1	-	-	-	-	975 -
Stage 2	-	-	-	-	968 -

Approach	EB	WB	SB
HCM Control Delay, s	1.1	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1562	-	-	-	952
HCM Lane V/C Ratio	0.003	-	-	-	0.005
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2027 PM PEAK TOTAL TRAFFIC  
5: Donald Street & Walter Purdy Avenue

07-09-2022

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	8	22	22	3	5	4
Future Vol, veh/h	8	22	22	3	5	4
Conflicting Peds, #/hr	10	0	0	10	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	26	26	4	6	5

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	40	0	-	0	94 48
Stage 1	-	-	-	-	38 -
Stage 2	-	-	-	-	56 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	1570	-	-	-	906 1021
Stage 1	-	-	-	-	984 -
Stage 2	-	-	-	-	967 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1557	-	-	-	885 1004
Mov Cap-2 Maneuver	-	-	-	-	885 -
Stage 1	-	-	-	-	969 -
Stage 2	-	-	-	-	959 -

Approach	EB	WB	SB
HCM Control Delay, s	2	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1557	-	-	-	934
HCM Lane V/C Ratio	0.006	-	-	-	0.011
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0

2022 AM PEAK EXISTING TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-09-2022

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	1	1	6	8	0
Future Vol, veh/h	1	1	1	6	8	0
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	2	9	13	0

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	46	33	23	0	-	0
Stage 1	23	-	-	-	-	-
Stage 2	23	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	964	1041	1592	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	1000	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	948	1023	1579	-	-	-
Mov Cap-2 Maneuver	948	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	992	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	984	-	-
HCM Lane V/C Ratio	0.001	-	0.003	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 AM PEAK BACKGROUND TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-10-2022

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	1	1	1	7	9	0
Future Vol, veh/h	1	1	1	7	9	0
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	2	2	11	14	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	49	34	24	0	0
Stage 1	24	-	-	-	-
Stage 2	25	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	960	1039	1591	-	-
Stage 1	999	-	-	-	-
Stage 2	998	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	944	1021	1578	-	-
Mov Cap-2 Maneuver	944	-	-	-	-
Stage 1	990	-	-	-	-
Stage 2	990	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	981	-	-
HCM Lane V/C Ratio	0.001	-	0.003	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 AM PEAK TOTAL TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-09-2022

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	8	4	7	9	0
Future Vol, veh/h	1	8	4	7	9	0
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	13	6	11	14	0

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	57	34	24	0	0
Stage 1	24	-	-	-	-
Stage 2	33	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	950	1039	1591	-	-
Stage 1	999	-	-	-	-
Stage 2	989	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	931	1021	1578	-	-
Mov Cap-2 Maneuver	931	-	-	-	-
Stage 1	987	-	-	-	-
Stage 2	981	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	1010	-	-
HCM Lane V/C Ratio	0.004	-	0.014	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2022 PM PEAK EXISTING TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-09-2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	0	1	3	6	2
Future Vol, veh/h	1	0	1	3	6	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	1	4	7	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	34	28	19	0	0
Stage 1	18	-	-	-	-
Stage 2	16	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	979	1047	1597	-	-
Stage 1	1005	-	-	-	-
Stage 2	1007	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	962	1029	1583	-	-
Mov Cap-2 Maneuver	962	-	-	-	-
Stage 1	996	-	-	-	-
Stage 2	999	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1583	-	962	-	-
HCM Lane V/C Ratio	0.001	-	0.001	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 PM PEAK BACKGROUND TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-10-2022

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	0	1	3	7	2
Future Vol, veh/h	1	0	1	3	7	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	1	4	8	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	35	29	20	0	0
Stage 1	19	-	-	-	-
Stage 2	16	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	978	1046	1596	-	-
Stage 1	1004	-	-	-	-
Stage 2	1007	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	961	1028	1582	-	-
Mov Cap-2 Maneuver	961	-	-	-	-
Stage 1	995	-	-	-	-
Stage 2	999	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1582	-	961	-	-
HCM Lane V/C Ratio	0.001	-	0.001	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 PM PEAK TOTAL TRAFFIC  
2: Walter Purdy Avenue & Brown Street

