To: **Chair and Members of Rothesay Planning Advisory Committee**

From: **Brian L. White, MCIP, RPP**
Director of Planning and Development Services

Date: **Wednesday, December 01, 2021**

Subject: **Rezoning - 36 Unit Apartment Building – 95 Hampton Road**

Applicant/owner:	Brett Taylor, Director	**Applicant/owner:**	KV Properties Ltd.
Mailing Address:	14 Wiltshire Drive Quispamsis NB E2E 0E9	**Mailing Address:**	1 Magnolia Lane PO Box 100 Rothesay, NB E2E 3L2
Property Location:	95 Hampton Road	**PIDs:**	30130314, 30130322, 00242495, 00242495, 00242271, 30130348, 30020051, 30130355
Plan Designation:	Commercial & High Density	**Zone:**	R1B & Central Commercial
Application For:	36 unit residential apartment building		
Input from Other Sources:			

ORIGIN:
An application from Brett Taylor, Director of KV Properties Ltd. to rezone 5143.5m² (1.27 acres) of land (see Map 1) at 95 Hampton Road and Woodland Avenue from Single Family Residential – Standard Zone [R1B] and Central Commercial to the Multi-Unit Residential Zone [R4] for a 36 unit apartment building subject to the terms of a development agreement.

Figure 1 - Architectural Rendering of Proposed 36 Unit Apartment Building

BACKGROUND:

The subject parcels (8 separate Parcel Identifier Numbers (PIDs)) of land are designated for both Central Commercial and High Density residential uses (see Map 2). The applicant has a tentative purchase agreement with Mr. Brian Edwards who owns two of the eight properties subject to the land assembly[1]. The property has frontage on Hampton Road although access will be via Woodland Avenue, which will be constructed by the developer. Staff note the proposed location of the building occupies the rear portion of the property in order to preserve the Hampton Road frontage for future commercial development.

The proposed building also is setback 5meters from the shared rear property boundary with 42-48 Clark Road. The proposed 5-meter setback does not meet the by-law minimum requirement of a 7.5-meter setback. Staff are reviewing the site plan and building location with the applicant to evaluate alternatives.

The property location is in area that marks the entry into Rothesay's commercial corridor. The property also fronts on what was known as NB Provincial Highway No.9 the "old Hampton Highway". Hampton Road is a provincially designated highway and is generally considered as Rothesay's "main street".

Figure 2 - Property Location (95 Hampton Road)

In general, Staff support the redevelopment of the property for higher density residential and note the added population to the area will support the existing schools and businesses in area. Also interesting to note that as our population ages and household sizes shrink this form of higher density becomes increasingly the preferred housing option, in that respect the proposed location is well suited to this form of housing.

[1] A land assembly or assemblage is the process of purchasing various smaller, contiguous parcels of property to merge them into one large land parcel or property.

Figure 3 - Proposed Site Plan (36-unit apartment building)

The Municipal Plan By-law 1-20 does contain policy direction (see Policy HDR-4 follows) that would allow Council to consider the application.

The commercial areas in Rothesay are focal points for residents, whether they are shopping or socializing. Council recognizes this function of commercial space as potential opportunity sites where ***higher density residential may be added*** *as a means of providing people with better access to the Town's services, to reduce sprawl, to permit a livelihood that allows for walkability and less car dependence, and to increase density in and around the Town's commercial areas.*

Policy HDR-4 High-density Residential:
COUNCIL SHALL Consider that High-density Residential (R6) development may be appropriate **throughout the Commercial Designation**[2], and may consider multi-unit dwellings through the re-zoning and development agreement process where such development demonstrates compliance with the following requirements:

a) Subject lands are adjacent to or in close proximity to collector or arterial streets and transit routes;

b) The maximum density does not exceed 100 square metres of land per apartment unit;

c) Subject lands are adequate in size relative to the intensity and scale of the proposed land development;

d) The subject lands do not exceed 1 acre in total area (or 40 apartment units);

e) Underground parking is provided;

[2] Although the property is not designated Commercial Council can consider amendments to the Zoning By-law on lands that adjoin a different land use designation (see Policy IM-14 Adjoining Designations)

f) Require the developer provide a technical wind and shadow study, to be completed by a certified professional, to ensure the proposed development does not generate excessive wind or cast a shadow on abutting properties or public road right-of-way that would detract from the quality, enjoyment, or use of the space.

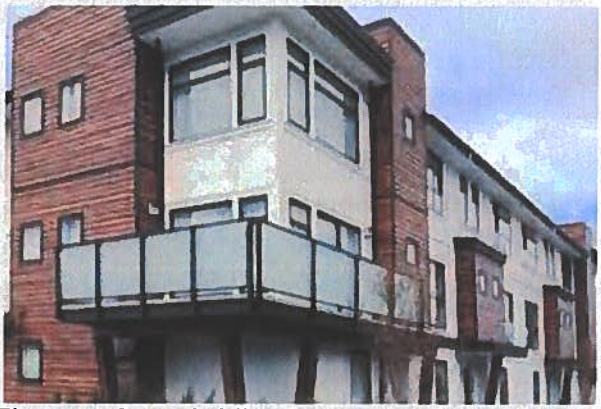
g) Require the developer to complete a traffic impact assessment for the proposed development on the surrounding area completed by a qualified transportation engineer or other technical specialist;

h) Excellence in site design best practices addressing features such as Crime Prevention through Environmental Design (CPTED) principles, urban design, and high quality landscaping; and

i) A building design of high quality that is consistent with community values and architectural best practices.

ANALYSIS:

Policy HDR-4 High-density Residential	Staff Comment
Subject lands are adjacent to or in close proximity to collector or arterial streets and transit routes;	The proposed building has frontage on Hampton Road with access through Woodland Avenue. A traffic impact statement was prepared to determine any additional traffic enhancement or requirements. Staff are still reviewing the traffic study and are considering the possibility of connecting Woodland Avenue through to Hampton Road. No determination regarding Woodland Avenue has been made yet.
The maximum density does not exceed 100 square meters of land per apartment unit;	The 8 properties have a total area of 5143.5m² (1.27 acres) in area and proposed density at 36 units does not exceed the 100m² of land per apartment unit. As noted earlier the applicant anticipates future commercial development of the front portion of the site; however, no less than 3600 square meters of the property would need to be allocated for the apartment building. The remaining balance 1,543.5m² could be retained under its current commercial zoning for future development consideration.
Subject lands are adequate in size relative to the intensity and scale of the proposed land development;	The proposed building would be located in an area containing a variety of uses including commercial (93-101 Hampton Road & 48-50 Clark Road), multi-unit residential (19 Woodland Avenue) and low-density (42-46 Clark Road) residential uses.
The subject lands do not exceed 1 acre in total area (or 40 apartment units);	As noted the entire parcel of land has a total area of 5143.5m², which exceeds the (4000m^2) limit on project density however, the project density at 36 units complies with the policy restriction on density. Furthermore, the applicant could easily consolidate the 8 property parcels to comply with plan policy.

