BELLEVILLE PLANNING ADVISORY COMMITTEE

A G E N D A

DECEMBER 2, 2019

5:30 P.M.

COUNCIL CHAMBER

Starting Page No.

CITY COUNCIL PLANNING COMMITTEE MEETING

1. ATTENDANCE

Councillor Paul Carr
Councillor Pat Culhane
Councillor Sean Kelly
Councillor Bill Sandison
Councillor Ryan Williams

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

3. PUBLIC MEETING - THE PLANNING ACT

3.1 **NOTICE OF COMPLETE APPLICATION AND INTRODUCTORY PUBLIC MEETING FOR PROPOSED AMENDMENT TO ZONING BY-LAW NUMBER 10245, AS AMENDED – 199 DUNDAS STREET EAST, CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1094
APPLICANT: JOSEPH CHACKO
OWNER: MHSA PROPERTIES LTD.

Notice of Meeting and Map **1**

Starting
Page No.

BELLEVILLE PLANNING ADVISORY COMMITTEE

A G E N D A

DECEMBER 2, 2019

5:30 P.M.

COUNCIL CHAMBER

Starting
Page No.

PLANNING ADVISORY COMMITTEE MEETING

1. ATTENDANCE

Councillor Paul Carr
Councillor Pat Culhane
Councillor Sean Kelly
Councillor Bill Sandison
Councillor Ryan Williams

John Baltutis
Kathryn Brown
Paul Jennings
David Joyce

2. DISCLOSURE OF PECUNIARY INTEREST AND THE GENERAL NATURE THEREOF

3. CONFIRMATION OF MINUTES

3.1 Minutes of the City Council Planning Committee Meeting and Planning Advisory Committee Meeting held on November 4, 2019

4. DEPUTATIONS

5. CORRESPONDENCE

Starting Page No.

6. REFERRALS FROM PUBLIC MEETING

6.1 **NOTICE OF COMPLETE APPLICATION AND INTRODUCTORY PUBLIC MEETING FOR PROPOSED AMENDMENT TO ZONING BY-LAW NUMBER 10245, AS AMENDED – 199 DUNDAS STREET EAST, CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1094
APPLICANT: JOSEPH CHACKO
OWNER: MHSA PROPERTIES LTD.

Policy Planner's Report No. PP-2019-83 **8**

RESOLUTION

"THAT Report No. PP-2019-83 dated December 2, 2019 regarding Notice of Complete Application and Introductory Public Meeting for Application for Proposed Amendment to Zoning By-law Number 10245, As Amended – 199 Dundas Street East, City of Belleville, County of Hastings be received as information; and

THAT Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department."

6.2 **NOTICE OF COMPLETE APPLICATION AND INTRODUCTORY PUBLIC MEETING FOR PROPOSED AMENDMENT TO ZONING BY-LAW NUMBER 10245, AS AMENDED – 8 & 12 KING STREET, CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1095
OWNER/APPLICANT: UCB CANADA
AGENT: INVESTMENT MANAGEMENT SYNDICATE LTD.

Principal Planner's Report No. PP-2019-84 **18**

RESOLUTION

"THAT Report No. PP-2019-84 dated December 2, 2019 regarding Proposed Amendment to Zoning By-law Number

10245, As Amended – 8 & 12 King Street, City of Belleville, County of Hastings be received as information; and

THAT Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department."

6.3 **NOTICE OF COMPLETE APPLICATION AND INTRODUCTORY PUBLIC MEETING FOR PROPOSED AMENDMENT TO THE OFFICIAL PLAN AND ZONING BY-LAW NUMBER 3014, AS AMENDED AND DRAFT PLAN OF SUBDIVISION; LOTS 8 & 9 OF REGISTERED PLAN NO. 124, CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1096 & 12T-19003
OWNER: ANDY GEERTSMA, GCL DEVELOPMENTS LTD.
APPLICANT: GCL DEVELOPMENTS LTD.
AGENT: LORELEI JONES, MACAULAY SHIOMI HOWSON LTD.

Manager of Approvals/Principal Planner's Report No. PP-2019-85 **28**

RESOLUTION

"THAT Report No. PP-2019-85 dated December 2, 2019 regarding Notice of Complete Application and Introductory Public Meetings for Proposed Amendment to the Official Plan and Zoning By-law Number 3014, As Amended, and Draft Plan of Subdivision; Lots 8 & 9 of Registered Plan No. 124, City of Belleville, County of Hastings be received as information; and

THAT Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department."

Starting Page No.

7. REPORTS

7.1 **RECOMMENDATION REPORT FOR PROPOSED AMENDMENT TO THE OFFICIAL PLAN AND ZONING BY-LAW NUMBER 10245, AS AMENDED – 375 TO 405 BRIDGE STREET EAST AND 172 TO 184 HERCHIMER AVENUE, CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1093
APPLICANT/OWNER: ALGONQUIN AND LAKESHORE CATHOLIC DISTRICT SCHOOL BOARD
AGENT: TODD COLBOURNE, COLBOURNE & KEMBEL, ARCHITECTS INC.

Principal Planner's Report No. PP-2019-88 **238**

RESOLUTION

"THAT the Planning Advisory Committee recommends the following to City Council:

THAT Application B-77-1093 to amend the City of Belleville Official Plan and Zoning By-law Number 10245, as amended for 375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue, City of Belleville, County of Hastings, be APPROVED as follows:

THAT Schedule 'B' Land Use Plan of the Official Plan be amended by redesignating portions of the subject lands from 'Residential Land Use' to 'Community Facility'; and

THAT Zoning By-law Number 10245, as amended, be amended by rezoning the subject lands to Community Facility (CF) Zone with special provisions to reduce the front yard setback, side yard setback, and parking requirements."

7.2 **RECOMMENDATION REPORT FOR PROPOSED DRAFT PLAN OF SUBDIVISION, SAND CHERRY COURT, PART OF LOT 37, CONCESSION 1, FORMER TOWNSHIP OF SIDNEY, NOW CITY OF BELLEVILLE**
FILE NUMBER: 12T-19001
OWNER: SAND CHERRY COURT G.P. INC. C/O SYFEDDIN HOSSEINI
AGENT: MCINTOSH PERRY CONSULTING – MARKO CEKIC

Starting Page No.

RESOLUTION

"THAT the Planning Advisory Committee recommends the following to City Council:

THAT approval of a Draft Plan of Subdivision, prepared by McIntosh Perry Consulting Engineers Ltd., dated July 29, 2015, as shown on Attachment #2 to Manager of Approvals' Report No. APS-2019-42, be granted for the lands identified as Part of Lots 3 & 4, Registrar's Compiled Plan 1819, City of Belleville, County of Hastings (File: 12T-19001) subject to the draft plan conditions outlined in Attachment #3 to Manager of Approvals' Report No. APS-2019-42."

7.2 **RECOMMENDATION REPORT FOR PROPOSED DRAFT PLAN OF SUBDIVISION, BELL BOULEVARD SUBDIVISION, PART OF LOT 32, CONCESSION 2, FORMER TOWNSHIP OF SIDNEY, NOW CITY OF BELLEVILLE**
FILE NUMBER: 12T-19002
OWNER: 2555111 ONTARIO INC., C/O BHUPINDER PAUL SHARMA
AGENT: RFA PLANNING CONSULTANT INC., SHAWN LEGERE

RESOLUTION

"THAT the Planning Advisory Committee recommends the following to City Council:

THAT approval of a Draft Plan of Subdivision, prepared by RFA Planning Consultant Inc., revised to November 14, 2019, as shown on Attachment #2 to Manager of Approvals' Report No. APS-2019-43, be granted for the lands located north of Bell Boulevard and east of Hannafin Road, more particularly described as Part of Lot 32, Concession 2, Township of Sidney, now City of Belleville, County of Hastings (File: 12T-19002) subject to the draft plan conditions outlined in Attachment #4 to Manager of Approvals' Report No. APS-2019-43."

Starting Page No.

8. INFORMATION MATTERS

9. GENERAL BUSINESS AND INQUIRIES

10. ADJOURNMENT

City of Belleville
Engineering & Development Services Department
Policy Planning Section
Telephone: 613-968-6481
Fax: 613-967-3262

File No.: B-77-1094

NOTICE OF PUBLIC MEETING
ZONING BY-LAW AMENDMENT APPLICATION
199 Dundas Street East

CITY COUNCIL PLANNING COMMITTEE
CITY HALL - COUNCIL CHAMBER
169 FRONT STREET
Monday, December 2, 2019 AT 5:30 P.M.

A Public Meeting, as noted above, will be held at City Hall in the Council Chambers (169 Front Street) on Monday, December 2, 2019 at 5:30 P.M. to consider an amendment to Zoning By-Law Number 10245, as amended, for a property located south of Dundas Street East, east of Foster Avenue, and west of First Street, which is municipally known as **199 Dundas Street East**.

The property has a frontage of approximately 28.77 metres on Dundas Street East. The Applicant requests a rezoning from Highway Commercial (C3) Zone to Highway Commercial (C3-1) Zone with special provisions to add medical clinic as a permitted use. A Location Plan is shown on APPENDIX 1 which is attached.

In the Official Plan, the subject land is designated as “Commercial”.

If you wish to be notified of the decision of the City of Belleville or Belleville Planning Advisory Committee in respect of this application, you must submit a **written** request to Matt MacDonald, Secretary, Planning Advisory Committee in person or by mail at: Belleville City Hall, 169 Front Street, Belleville, K8N 2Y8, or by email at: mtmacdonald@city.belleville.on.ca.

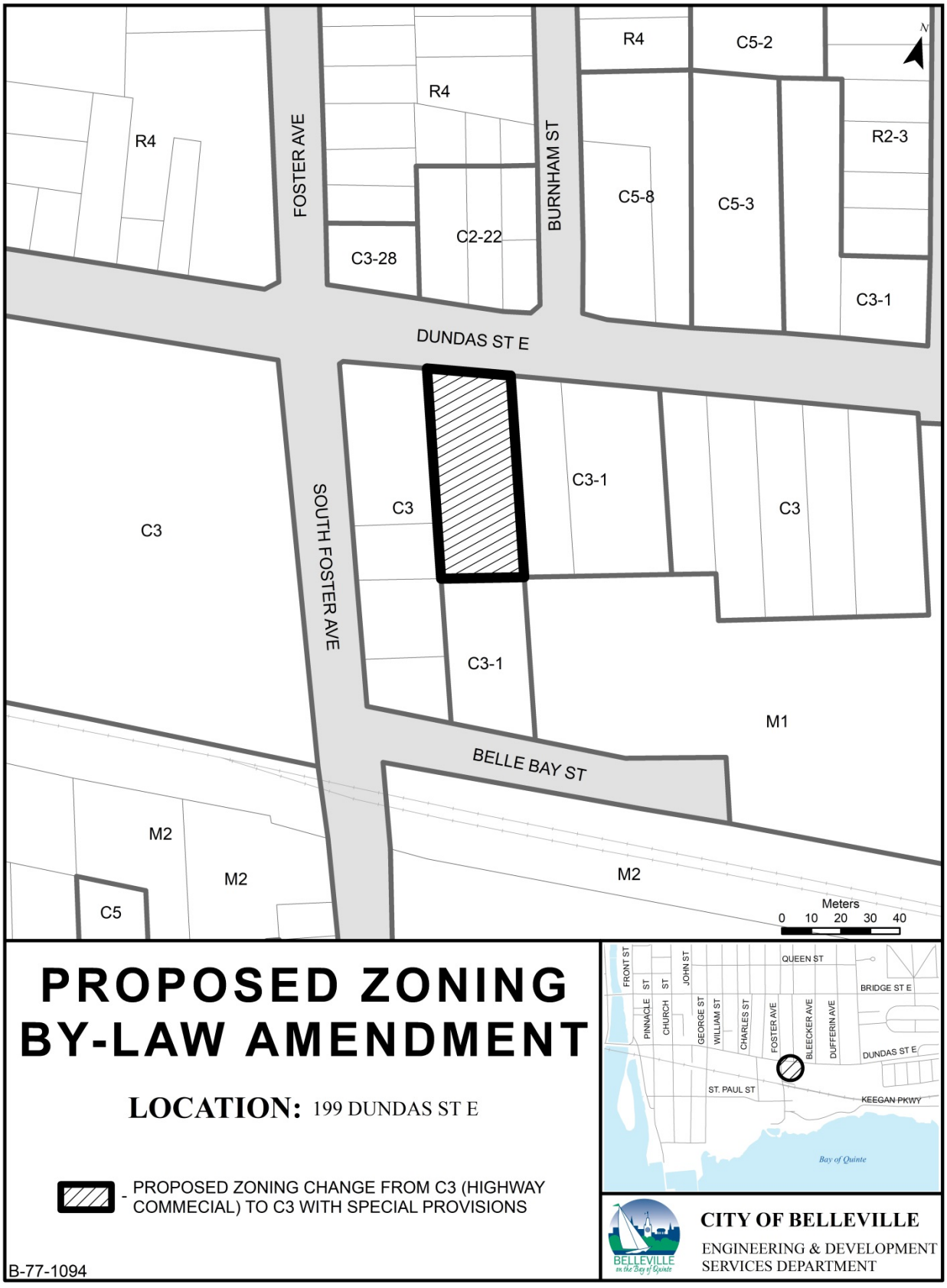
If a person or public body would otherwise have an ability to appeal the decision of the City of Belleville to the Local Planning Appeal Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the City of Belleville before the by-law is passed, the person or public body is **not** entitled to appeal the decision and that person or public body may **not** be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so. Please be further advised that written submissions received prior to the public meeting may be made available to the Applicant.

For more information contact the Planning Section, Engineering & Development Services Department, 2nd floor, Belleville City Hall, 169 Front Street, Belleville, K8N 2Y8 (Telephone: 613-967-3288).

As per the requirements of the Planning Act, this application is confirmed to be complete.

Matt MacDonald, Secretary
Planning Advisory Committee

DATED at the City of Belleville this 8th day of November, 2019.


R4
FOSTER AVE
R4
C3-28
C2-22
BURNHAM ST
R4
C5-2
C5-8
C5-3
R2-3
C3-1
DUNDAS ST E
C3
SOUTH FOSTER AVE
C3
C3-1
C3-1
C3
C3-1
M1
BELLE BAY ST
M2
M2
C5
M2
Meters
0 10 20 30 40
PROPOSED ZONING BY-LAW AMENDMENT
LOCATION: 199 DUNDAS ST E
- PROPOSED ZONING CHANGE FROM C3 (HIGHWAY COMMECIAL) TO C3 WITH SPECIAL PROVISIONS
B-77-1094
FRONT ST
JOHN ST
QUEEN ST
BRIDGE ST E
PINNACLE ST
CHURCH ST
GEORGE ST
WILLIAM ST
CHARLES ST
FOSTER AVE
BLEECKER AVE
DUFFERIN AVE
DUNDAS ST E
ST. PAUL ST
KEEGAN PKWY
Bay of Quinte
CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT

City of Belleville
Engineering & Development Services Department
Policy Planning Section
Telephone: 613-968-6481
Fax: 613-967-3262

File No.: B-77-1095

NOTICE OF PUBLIC MEETING
ZONING BY-LAW AMENDMENT APPLICATION
8 & 12 King Street

CITY COUNCIL PLANNING COMMITTEE
CITY HALL - COUNCIL CHAMBER
169 FRONT STREET
Monday, December 2, 2019 AT 5:30 P.M.

A Public Meeting, as noted above, will be held at City Hall in the Council Chambers (169 Front Street) on Monday, December 2, 2019 at 5:30 P.M. to consider an amendment to Zoning By-Law Number 10245, as amended, for a property located west of King Street, east of James Street, north of Dundas Street West, and south of Colborne Street, which is municipally known as **8 & 12 Dundas Street East**.

The property has a frontage of approximately 30.18 metres on King Street. The Applicant requests a rezoning from Highway Commercial (C3) Zone to General Commercial (C2) Zone with special provisions to permit a parking lot associated with the property located at 2 Dundas Street West. A Location Plan is shown on APPENDIX 1 which is attached.

In the Official Plan, the subject land is designated as “City Centre”.

If you wish to be notified of the decision of the City of Belleville or Belleville Planning Advisory Committee in respect of this application, you must submit a **written** request to Matt MacDonald, Secretary, Planning Advisory Committee in person or by mail at: Belleville City Hall, 169 Front Street, Belleville, K8N 2Y8, or by email at: mtmacdonald@city.belleville.on.ca.

If a person or public body would otherwise have an ability to appeal the decision of the City of Belleville to the Local Planning Appeal Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the City of Belleville before the by-law is passed, the person or public body is **not** entitled to appeal the decision and that person or public body may **not** be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so. Please be further advised that written submissions received prior to the public meeting may be made available to the Applicant.