07-09-2022

Intersection						
Int Delay, s/veh	3.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	1	3	6	3	7	2
Future Vol, veh/h	1	3	6	3	7	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	7	4	8	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	47	29	20	0	0
Stage 1	19	-	-	-	-
Stage 2	28	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	963	1046	1596	-	-
Stage 1	1004	-	-	-	-
Stage 2	995	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	944	1028	1582	-	-
Mov Cap-2 Maneuver	944	-	-	-	-
Stage 1	992	-	-	-	-
Stage 2	987	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1582	-	1006	-	-
HCM Lane V/C Ratio	0.005	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2022 AM PEAK EXISTING TRAFFIC  
1: Walter Purdy Avenue & Mosher Street

07-09-2022

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	1	0	7	8	1
Future Vol, veh/h	2	1	0	7	8	1
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	0	11	13	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	45	34	25	0	0
Stage 1	24	-	-	-	-
Stage 2	21	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	965	1039	1589	-	-
Stage 1	999	-	-	-	-
Stage 2	1002	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	950	1021	1576	-	-
Mov Cap-2 Maneuver	950	-	-	-	-
Stage 1	991	-	-	-	-
Stage 2	994	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1576	-	973	-	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 AM PEAK BACKGROUND TRAFFIC  
1: Walter Purdy Avenue & Mosher Street

07-10-2022

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	1	0	8	9	1
Future Vol, veh/h	2	1	0	8	9	1
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	2	0	13	14	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	48	35	26	0	0
Stage 1	25	-	-	-	-
Stage 2	23	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	962	1038	1588	-	-
Stage 1	998	-	-	-	-
Stage 2	1000	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	947	1020	1575	-	-
Mov Cap-2 Maneuver	947	-	-	-	-
Stage 1	990	-	-	-	-
Stage 2	992	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1575	-	970	-	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s)	0	-	8.7	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 AM PEAK TOTAL TRAFFIC  
1: Walter Purdy Avenue & Mosher Street

07-09-2022

Intersection						
Int Delay, s/veh	2.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	2	4	1	8	9	1
Future Vol, veh/h	2	4	1	8	9	1
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	6	2	13	14	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	52	35	26	0	0
Stage 1	25	-	-	-	-
Stage 2	27	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	957	1038	1588	-	-
Stage 1	998	-	-	-	-
Stage 2	996	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	941	1020	1575	-	-
Mov Cap-2 Maneuver	941	-	-	-	-
Stage 1	989	-	-	-	-
Stage 2	988	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	0.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1575	-	992	-	-
HCM Lane V/C Ratio	0.001	-	0.009	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2022 PM PEAK EXISTING TRAFFIC  
1: Walter Purdy Avenue & Mosher Street

07-09-2022

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	0	4	8	2
Future Vol, veh/h	1	1	0	4	8	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	0	5	10	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	36	31	22	0	-	0
Stage 1	21	-	-	-	-	-
Stage 2	15	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	977	1043	1593	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	961	1025	1580	-	-	-
Mov Cap-2 Maneuver	961	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	1000	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1580	-	992	-	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 PM PEAK BACKGROUND TRAFFIC  
1: Walter Purdy Avenue & Mosher Street

07-10-2022

Intersection						
Int Delay, s/veh	1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	1	0	4	9	2
Future Vol, veh/h	1	1	0	4	9	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	1	0	5	11	2

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	37	32	23	0	0
Stage 1	22	-	-	-	-
Stage 2	15	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-
Pot Cap-1 Maneuver	975	1042	1592	-	-
Stage 1	1001	-	-	-	-
Stage 2	1008	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	959	1024	1579	-	-
Mov Cap-2 Maneuver	959	-	-	-	-
Stage 1	993	-	-	-	-
Stage 2	1000	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	990	-	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2027 PM PEAK TOTAL TRAFFIC  
1: Walter Purdy Avenue & Mosher Street