Underground parking is provided;	The proposal includes indoor parking on the building's main level and a combination of sheltered and open surface parking.
Require the developer provide a technical wind and shadow study, to be completed by a certified professional, to ensure the proposed development does not generate excessive wind or cast a shadow on abutting properties or public road right-of-way that would detract from the quality, enjoyment, or use of the space.	The developer is preparing a technical shadow study of the proposed building.
Require the developer to complete a traffic impact assessment for the proposed development on the surrounding area completed by a qualified transportation engineer or other technical specialist;	Staff are still reviewing the developer's traffic impact statement.
Excellence in site design best practices addressing features such as Crime Prevention through Environmental Design (CPTED) principles, urban design, and high quality landscaping; and	Staff note that because the proposed building would potentially share a property boundary with potentially a future commercial parking lot it will be very important to define property lines with landscaping and fencing such that commercial customers are clear about the private property and do not use the property.
A building design of high quality that is consistent with community values and architectural best practices.	Staff believe that the flat roof modern style of architecture in this mixed-use neighbourhood achieves good design as the scale, bulk and height of the building is appropriate to the existing or desired future character of Hampton Road and surrounding buildings. Staff are however, still reviewing the use of façade colours and materials to potentially mitigate the bright white appearance of the building and perhaps introduce materials that are more natural.  The use of wood siding in combination with other materials can break up the façade's massing and add warmth and texture.

DEVELOPMENT AGREEMENT:

Staff will prepare a development agreement for PAC's review before proceeding to Council. A development agreement is a contract between Rothesay and the property owners that specify the details and obligations of the individual parties concerning the proposed development. Implementation Policy IM-13 states that Council shall consider development agreement applications pursuant to the relevant policies of the Municipal Plan and consideration of the following:

Implementation Policy IM-13	Staff Review
A. That the proposal is not premature or inappropriate by reason of:	
1) The financial capability of Rothesay to absorb any costs relating to the development;	Staff are still considering options with regard to the creation of driveway on Woodland Avenue or the development of connected public street.
2) The adequacy of municipal wastewater facilities, storm water systems or water distribution systems;	Staff believe that the municipal infrastructure is adequate for the proposed development.
3) The proximity of the proposed development to schools, recreation or other municipal facilities and the capability of these services to satisfy any additional demands;	Staff believe the schools, recreation or other municipal facilities in the neighbourhood are adequate for the proposed development.
4) The adequacy of road networks leading to or within the development; and	Staff are still reviewing the traffic study.
5) The potential for damage or destruction of designated historic buildings and sites.	There are no historic buildings or sites identified within the project's vicinity.
B. that controls are placed on the proposed development so as to reduce conflict with any adjacent or nearby land uses by reason of:	
1. Type of use;	The multi-unit residential is a compatible use with the surrounding businesses.
2. Height, bulk and lot coverage of any proposed building;	Staff's main concern is the proposed reduced rear yard setback of 5m, otherwise the proposed building Height, bulk and lot coverage comply with the by-law.
3. Traffic generation, access to and egress from the site, and parking; open storage; and	Staff are reviewing the traffic study.
4. Signage.	No commercial signage is requested.
C. That the proposed development is suitable in terms of the steepness of grades, soil and geological conditions, proximity to watercourses, or wetlands and lands that are vulnerable to flooding.	The property is poorly drained and therefore not suitable for development of underground parking and therefore the developer has proposed parking on the main level of the building.

KENNEBECASIS VALLEY FIRE DEPARTMENT:
As is required by Municipal Plan **Policy FR-7,** the KVFD must review proposals for new development projects to ensure that public safety and firefighting concerns are addressed. KV Fire Department are still reviewing the proposed development.

POLLING:
Staff will prepare a polling notification letter to be sent to surrounding property owners.

RECOMMENDATIONS:
Staff recommend the Planning Advisory Committee consider the following MOTION:

A. PAC HEREBY Tables the rezoning application for 95 Hampton Road pending the receipt of a supplemental staff report containing the following:
    1. Additional project details from the applicant;
    2. Staff review and recommendation of traffic and access;
    3. Polling results;
    4. Review by KVFD; and
    5. Draft development agreement and rezoning By-law.

Map 1	Property Location Map
Map 2	Future Land Use Designation (Municipal Plan)
Attachment A	Proposed Development Submission from Applicant

Report Prepared by: Brian L. White, MCIP, RPP
Date: Wednesday, December 01, 2021

Map 1

2021December1PACStaffRptHampton/Woodland_008

Property Location

1:600

Map 2 - Future Land Use - Municipal Plan

11/25/2021, 1:00:49 PM

Future Land Use

- High Density
- Medium Density
- Property
- Commercial
- Institutional
- Rothesay Boundary
- Civic Address