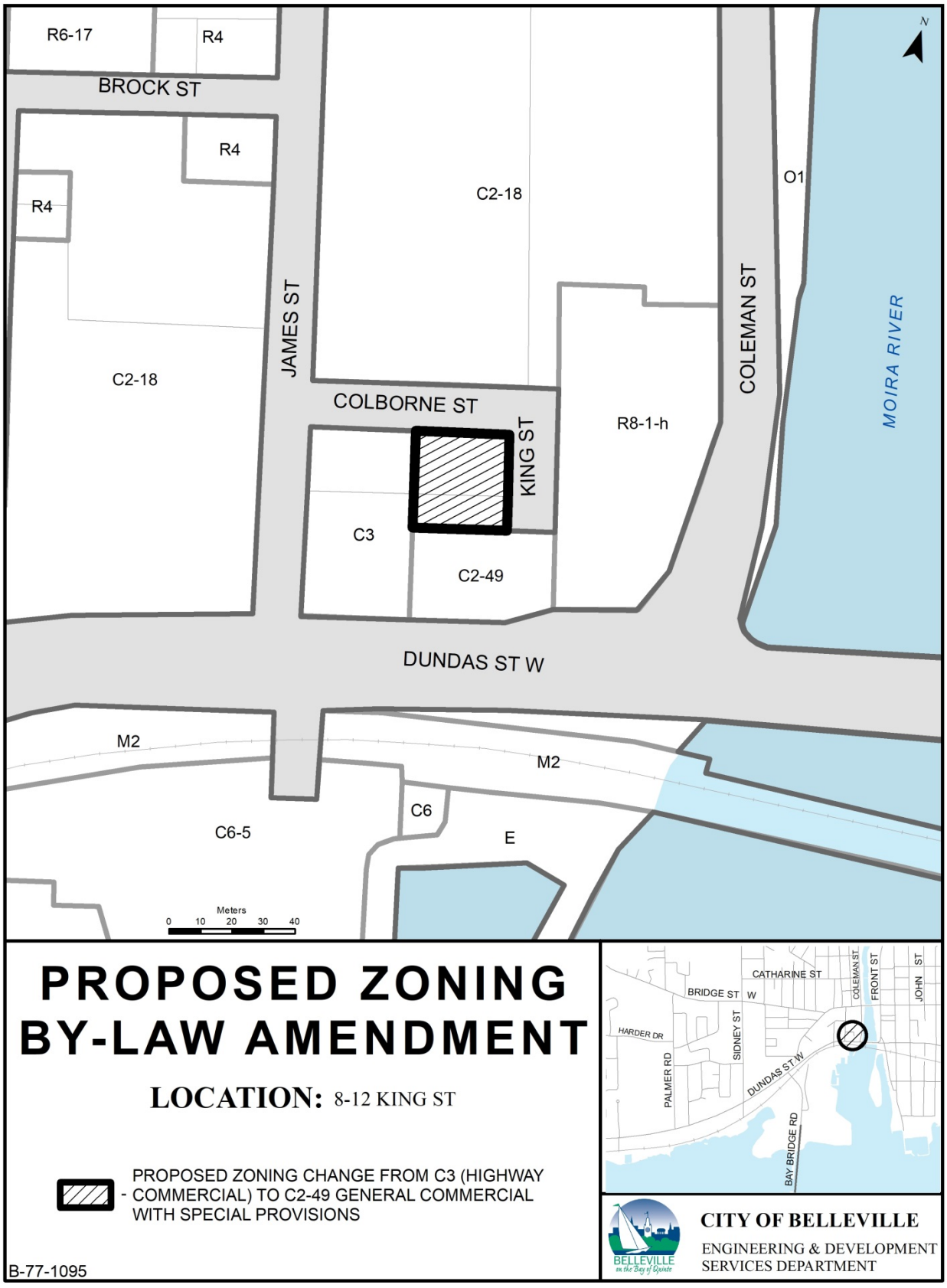
For more information contact the Planning Section, Engineering & Development Services Department, 2nd floor, Belleville City Hall, 169 Front Street, Belleville, K8N 2Y8 (Telephone: 613-967-3288).

As per the requirements of the Planning Act, this application is confirmed to be complete.

Matt MacDonald, Secretary
Planning Advisory Committee

DATED at the City of Belleville this 8th day of November, 2019.

APPENDIX 1


R6-17
R4
BROCK ST
R4
R4
C2-18
C2-18
JAMES ST
COLBORNE ST
KING ST
C3
C2-49
R8-1-h
COLEMAN ST
O1
MOIRA RIVER
N
DUNDAS ST W
M2
M2
C6
C6-5
E
Meters
0 10 20 30 40
PROPOSED ZONING BY-LAW AMENDMENT
LOCATION: 8-12 KING ST
PROPOSED ZONING CHANGE FROM C3 (HIGHWAY - COMMERCIAL) TO C2-49 GENERAL COMMERCIAL WITH SPECIAL PROVISIONS
B-77-1095
CATHARINE ST
BRIDGE ST W
COLEMAN ST
FRONT ST
JOHN ST
HARDER DR
SIDNEY ST
PALMER RD
DUNDAS ST W
BAY BRIDGE RD
CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT

City of Belleville

Engineering & Development Services Department
Policy Planning Section
Telephone: 613-967-3288
Fax: 613-967-3262

File No.: 12T-19003
File No.: B-77-1096

NOTICE OF COMPLETE APPLICATIONS AND PUBLIC MEETING
OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT APPLICATION
and DRAFT PLAN OF SUBDIVISION APPLICATION
Lots 8 & 9 Registered Plan No. 124
CITY COUNCIL PLANNING COMMITTEE
CITY HALL - COUNCIL CHAMBER
169 FRONT STREET
MONDAY, December 2, 2019 AT 5:30 P.M.

A Public Meeting, as noted above, will be held at City Hall in the Council Chambers (169 Front Street) on Monday, December 2, 2019 at 5:30 P.M. to consider an Official Plan amendment, an amendment to Zoning By-Law Number 3014, and a draft plan of subdivision for a property located at the southeast corner of Farnham Road and Scott Drive, which is known as **Lots 8 & 9 of Registered Plan No. 124**.

This property has frontage of 236 m on Farnham Road. In the Official Plan, the subject land is designated as “Residential”, “Open Space”, and “Environmental Protection”. The subject land is currently zoned Development (D-r) Zone and Hazard (H) Zone under Zoning By-Law 3014. A Location Map is shown on APPENDIX 1 which is attached.

The Applicant requests to adjust the boundaries of the “Residential” and “Open Space” designations in the Official Plan and to rezone the lands to:

- Low Density Residential Type 1 (R1) Zone with special provisions;
- Medium Density Residential (R3) Zone with special provisions;
- High Density Residential (R4) Zone with special provisions;
- Community Facility (CF) Zone
- Hazard (H) Zone

The residential zones will have special provisions to permit a range of housing types, densities, and setbacks.

An application for Draft Plan of Subdivision has also been received to request the subdivision of the 21.2 hectare parcel into 165 lots and blocks for the development of 367 residential units, along with internal roads, laneways, parkland and open space blocks.

If you wish to be notified of the decision of the City of Belleville or Belleville Planning Advisory Committee in respect of this application, you must submit a **written** request to Matt MacDonald, Secretary, Planning Advisory Committee in person or by mail at: Belleville City Hall, 169 Front Street, Belleville, K8N 2Y8, or by email at: mtmacdonald@city.belleville.on.ca.

If a person or public body would otherwise have an ability to appeal the decision of the City of Belleville to the Local Planning Appeal Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the City of Belleville before the by-law is passed, the person

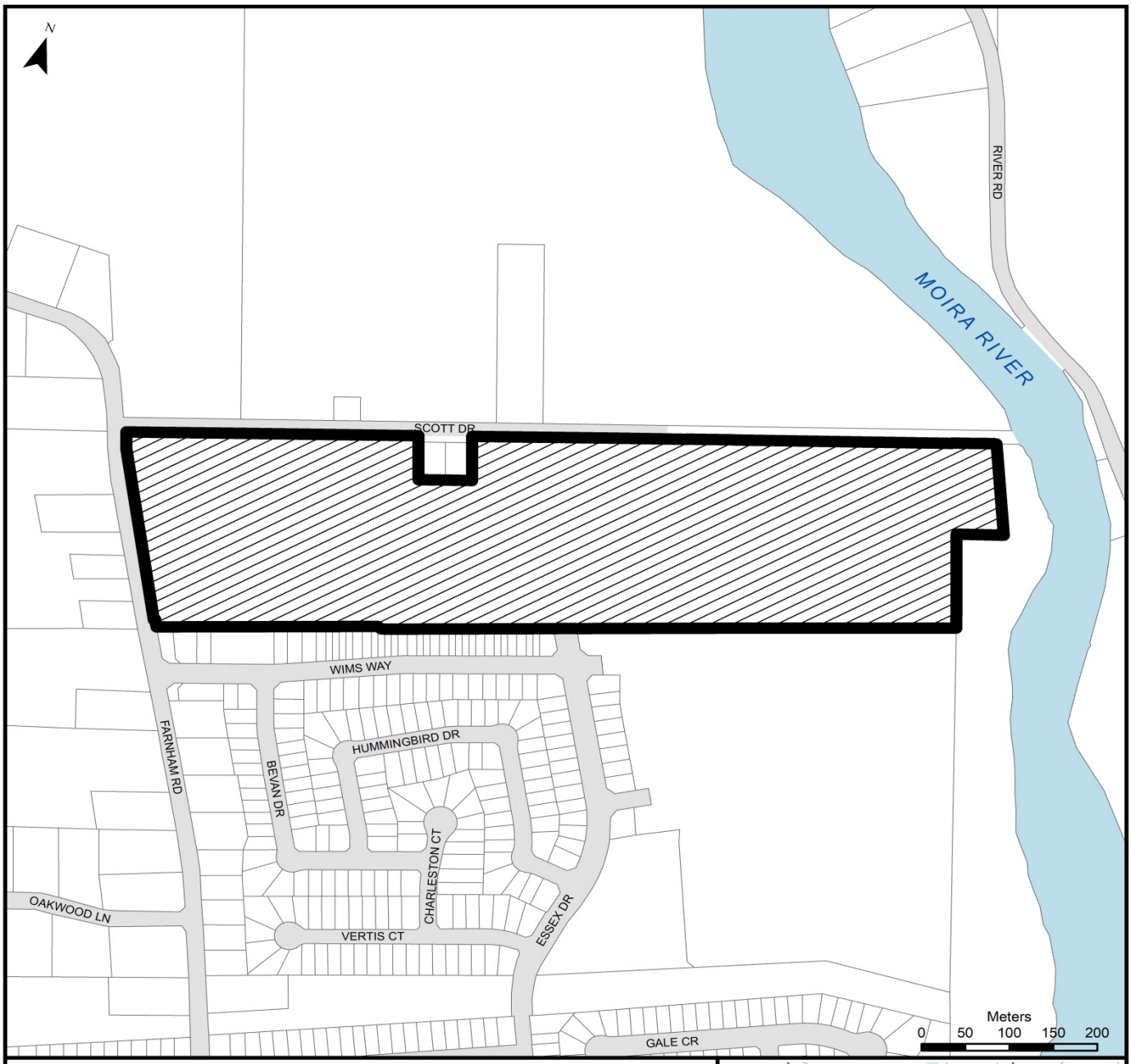
or public body is **not** entitled to appeal the decision and that person or public body may **not** be added as a party to the hearing of an appeal before the Local Planning Appeal Tribunal unless, in the opinion of the Tribunal, there are reasonable grounds to do so. Please be further advised that written submissions received prior to the public meeting may be made available to the Applicant.

For more information contact the Planning Section, Engineering & Development Services Department, 2nd floor, Belleville City Hall, 169 Front Street, Belleville, K8N 2Y8 (Telephone: 613-967-3288).

As per the requirements of the Planning Act, this application is confirmed to be complete.

Matt MacDonald, Secretary
Planning Advisory Committee

DATED at the City of Belleville this 8th day of November, 2019.

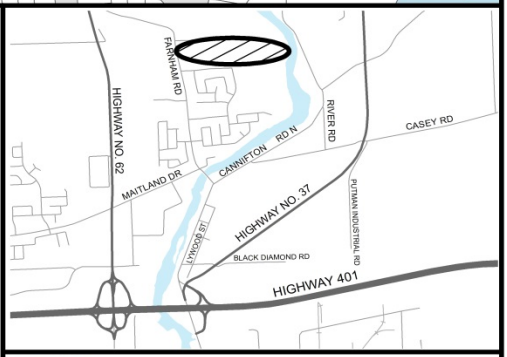


PROPOSED OFFICIAL PLAN, ZONING BY-LAW AMENDMENT AND DRAFT PLAN OF SUBDIVISION

LOCATION: FARNHAM RD & SCOTTS DR

- SUBJECT LANDS

B-77-1096 - B-50-3-30



CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT

APPROVAL BLOCK
DE& DS

CITY OF BELLEVILLE

Andrew Chan, Policy Planner
Engineering and Development Services Department

Report No. PP-2019-83
December 2, 2019

To: Belleville Planning Advisory Committee

Subject: Notice of Complete Application and Introductory Public Meeting for Application for Proposed Amendment to Zoning By-Law Number 10245, As Amended
199 Dundas Street East
City of Belleville
APPLICANT: Joseph Chacko
OWNER: MHSA Properties Ltd.

File: B-77-1094

Recommendation:

"That Report No. PP-2019-83 dated December 2, 2019 regarding Notice of Complete Application and Introductory Public Meeting for Application for Proposed Amendment to Zoning By-Law Number 10245, As Amended – 199 Dundas Street East, City of Belleville, County of Hastings be received as information, and;

That Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department."

Background:

The application for the proposed amendment to Zoning By-Law Number 10245 was received by the City of Belleville on October 30, 2019.

The initial public meeting is held in accordance with the requirements of the Planning Act. The purpose of this meeting is for Committee Members to formally hear and receive public comments. The intent of this statutory public planning meeting is to receive public feedback and incorporate it into a recommendation report from Staff.

The Applicant has indicated the intent of the rezoning is to permit the use of medical clinic located at 199 Dundas Street East.

The subject land is identified on the attached Location Map (Attachment #1). Site Details for the subject land:

Site Review	Description
Site Location	The subject land are municipally known as 199 Dundas Street East which is located south of Dundas Street East, east of South Forster Avenue, and west of Burnham Street
Site Size	1910.00 m²
Present Use	Office
Proposed Use	Medical Clinic
Belleville Official Plan Designation	Commercial Land Use
Present Zone Category	Highway Commercial (C3) Zone
Proposed Zone Category	Highway Commercial (C3) Zone with special provisions to include Medical Clinic as a permitted use
Land uses to the north	Single-detached dwellings
Land uses to the east	Business office
Land uses to the south	Parking lot
Land uses to the west	Restaurant, business office, and retail store

An aerial map was submitted with the application (Attachment #2). No other additional information, reports, or studies were provided with the rezoning application. This document has been available for public review at the Planning Department.

Proposal

The Application proposes to rezone the subject land from Highway Commercial (C3) Zone to Highway Commercial (C3) Zone with special provisions to include a medical clinic as a permitted use.

Provincial Policy Statement

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement. Planning Staff will consider the following policies in the PPS:

1.1.1 Healthy, liveable and safe communities are sustained by:

a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;

b) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

1.1.3.1 Settlement areas shall be the focus of growth and development, and

their vitality and regeneration shall be promoted.

1.7.1 Long-term economic prosperity should be supported by:

a) promoting opportunities for economic development and community investment-readiness;

Official Plan

The land is designated "Commercial" in the City's Official Plan (Attachment #3 – Official Plan Designation Map). Planning Staff use the policies within the Official Plan to make recommendations.

The Official Plan states that commercial land uses are dependent upon vehicular access. The property should have sufficient on-site parking that is integrated to ensure safe movement of vehicular and pedestrian traffic. Parking lots should be enhanced through appropriate landscaping and lighting, which should ensure public safety, oriented away from nearby residential properties and not interfere with visibility on public streets.

The subject land specifically falls within the Bayview Mall/Dundas Street East Corridor, which is identified as lands along Dundas Street East from the City Centre to Haig Road. Land uses in this corridor should generally be geared to service the community. Permitted uses include motels/hotels, conference facilities, restaurants, retail stores, personal service uses, automotive service uses, business, professional and administrative offices, recreational uses, places of entertainment, private clubs, theatres, community facilities, and all types of commercial services and parking lots. Additionally, commercial uses in the corridor should minimize adverse impacts on adjacent residential land uses.

The subject land also is within the Bayshore Planning Special Policy Area. To increase the recreational potential, the uses that are encouraged in this special policy area include open spaces, and compatible commercial, public facility and residential land uses. Development should be sensitive to issues of urban design, environmental conditions and the area's setting along the shores of the Bay of Quinte.

Zoning By-law

Currently, 199 Dundas Street East is zoned Highway Commercial (C3) Zone. The Application proposes to rezone the subject land to Highway Commercial (C3) Zone with special provisions to include a medical clinic as a permitted use.

The following uses are currently permitted on the subject land:

Highway Commercial (C3) Zone Permitted Uses	
• assembly hall;	• motor vehicle body shop, only if wholly enclosed;
• bank and/or trust company;	• motor vehicle rental agency;
• billiard parlour;	• motor vehicle repair garage;
• bowling alley;	• motor vehicle sales room and lot;
• coin-operated laundry;	• recreational vehicle sales and/or service outlet;
• dog kennel;	• retail store;
• drive-in restaurant;	• service shop;
• dry-cleaning establishment;	• tavern;
• eating establishment;	• theatre;
• hotel;	• business, professional, administrative and/or government offices;
• motel;	• public use.

Currently, the Highway Commercial (C3) Zone does not list medical clinic as a permitted use.

Zoning By-Law 10245 defines medical clinic as a building or portion of a building used solely for the purpose of consultation, diagnosis and treatment of patients by two or more legally qualified physicians, dentists, optometrists, chiropodists, chiropractors and/or drugless practitioners, together with their qualified assistant. A building for a medical clinic may include administrative offices, waiting rooms, examination rooms, treatment rooms, laboratories and/or pharmacies used in connection and forming part of the practises, but shall not include accommodation for inpatient care, operating rooms for major surgery.

Public Comments

On November 8, 2019 a written notice and location map was mailed by first class mail to all registered owners of land within 120 metres of the subject property. The notice provided information that a public meeting was scheduled for December 2, 2019.

Similarly, a sign was placed on the subject land notifying the general public that a public meeting was scheduled for December 2, 2019.

At the time of writing this report, no correspondence from the public has been received by the City regarding this application.

Staff and Agency Comments

External Agency Circulation

The subject application was circulated for comment to the Algonquin &

Lakeshore Catholic School Board, the Hastings & Prince Edward District School Board, Hastings and Prince Edward Health Unit, Bell Canada, Canada Post, Ontario Power Generation, Union Gas, Elexicon Energy, Hydro One, TransCanada Pipeline, Enbridge Pipelines, Trans-Northern Pipelines, MPAC, Quinte Conservation and the Health Unit.

Canadian Pacific Limited has also been notified of this application due to the lands' proximity to their railway line.

The Ministry of Transportation and Hydro One have provided correspondence and they have no concerns.

At the time of writing this report, no other comments or concerns have been received regarding this application.

Internal Department Circulation

The subject application was circulated for comment to the Belleville Fire Department, Belleville Police Service, the General Manager of Transportation & Operations Department, General Manager of Environmental Services, the Director of Recreation, Culture and Community Services, the Manager of Parks & Open Spaces, the Chief Administrative Officer, the Manager of Economic & Strategic Initiatives, the City Clerk, and the Chief Building Official.

Belleville Fire Department has provided correspondence and they have no concerns.

At the time of writing this report, no other comments have been received regarding this application.

Considerations:

Public

Circulation to the public complies with the requirements of the Planning Act, R.S.O. 1990.

Financial

The fees of the application have been received by the City.