07-09-2022

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	3	2	4	9	2
Future Vol, veh/h	1	3	2	4	9	2
Conflicting Peds, #/hr	10	10	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	4	2	5	11	2

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	41	32	23	0	-	0
Stage 1	22	-	-	-	-	-
Stage 2	19	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	970	1042	1592	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1004	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	954	1024	1579	-	-	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	992	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	2.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	1006	-	-
HCM Lane V/C Ratio	0.002	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

2022 AM PEAK EXISTING TRAFFIC  
8: Walter Purdy Avenue & Willow Street

07-09-2022

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	200	4	5	119	4	7
Future Vol, veh/h	200	4	5	119	4	7
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	313	6	8	186	6	11

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	329	0	538 336
Stage 1	-	-	-	-	326 -
Stage 2	-	-	-	-	212 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1231	-	504 706
Stage 1	-	-	-	-	731 -
Stage 2	-	-	-	-	823 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1221	-	492 694
Mov Cap-2 Maneuver	-	-	-	-	492 -
Stage 1	-	-	-	-	725 -
Stage 2	-	-	-	-	811 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	604	1221	-	-	-
HCM Lane V/C Ratio	0.028	0.006	-	-	-
HCM Control Delay (s)	11.1	8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

2027 AM PEAK BACKGROUND TRAFFIC  
8: Walter Purdy Avenue & Willow Street

07-10-2022

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	221	4	6	131	4	8
Future Vol, veh/h	221	4	6	131	4	8
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	345	6	9	205	6	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	361	0	591 368
Stage 1	-	-	-	-	358 -
Stage 2	-	-	-	-	233 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1198	-	470 677
Stage 1	-	-	-	-	707 -
Stage 2	-	-	-	-	806 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1188	-	458 666
Mov Cap-2 Maneuver	-	-	-	-	458 -
Stage 1	-	-	-	-	701 -
Stage 2	-	-	-	-	792 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	578	1188	-	-	-
HCM Lane V/C Ratio	0.032	0.008	-	-	-
HCM Control Delay (s)	11.4	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

2027 AM PEAK TOTAL TRAFFIC  
8: Walter Purdy Avenue & Willow Street

07-09-2022

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	242	4	6	136	4	8
Future Vol, veh/h	242	4	6	136	4	8
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	378	6	9	213	6	13

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	394	0	632 401
Stage 1	-	-	-	-	391 -
Stage 2	-	-	-	-	241 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1165	-	444 649
Stage 1	-	-	-	-	683 -
Stage 2	-	-	-	-	799 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1155	-	433 638
Mov Cap-2 Maneuver	-	-	-	-	433 -
Stage 1	-	-	-	-	678 -
Stage 2	-	-	-	-	785 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	551	1155	-	-	-
HCM Lane V/C Ratio	0.034	0.008	-	-	-
HCM Control Delay (s)	11.8	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-

2022 PM PEAK EXISTING TRAFFIC  
8: Walter Purdy Avenue & Willow Street

07-09-2022

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	74	3	7	115	3	2
Future Vol, veh/h	74	3	7	115	3	2
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	4	8	137	4	2

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	102	0	263 110
Stage 1	-	-	-	-	100 -
Stage 2	-	-	-	-	163 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1490	-	726 943
Stage 1	-	-	-	-	924 -
Stage 2	-	-	-	-	866 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1477	-	710 927
Mov Cap-2 Maneuver	-	-	-	-	710 -
Stage 1	-	-	-	-	917 -
Stage 2	-	-	-	-	854 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	783	1477	-	-	-
HCM Lane V/C Ratio	0.008	0.006	-	-	-
HCM Control Delay (s)	9.6	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

2027 PM PEAK BACKGROUND TRAFFIC  
8: Walter Purdy Avenue & Willow Street

07-10-2022

Intersection						
Int Delay, s/veh	0.5					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	82	3	8	127	3	2
Future Vol, veh/h	82	3	8	127	3	2
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	4	10	151	4	2