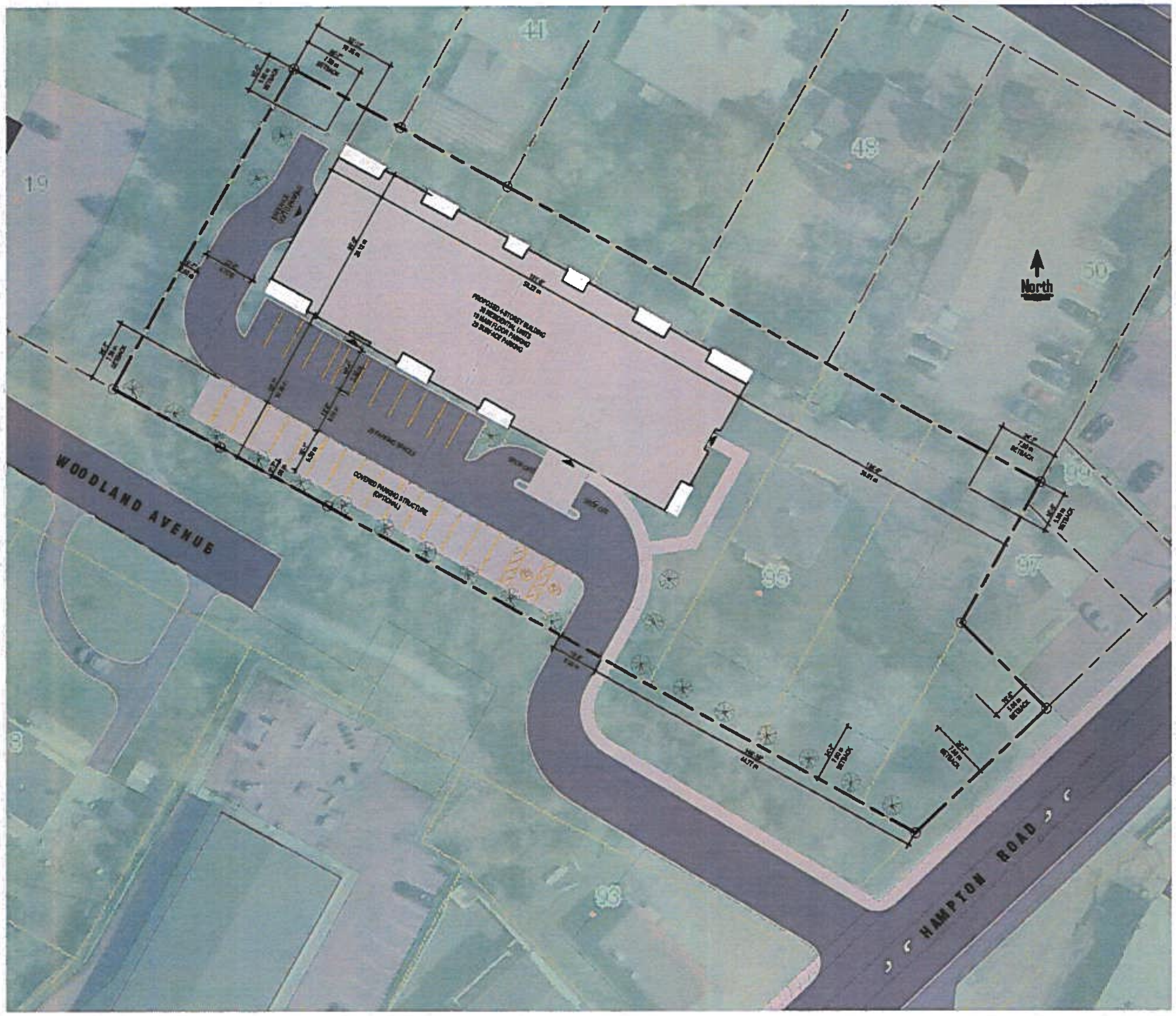
1:2,257

0 — 0.01 — 0.03 — 0.05 mi

0 — 0.02 — 0.04 — 0.08 km

SCHEMATIC SUMMARY	
[illegible]	[illegible]
[illegible]	8 Hampton Road Rothesay
[illegible]	5146.38 Sqm
[illegible]	R1B & Central Commercial
[illegible]	Multi-Unit Residential (R4)
[illegible]	[illegible]
[illegible]	[illegible]
PARKING	
[illegible]	47
[illegible]	1.3
[illegible]	30
[illegible]	17
[illegible]	4
[illegible]	49
[illegible]	1.33
BUILDING INFO	
[illegible]	1105.10 sqm.
[illegible]	4
[illegible]	13m
[illegible]	18m
[illegible]	Concrete
[illegible]	35
[illegible]	
[illegible]	[illegible]

SCHEMATIC SUMMARY
12" = 1'-0"



SITE PLAN
3/64" = 1'-0"

"Not For Construction"

Issue	DESCRIPTION	DATE

THIS DRAWING MAY NOT BE USED IN WHOLE OR IN PART FOR ANY PROJECT OTHER THAN THAT DESIGNATED HEREIN.

ANY CHANGES TO THIS DESIGN, PRIOR TO OR DURING CONSTRUCTION, MUST BE APPROVED BY THE ARCHITECT & ARCHITECTURAL DESIGNER.

ALL CONTRACTORS MUST CONFORM TO ALL REGULATIONS, MUNICIPAL AND PROVINCIAL BY-LAWS AND "THE NATIONAL BUILDING CODE OF CANADA".

ALL REQUIRED PERMITS MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION.

Rev.#	Description	Date

spitfire DESIGN CO.

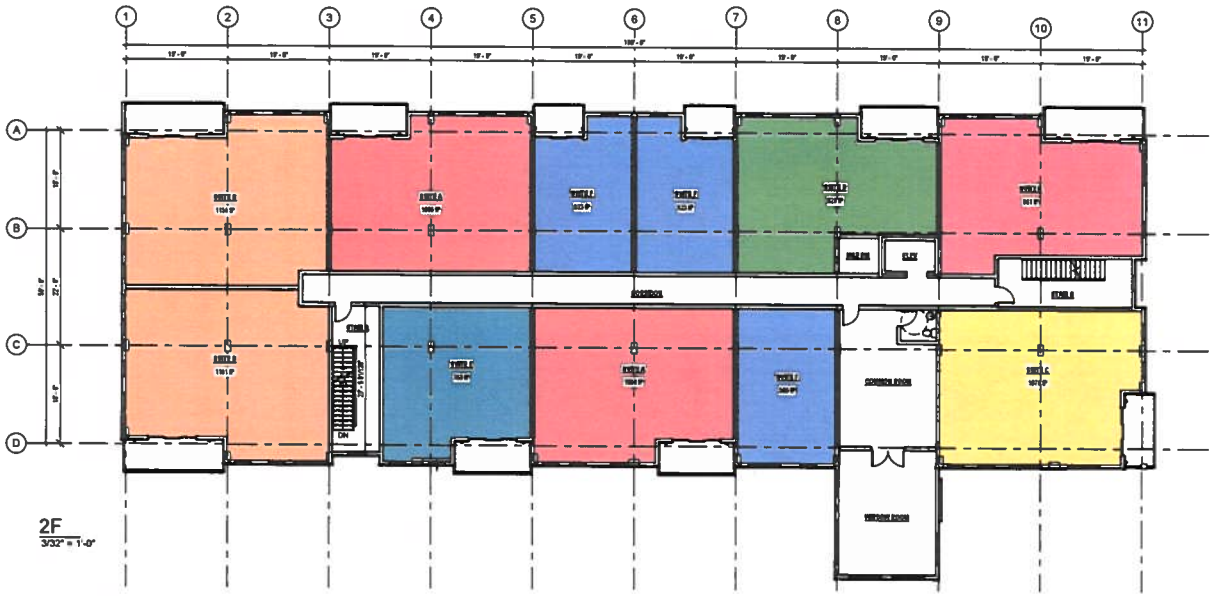
KV PROPERTIES

APARTMENT

98 Hampton Road Rothesay, Moncton

SITE PLAN

Date	10 Nov, 2021		
Checked by	O.M.		
Drawn by	E.C.	Revision	-
Scale	AS NOTED		
Sheet	A0.1	Project no.	4405



SUITE BREAKDOWN

Name	Comments	Area	Count
SUITE A	TWO BED TWO BATH	1060 SF	6
SUITE B	TWO BED TWO BATH	1155 SF	6
SUITE BF 1	TWO BED ONE BATH	980 SF	1
SUITE BF 2	TWO BED ONE BATH	830 SF	1
SUITE C	TWO BED ONE BATH	1060 SF	4
SUITE D	TWO BED ONE BATH	930 SF	3
SUITE E	ONE BED ONE BATH	770 SF	3
SUITE F	ONE BED ONE BATH	520 SF	7
SUITE G	TWO BED TWO BATH	1040 SF	2
SUITE H	ONE BED ONE BATH	960 SF	3

Grand total: 36

SUITE BREAKDOWN PER FLOOR

Name	Comments	Area	Count
1F			
SUITE BF 1	TWO BED ONE BATH	980 SF	1
SUITE BF 2	TWO BED ONE BATH	830 SF	1
SUITE C	TWO BED ONE BATH	1060 SF	1
1F 3			
2F			
SUITE A	TWO BED TWO BATH	1060 SF	2
SUITE B	TWO BED TWO BATH	1155 SF	2
SUITE C	TWO BED ONE BATH	1060 SF	1
SUITE D	TWO BED ONE BATH	930 SF	1
SUITE E	ONE BED ONE BATH	770 SF	1
SUITE F	ONE BED ONE BATH	520 SF	3
SUITE H	ONE BED ONE BATH	960 SF	1
2F 11			
3F			
SUITE A	TWO BED TWO BATH	1060 SF	2
SUITE B	TWO BED TWO BATH	1155 SF	2
SUITE C	TWO BED ONE BATH	1060 SF	1
SUITE D	TWO BED ONE BATH	930 SF	1
SUITE E	ONE BED ONE BATH	770 SF	1
SUITE F	ONE BED ONE BATH	520 SF	2
SUITE G	TWO BED TWO BATH	1040 SF	1
SUITE H	ONE BED ONE BATH	960 SF	1
3F 11			
4F			
SUITE A	TWO BED TWO BATH	1060 SF	2
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SUITE D	TWO BED ONE BATH	930 SF	1
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4F 11			

Grand total: 36

"Not For Construction"

Rev #	Description	Date

Stamp

An Alberland Consultant

An Alberland Designer

spitfire DESIGN CO.