Impact on and input from other Departments/Sources

Circulation of this application to other departments/agencies has occurred.

Strategic Plan Alignment

The City of Belleville's Strategic Plan identifies nine strategic themes including, Industrial and Commercial Development, and Community Health, Safety and Security.

Strategic objectives of the Industrial and Commercial Development theme include:

- Ensure suitable serviced employment lands are available to meet the needs of all potential industrial and commercial investments
- Market the City's unique strengths to attract leading-edge industries that provide high paying job opportunities
- Encourage remediation and redevelopment of underutilized lands
- Support initiatives that create an available skilled labour force, including programs to retain youth in the community

Strategic objectives of the Community Health, Safety and Security theme include:

- Support and advocate for the establishment of responsive public health services and accessible medical care
- Encourage development of a viable social safety net

Conclusion:

Comments received at this public meeting, as well as subsequent written comments will be considered by the Engineering and Development Services Department in analysis of the application received to amend the City of Belleville Zoning By-law 10245. A recommendation report will be brought forward upon receipt of all agency and public comments.

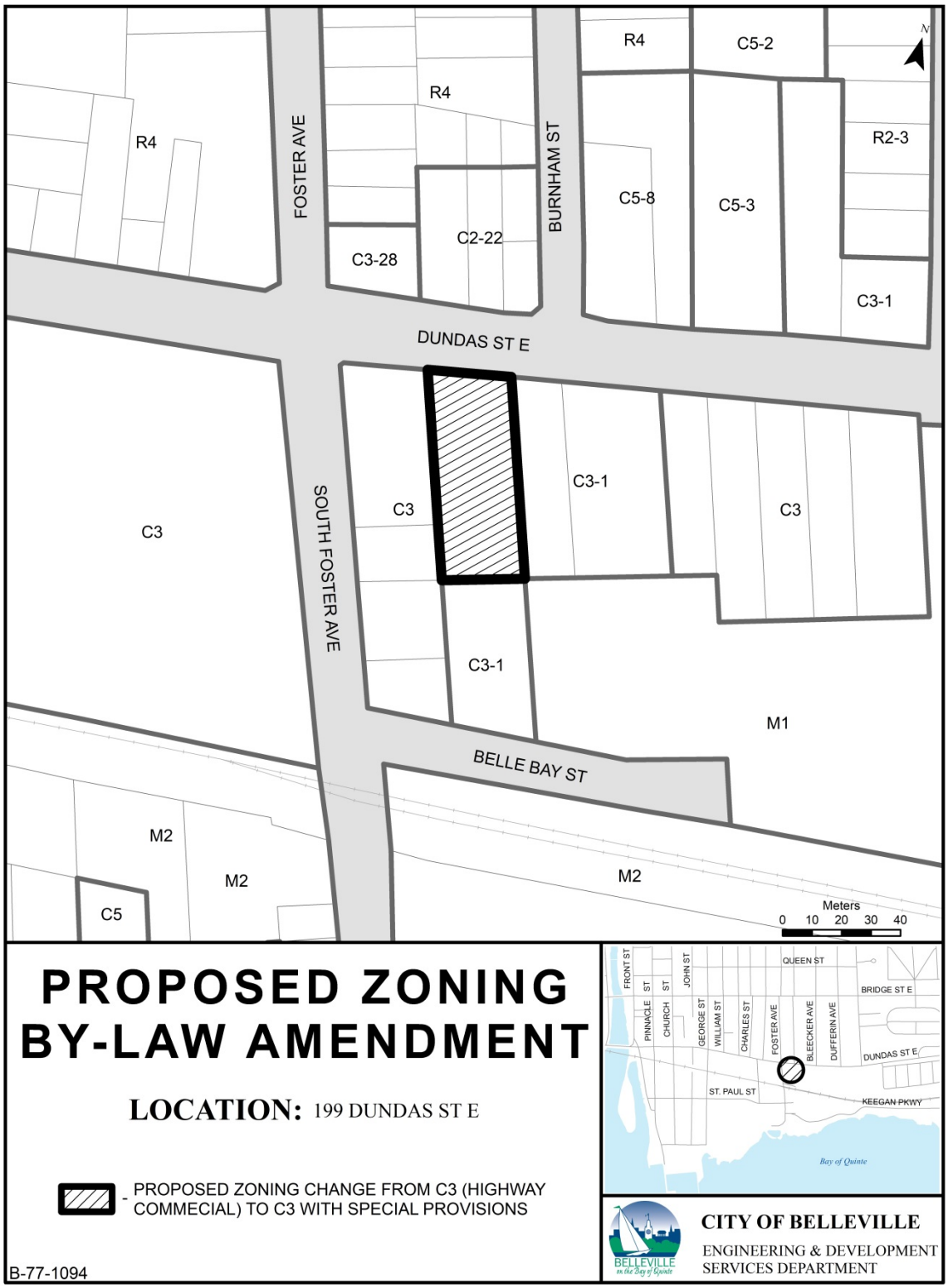
Respectfully submitted,

Andrew Chan, BES
Policy Planner, Policy Planning
Engineering and Development Services Department

Attachments

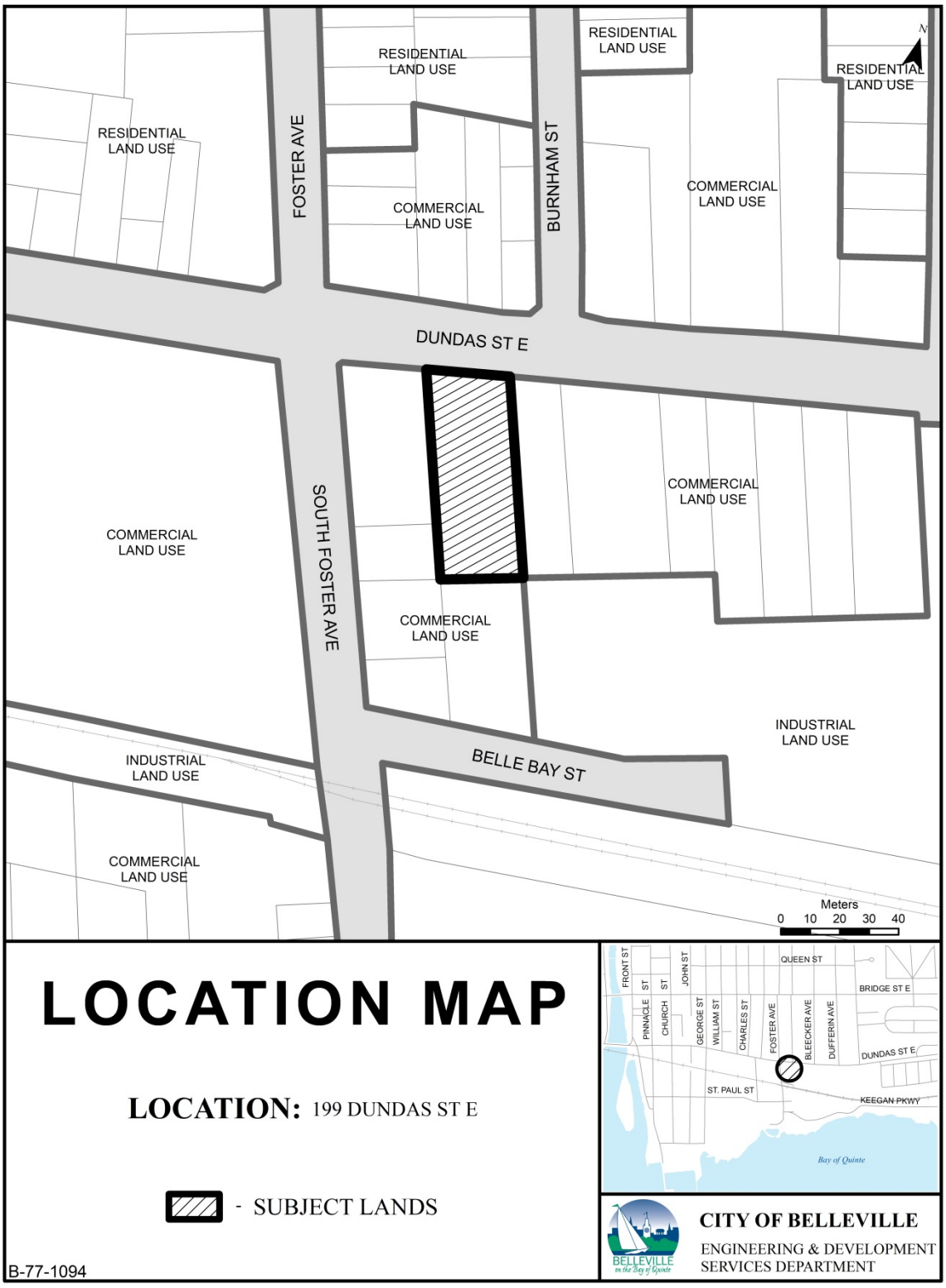
Attachment #1 – Location Map
Attachment #2 – Aerial Map
Attachment #3 – Official Plan Designation

Attachment #1 – Location Map



Attachment #2 – Aerial Map

Attachment #3 – Official Plan Designation



APPROVAL BLOCK
DE& DS

CITY OF BELLEVILLE
Thomas Deming, Principal Planner
Engineering and Development Services Department
Report No. PP-2019-84
December 2, 2019

To: Belleville Planning Advisory Committee

Subject: Notice of Complete Application and Introductory Public Meeting for Application for Proposed Amendment to Zoning By-Law 10245 RE: 8 & 12 King Street
City of Belleville
OWNER/APPLICANT: UCB Canada
AGENT: Investment Management Syndicate Ltd.

File: B-77-1095

Recommendation:

That Report No. PP-2019-84 dated December 2, 2019 regarding Proposed Amendment to Zoning By-Law Number 10245, as Amended – 8 & 12 King Street, City of Belleville, County of Hastings be received as information, and;

That Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department.

Background:

A rezoning application for 8 & 12 King Street was received on October 30, 2019. The application proposes to develop the site as a parking lot associated with the building at 2 Dundas Street. The application is in relation to severance application B27/19 which gave consent to sever the subject land. The severance has been given provisional approval until the conditions of the severance are met, the appeal period is over, and the deed has been filed.

The initial public meeting is held in accordance with the requirements of the Planning Act. The purpose of this meeting is for Committee Members to formally hear and receive public comments. The intent of this statutory public planning meeting is to receive public feedback and incorporate it into a recommendation report from staff.

The subject land is identified on the attached Location Map (Attachment #1).

Site details for the subject land:

Site Review	Description
Site Location	The subject land is municipally known as 8 & 12 King Street and located east of James Street, north of Dundas Street West, and south of Colborne Street
Site Size	910.5 square metres
Present Use	Vacant
Proposed Use	Parking lot
Belleville Official Plan Designation	City Centre
Present Zone Category	C3 – Highway Commercial
Proposed Zone Category	C2 – General Commercial Zone with special provisions to permit a parking lot associated with the property located at 2 Dundas Street
Land uses to the north	Parking lot for court house
Land uses to the east	Vacant (future residential building)
Land uses to the south	Vacant (future mixed use building)
Land uses to the west	Parking lot

In support of the application, the following was submitted:

- A survey plan.

This document is included with this report as Attachment #2 and has been available for public review at the Planning Department.

Proposal

The Applicant proposes to rezone the subject lands from Highway Commercial (C3) Zone to General Commercial (C2) Zone with special provisions to permit a parking lot associated with the property located at 2 Dundas Street.

Provincial Policy Statement

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement.

Planning Staff will consider the following policies in the PPS:

1.1.1 Healthy, livable and safe communities are sustained by:

a) promoting efficient development and land use patterns which

sustain the financial well-being of the Province and municipalities over the long term;

b) accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs;

c) avoiding development and land use patterns which may cause environmental or public health and safety concerns;

d) avoiding development and land use patterns that would prevent the efficient expansion of settlement areas in those areas which are adjacent or close to settlement areas;

e) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

f) improving accessibility for persons with disabilities and older persons by identifying, preventing and removing land use barriers which restrict their full participation in society;

g) ensuring that necessary infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities are or will be available to meet current and projected needs; and

h) promoting development and land use patterns that conserve biodiversity and consider the impacts of a changing climate.

1.1.3.2 Land use patterns within settlement areas shall be based on:

a) densities and a mix of land uses which:

1. efficiently use land and resources;

2. are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;

Official Plan

The current Official Plan was adopted by City Council on June 18, 2001 and approved by the Ministry of Municipal Affairs and Housing on January 7, 2002. Since 2002, a significant number of new and updated policies and legislation has occurred at the provincial level. The City is currently

undertaking a Municipal Comprehensive Review and update to the policies of the Official Plan to ensure they comply with current provincial policies and legislation. The City will have to comply with the province's new legislation, regulations, and policies when updating the Official Plan.

Planning Staff will use the policies within the Official Plan to make a recommendation. The land is designated "City Centre" in the City's Official Plan (Attachment #3 – Official Plan Designation Map).

Staff will consider the following Official Plan policies in relation to this application:

3.8.1 City Centre Permitted Uses

The uses permitted in the City Centre shall include a broad range of commercial, residential and community facility uses, as follows:

a) Commercial and employment uses, including hotels, conference facilities, retail uses, business, professional and administrative offices, outdoor cafes and restaurants, places of entertainment, private clubs, theatres, art galleries, marinas, recreational uses, all types of commercial services and parking lots.
b) Medium and high density residential uses including seniors' residences and retirement communities, either as main uses or within mixed use developments.

3.8.4 Parking Strategies

a) Vehicular parking is important to the success of the City Centre. The provision of public and private parking facilities is encouraged to meet the needs of all uses in the City Centre. In recognition of the concentration of uses and the frequency of multi-purpose trips to the City's core, parking standards in some parts of the City Centre may be reduced.

b) Major new development should be encouraged to provide on-site parking; this is particularly important for residential uses. However, it may not always be practical or appropriate to provide on-site parking due to location or access concerns; in such instances, the cash-in-lieu provisions as set out in Section 8.1.5 b) of this Plan may be employed at the discretion of the Municipality.

Zoning By-law

The subject land is currently zoned Highway Commercial (C3) Zone. The application proposes to amend the zoning to General Commercial (C2) Zone

with special provisions to permit a parking lot associated with the property located at 2 Dundas Street.

The property located at 2 Dundas Street is zoned General Commercial (C2-49) Zone. The C2-49 site specific zone states parking areas are not required to be provided on the same lot on which the main use is located. There is not currently a zone in By-Law 10245 that permits private parking associated with another property as the main use on a lot.

The General Commercial (C2) Zone lists “public parking area” as a permitted use. The application proposes a use similar to this without the public component.

Public Comments

On November 8, 2019 a written notice and location map was mailed by first class mail to all registered owners of land within 120 metres of the subject property. The notice provided information that a public meeting was scheduled for December 2, 2019.

Similarly, a sign was placed on the subject lands notifying the general public that a public meeting was scheduled for December 2, 2019.

Both notices state that additional information is available in the City’s planning files for review by any member of the public during business hours.

At the time of writing this report, no correspondence from the public has been received by the City.

Staff and Agency Comments

External Agency Circulation

The subject application was circulated for comment to the Algonquin & Lakeshore Catholic School Board, the Hastings & Prince Edward District School Board, Hastings and Prince Edward Health Unit, Bell Canada, Canada Post, Ontario Power Generation, Union Gas, Veridian Connections, Hydro One, TransCanada Pipeline, Enbridge Pipelines, Trans-Northern Pipelines, MPAC, Quinte Conservation and the Health Unit.

Hydro One and the Ministry of Transportation have provided that they have no objections to the application.

At the time of writing this report, no other comments or concerns have been received regarding this application.

Internal Department Circulation

The subject application was circulated for comment to the Belleville Fire Department, Belleville Police Service, the Development Engineer, the General Manager of Transportation & Operations Department, General Manager of Environmental Services, the Director of Recreation, Culture and Community Services, the Manager of Parks & Open Spaces, the Chief Administrative Officer, the Manager of Economic & Strategic Initiatives, the City Clerk, and the Chief Building Official.

Belleville Fire Department have provided they have no objections to the application.

The Approvals Section will identify the appropriate mechanism to ensure the parking on the subject land remains associated with the use at 2 Dundas Street.

At the time of writing this report, no other comments have been received regarding this application.

Considerations:

Public

Circulation to the public complies with the requirements of the Planning Act, R.S.O. 1990.

Financial

The fees of the application have been received by the City.

Impact on and input from other Departments/Sources

Circulation of this application to other departments/agencies has occurred.

Strategic Plan Alignment

The City of Belleville's Strategic Plan identifies nine strategic themes including Industrial and Commercial Development, Residential Development, City Centre Revitalization, Culture and Recreation, and Tourism and Waterfront Revitalization.

Strategic objectives of the Residential Development theme include:

- Plan for residential growth to meet our needs for 20 years and designate sufficient land in our planning documents to accommodate residential

growth for 10 years

- Provide for a variety of housing forms to reflect our changing demographics and need for affordability

Strategic objectives of the City Centre Revitalization theme include:

- Encourage the creation of a vibrant downtown, accented with pedestrian-friendly services and unique residential and commercial opportunities.
- Promote the City‘s core as a centre for government, financial, legal and related services

Conclusion:

Comments received at this public meeting, as well as subsequent written comments will be considered by the Engineering and Development Services Department in analysis of the application received to amend the City of Belleville Zoning By-law 10245. A recommendation report will be brought forward upon receipt of all agency and public comments. In addition, staff will research and review additional resources to aid in providing a thorough recommendation.