Major/Minor	Major1	Major2	Minor1	Minor2		
Conflicting Flow All	0	0	112	0	291	120
Stage 1	-	-	-	-	110	-
Stage 2	-	-	-	-	181	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1478	-	700	931
Stage 1	-	-	-	-	915	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1465	-	684	915
Mov Cap-2 Maneuver	-	-	-	-	684	-
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	837	-

Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	761	1465	-	-	-
HCM Lane V/C Ratio	0.008	0.007	-	-	-
HCM Control Delay (s)	9.8	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

2027 PM PEAK TOTAL TRAFFIC  
8: Walter Purdy Avenue & Willow Street

07-09-2022

Intersection						
Int Delay, s/veh	0.4					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	90	3	8	146	3	2
Future Vol, veh/h	90	3	8	146	3	2
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	4	10	174	4	2

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	121	0	323
Stage 1	-	-	-	-	119
Stage 2	-	-	-	-	204
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1467	-	671
Stage 1	-	-	-	-	906
Stage 2	-	-	-	-	830
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1455	-	655
Mov Cap-2 Maneuver	-	-	-	-	655
Stage 1	-	-	-	-	899
Stage 2	-	-	-	-	817

Approach	SE	NW	NE
HCM Control Delay, s	0	0.4	9.9
HCM LOS			A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	736	1455	-	-	-
HCM Lane V/C Ratio	0.008	0.007	-	-	-
HCM Control Delay (s)	9.9	7.5	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	0	-	-	-

2027 AM PEAK TOTAL TRAFFIC  
4: Gallagher Street & Willow Street

07-09-2022

Intersection						
Int Delay, s/veh	1.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	225	8	5	136	13	21
Future Vol, veh/h	225	8	5	136	13	21
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	352	13	8	213	20	33

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	375	0	608 379
Stage 1	-	-	-	-	369 -
Stage 2	-	-	-	-	239 -
Critical Hdwy	-	-	4.12	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	-	-	2.218	-	3.518 3.318
Pot Cap-1 Maneuver	-	-	1183	-	459 668
Stage 1	-	-	-	-	699 -
Stage 2	-	-	-	-	801 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1173	-	448 657
Mov Cap-2 Maneuver	-	-	-	-	448 -
Stage 1	-	-	-	-	693 -
Stage 2	-	-	-	-	788 -

Approach	SE	NW	NE
HCM Control Delay, s	0	0.3	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	558	1173	-	-	-
HCM Lane V/C Ratio	0.095	0.007	-	-	-
HCM Control Delay (s)	12.1	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.3	0	-	-	-

2027 PM PEAK TOTAL TRAFFIC  
4: Gallagher Street & Willow Street

07-09-2022

Intersection						
Int Delay, s/veh	1.3					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Traffic Vol, veh/h	85	13	19	130	12	8
Future Vol, veh/h	85	13	19	130	12	8
Conflicting Peds, #/hr	0	10	10	0	10	10
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	101	15	23	155	14	10

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	126	0	330
Stage 1	-	-	-	-	119
Stage 2	-	-	-	-	211
Critical Hdwy	-	-	4.12	-	6.42
Critical Hdwy Stg 1	-	-	-	-	5.42
Critical Hdwy Stg 2	-	-	-	-	5.42
Follow-up Hdwy	-	-	2.218	-	3.518
Pot Cap-1 Maneuver	-	-	1460	-	665
Stage 1	-	-	-	-	906
Stage 2	-	-	-	-	824
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1448	-	643
Mov Cap-2 Maneuver	-	-	-	-	643
Stage 1	-	-	-	-	899
Stage 2	-	-	-	-	803

Approach	SE	NW	NE
HCM Control Delay, s	0	1	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER
Capacity (veh/h)	727	1448	-	-	-
HCM Lane V/C Ratio	0.033	0.016	-	-	-
HCM Control Delay (s)	10.1	7.5	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.1	0	-	-	-