Client: KV PROPERTIES

Project: APARTMENT

86 Hampton Road Rothesay, Moncton

Drawing Title: 1F-2F

Date	10 Nov, 2021
Checked by	D.M.
Drawn by	E.C.
Revision	-
Scale	All NOTED
Sheet	A2.1
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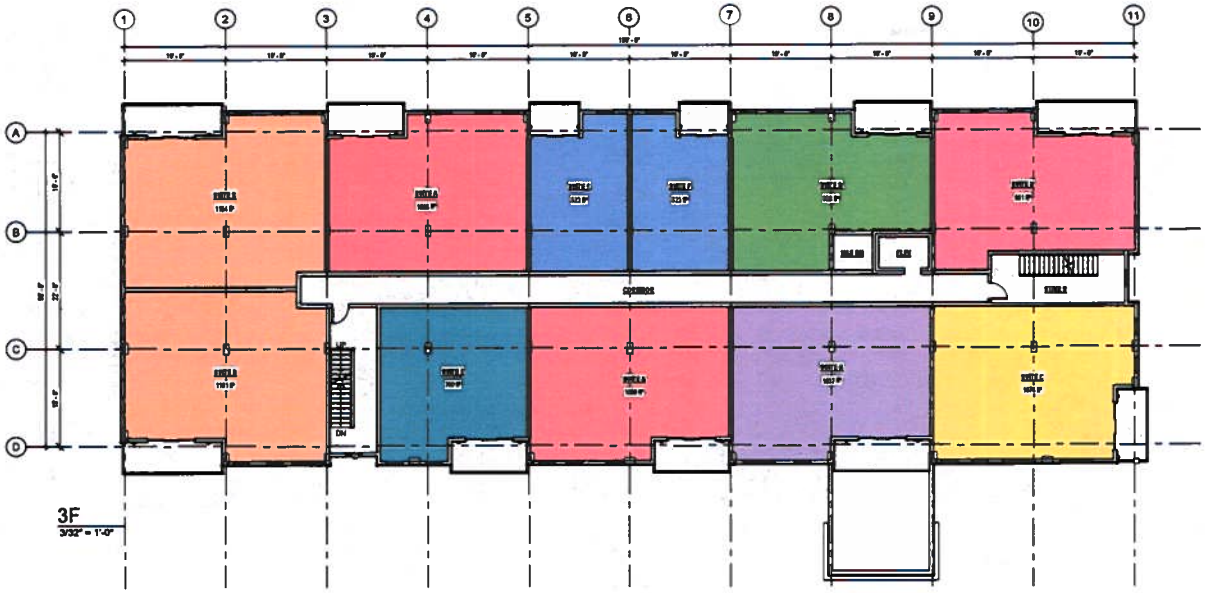

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SUITE D	TWO BED ONE BATH	930 SF	1
SUITE E	ONE BED ONE BATH	770 SF	1
SUITE F	ONE BED ONE BATH	520 SF	3
SUITE H	ONE BED ONE BATH	980 SF	1
2F 11			
3F			
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SUITE H	ONE BED ONE BATH	980 SF	1
4F 11			

Grand total: 36

"Not For Construction"

Mark	Description	Date
01	-	-

Rev #	Description	Date

Name

Architectural Consultant

Architectural Designer

spitfire DESIGN CO.

Client

KV PROPERTIES

Project

APARTMENT

90 Hampton Road Rothesay, Moncton

Drawing title

3F-4F

Date	10 Nov. 2021
Checked by	D.M.
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Scale	AS NOTED
Sheet	A2.2
Project no.	4405


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DESIGN CO


ARCHITECTURE
spitfire
DESIGN CO.


95
Hampton
spitfire
DESIGN CO


ARCHITECTURE
spitfire
DESIGN CO
95

June 28, 2021

Brett Taylor
KV Properties Limited
1 Magnolia Lane
Rothesay (NB) E2E 3L2

Subject: **Traffic Memo – Hampton Road Apartments Traffic Impact Statement**
Englobe Ref. 2105853

INTRODUCTION

A new residential development has been proposed at 95 Hampton Road in the Town of Rothesay. The development will consist of a 40-unit apartment building with both underground and service level parking facilities. Access to the site will be facilitated off a new section of Woodland Avenue. This new section of the street will connect onto Hampton Road west of the development site. The new section of Woodland Avenue will end near the development site access and will not connect to the existing section of Woodland Avenue until some point later in the future.

As part of the development approval process, the Town of Rothesay requires that a Traffic Impact Statement (TIS) be completed for this development. The primary concern is how the development will impact traffic along Hampton Road and how the site will be accessed. KV Properties Ltd. has retained Englobe Corp. to complete this TIS. The Study Area for this TIS includes the proposed development site, the new section of Woodland Avenue, the intersection of Hampton Road and Marr Road/Clark Road, as well as the section of Hampton Road between Woodland Avenue and Marr Road/Clark Road, as shown in **Figure 1.** Should all the approvals be granted, it is expected that the proposed development will be fully operational in 2023, therefore 2028 was chosen as the future horizon year for the analysis.

Figure 1 – Study Area

EXISTING CONDITIONS

Streets and Intersections

Hampton Road is a local collector street as well as a provincially designated arterial highway (Route 100). Hampton Road is oriented in the north-south direction and is a primary travel corridor through the Town of Rothesay, providing access to residential, commercial and institutional land uses. Near the development site, Hampton Road carries Annual Average Daily Traffic (AADT) volumes of approximately 10,500 vehicles per day and has one lane of traffic in each direction that are separated by a two-way left turn lane. Hampton Road features sidewalk along both sides of the street.

Woodland Avenue is a local street that extends in the east-west direction. The east end of Woodland Avenue ends approximately 80 m west of Hampton Road. The proposed new section of Woodland Avenue will be aligned with the existing section of the street, however it will not connect through to it. The new section of Woodland Avenue will intersect with Hampton Road at a t-intersection. Stop control will be provided on the Woodland Avenue approach.

The **Hampton Road / Marr Road / Clark Road** intersection is a 4-legged signalized intersection and is located approximately 100 m north of the proposed Woodland Avenue section. The north and south approaches are located on Hampton Road, while the east and west approaches are located on Marr Road and Clark Road, respectively. Crosswalks are present across all approaches.

Traffic Volumes

Peak hour turning movement counts were completed by Englobe in February, 2016 at the intersection of Hampton Road and Marr Road/Clark Road. These data were used to estimate the future traffic volumes along Hampton Road near the proposed development site. The 2016 traffic data are provided in **Appendix A**.

DEVELOPMENT TRAFFIC GENERATION

Trip generation rates for the proposed development were estimated using the ITE TripGen Web-based App, which is based on the 10th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*. The proposed development will consist of a mid-rise residential building with 40 dwelling units, therefore ITE Land Use #221 (Multifamily Housing – Mid-Rise) was used to generate trips for the development. The resulting vehicle trip generation is shown in **Table 1.** It was assumed that all of these trips would be made by motor vehicle as that would represent a conservative approach in estimating traffic generation.