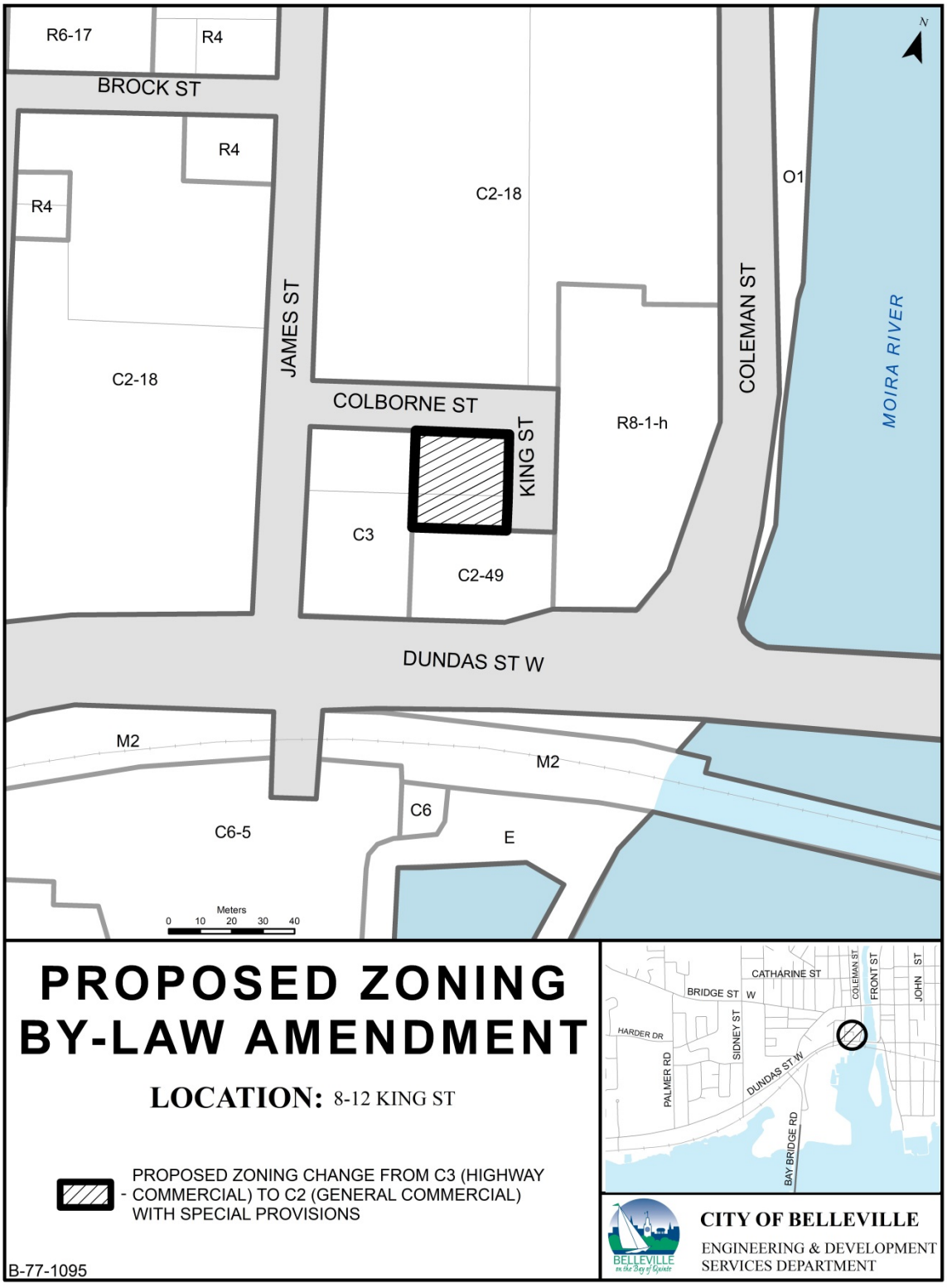
Respectfully submitted

_____
Thomas Deming
Principal Planner, Policy Planning
Engineering and Development Services Department

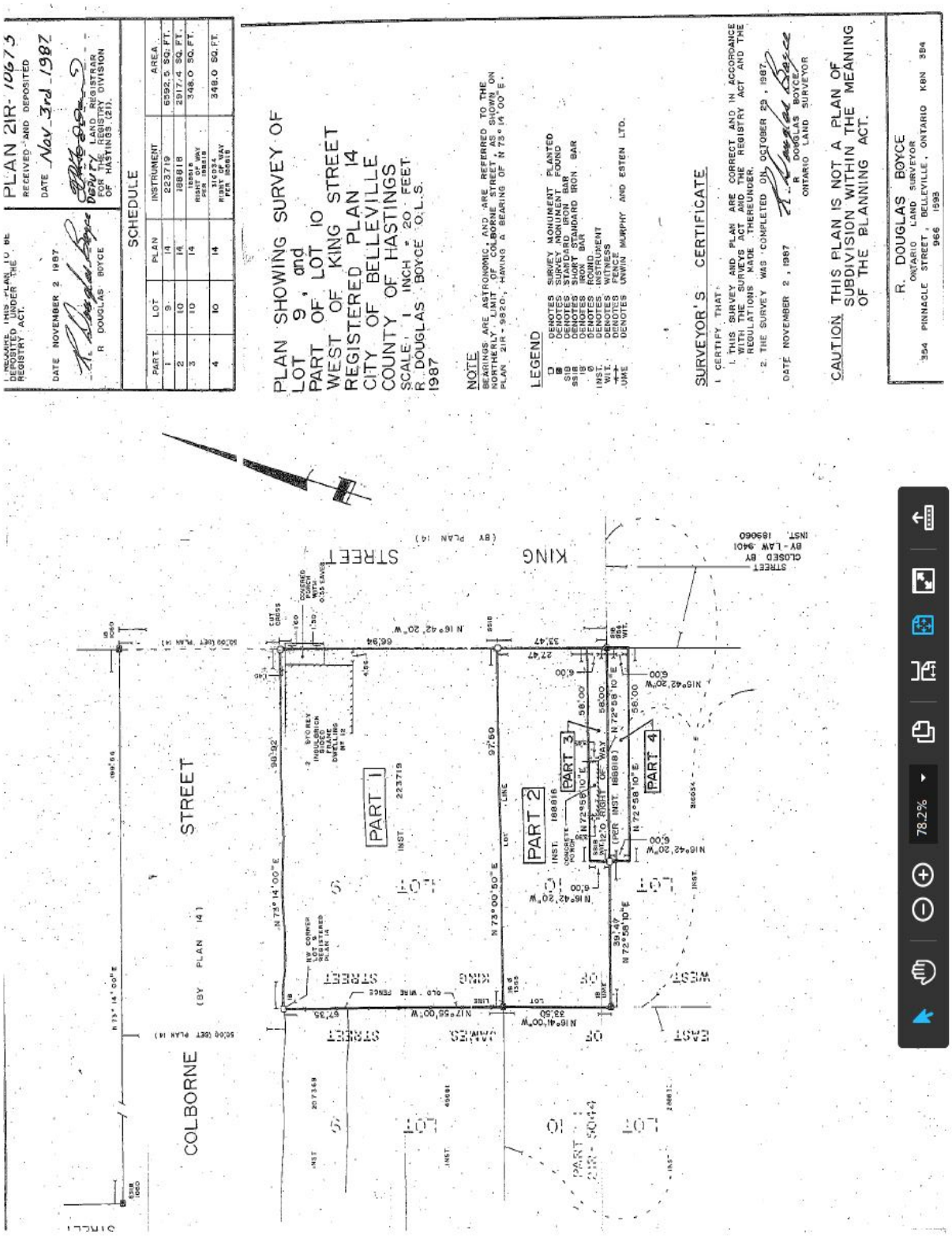
Attachments

Attachment #1 – Location Map
Attachment #2 – A survey plan
Attachment #3 – Official Plan Designation Map

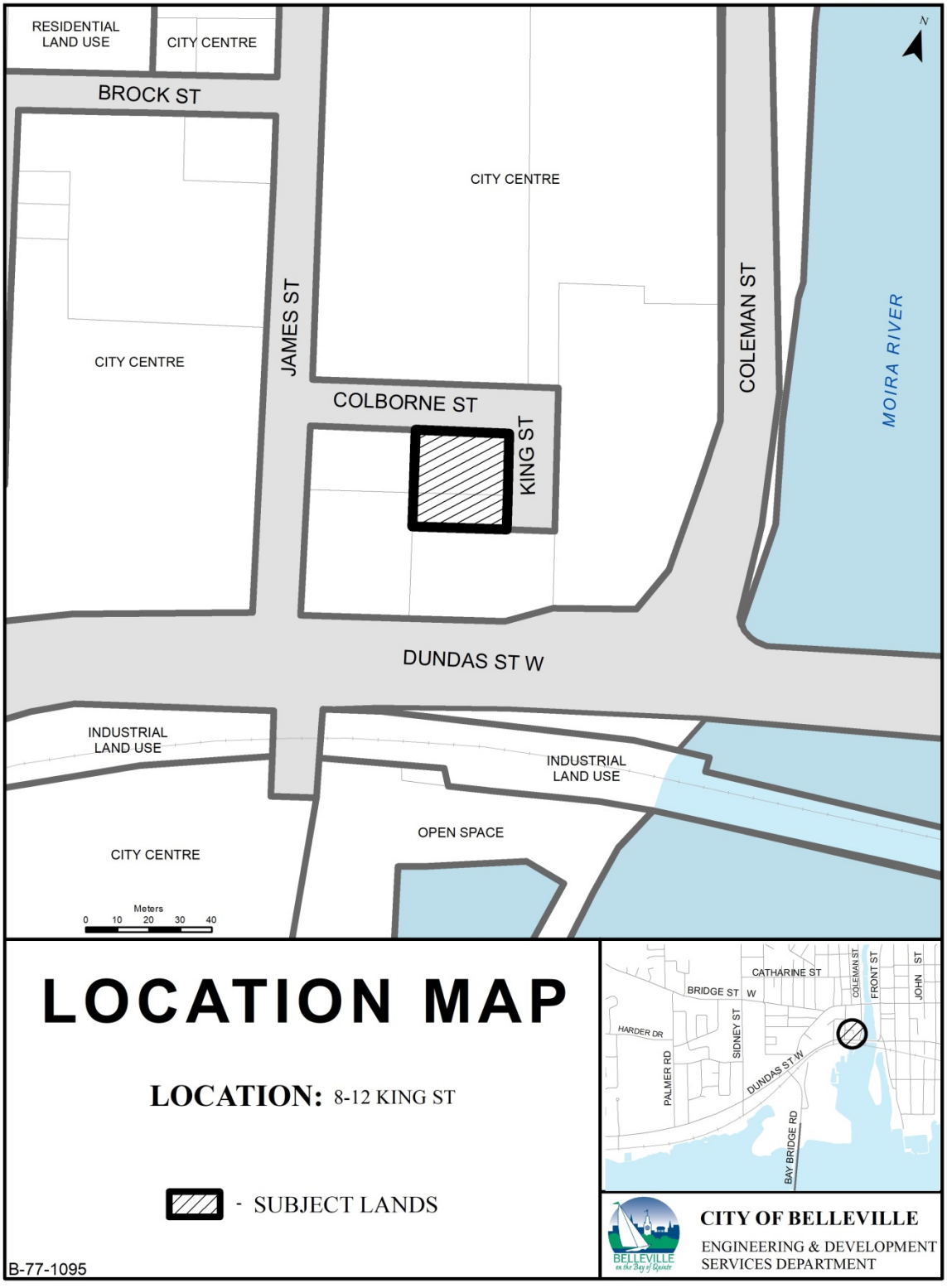
Attachment #1 – Location Map



Attachment #2 – Survey Plan



Attachment #3 – Official Plan Designation Map



APPROVAL BLOCK
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CITY OF BELLEVILLE

Thomas Deming, Principal Planner & Greg Pinchin, Manager of Approvals
Engineering and Development Services Department
Report No. PP-2019-85
December 2, 2019

To: Belleville Planning Advisory Committee

Subject: Notice of Complete Application and Introductory Public Meeting for Proposed Amendment to the Official Plan and Zoning By-Law Number 3014 and Draft Plan of Subdivision; Lots 8 & 9 of Registered Plan No. 124, City of Belleville, County of Hastings

OWNER: Andy Geertsma, GCL Developments Ltd.
APPLICANT: GCL Developments Ltd.
AGENT: Lorelei Jones, Macaulay Shiomi Howson Ltd.

Files: B-77-1096 & 12T-19003

Recommendation:

"That Report No. PP-2019-85 dated December 2, 2019 regarding Notice of Complete Application and Introductory Public Meeting for Proposed Amendment to the Official Plan and Zoning By-Law Number 3014, and Draft Plan of Subdivision; Lots 8 & 9 of Registered Plan No. 124, City of Belleville, County of Hastings be received as information, and;

That Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department."

Background:

An application for the proposed amendment to the Official Plan and Zoning By-law Number 3014 and Draft Plan of Subdivision was received by the City of Belleville on October 29, 2019. The application proposes 367 residential units of various types and densities, a park, open space, and walkways.

The initial public meeting is held in accordance with the requirements of the Planning Act. The purpose of this meeting is for Committee Members to formally hear and receive public comments. The intent of this statutory public planning meeting is to receive public feedback and incorporate it into a recommendation report from Staff.

The subject land is identified on the attached Location Map (Attachment #1).

Site details for the subject land:

Site Review	Description
Site Location	Lots 8 & 9 of Registered Plan No. 124 located at the southeast corner of Farnham Road and Scott Drive
Site Size	21.2 hectares
Present Use(s)	Predominately grass covered with a tree covered area
Proposed Use	367 residential units, a park, open space and walkways
Belleville Official Plan Designation	• Residential Land Use • Open Space • Environmental Protection
Present Zone Category	• Development (D-r) Zone • Hazard (H) Zone
Proposed Zone Category	• Low Density Residential Type 1 (R1) Zone with special provisions; • Medium Density Residential (R3) Zone with special provisions; • High Density Residential (R4) Zone with special provisions; • Community Facility (CF) Zone • Hazard (H) Zone
Land uses to the north	Farmland, single detached dwellings
Land uses to the east	Moira River valley
Land uses to the south	Single detached and townhouse dwellings
Land uses to the west	Estate residential lots and farmland

In support of the application, the following was submitted:

- Riverstone Draft Plan of Subdivision Preliminary Design prepared by Ainley Group dated October 21, 2019 (Attachment #2)
- Draft Official Plan Amending By-Law received October 30, 2019 (Attachment #3)
- Draft Zoning By-Law 3014 Amending By-Law received October 30, 2019 (Attachment #4)
- Planning Justification Report prepared by Macaulay Shiomi Howson Ltd. dated November, 2019 (Attachment #5)
- Draft Environmental Impact Study – Cannif North Lands, City of Belleville prepared by Ainley Group dated August 9, 2019 (Attachment #6)
- Riverstone Development Servicing Brief to Support Draft Plan of Subdivision, Zoning By-Law Amendment, and Official Plan Amendment Applications prepared by Ainley Graham & Associates dated October 2019 (Attachment #7)

- Riverstone Development Stormwater Management Brief to Support Draft Plan of Subdivision, Zoning By-Law Amendment, and Official Plan Amendment Applications prepared by Ainley Graham & Associates dated October 2019 (Attachment #8)
- Riverstone Subdivision Application – Traffic Review Memorandum prepared by Ainley Group dated October 30, 2019 (Attachment #9)
- Riverstone Draft Plan and Rezoning Application – Phase I/II ESA Summary Memorandum prepared by Ainley Group dated October 30, 2019 (Attachment #10)
- Riverstone Development Preliminary Watermain Design Brief for Proposed Draft Plan of Subdivision, Zoning By-Law Amendment, and Official Plan Amendment Applications prepared by Ainley Graham & Associates dated October 2019
- Conceptual Street Tree Design and associated Landscape Design Drawings prepared by Wentworth Landscapes dated October 29, 2019 and November 6, 2019
- Riverstone Zoning Chart (for Proposed Amendments)
- Various photos of the subject property

These documents have been available for public review at the Planning Department.

Proposal

In the Official Plan, the subject land is designated as “Residential Land Use” and “Open Space”. The application proposes to replace part of the Residential land with Open Space and part of the Open Space land with Residential land in order to locate the open space area in a more central location within the development.

The Applicant requests a rezoning of the subject lands from Development (D-r) Zone and Hazard (H) Zone to the following zones:

- Low Density Residential Type 1 (R1) Zone with special provisions;
- Medium Density Residential (R3) Zone with special provisions;
- High Density Residential (R4) Zone with special provisions;
- Community Facility (CF) Zone
- Hazard (H) Zone

The purpose of the rezoning of the subject lands in conjunction with the application for subdivision approval is to permit the following:

- Up to 79 single detached lots with frontages of 11 m (36 ft) and up;
- 30 single detached lots with frontages ranging between 8.5 (28 ft) and 10.5 m (34.5 ft) m and laneway access;
- 4 semi-detached lots (8 units) with 9.8 m (32 ft) frontages and

laneway access;
- 48 townhouse lots with 6.7 m (22 ft) frontages and laneway access;
- 66 townhouse lots with 6.0 m (20 ft) frontages;
- 63 bungalow townhouses with 7.5 m (25 ft) frontages;
- 1 medium density block with approximately 35 units;
- 1 condominium block with approximately 42 townhouse units;
- Open Space block containing the wetlands and spring plus a 30 m setback from the wetland and a 15 m setback from the spring; and
- Parkette/access to wetland.

It is noted that Scott Drive abuts the northern boundary of the proposed development. Due to the proposed realignment of Farnham Road, staff has requested and the developer has proposed to close the Scott Drive access to Farnham Road and instead incorporate Scott Drive into the subdivision's internal street network. Details may be finalized through draft plan conditions of approval.

The City of Belleville Farnham Road Master Plan completed in 2015 notes the closure of the Scott Drive access to Farnham Road, with access relocated to a future road to the south. The preparation of the Master Plan followed a Municipal Class Environmental Assessment process which is an approved process under the Environmental Assessment Act. Public consultation was a key component of the study.

Provincial Policy Statement

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement.

Planning Staff will consider the following policies in the PPS:

1.1.1 Healthy, liveable and safe communities are sustained by:

a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;

b) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

1.1.3.1 Settlement areas shall be the focus of growth and development, and their vitality and regeneration shall be promoted.

1.1.3.2 Land use patterns within settlement areas shall be based on:

a) densities and a mix of land uses which:

1. efficiently use land and resources;

2. are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;

3. minimize negative impacts to air quality and climate change, and promote energy efficiency;

4. support active transportation;

5. are transit-supportive, where transit is planned, exists or may be developed.

1.1.3.4 Appropriate development standards should be promoted which facilitate intensification, redevelopment and compact form, while avoiding or mitigating risks to public health and safety.

1.1.3.6 New development taking place in designated growth areas should occur adjacent to the existing built-up area and shall have a compact form, mix of uses and densities that allow for the efficient use of land, infrastructure and public service facilities.

1.4.3 Planning authorities shall provide for an appropriate range and mix of housing types and densities to meet projected requirements of current and future residents of the regional market area.