Table 1 – Traffic Generation for Proposed Development

Development	Size	AM Peak Hour			PM Peak Hour			Daily Total
		In	Out	Total	In	Out	Total	
Multifamily Housing - Mid-Rise (ITE Land Use #221)	40 Dwelling Units	3	11	14	11	7	18	218

The development traffic was assigned to the new Hampton Road / Woodland Avenue intersection and the Hampton Road / Marr Road / Clark Road intersection based on the existing traffic distributions along Hampton Road. The 2028 horizon year traffic volumes were estimated by applying an annual growth rate of 1.0 % to the 2016 data and adding the development traffic. The 2028 traffic volumes at the intersections of Hampton Road / Woodland Avenue and Hampton Road / Marr Road / Clark Road with the development in place are shown in **Figure 2.**

Figure 2 – 2028 Traffic Volumes with Development Traffic

LEVEL OF SERVICE ANALYSIS

A Level of Service (LOS) analysis was completed for the 2028 traffic conditions at the new Hampton Road / Woodland Avenue intersection and at the Hampton Road / Marr Road / Clark Road intersection with the proposed residential development in place. The 2028 LOS results for the two intersections with the development in place are summarized as follows:

- In 2028, the Hampton Road / Woodland Avenue intersection would operate efficiently at an overall LOS A during both peak periods. All individual movements would operate at a LOS B or better.
- In 2028, the Hampton Road / Marr Road / Clark Road intersection would operate efficiently at an overall LOS C during both peak periods.
- During the PM peak period, the eastbound left turn and northbound through movements at the Hampton Road / Marr Road / Clark Road intersection would operate at a LOS E with v/c ratios of 0.91 and 1.02, respectively. The 95th percentile queue length at the northbound approach would be approximately 128 m.
- All other individual turning movements would operate at a LOS D or better during both peak periods.

The LOS results indicate that, in 2028 with the additional development traffic, the intersection of Hampton Road and Woodland Avenue will operate efficiently. The intersection of Hampton Road and Marr Road / Clark Road will also operate efficiently overall, with some delay for the northbound through traffic and eastbound left turn traffic during the evening peak period. This is a result of the background traffic growth and not the development traffic, as only 1-2 vehicles were added to these movements from the development. The 95th percentile queue length for northbound through traffic is estimated at 128 metres, which is greater than the distance of 100 metres that will be provided between the Hampton Road / Marr Road / Clark Road intersection and the proposed Woodland Avenue extension.

The LOS results, including average delay, volume to capacity (v/c) ratios, and the 95th percentile queue lengths for the 2028 traffic conditions with the development in place are summarized in **Table 2**. Detailed Synchro analysis outputs are included in **Appendix B**.

Subject: Traffic Memo – Hampton Road Apartments Traffic Impact Statement June 28, 2021

Table 2 – 2028 LOS with Development

Intersection			Overall LOS, Delay (sec/veh)	Turning Movement LOS Average Delay (seconds per vehicle) [Volume to Capacity Ratio (v/c)] 95th Percentile Queue (m)											
				Eastbound			Westbound			Northbound			Southbound		
North-South Street @ East-West Street	Traffic Control	Time Period		L	T	R	L	T	R	L	T	R	L	T	R
Hampton Road @ Woodland Avenue	STOP	**AM Peak**	**LOS A 0.2**	B 14.3 [0.03] <1	-	B 14.3 [0.03] <1	Shared	Shared	Shared	A 8.7 [0.00] 0	A 0.0 [0.23] 0	Shared	Shared	A 0.0 [0.35] 0	Shared
		PM Peak	**LOS A 0.2**	B 14.9 [0.02] <1	-	B 14.9 [0.02] <1	Shared	Shared	Shared	A 8.1 [0.01] <1	A 0.0 [0.32] 0	Shared	Shared	A 0.00 [0.24] 0	Shared
Hampton Road @ Marr Road / Clark Road		**AM Peak**	**LOS C 24.9**	C 25.9 [0.46] 33	C 26.8 [0.67] 71	Shared	Shared	D 49.1 [0.81] 66	A 5.4 [0.20] 10	C 24.3 [0.26] 16	D 37.1 [0.79] 74	Shared	C 24.0 [0.38] 37	A 9.3 [0.37] 41	A 2.0 [0.10] 5
		PM Peak	**LOS C 34.6**	**E 76.4 [0.91] 57**	C 21.9 [0.45] 46	Shared	Shared	D 36.9 [0.78] 87	A 4.9 [0.39] 15	C 23.1 [0.22] 17	**E 74.1 [1.02] 128**	Shared	C 23.2 [0.31] 30	A 8.2 [0.27] 30	A 1.7 [0.20] 7

PEDESTRIAN ACCESS

The Study Team completed a review of the existing pedestrian infrastructure near the proposed development site. Hampton Road currently features concrete sidewalk adjacent to the curb along both sides of the street. Crosswalks are provided in all directions at the Hampton Road / Marr Road / Clark Road intersection. It is recommended that a pedestrian connection be provided into the development site from Hampton Road. This could be achieved either by extending sidewalk along the north side of the new section of Woodland Avenue, or by providing a walkway directly to the site from Hampton Road.

The proposed development is located along a KV COMEX transit route. The nearest transit stop is located in front of Rothesay High School, which is approximately 350m from the development site.

DRIVEWAY ACCESS AND PARKING

The proposed development will be accessed off a new section of Woodland Avenue. This new section will be located approximately 100 m south of the Hampton Road / Marr Road / Clark Road signalized intersection. This is greater than the minimum corner clearance recommended by the TAC Design Guide, which states that 55 m should be provided between a major signalized intersection and an access road or driveway. It is recommended that the development access off the new section of Woodland Avenue be installed at least 5 m west of Hampton Road in order to adhere to TAC recommendations.

The development's parking facilities have not yet been established, however it is expected that both underground and surface level parking will be provided. According to the Town of Rothesay Zoning By-Law No. 02-10, the parking requirements for multi-unit residential developments vary between 1.1 to 1.5 parking spaces per unit depending on the number of bedrooms that are provided. Barrier-free parking requirements are determined based on the total number of parking spaces required. **Table 3** summarizes the parking requirements for a 40-unit residential building.

Table 3 – Parking Lot Requirements

Number of Bedrooms per Unit	Spaces Required per Unit	Total Spaces Required	Total Barrier-Free Spaces Required
0 (Bachelor)	1.1	44	2
1 to 2	1.3	52	4
3 +	1.5	60	4

The minimum total number of parking spaces required at the development (underground and at surface level) varies between 44 and 60 spaces depending on the number of bedrooms that will be provided within each residential unit. The minimum number of barrier free spaces varies between 2 and 4.

SUMMARY AND RECOMMENDATIONS

In summary, traffic generated by the 40-unit residential development is not expected to cause operational issues to the existing street network. The Hampton Road / Marr Road / Clark Road is expected to continue to operate efficiently during peak periods. During the evening peak period, it is expected that the queue at the south leg of the intersection will extend past the new section of Woodland Avenue, which may result in extra delays for vehicles turning left out of Woodland Avenue.

Pedestrian access to the site is good due to the presence of sidewalks along Hampton Road and crosswalks at the Hampton Road / Marr Road / Clark Road intersection. It is, however, recommended that a walkway into the site from Hampton Road or a sidewalk along the new section of Woodland Avenue be provided to provide direct pedestrian access to the development.

Based on guidance from TAC, it is recommended that a minimum clearance of 5 m be provided between the corner of Woodland Avenue and Hampton Road and the development access. This access will provide access to the development's parking facilities, which, according to the Town's zoning bylaws, must include 44 to 60 parking spaces depending on the number of bedrooms provided within each residential unit.

We trust the enclosed is to your satisfaction. If, however, additional information should be required, please communicate with the undersigned.

Yours very truly,

Jill DeMerchant, P.Eng., M.Eng.

Transportation Engineer

Peter Allaby, P.Eng., M.A.Sc.

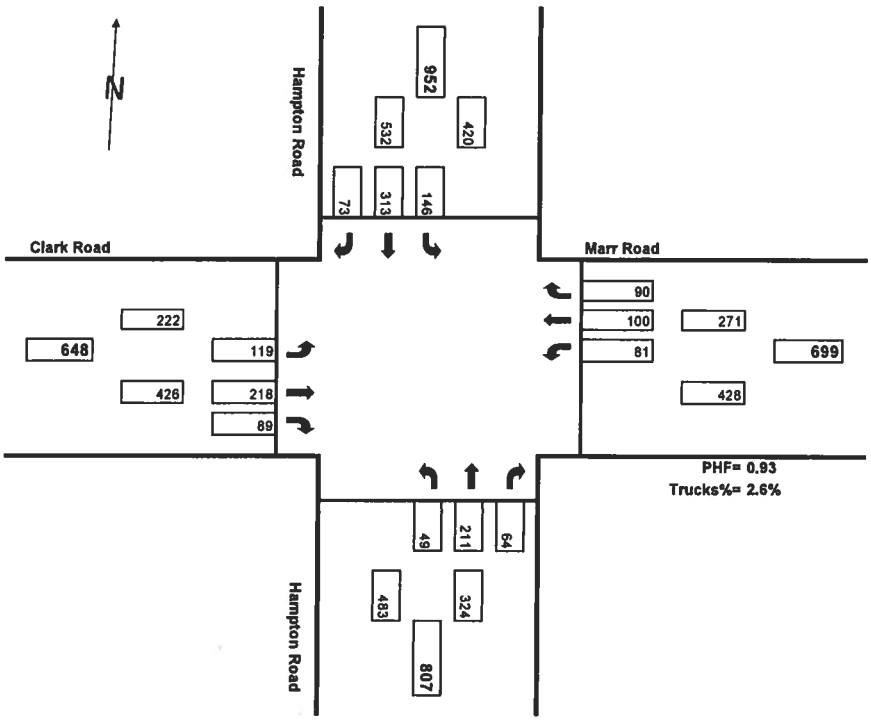
Vice President Operations

Appendix A: Traffic Data

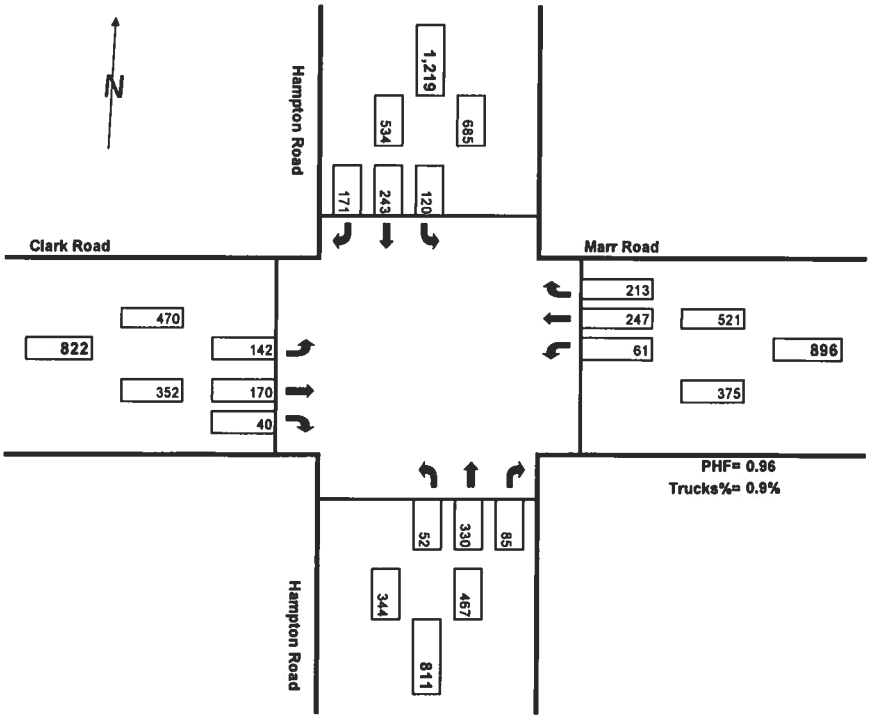
Traffic Count Summary
AM and PM Peak Hours

Hampton Road/Marr Road

AM Peak Hour 07:45 - 08:45



PM Peak Hour 16:15 - 17:15



Appendix B: Level of Service Reports

Hampton Road TIS
AM Peak with Development

06-28-2021

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	7	1	365	544	2
Future Volume (Veh/h)	4	7	1	365	544	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	4	8	1	392	585	2
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					131	
pX, platoon unblocked	0.89	0.89	0.89			
vC, conflicting volume	980	586	587			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	915	471	472			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	98	100			
cM capacity (veh/h)	270	528	963			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	12	1	392	587
Volume Left	4	1	0	0
Volume Right	8	0	0	2
cSH	401	963	1700	1700
Volume to Capacity	0.03	0.00	0.23	0.35
Queue Length 95th (m)	0.7	0.0	0.0	0.0
Control Delay (s)	14.3	8.7	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.3	0.0		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		