Official Plan

The current Official Plan was adopted by City Council on June 18, 2001 and approved by the Ministry of Municipal Affairs and Housing on January 7, 2002. Since 2002, a significant number of new and updated policies and legislation have occurred at the provincial level. The City undertook a Municipal Comprehensive Review and the policies of the Official Plan are currently being updated to ensure they comply with current provincial policies and legislation. The City will have to comply with the province's new legislation, regulations, and policies when updating the Official Plan.

Planning Staff will use the policies within the Official Plan to make a recommendation. The land is designated Residential Land Use, Environmental Protection, and Open Space in the City's Official Plan. The Residential lands are where the housing will be directed. The Open Space and Environmental Protection lands on the east portion of the lands contain the Corbyville Provincially Significant Wetland, a 50 metre protection area

from this PSW, and parkland featuring a trail system. This trail system will eventually connect to the large trail system adjacent to the Moira River (See Attachment #11 – Official Plan Designation Map).

The application proposes to adjust the boundaries for part of the Residential land with Open Space and part of the Open Space land with Residential land in order to locate the open space area in a more central location with the development. The Environmental Protection designation will remain unchanged for the Corbyville Provincially Significant Wetland to protect this area.

Policies that will be considered include:

2.2.4 Settlement Patterns

The urban service area will be the focus of the majority of future residential growth and non-residential development.

3.5.3 Significant Wetlands and the Habitat of Endangered and Threatened Species

b) No new development within provincially significant wetlands or within significant portions of the habitat of endangered and threatened species, or the expansion or redevelopment of existing development within such areas (excluding established agricultural activities) shall be permitted. Conservation activities associated with maintaining and restoring wetlands and natural habitats of threatened species are strongly encouraged by this Plan.

3.6.1 Open Space Permitted Uses

Generally, open space uses would include local or neighbourhood parks, community parks, and regional parks. Parks can also be defined by their primary function, as either active or passive open space; many parkland areas have a combination of both active and passive functions.

3.6.2 Open Space Policies

c) Trail development is an important component to the development of an open space system and the promotion of the community's quality of life. Trails that connect shoreline areas, valleys, existing parks or other important physical or man-made features should be developed wherever possible but must be planned and designed in such manner that respects the interests of abutting property owners.

h) All open space areas should have safe pedestrian access and circulation

on-site.

3.10.2 Residential Policies

a) Residential development within areas designated Residential land use should be permitted to occur at various densities within the City to ensure a full range of housing forms at different sizes and styles that meets the needs of all citizens is provided.
b) The type and arrangement of dwellings and densities are important to the character of the City and specific residential neighbourhoods. Ideally all neighbourhoods should contain a mixture of dwelling types at different densities, but in some cases this is not possible nor is it desirable; some neighbourhoods therefore may consist predominantly of one form of housing whereas other neighbourhoods would have greater variety. Care should be exercised however to not create areas of excessively high densities without ample supply of municipal services and community facilities to meet the needs of such a neighbourhood.

c) This Plan supports the development of affordable housing, and ideally all residential neighbourhoods should have a variety of housing types at various levels of affordability.

d) When allocating or determining the preferred locations for high density residential development, Council should be guided by the following principles:

i) The lands should have direct frontage on or immediate access to arterial or major collector roads; developments with access only to collector streets should generally be smaller scale.

ii) The main access routes to such developments should not be through areas of low density residential development.

iii) The preferred locations for large scale high density residential developments would be along major arterial streets or at major intersections where access to two or more major transportation corridors is available.

iv) High density residential development should be directed to areas which are adequately serviced with open space and other required community facilities and services, all of which should be of sufficient size to meet the needs of the residents of the housing development.

v) While not a prerequisite, a preferred location for large scale high density residential development would be in close proximity to or adjacent to non-residential land uses which service the residential

area (neighbourhood commercial uses, schools, parks, churches).

vi) High density residential development is a preferred housing form to be established immediately abutting a non-residential land use in another land use category, or along very high traffic corridors.

i) This Plan supports the development of all forms of housing in all forms of tenure, being freehold, rental, cooperative, and condominium.

Zoning By-law

The Applicant requests a rezoning of the subject land from Development (D-r) Zone and Hazard (H) Zone to the following zones:

- Low Density Residential Type 1 (R1) Zone with special provisions;
- Medium Density Residential (R3) Zone with special provisions;
- High Density Residential (R4) Zone with special provisions;
- Community Facility (CF) Zone
- Hazard (H) Zone

The following chart summarizes the proposed zoning provisions that are requested:

Zone	Lot Frontage (Min)	Lot Area (Min)	Front Yard Depth (Min)	Rear Yard Depth (Min)	Interior Side Yard Width (Min)	Exterior Side Yard Width (Min)	Lot Coverage All Buildings (Max)
R1 - XX Single Detached	11.0 m, 12.2 m on corner lot	340 m²	6.0 m	7.6 m	1.2 m on one side & 0.6 m on other	2.4 m	45%
R3-X Laneway Singles, Semis and Townhouses	Singles & Semis: 8.5 m & 9.7 m on corner lot; Townhouse: 6.7 m & 9.1 m on corner lot	Singles & Semis: 270 m²; Townhouse: 210 m²	3.0 m	6.7 m	1.2 m one side, 0.6 m on other; Semis & Townhouse:1.2 m, 0 m where attached	2.4 m	Singles & Semis: 65%; Townhouse: 75%
R3-Y Singles, Semis, Townhouses and Bungalow Townhouses	Singles: 11 m & 12.2 m on corner lot; Semis: 7.5 m & 8.7 m on corner lot Townhouse: 6.0 m & 9.1 m on corner lot; Single	Singles: 340 m²; Semis: 230 m²; Townhouse: 180 m²; Single storey Townhouse: 230 m²	6.0 m	7.0 m	Singles: 1.2 m one side & 0.6 m on other; Semis & Townhouses: 1.2 m, 0 m where attached	2.4 m	Singles: 45%; Semis: 48%; Townhouse: 48%; Single storey Townhouse: 56%

	storey Townhouse: 7.5 m & 9.9 m on corner lot						
R3-Z Condo Townhouses	15.0 m for the condo lot	1 wall attached: 232 m²; more than 1 wall attached: 105 m²	6.0 m	6.0 m	1.2 m, 0 m where attached	2.4 m	45%
R4-X Condo Townhouses &/or Apartment	Row dwelling: 6 m; Apartment: 30 m	4,200 m²	6.0 m	7.0 m	Row dwelling 1.2 m, 0 m where attached Apartment: 2.4 m	2.4 m	Row dwelling: 45% Apartment: 35%

For the lots within the R3-X Zone, the following provisions are requested for an accessory building to be used as a private garage with rear lane access:

- Minimum Distance to the rear of dwelling: 4.6 m
- Minimum Distance from the interior side lot line: 0.6 m on one side (except where there is an attached wall) and 2.1 m on the other side
- Minimum Distance from the exterior side lot line: 2.4 m
- Minimum Distance to the rear lot line: 0.6 m
- Notwithstanding the definition of Accessory Building or Structure, an accessory building to be used as a garage may be attached to the dwelling subject to the following regulations:
- Maximum width of the dwelling at point of attachment to private garage : 3.5 m
- Maximum height of the dwelling at point of attachment to private garage: 1 storey
- Maximum height of the accessory building: 7.5 m
- For a coach house dwelling unit located above a private garage accessed by a lane, the calculation of the width for the required additional parking space may include contiguous land on an adjacent lot that is secured by an easement which is registered on title.
- All residential lots shall have rear lane access
- The maximum number of townhouse lots in one black shall be 6

Public Comments

Written notice and location map was mailed by first class mail to all registered owners of land within 120 metres of the subject property. The notice provided information that a public meeting was scheduled for December 2, 2019.

Similarly, signs were placed on the subject lands notifying the general public

that a public meeting was scheduled for December 2, 2019.
Both the notice and signs state that additional information is available in the City's planning files for review by any member of the public during business hours.

At the time of writing this report, no correspondence from members of the public has been received by the City. Written comments and comments received at the public meeting will be analysed by City staff and form part of the public record for the final Recommendation Report.

Staff and Agency Comments

External Agency Circulation

The subject application was circulated for comment to the Algonquin & Lakeshore Catholic School Board, the Hastings & Prince Edward District School Board, Hastings and Prince Edward Health Unit, Bell Canada, Canada Post, Ontario Power Generation, Union Gas, Elexicon Energy, Hydro One, TransCanada Pipeline, Enbridge Pipelines, Trans-Northern Pipelines, MPAC, Quinte Conservation and the Health Unit.
Elexicon Energy, Hydro One, and the Ministry of Transportation have provided comment that they have no concerns with this proposal. Hastings & Prince Edward District School Board have requested notification of the City's decision, but have not otherwise commented.

At the time of writing this report, no other comments or concerns have been received regarding this application.

Internal Department Circulation

The subject application was circulated for comment to the Belleville Fire Department, Belleville Police Service, the Development Engineer, the General Manager of Transportation & Operations Department, General Manager of Environmental Services, the Director of Recreation, Culture and Community Services, the Manager of Parks & Open Spaces, the Chief Administrative Officer, the Manager of Economic & Strategic Initiatives, the City Clerk, and the Chief Building Official.

Belleville Fire Department have provided that they have no objections to this application.

At the time of writing this report, no other comments have been received regarding this application.

Considerations:

Public

Circulation to the public complies with the requirements of the Planning Act, R.S.O. 1990.

Financial

The fees of the application have been received by the City. Any planning, engineering, surveying and legal costs to facilitate the plan of subdivision for the subject lands would be at the owner's expense.

Impact on and input from other Departments/Sources

Circulation of this application to other departments/agencies has occurred.

Strategic Plan Alignment

The City of Belleville's Strategic Plan identifies nine strategic themes including Residential Development.

Strategic objectives of the Residential Development theme include:

- Plan for residential growth to meet our needs for 20 years and designate sufficient land in our planning documents to accommodate residential growth for 10 years; and
- Provide for a variety of housing forms to reflect our changing demographics and need for affordability.

Conclusion:

Comments received at this public meeting, as well as subsequent written comments will be considered by the Engineering and Development Services Department in analysis of the application received to amend the City of Belleville Official Plan and Zoning By-law 3014. A recommendation report will be brought forward upon receipt of all agency and public comments.

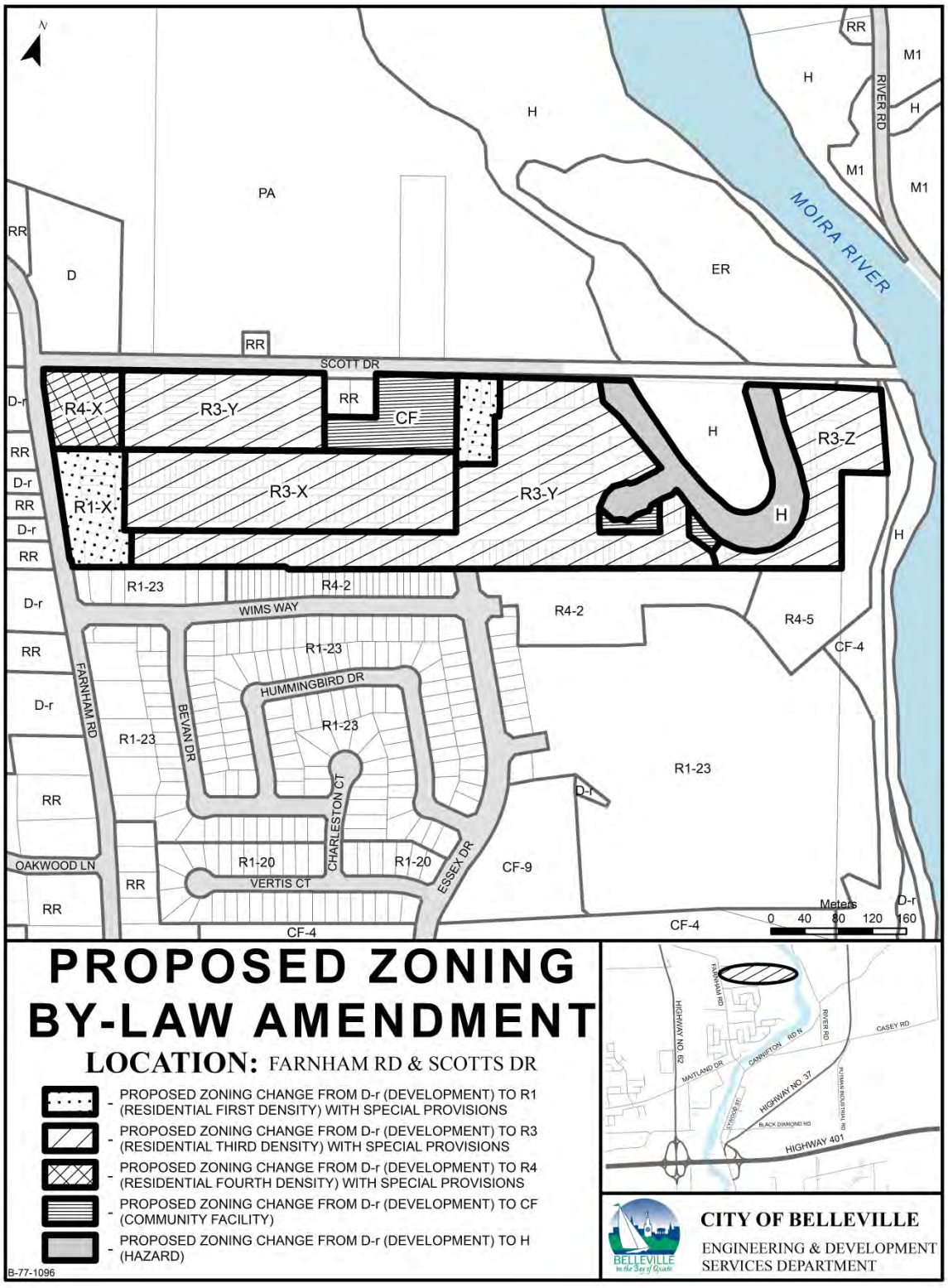
Respectfully submitted

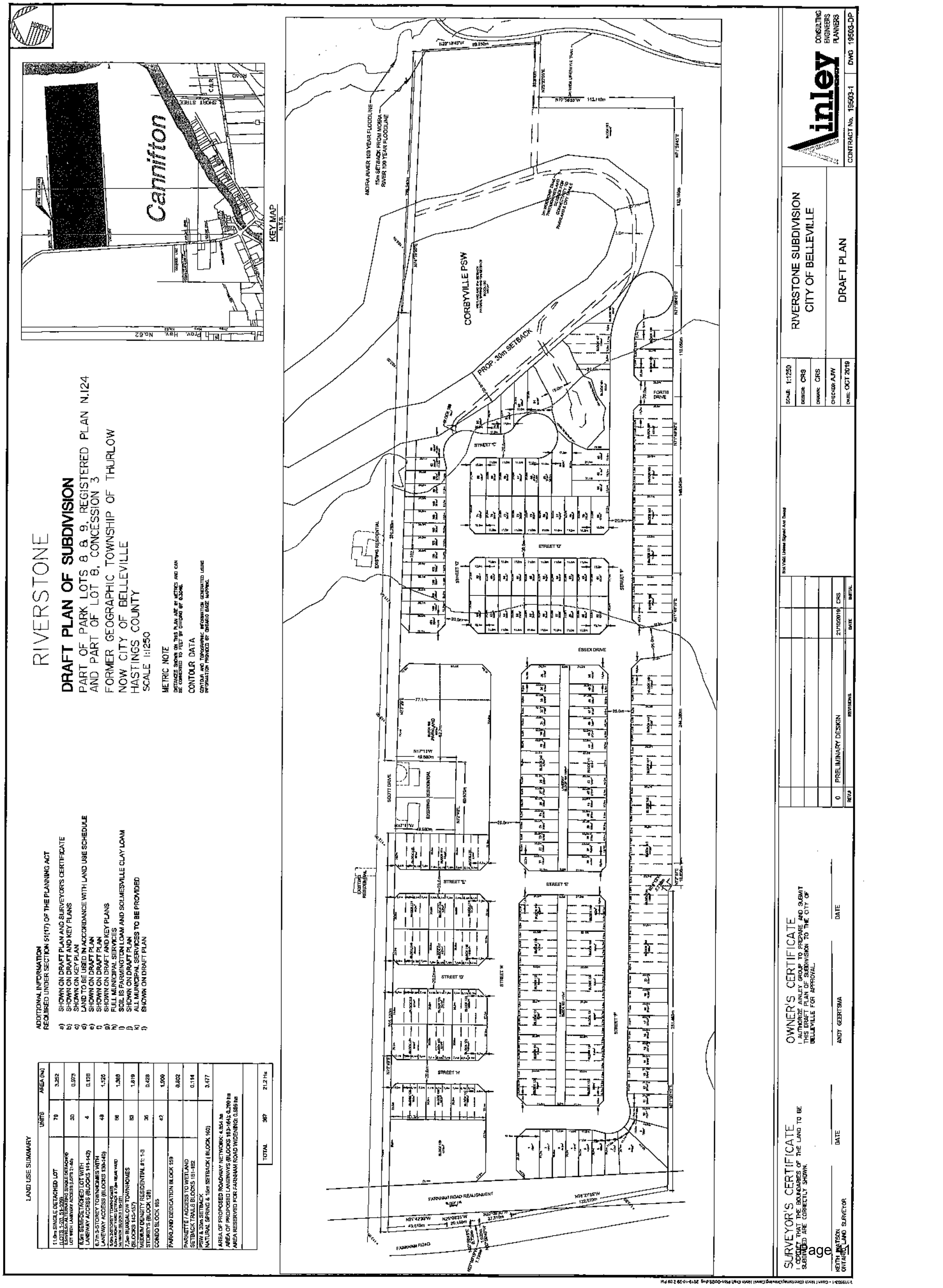
_____	_____
Thomas Deming	Greg Pinchin
Principal Planner, Policy Planning Section	Manager, Approvals Section

Engineering and Development Services Department

Attachments

Attachment #1 – Location Map
Attachment #2 – Draft Plan of Subdivision
Attachment #3 – Proposed Official Plan Amendment
Attachment #4 – Proposed Zoning By-Law
Attachment #5 – Planning Justification Report
Attachment #6 – Environmental Impact Study
Attachment #7 – Servicing Report
Attachment #8 – Stormwater Brief
Attachment #9 – Traffic Memo
Attachment #10 – Environmental Site Assessment
Attachment #11 – Official Plan Designation Map