Hampton Road TIS
AM Peak with Development

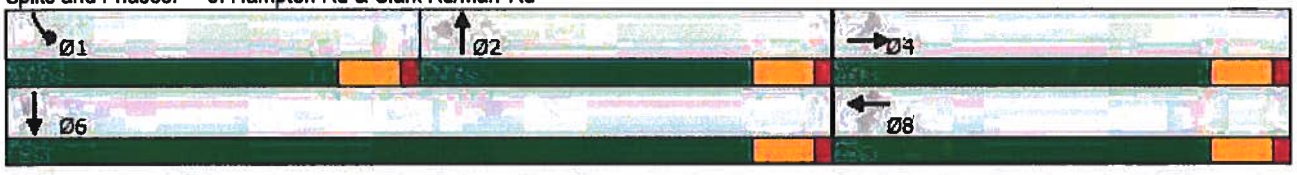
06-28-2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	246	100	91	113	101	56	240	73	165	355	82
Future Volume (vph)	134	246	100	91	113	101	56	240	73	165	355	82
Satd. Flow (prot)	1752	1765	0	0	1804	1568	1752	1780	0	1752	1845	1568
Flt Permitted	0.558				0.486		0.535			0.950		
Satd. Flow (perm)	1029	1765	0	0	897	1568	987	1780	0	1752	1845	1568
Satd. Flow (RTOR)		30				109		21				88
Lane Group Flow (vph)	144	373	0	0	220	109	60	336	0	177	382	88
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Prot	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	25.0	25.0		25.0	25.0	25.0	22.5	22.5		22.5	45.0	45.0
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5		4.5	4.5	4.5
Act Effct Green (s)	20.5	20.5			20.5	20.5	15.7	15.7		18.0	38.3	38.3
Actuated g/C Ratio	0.30	0.30			0.30	0.30	0.23	0.23		0.27	0.56	0.56
v/c Ratio	0.46	0.67			0.81	0.20	0.26	0.79		0.38	0.37	0.10
Control Delay	25.9	26.8			49.1	5.4	24.3	37.1		24.0	9.3	2.0
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	25.9	26.8			49.1	5.4	24.3	37.1		24.0	9.3	2.0
LOS	C	C			D	A	C	D		C	A	A
Approach Delay		26.5			34.6			35.2			12.3	
Approach LOS		C			C			D			B	
Queue Length 50th (m)	16.1	41.3			28.0	0.0	6.5	39.4		20.0	25.3	0.0
Queue Length 95th (m)	33.1	#71.4			#66.0	10.3	16.1	#74.2		37.2	41.2	5.1
Internal Link Dist (m)		207.1			251.9			107.5			234.5	
Turn Bay Length (m)						50.0				75.0		40.0
Base Capacity (vph)	311	555			271	551	262	488		465	1103	973
Starvation Cap Reductn	0	0			0	0	0	0		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.46	0.67			0.81	0.20	0.23	0.69		0.38	0.35	0.09

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 67.8
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 24.9 — Intersection LOS: C
Intersection Capacity Utilization 71.2% — ICU Level of Service C
Analysis Period (min) 15
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Hampton Rd & Clark Rd/Marr Rd



Hampton Road TIS
PM Peak with Development

06-28-2021

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	3	6	527	388	5
Future Volume (Veh/h)	4	3	6	527	388	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	4	3	6	549	404	5
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)					131	
pX, platoon unblocked	0.93	0.93	0.93			
vC, conflicting volume	968	406	409			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	929	328	331			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	100	99			
cM capacity (veh/h)	277	668	1152			

Direction, Lane #	EB 1	NB 1	NB 2	SB 1
Volume Total	7	6	549	409
Volume Left	4	6	0	0
Volume Right	3	0	0	5
cSH	369	1152	1700	1700
Volume to Capacity	0.02	0.01	0.32	0.24
Queue Length 95th (m)	0.5	0.1	0.0	0.0
Control Delay (s)	14.9	8.1	0.0	0.0
Lane LOS	B	A		
Approach Delay (s)	14.9	0.1		0.0
Approach LOS	B			

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	37.7%	ICU Level of Service	A
Analysis Period (min)	15		

Hampton Road TIS
PM Peak with Development

06-28-2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	160	192	46	70	278	240	60	374	97	135	277	193
Future Volume (vph)	160	192	46	70	278	240	60	374	97	135	277	193
Satd. Flow (prot)	1787	1827	0	0	1862	1599	1787	1823	0	1787	1881	1599
Flt Permitted	0.332				0.843		0.583			0.950		
Satd. Flow (perm)	625	1827	0	0	1586	1599	1097	1823	0	1787	1881	1599
Satd. Flow (RTOR)		17				250		18				201
Lane Group Flow (vph)	167	248	0	0	363	250	63	491	0	141	289	201
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Prot	NA	Perm
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2					6
Total Split (s)	25.0	25.0		25.0	25.0	25.0	22.5	22.5		22.5	45.0	45.0
Total Lost Time (s)	4.5	4.5			4.5	4.5	4.5	4.5		4.5	4.5	4.5
Act Effct Green (s)	20.5	20.5			20.5	20.5	18.0	18.0		18.0	40.5	40.5
Actuated g/C Ratio	0.29	0.29			0.29	0.29	0.26	0.26		0.26	0.58	0.58
v/c Ratio	0.91	0.45			0.78	0.39	0.22	1.02		0.31	0.27	0.20
Control Delay	76.4	21.9			36.9	4.9	23.1	74.1		23.2	8.2	1.7
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	76.4	21.9			36.9	4.9	23.1	74.1		23.2	8.2	1.7
LOS	E	C			D	A	C	E		C	A	A
Approach Delay		43.8			23.9			68.3			9.5	
Approach LOS		D			C			E			A	
Queue Length 50th (m)	22.0	25.6			45.5	0.0	6.8	~67.8		15.7	17.8	0.0
Queue Length 95th (m)	#57.4	45.7			#87.1	15.2	16.5	#127.6		30.1	30.2	7.4
Internal Link Dist (m)		207.1			251.9			107.5			234.5	
Turn Bay Length (m)						50.0				75.0		40.0
Base Capacity (vph)	183	547			464	645	282	482		459	1088	1009
Starvation Cap Reductn	0	0			0	0	0	0		0	0	0
Spillback Cap Reductn	0	0			0	0	0	0		0	0	0
Storage Cap Reductn	0	0			0	0	0	0		0	0	0
Reduced v/c Ratio	0.91	0.45			0.78	0.39	0.22	1.02		0.31	0.27	0.20

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 34.6 Intersection LOS: C
Intersection Capacity Utilization 79.5% ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: Hampton Rd & Clark Rd/Marr Rd

506.433.4427 (Sussex)
506.652.1522 (Saint John)
info@dmse.ca
www.dmse.ca

DON - MORE
SURVEYS & ENGINEERING LTD.

Ref: 21292-WaterDemands

November 23, 2021

Mr. McLean,

Re: 97 Hampton Road - Water Demands - KV Properties

Don-More Surveys & Engineering Ltd. (Don-More) has been engaged to perform hydrant flow testing and analyse available flows relative to projected demands for a proposed new development located at 97 Hampton Road.

We understand the proposed development is a 4 story building with a footprint of 1165m². There are 36 proposed apartment units.

Using the Fire Underwriters Survey 1999 version, we can calculate the projected firefighting demands for the building. Full calculations are included in Appendix A. From this we see for non-combustible construction a peak demand of 1023gpm, and for limited combustible construction a peak demand of 1159gpm.

We can then calculate the peak domestic demands for the building. 36 residential units create a max hourly demand of 17gpm.

A hydrant flow test was conducted on November 23, 2021. Details of this test are included in schedule B.

Looking at a total combined projected demand of 1176gpm (1159gpm+17gpm), and comparing to the hydrant flow test we see a projected system pressure of about 40psi at peak demand. This is considered acceptable and based on this information we feel the system will support this development.

Closing

We trust this is sufficient for your present needs. Please feel free to contact the undersigned at 506.636.2136 or at at@dmse.ca for any additional information or clarification.

Yours truly,

Don-More Surveys & Engineering Ltd.

Andrew Toole

Andrew Toole, NBLS, P.Eng.

T 506.433.4427
T 506.652.1522

4-60 Maple Avenue, Sussex, NB E4E 2N5
16 Fulton Lane, Saint John, NB E2H 2W4

www.dmse.ca
info@dmse.com

Appendix A

Projected Flow Calculations

T 506.433.4427
T 506.652.1522

4-60 Maple Avenue, Sussex, NB E4E 2N5
16 Fulton Lane, Saint John, NB E2H 2W4

www.dmse.ca
info@dmse.com

Fire Flow Calculations
21292- 97 Hampton Road

From "Fire Underwriters Survey- 1999 Water Supply for Public Fire Protection"

$F = 220C\sqrt{A}$

where: F= required fire flow in litres per minute (LPM)
C= Coefficient related to the tyoe of construction
A= Total floor area (m^2)

Part 1: Determining an Esitmate of Fire Flow

Assuming fire resistive construction (**C=0.6**)

Note: For fire resistive buildings, consider the two largest ajoinging floors plus 50% of each floor immediatley above them.

A= 2*1040+(0.5*2*1040) = **3120 m^2**

F= **7373.12 LPM**

Part 2: Reduction for Non-Combustible or Limited Combustible

For Non-Combustible (-25%)	F=	**5529.84 LPM**
For Limited Combustible (-15%)	F=	**6267.15 LPM**

Part 3: Reduction for Sprinklers (-30%)

			Range of Demands depending on Non-Combustible vs Limited Combustible:
For Non-Combustible	F=	**3870.89 LPM**	**1022.7 GPM**
For Limited Combustible	F=	**4387.01 LPM**	**1159.0 GPM**

Note: The are additional reductions related to sprinklers therefore this should be considered a consetvative flow rate

Domestic Demand Calculations
21292- 97 Hampton Road

Residential Portion of Building					
Units	36	Units			
Population	90	Persons (2.5 people/unit)			
Site area	N/A	m²			
Domestic Demands					
Average Daily Demand	410	L/person			
Max daily demand	680	L/person			
Max hourly demand	1025	L/person			
Avg Day	0.427	l/s	25.6	l/min	6.8 Gal/min (US)
Max day	0.708	l/s	42.5	l/min	11.2 Gal/min (US)
Max hour	1.068	l/s	64.1	l/min	16.9 Gal/min (US)

Appendix B

Hydrant Flow Test

T 506.433.4427
T 506.652.1522

4-60 Maple Avenue, Sussex, NB E4E 2N5
16 Fulton Lane, Saint John, NB E2H 2W4

www.dmse.ca
info@dmse.com

Project: KV Properties
Date: November 23, 2021
Location: 97 Hampton Road, Rothesay

DON - MORE
SURVEYS & ENGINEERING LTD.

System Info:

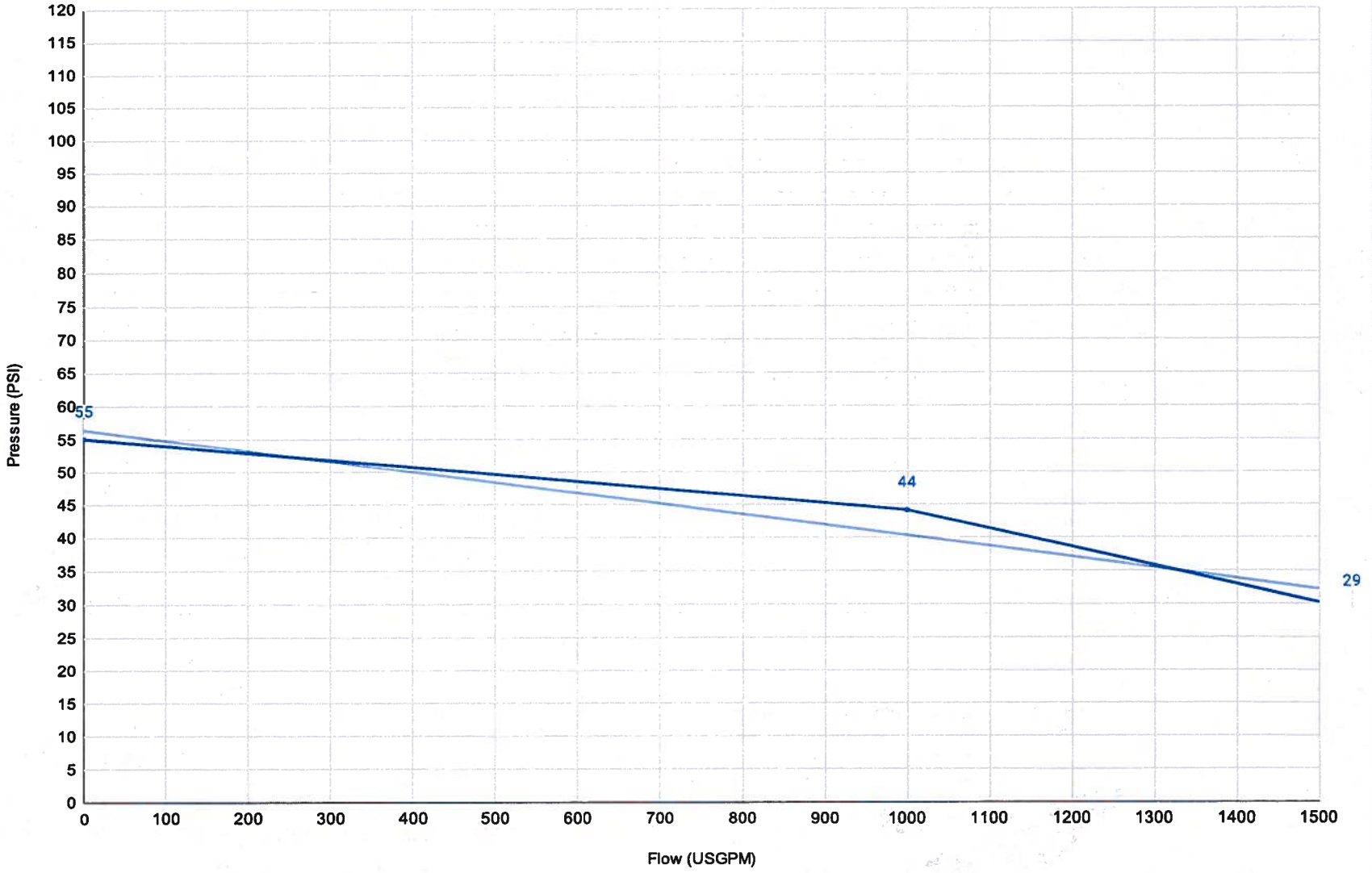
Pipe size: 200mm
Looped: Yes
Notes:

Test Data:

Residual Hydrant: Northeast of Rothesay High School
Flow Hydrant: Intersection of Scott & Hampton Roads
Static pressure: 55 psi
Time of Test: 9:30 AM
Pitot coefficent: 0.88

Test #	# of outlets	Orifice sizes (inches)	Pitot readings (psi)	Equivalent flow (usgpm)	Total flow (usgpm)	Residual Pressure (psi)
0	0			0	0	55
1	1	2.5	37	1000	1000	44
2	2	2.5	22	770	1540	29
3	1	2.5		0	0	
4	2	2.5		0	0	
5	1	2.5		0	0	
6	2	2.5		0	0	

Water Flow Test Summary




SPRUCEWOOD Avenue
SPRUCES Lane
WOODLAND Avenue
CLARK Road
SCOTT Avenue
HAMPTON Road
ROSEDALE Avenue
ROBINSON Street
GLENWOOD Drive
IONA Avenue
HENDERSON Road
HIGHLAND Avenue
CHARLES Crescent
30197301
30195678
30256107
30253319
30255917
30264022
30112023
30304216
30304224
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