N
MOIRA RIVER
RIVER RD
SCOTT DR
FARNHAM RD
BEVAN DR
WIMS WAY
HUMMINGBIRD DR
CHARLESTON CT
ESSEX DR
VERTIS CT
OAKWOOD LN
PA
D
ER
H
M1
RR
D-r
R4-X
R3-Y
CF
R3-Z
R3-X
R1-X
R1-23
R4-2
R4-5
CF-4
R1-20
CF-9
Meters
0 40 80 120 160
PROPOSED ZONING BY-LAW AMENDMENT
LOCATION: FARNHAM RD & SCOTTS DR
- PROPOSED ZONING CHANGE FROM D-r (DEVELOPMENT) TO R1 (RESIDENTIAL FIRST DENSITY) WITH SPECIAL PROVISIONS
- PROPOSED ZONING CHANGE FROM D-r (DEVELOPMENT) TO R3 (RESIDENTIAL THIRD DENSITY) WITH SPECIAL PROVISIONS
- PROPOSED ZONING CHANGE FROM D-r (DEVELOPMENT) TO R4 (RESIDENTIAL FOURTH DENSITY) WITH SPECIAL PROVISIONS
- PROPOSED ZONING CHANGE FROM D-r (DEVELOPMENT) TO CF (COMMUNITY FACILITY)
- PROPOSED ZONING CHANGE FROM D-r (DEVELOPMENT) TO H (HAZARD)
B-77-1096
HIGHWAY NO. 62
CASEY RD
MAITLAND DR
CANNIFTON RD N
HIGHWAY NO. 37
BLACK DIAMOND RD
HIGHWAY 401
CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT


RIVERSTONE
DRAFT PLAN OF SUBDIVISION
PART OF PARK LOTS 8 & 9, REGISTERED PLAN N.124
AND PART OF LOT 8, CONCESSION 3
FORMER GEOGRAPHIC TOWNSHIP OF THURLOW
NOW CITY OF BELLEVILLE
HASTINGS COUNTY
SCALE 1:1250
METRIC NOTE
CONTOUR DATA
ADDITIONAL INFORMATION
REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT
a) SHOWN ON DRAFT PLAN AND SURVEYOR'S CERTIFICATE
b) SHOWN ON DRAFT AND KEY PLANS
c) SHOWN ON KEY PLAN
d) LAND TO BE USED IN ACCORDANCE WITH LAND USE SCHEDULE
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT AND KEY PLANS
h) FULL MUNICIPAL SERVICES
i) SOIL IS FARMINGTON LOAM AND SOLMESVILLE CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN
LAND USE SUMMARY
KEY MAP
N.T.S.
Cannifton
CORBYVILLE PSW
PROP. 30m SETBACK
STREET 'C'
STREET 'D'
STREET 'E'
STREET 'F'
STREET 'G'
STREET 'H'
ESSEX DRIVE
SCOTT DRIVE
FORTIS DRIVE
EXISTING RESIDENTIAL
FARNHAM ROAD REALIGNMENT
FARNHAM ROAD
SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ARE CORRECTLY SHOWN.
DATE
KEITH WATSON
ONTARIO LAND SURVEYOR
OWNER'S CERTIFICATE
I AUTHORIZE AINLEY GROUP TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF BELLEVILLE FOR APPROVAL.
ANDY GEERTSMA
DATE
0 PRELIMINARY DESIGN 21/10/2019 CRS
REVISIONS DATE INITIAL
SCALE: 1:1250
DESIGN: CRS
DRAWN: CRS
CHECKED: AJW
DATE: OCT 2019
RIVERSTONE SUBDIVISION
CITY OF BELLEVILLE
DRAFT PLAN
Ainley
CONSULTING ENGINEERS PLANNERS
CONTRACT No. 19503-1
DWG 19503-DP

The Corporation of the City of Belleville
By-law Number _____

A By-law to adopt amendment XX to the City of Belleville Official Plan

The Council of the Corporation of the City of Belleville, in accordance with the provisions of the Planning Act, 1990, R.S.O., c.P. 13, as amended, hereby enacts as follows:

1. That Amendment No. XX to the Official Plan of the City of Belleville, being the attached text and schedules, is hereby adopted.

2. That the City Clerk is hereby authorized and directed to make application to the Minister of Municipal Affairs and Housing for the approval of Amendment No. XX to the Official Plan of the City of Belleville.

BY-LAW read and passed by the Council of the City of Belleville Hills this _____ day of _____, 2020.

_____
MAYOR

_____
CLERK

AMENDMENT NO. XX TO THE OFFICIAL PLAN
OF THE CITY OF BELLEVILLE

The attached text and schedules constitute Amendment No. XX to the Official Plan of the City of Belleville, which was adopted by the Council of the City of Belleville by By-law 2020--_____ in accordance with the provisions of the Planning Act, 1990, R.S.O., c.P. 13, as amended:

THE CORPORATION OF THE CITY OF BELLEVILLE.

_____ _____

MAYOR CLERK

AMENDMENT NO. XX

TO THE OFFICIAL PLAN FOR THE CITY OF BELLEVILLE

PART A – THE PREAMBLE does not constitute part of the Amendment.

PART B - THE AMENDMENT, consisting of the following text and schedules, constitutes Amendment No. XX to the Official Plan for the City of Belleville.

Part A – The Preamble

1. Purpose of the Amendment

The purpose of this Amendment is to relocate an Open Space designation from the east side of the wetland to a more central location within the proposed plan of subdivision in order to enhance the parkland's accessibility and visibility, provide active recreational opportunities that more easily serve the entire subdivision and improve the pedestrian experience along main roads within the development.

2. Location

The lands affected by this Amendment are located south of Scott Drive and west of the Moira River. The lands are identified as part of Lots 8 and 9, Concession 3, former Township of Thurlow, now City of Belleville.

3. Basis of the Amendment

The Official Plan policies state that the Open Space designation applies to areas where the predominant use of land is for significant public outdoor parks and recreation uses and to some privately owned lands that have open space characteristics. Open space uses typically include local or neighbourhood parks, community parks, and regional parks. Parks can provide active or passive recreational opportunities and many parks have a combination of both functions.

The lands are not designated Environmental Protection which would apply to lands with natural hazards or natural heritage features. The lands are located outside of the flood plain and beyond the environmental buffer for the river and the wetland and are therefore not required for environmental protection purposes. The subdivision will provide a walkway connection between the wetland and the river.

At present, the area designated Open Space within the subdivision does not have public road access as Scott Drive does not extend east of the wetland area and the internal subdivision road access is limited by the location of the wetland. The Open Space designation is being relocated adjacent to Scott Street, Essex Drive and Street A where the Open Space location will have frontage and access from three public roads. This will provide excellent exposure and visibility to enhance public safety, whereas the existing open space location would have a much lower level of visibility. The new location will provide easy access for active park facilities that serve the whole development. It will also enhance the streetscape of Street A and Essex Drive which will be the main access roads into the subdivision, thereby improving the pedestrian experience and overall character of the subdivision.

Part B – The Amendment

All of this part of the document entitled PART B – THE AMENDMENT, consisting of the following text and schedules, constitutes Amendment No. XX to the Official Plan for the City of Belleville.

Details of the Amendment

1. That Schedule 'B' – Land Use Plan - Urban Serviced Area is amended as shown on Schedule 1 attached to and forming part of this Amendment No. XX, by replacing the Open Space land use designation with a Residential Land Use designation and replacing a Residential Land Use designation with an Open Space designation.

Implementation and Interpretation

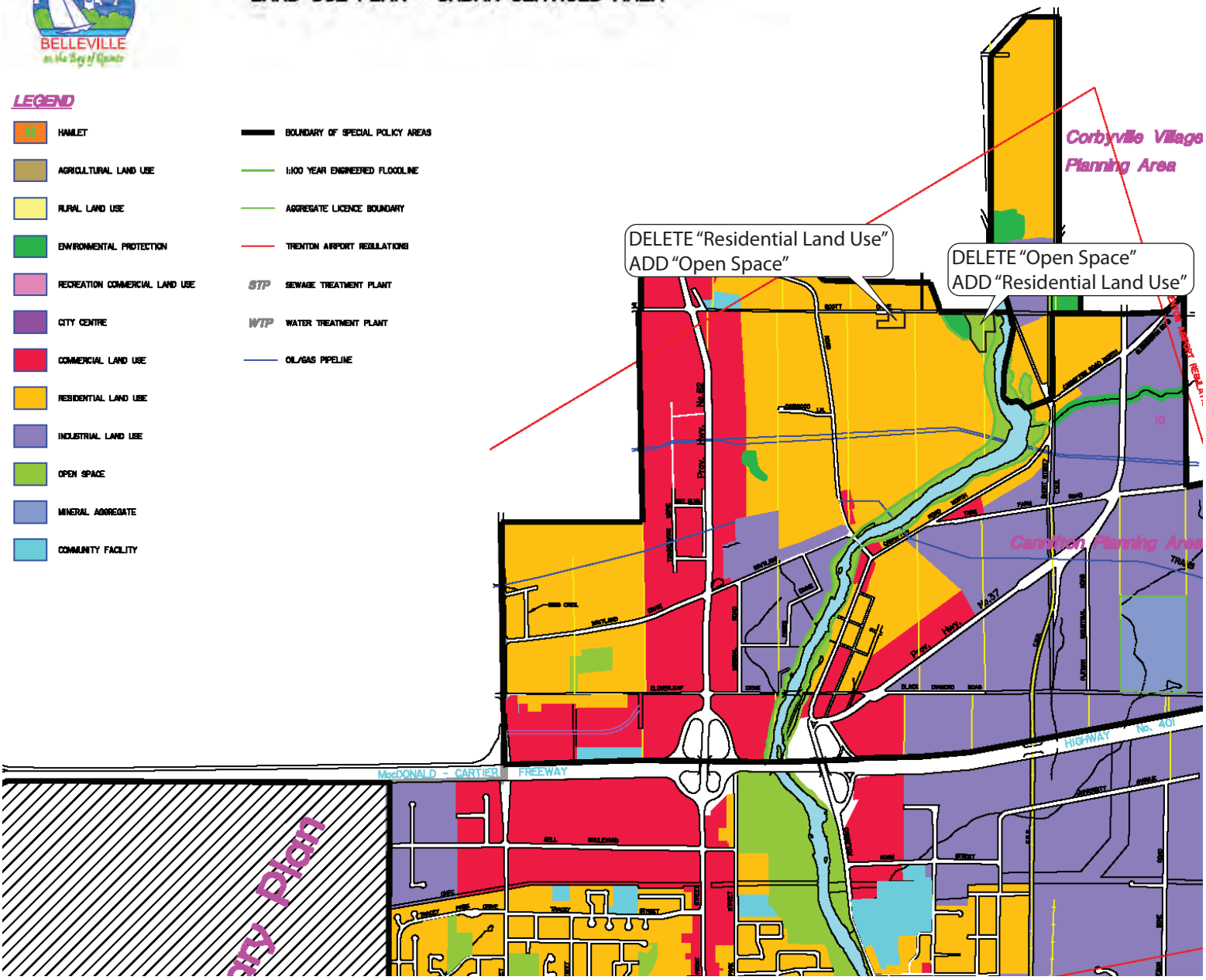
This Official Plan Amendment shall be implemented and interpreted in accordance with the implementation and interpretation provisions set out in the Amendment and the relevant sections of the Official Plan.

Schedule 'A'
To OPA No.__
City of Belleville

CITY OF BELLEVILLE - OFFICIAL PLAN

SCHEDULE 'B'

LAND USE PLAN - URBAN SERVICED AREA



N

This is Schedule 'A' to OPA No. ___
Passed this __ day of _____, 2019.

Mayor_____

Clerk_____

The Corporation of the City of Belleville
By-law Number _____

A By-law to amend Township of Thurlow Zoning By-law 3014

The Council of the Corporation of the City of Belleville enacts the following:

1) That Schedule A1 of By-law 3014, as amended, is hereby amended by rezoning lands located southeast of Farnham Road and Scott Drive, legally known as Part of Lots 8 & 9, Plan N.124 and Part of Lot 8, Concession 3, Thurlow, City of Belleville, from D-r and H to R1-XX, R3-X, R3-Y, R3-Z, R4-X, CF and H.

2) That Part 6.1 of By-law 3014 as amended shall hereby be amended by adding a new subsection as follows:

   (xx) Notwithstanding the provisions of Section 6.1.2 of By-law 3014, within the lands zoned R1-XX, the following provisions shall apply to the use of land and the construction and use of buildings in this zone:

   a. Minimum Lot Area: 340 sq. m

   b. Minimum Lot Frontage: 11.0 m, and 12.2 m for a corner lot

   c. Minimum Front Yard Depth: 6.0 m

   d. Minimum Interior Side Yard Width: 1.2 m on one side and 0.6 m on the other side. The 0.6 m setback shall be beside a 1.2 m setback on the adjacent property

   e. Minimum Exterior Side Yard Width: 2.4 m

   f. Maximum Lot Coverage: 45 percent

3) That Part 6.3 of By-law 3014 as amended shall hereby be amended by adding a new subsection as follows:

   (x) Notwithstanding the provisions of Sections 6.3.1, 6.3.2 and 6.3.3 of By-law 3014, within the lands zoned R3-X, the following provisions shall apply to the use of land and the construction and use of buildings in this zone:

a. Permitted Uses
    i) Residential uses:
        - Single detached dwelling house,
        - Semi detached dwelling house
        - Townhouse with frontage on a public road
    ii) Non Residential Uses:
        - Public uses of utilities in accordance with the provisions of this By-law
    iii) Accessory Uses:
        - Uses, buildings or structure accessory to any of the permitted uses in accordance with the provisions of this By-law

b. Minimum Lot Area:
    i. 270 sq. m for a Single detached dwelling house and Semi detached dwelling house
    ii. 210 sq. m for a Townhouse

c. Minimum Lot Frontage:
    i. 8.5 m for a Single detached dwelling house and a Semi detached dwelling house and 9.7 m for a Single detached dwelling house and Semi detached dwelling house on a corner lot
    ii. 6.7 m for a Townhouse and 9.1 m for a Townhouse on a corner lot

d. Minimum Front Yard Depth: 3.0 m

e. Minimum Rear Yard Depth: 6.7 m

f. Minimum Interior Side Yard Width:
    i. Single detached dwelling: 1.2 m on one side and 0.6 m on the other side,
    ii. Semi detached dwelling: 1.2 m except where the interior side yard is adjacent to a common wall of a Semi detached dwelling house where the minimum width shall be 0 m
    iii. Townhouse: 1.2 m except where the interior side yard is adjacent to a common wall of a Townhouse where the minimum width shall be 0 m

g. Minimum Exterior Side Yard width: 2.4 m

h. Maximum Lot Coverage:
    i. 65 percent for a Single detached dwelling unit and Semi detached dwelling unit
    ii. 75 percent for a Townhouse

i. Minimum number of Parking Spaces: 1 per dwelling unit

j. Notwithstanding the provisions of Section 4.1, the following regulations shall apply to an accessory building to be used as a private garage with rear lane access:
   i) Minimum Distance to rear of dwelling: 4.6 m
   ii) Minimum Distance from interior side lot line: 0.6 m on one side and 2.1 m on the other side
   iii) Minimum Distance from exterior side lot line: 2.4 m
   iv) Minimum Distance to the rear lot line: 0.6 m

k) Notwithstanding the definition of Accessory Building or Structure in section 7.2, an accessory building to be used as a private garage may be attached to the dwelling subject to the following regulations:
   i) Maximum width of dwelling at point of attachment to private garage: 3.5 m
   ii) Maximum height of dwelling at point of attachment to private garage: 1 storey
   iii) Maximum height of accessory building: 7.5 m

l) Pursuant to Section 4.24, for a coach house dwelling located above a private garage accessed by a lane, the calculation of the width for the required additional parking space may include contiguous land on an adjacent lot that is secured by an easement which is registered on title.

m) All residential lots shall have rear lane access

n) The maximum number of Townhouses in one block shall be 6.

4) That Part 6.3 of By-law 3014 as amended shall hereby be amended by adding a new subsection as follows:

(x) Notwithstanding the provisions of Section 6.3.1 and 6.3.3 of By-law 3014, within the lands zoned R3-Y, the following provisions shall apply to the use of land and the construction and use of buildings in this zone:

a. In addition to the permitted residential uses in section 6.3.1.1, a Semi Detached dwelling house, and a Townhouse shall be permitted.

b. Minimum Lot Area:
   i. 340 sq. m for a Single detached dwelling house
   ii. 230 sq m for a Semi detached dwelling house
   iii. 180 sq. m for a Townhouse
   iv. 230 sq m for a single storey Townhouse

c. Minimum Lot Frontage:

i. 11.0 m for a Single detached dwelling and 12.2 m for Single detached dwelling on a corner lot
ii. 7.5 m for a Semi detached dwelling house and 8.7 m for Semi detached dwelling house on a corner lot
iii. 6.7 m for a Townhouse and 9.1 m for a Townhouse on a corner lot
iv. 7.5 m for a single storey Townhouse and 9.9 m for a single storey Townhouse on a corner lot

d. Minimum Front Yard Depth: 6.0 m

e. Minimum Interior Side Yard Width:

i. Single detached dwelling: 1.2 m on one side and 0.6 m on the other side,
ii. Semi detached dwelling: 1.2 m except where the interior side yard is adjacent to a common wall of a Semi detached dwelling house where the minimum width shall be 0 m
iii. Townhouse and single storey Townhouse: 1.2 m except where the interior side yard is adjacent to a common wall of a Townhouse or single storey Townhouse where the minimum width shall be 0 m

f. Minimum Exterior Side Yard Depth: 2.4 m

g. Minimum Rear Yard Depth: 7.0 m

h. Maximum Lot Coverage
i. Single detached dwelling unit: 45 percent
ii. Semi detached dwelling unit: 48 percent
iii. Townhouse: 48 percent
iv. Single storey Townhouse: 56 percent

5) That Part 6.3 of By-law 3014 as amended shall hereby be amended by adding a new subsection as follows:

(x) Notwithstanding the provisions of Section 6.3.1 and 6.3.3 of By-law 3014, within the lands zoned R3-Z, the following provisions shall apply to the use of land and the construction and use of buildings in this zone:

a. In addition to the permitted residential uses in section 6.3.1.1, a Row dwelling house and Townhouse shall be permitted.

b. Minimum Lot Area for a Row dwelling house and Townhouse shall be the sum of the areas for each dwelling unit as follows:

i. Dwelling unit with one wall attached: 232 sq m
ii. Dwelling unit with more than one wall attached: 105 sq. m

c. Minimum Lot Frontage: 15 m

d. Minimum Front Yard Depth to the closest wall of any building on the lot: 6.0 m

e. Minimum setback from centreline of municipal street: 15 m

f. Minimum Interior Side Yard Width for a Row dwelling house and a Townhouse: 1.2 m except where the interior side yard is adjacent to a common wall where the minimum width shall be 0 m.

g. Minimum Exterior Side Yard Depth for a Row dwelling house and a Townhouse: 2.4 m

h. Minimum Rear Yard Depth for a Row dwelling house and Townhouse: 6.0 m

i. Minimum landscaped open space for a Row dwelling house and Townhouse: 30 percent

j. Maximum Lot Coverage for Row dwelling houses and Townhouses: 45 percent

6) That Part 6.4 of By-law 3014 as amended shall hereby be amended by adding a new subsection as follows:

(xx) Notwithstanding the provisions of Section 6. of By-law 3014, within the lands zoned R4-X, the following provisions shall apply to the use of land and the construction and use of buildings in this zone:

a. Minimum Lot Area: 4,200 sq m

b. Minimum Front Yard Depth: 6.0 m

c. Minimum Interior Side Yard Width: 1.2 m for a Row dwelling house, and 2.4 for an Apartment dwelling house

d. Minimum Exterior Side Yard Depth: 2.4 m

e. Minimum Rear Yard Depth: 7.0 m

f. Maximum Lot Coverage: 45 percent for a Row dwelling house, and 35 percent for an Apartment dwelling house

g. Notwithstanding section 7.116, for the purposes of calculating Lot Coverage, a Lot shall be deemed to be all of the lands within the total block of land on the plan of subdivision, irrespective of whether a condominium corporation is created.

7) Notwithstanding Section 6.2.3 in By-law 3014, provision 6.2.3.9 shall not apply to the lands zoned R3-X, R3-Y, R3-Z, and R4-X whereas the By-law requires in areas designated "Residential" in the Official Plan NOT MORE than 25% of the dwelling units in any plan of subdivision shall be semi-detached or duplex dwelling units.

8) Notwithstanding Sections 6.1.7.3, 6.3.3.12 and 6.4.3.8 in By-law 3014, the provisions shall not apply to the lands zoned R1-XX, R3-X, R3-Y, R3-Z and R4-X which requires a minimum set back from the centre line of a street as follows:

6.2.3.11.1	Provincial Highway:	26 metres
6.2.3.11.2	County of Collector Road:	21 metres
6.2.3.11.3	Township Road:	17.7 metres

9) All provisions of the By-law apply to all Dwelling units fronting onto private and public roads whereas the By-law applies to Dwelling units on public roads only.

10) All other provisions in By-law 3014 shall apply.

11) This By-law shall come into force and take effect on the day of passing thereof provided not notice of appeal is filed pursuant to the provisions of the Planning Act R.S.O. 1990, as amended. In the event that an appeal is filed, the By-law shall come into force and take effect in accordance with the provisions of the Planning Act R.S.O. 1990.

Read a first time this _____ day of _____, 2020.

Read a second time this _____ day of _____, 2020.

Read a third time and finally passed this _____ day of _____, 2020.

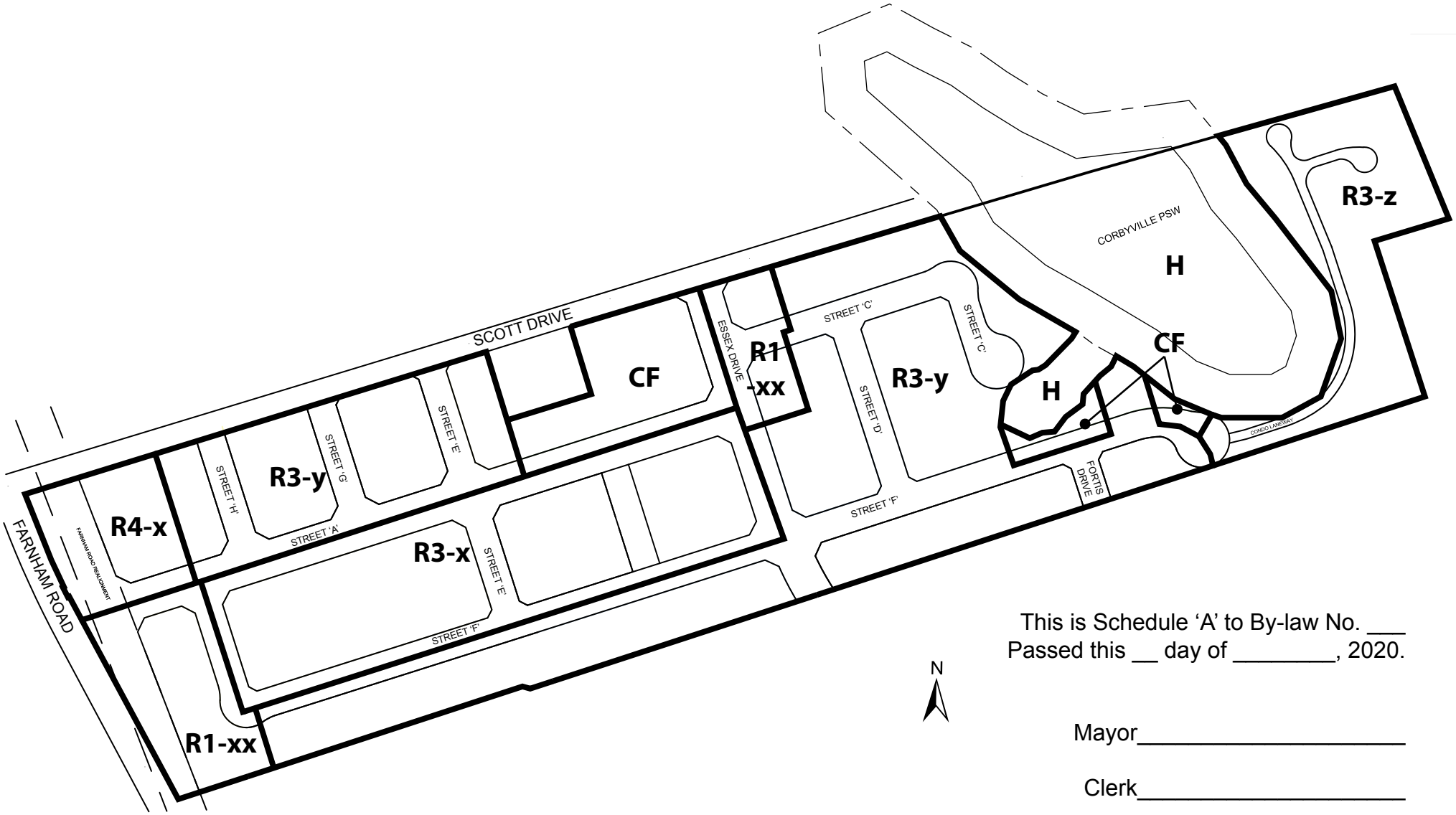
_____

MAYOR

_____

CITY CLERK

Schedule 'A'
To Zoning By-law No.__
City of Belleville



This is Schedule 'A' to By-law No. ___
Passed this __ day of _____, 2020.

Mayor_____

Clerk_____

PLANNING JUSTIFICATION REPORT

Part of Lots 8 and 9, Registered Plan N.1245 and
Part of Lot 8 Concession 3
former Township of Thurlow, now City of Belleville

Application for Official Plan Amendment, Zoning By-law Amendment, and Plan of Subdivision for the Riverstone Development

prepared for
GCL Development Ltd.

by
Macaulay Shiomi Howson Ltd

November 2019

Table of Contents

1 Introduction

1.1 Background

The purpose of this report is to provide a planning rationale in support of Official Plan amendment, rezoning and subdivision applications on behalf of GCL Development Ltd for lands located in part of Lots 8 and 9, Plan N.124 and Part of Lot 8, Concession 3, former Township of Thurlow, now City of Belleville. The subject lands, referred to as Riverstone, are located north of Highway 401 near the north end of the urban area of Belleville. The subject lands contain 21.2 ha. They are predominately grass covered with a tree covered area and part of the Corbyville wetland complex and a small spring located on the eastern portion of the property. There are vacant buildings including a former house, barn and sheds on the western portion of the property fronting Farnham Road.

1.2 Context

The subject lands are located on the east side of Farnham Road, south of Scott Drive and west of the Moira River. The lands to the south are currently being developed with a combination of single detached and townhouse lots as well as parkland and a stormwater management facility.

There are two existing single detached houses on the south side of Scott Drive that are not part of the subdivision. The lands north of Scott Drive are currently being farmed. The lands on the west side of Farnham Road contain estate residential lots and farmland. The lands to the east are part of the Moira River valley.

An air photo of the existing context is shown on Figure 1.

Figure 1 Context Air Photo

1.3 Proposed Development

The Riverstone development as shown on Figure 2, is proposing 367 residential units, a park, open space and future walkways consisting of:

- Up to 79 single detached lots with frontages of 11 m (36 ft) and up
- 30 single detached lots with frontages ranging between 8.5 (28 ft) and 10.5 m (34.5 ft) m and laneway access
- 4 semi-detached lots (8 units) with 9.8 m (32 ft) frontages and laneway access
- 48 townhouse lots with 6.7 m (22 ft) frontages and laneway access
- 66 townhouse lots with 6.0 m (20 ft) frontages
- 63 bungalow townhouses with 7.5 m (25 ft) frontages
- 1 medium density block with approximately 35 units

- 1 condominium block with approximately 42 townhouse units
- 1 park block containing 0.8 ha (2.0 ac)
- Open Space block containing the wetlands and spring plus a 30 m setback from the wetland and a 15 m setback from the spring containing 3.48 ha (8.6 ac)
- Parkette/ access to wetland block 0.11 ha (0.27 ac)
- Farnham Road realignment and road widening containing 0.69 ha (1.7 ac)
- New internal roads containing 5.11 ha (12.6 ac)
- Laneways containing 0.28 ha (0.69 ac)

A 5 m (16 ft) wide walkway block connecting the open space block to the river will be provided at the time of site plan approval of the condominium townhouses.

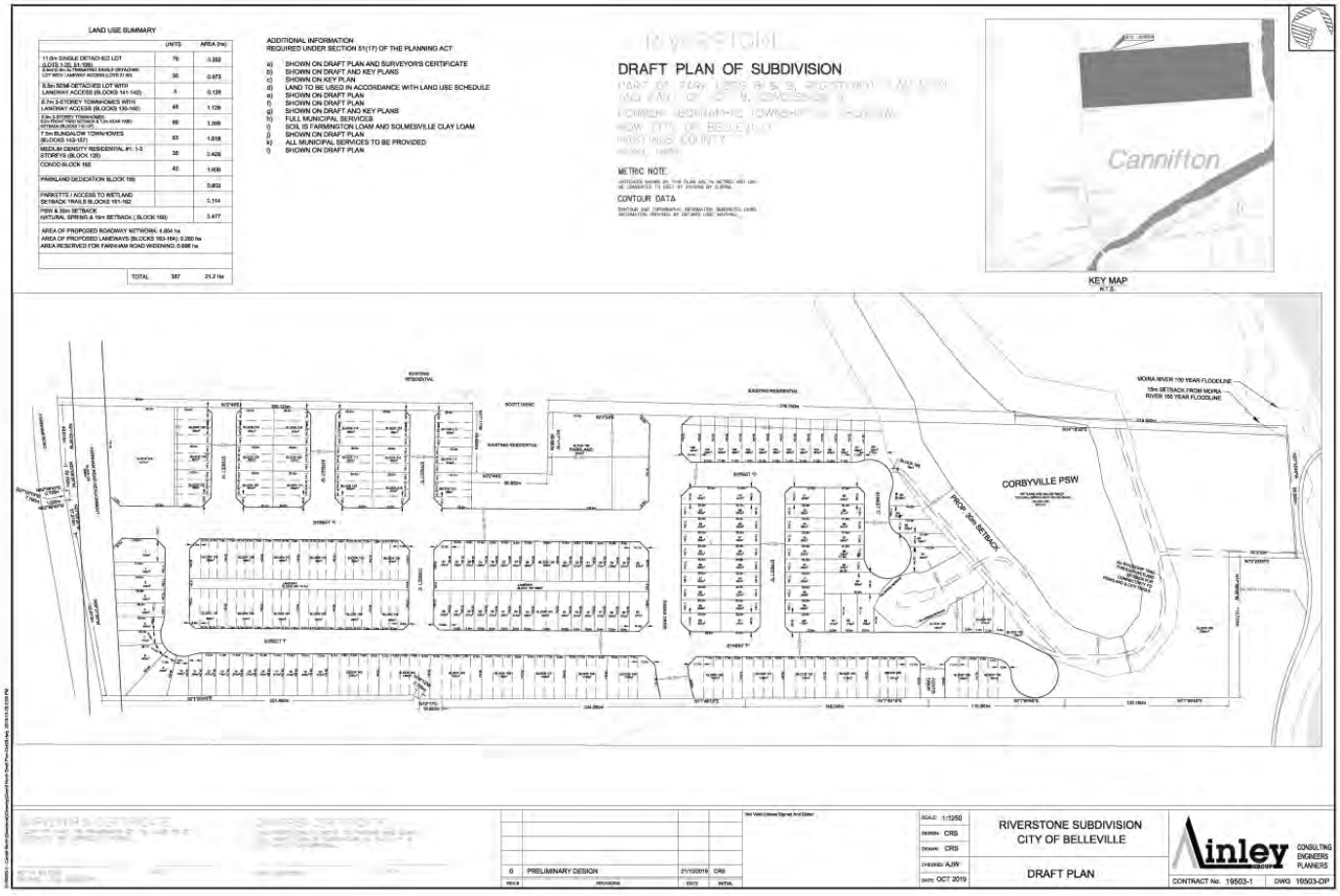


Figure 2 Draft Plan of Subdivision

2 Provincial Policy Statement

The Provincial Policy Statement (PPS) 2014 provides policy direction on matters of provincial interest related land use planning and all decisions made under the Planning Act shall be consistent with the PPS. The following analysis addresses how the proposed development is consistent with the PPS:

1.0 Building Strong Healthy Communities

1.1 Managing and Directing Land Use to Achieve Efficient and Resilient Development and Land Use Patterns

The proposed subdivision is located within the Urban Serviced Area of Belleville and represents a logical extension of the development area. It provides for additional forms of housing within the community thereby accommodating a mix of residential uses and increasing the range of options, which improves the opportunity for housing that is more affordable. It provides cost effective development pattern by extending services within a residential area thereby contributing to a healthy, liveable and safe community. It supports active transportation by providing sidewalks and trails for pedestrian connections.

1.2 Coordination

The community was planned to allow for the development of these lands to ensure a coordinated approach to the development.

1.4 *Housing*

The proposed development will assist in maintaining a 10 year supply of residential lands within the City as well as a three year supply of draft plan approved lands and land zoned to facilitate residential intensification. The subdivision provides for a variety of lot sizes and built form to facilitate an appropriate range of housing types and densities to meet projected needs of current and future residents with an appropriate level of infrastructure and public service facilities that support the residents.

1.4 Public Spaces, Recreation, Parks, Trails and Open Space

The public park block provides active and passive recreational opportunities and there is an open space block/parkette and buffers to protect the provincially significant wetland and spring. A woodchip trail is proposed through the buffer area of the wetland that will connect to the trail along Moira River to the east of the subject lands. The subdivision will promote healthy, active communities by

providing sidewalks and walkways to meet the needs of pedestrians, and parks and open space for active an healthy living.

1.5 Infrastructure and Public Service Facilities

This development will be on full municipal services and will optimize use of existing municipal sewer and water services. A Municipal Servicing Capacity Report and a Stormwater Management Report has been prepared by Ainley Group to demonstrate that sufficient capacity exists to provide for the development and that the stormwater can appropriately addressed through the expansion of the existing stormwater management facility. This development makes efficient use of existing infrastructure.

1.6 *Long Term Economic Prosper*ity

The proposed development helps with long term economic prosperity by optimizing use of land, infrastructure and public service facilities.

1.7 Energy, Air Quality and Climate Change

The proposed development promotes active transportation and the homes will include energy and water efficiency features.

2.0 Wise Use and Management of Resources

2.1 *Natural Heritage*

A scoped Environmental Impact Study has been prepared for the subject lands by Ainley Group. The report addresses development on the subject lands and within 120 m of a Provincially Significant Wetland (PSW). It indicates that the proposed retention of the features and the associated buffers are sufficient to protect the ecological functions of the features.

2.2 *Water*

Water quality will be addressed through the use of stormwater management techniques which are addressed in the Stormwater Report prepared by Ainley and described in section 5.3 of this report.

2.6 *Cultural Heritage and Archaeology*

A Stage 1 and 2 Archaeological Assessment was undertaken for the property for the previous owner. No archaeological resources were recovered during the Stage 2 analysis and the report concluded that there were no areas of archaeological significance or potential on the subject lands. It therefore recommended that no further archaeological assessment was required.

3.0 Protecting Public Health and Safety

3.1 *Natural Hazard policies*

The subject lands are located outside of the 100 year floodline of the Moira River and contain no hazard lands.

Summary and Conclusions

In summary, the proposed development of the subject lands will support a strong, resilient community with an appropriate range of housing types that make efficient use of existing infrastructure and public services. Recreational and open space opportunities are available, active transportation will be supported and water resources have been appropriately addressed. No development will occur within the wetland and appropriate buffering has been provided to the wetland and the spring. As a result, the proposed development is consistent with the PPS.

3 Belleville Official Plan

The subject lands are currently designated Residential, Open Space and Environmental Protection in the Official Plan (OP) as shown on Figure 3. The subject lands are also located within the Urban Serviced Area and are part of the Cannifton Planning Area.

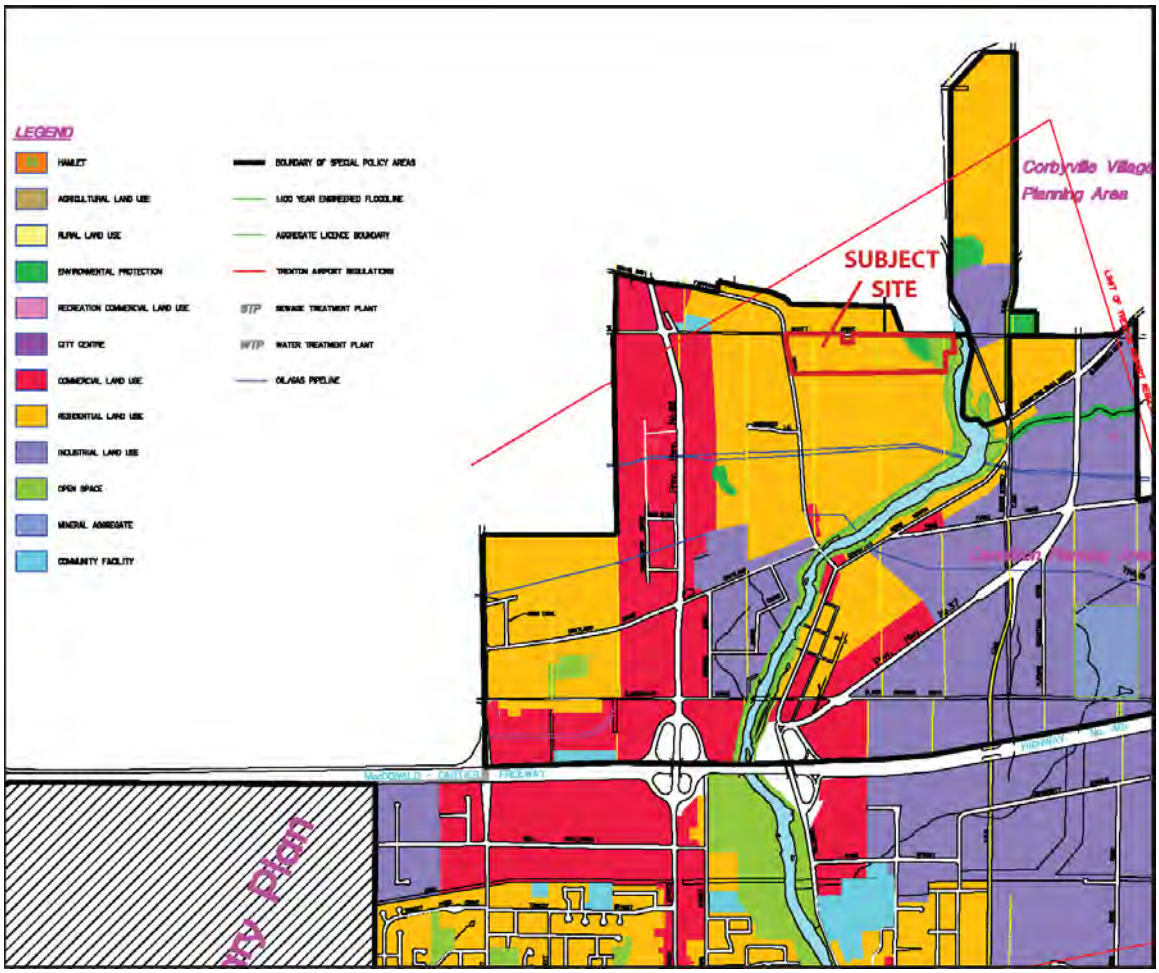


Figure 3 Existing Official Plan designations – Excerpt of Schedule B from City of Belleville Official Plan

Residential

The Residential designation permits low, medium and high densities with built forms that range from single detached dwellings to a variety of attached and multiple dwellings and the proposed residential uses are therefore permitted.

The densities that are permitted in the OP are:

i) Low density residential uses which would normally include single detached and attached two-unit dwellings, developed up to 18 units per hectare gross residential density or 25 units per hectare net residential density.
ii) Medium density residential uses which would normally include various types of attached, multiple or cluster housing projects such as row dwellings and small low-profile apartment complexes, developed up to 60 units per hectare net residential density.
iii) High density residential uses which would normally include various types of multiple dwellings such as apartment complexes and stacked townhouses, developed up to 115 units per hectare net residential density.

The policies state that ideally all neighbourhoods should contain a mixture of dwelling types at different densities. It also supports the development of all forms of housing in all forms of tenure, being freehold, rental, cooperative, and condominium.

In determining the neighbourhood densities, consideration should be given to:

- the capacity of servicing systems to handle the traffic, water and sewage flows, and other services;
- the capacity of schools, parks, and other soft services in the area to service the neighbourhood; and
- the availability of or the ability to provide transit services.

The proposed number of units within Block 1 which is located at the southeast corner of Farnham Road and Scott Drive falls within the high density residential density range. While the density may be within the high density category, the proposed height is a maximum of 3 storeys which is a height more typically associated with medium density development. The proposed 11 m frontage single detached lots and the condominium townhouses east of the wetland fall within the low density range. The remainder of the proposed development falls into the medium density range although some of units are single and semi-detached units which are typically considered to be low density and overall within the development 30 percent of the total number of units are single and semi detached. The overall density of the development is 20.72 units per ha of gross residential density as defined by the Official Plan.

The OP policies state that the preferred locations for medium and high density residential development should be guided by the following principles:

- The lands should have direct frontage on or immediate access to arterial or major collector roads for high density residential and collector roads for medium density residential; high density developments with access only to collector streets should generally be smaller scale.

- The main access routes to such developments should not be through substantial areas of low density residential development.
- The preferred locations for large scale high density residential developments would be along major arterial streets or at major intersections where access to two or more major transportation corridors is available. Where located along collector streets, the preferred locations for medium density residential developments would be at intersections or where access to two or more transportation corridors is available.
- High and medium density residential development should be directed to areas which are adequately serviced with open space and other required community facilities and services, all of which should be of sufficient size to meet the needs of the residents of the housing development.
- A preferred location would be in close proximity to or adjacent to non-residential land uses which service the residential area (neighbourhood commercial uses, schools, parks, churches).
- High and medium density residential development is a preferred housing form immediately abutting a non-residential land use in another land use category, or along very high traffic corridors.

In this case, the subject lands front onto Farnham Road which is a collector road. In addition, although proposed Street A is not designated a collector road, it is being designed to look and function like a collector road. Essex Drive, which will extend into the new development from the south, is also designed with a collector road width. As a result, traffic from the high density block has direct access to a collector road and traffic from the medium density residential has close or direct access to roads with the width and potential function of collector roads.

The proposed high density residential will be developed at a small scale given its proposed maximum 3 storey height and relatively low number of units (35) so that its built form will fit within the character of the community. The proposed medium and high density development will be close to local parks and have excellent access to open space areas and the Moira River trail. It will also be located within good proximity to commercial uses and places of worship in Cannifton approximately 1.4 km away.

A servicing report has been prepared that indicates that there is servicing capacity to accommodate the development. A traffic brief also states that the road network can accommodate the proposed development and Farnham Road is expected to be a location for future transit.

As a result, proposed subdivision will contribute to a range of housing types and sizes within the community and the proposed medium and high density residential development meets the intent of the OP policies for the location of these uses.

Environmental Protection

Lands within the Environmental Protection designation "require special care and regulation due to their inherent natural or physical characteristics" due to be hazard lands or containing natural heritage features. On the subject lands, the Environmental Protection designation applies to lands that are a small part of a larger wetland complex.

The OP policies state that no new development will be permitted within provincially significant wetlands and that development may be permitted within 120 m where it has been demonstrated through an Environmental Impact Study (EIS) that there would be no adverse impact on the natural area or ecological functions. A scoped Environmental Impact Study (building on a previous EIS for the subject lands) has been prepared which assesses the impact of the proposed development on the wetland and proposed 30 m buffer. It concludes that the subject lands provide limited ecological functions and do not exhibit high levels of sensitivity to environmental disturbance. It also states that given the lack of sensitive habitat, the relatively simple flora and fauna communities and the low level of hydrological connectivity between the on-site wetland and surrounding land, a 30 m vegetated buffer surrounding the wetland is sufficient to protect its ecological functions.

A woodchip trail is proposed within the 30 m buffer and the EIS concludes that it is acceptable provided it is located along the edge, the foot print remains concentrated for trail construction only, and erosion and sediment control barriers are installed to limit potential impacts to the wetland.

The subject lands also contain a groundwater spring that is not located within the land designated Environmental Protection. The water from the spring flows to the wetland and the lands containing the spring and surrounding area have been protected. The EIS states that the spring does not contribute to fish habitat or other significant natural features and as a result, it concludes that a 15 m vegetated buffer around the spring is sufficient to protect the function of the feature.

As a result, the proposed development meets the requirements of the Environmental Protection policies.

Open Space

The OP policies state that the Open Space designation applies to areas where the predominant use of land is for significant public outdoor parks and recreation uses and to some privately owned lands that have open space characteristics. The designation does not apply to all parkland areas that exist or that would be established, as open space areas are allowed to locate in other land use designations.

Open space uses typically include local or neighbourhood parks, community parks, and regional parks. Parks can provide active or passive recreational opportunities and many parks have a combination of both functions. The policies state that "while the majority of open space lands and facilities would be publicly owned and operated, certain recreational facilities with commercial potential can be owned and operated privately, either in a commercial capacity or as non-profit ventures." In the case of the subject lands, the property is privately owned and there are no plans for commercial recreational facilities in this location.

At present, the land designated Open Space does not have public road access as Scott Drive does not extend east of the wetland area. The lands designated Open Space are located outside of the flood plain and beyond the environmental buffer for the river and the wetland. Some of the Open Space lands are tree covered but are not deemed significant woodland. In addition, the area designated Open Space significantly exceeds the lands required for 5% parkland dedication. As a result, there does not appear to be a clear rationale for the extent of the current Open Space designation.

Given the mix of housing types that are going to be developed, it is proposed to provide public parkland in a more central and accessible location within the subdivision. As a result, it is proposed to relocate the Open Space designation adjacent to Scott Street, Essex Drive and Street A. The Open Space location would have frontage and access from three public roads which provide excellent exposure and visibility to enhance public safety, whereas the existing open space location would have a lower level of visibility and access would be limited by the location of the wetland. The new location would also be close most of the proposed townhouses, and provide easy access for active park facilities that serve the whole development. It would also enhance the streetscape of Street A and Essex Drive which will be the main access roads into the subdivision, thereby improving the pedestrian experience and overall character of the subdivision.

In addition to the proposed public park, there is additional open space provided adjacent to the spring lands to enhance the visibility and access to those lands and the woodchip trail. There will also be a walkway provided during the condominium site plan

approval from the woodchip trail to the Moira River trail thereby providing good connectivity between open space areas.

Special Policy Area # 5 – Cannifton Planning Area

The Cannifton Planning Area is intended to accommodate a significant portion of the City's future residential, commercial and industrial development. The policies state that development should occur in phases as the logical extension of servicing becomes available. As noted in the Servicing Report, the services will be available at the property line as a result of development occurring immediately to the south and are sufficient size to accommodate the proposed development. A stormwater report also addresses how stormwater objectives will be achieved for the subject land.

Within the Cannifton Planning Area, the policies indicate that residential development should occur at all densities but should consist primarily of low density residential. The Cannifton Planning Area will provide housing for up to 7,500 persons once fully developed, consisting of approximately 2,000 low density residential units and 1,000 medium/high density residential units. The proposed subdivision will provide the full range of low, medium and high density residential development options. It is noted that there is already a significant number of low density residential units existing or proposed within the Cannifton area and that therefore the proposed subdivision provides a greater diversity of residential options within the overall community. As indicated above, while some of the proposed development falls within the medium density category, it still provides a low density built form (i.e. single and semi-detached lots) and with the possible exception of the high density block, all units will have ground oriented direct outdoor access.

The policies also state that recreational land uses within the Cannifton Planning Area should consist of a network of active and passive parks and trail systems that complement the City's efforts to provide a variety of recreational opportunities to the area. As discussed above, the proposed subdivision provides a network of opportunities for active and passive recreation, trails and a connection to the river trail system.

Policies require master drainage plans to address water quality and to ensure that there should be a zero percent increase in peak stormwater runoff. These requirements are addressed in the stormwater report.

Servicing

The OP stipulates that development will not be permitted unless there is adequate servicing available and as discussed in further detail in section 5.2 below, services can be

extended from the subdivision to the south and there is sufficient capacity within the pipes to accommodate the development. Policies also state that adequate consideration must be given to stormwater management prior to permitting development to proceed and as noted below, storm sewers will be available for connection to the lands to the south where stormwater management facilities will control water quantity and quality. Some additional quality control will be provided for lands on the east side of the proposed development which were not originally anticipated to be captured by the facilities to the south.

Transportation

Policies indicate that all development should have frontage on and access to a public road and that direct access to municipal roads will only be permitted in locations that can accommodate traffic in a safe manner. All of the proposed lots and blocks will have access to local roads with good sight lines that can safely accommodate them.

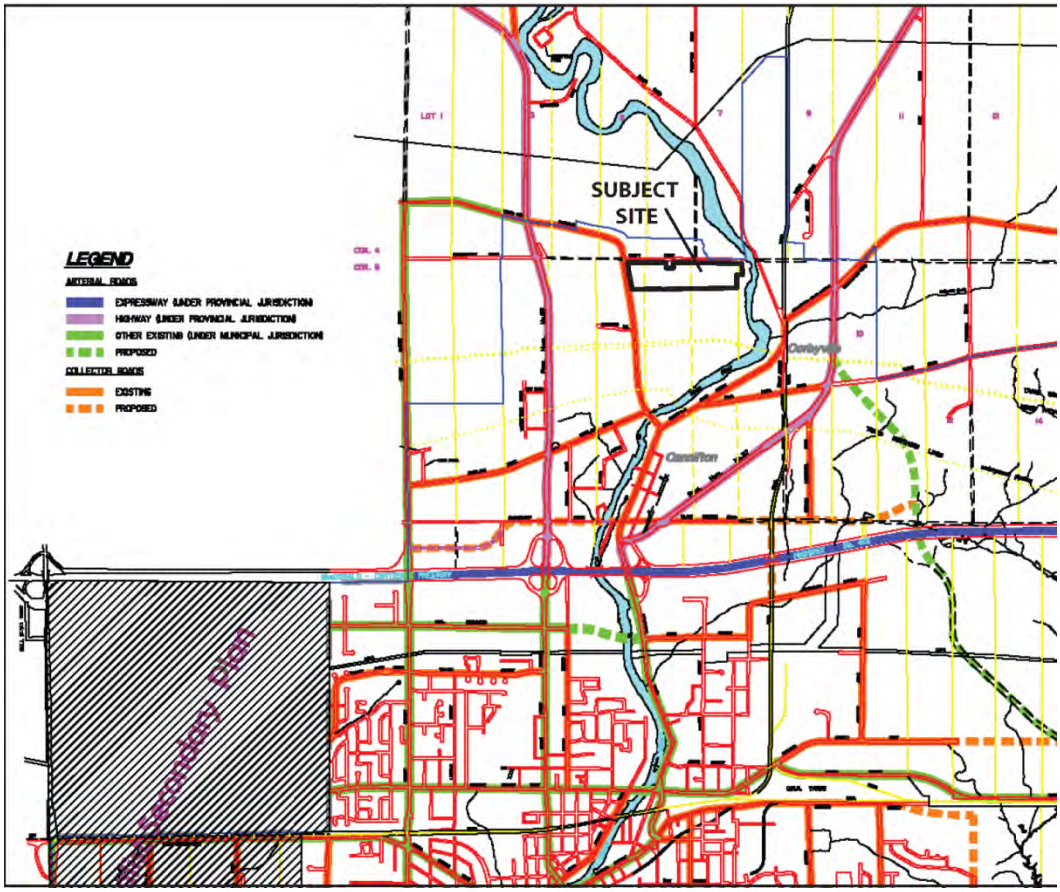


Figure 4 Official Plan Transportation designations – Excerpt of Schedule C from City of Belleville Official Plan

Farnham Road is designated as a collector road and provision has been made for a widening and realignment of the road to improve the capacity and function of the road in accordance with the Farnham Road Master Plan. There is only one road which exits onto Farnham Road and no individual lot driveways will have access in order to protect the carrying capacity of the road. The other roads within the subdivision are local roads although as noted, the extension of Essex Drive and Street A are proposed to be collector road widths. Essex Road connects to the subdivision to the south to provide good connectivity.

The OP policies state that recreational trails connecting various parts of the City are considered an integral part of the City's transportation system and provision has been made for a trail within the wetland buffer and also a connection to the Moira River trail system. Sidewalks will be provided along all public roads to provide a safe pedestrian realm and encourage active transportation.

The policies state that parking is an integral component of the transportation system. Adequate parking will be provided in the subdivision through garages and driveways on individual lots and in the case of the residential blocks, through the provision of parking facilities for residents and visitors.

Summary and Conclusions

The subject lands are currently designated Residential, Open Space and Environmental Protection in the Official Plan. They are also located within the Urban Serviced Area and are part of the Cannifton Planning Area.

The proposed development will create a range of densities and housing forms to provide a wide array of housing options in an attractive setting. It will introduce laneway housing which will provide an attractive streetscape by removing garages from the road. The proposed medium and high density residential development meets the intent of the OP policies for the location of those uses. There is adequate servicing available and appropriate roads and road capacity to accommodate the development.

The lands designated Environmental Protection will be protected and appropriately buffered. A proposed wood chip trail through the buffer area will enhance pedestrian access while respecting the significance of the area.

It is proposed to amend the Official Plan to allow for the relocation of the Open Space designation to a more central location within the development in order to improve access to active recreational opportunities for all residents. The relocation will increase the visibility of the open space area as it will have frontage on three public roads and it will enhance the pedestrian experience and streetscapes of the main access roads into

the development. The proposed walkway to the Moira River trail system will maintain a connection between the river and the wetland area. The proposed open space relocation therefore ensures the provision of both active and passive recreational opportunities and provides increased benefits to the community.

4 Zoning By-law

The current zoning on the subject lands is D-r and H in the Thurlow Zoning By-law 3014. As zoning by-law amendment application has been submitted rezone the property to permit the lots in the draft plan of subdivision and to provide site specific zone provisions that permit the type of residential dwellings that are being proposed.

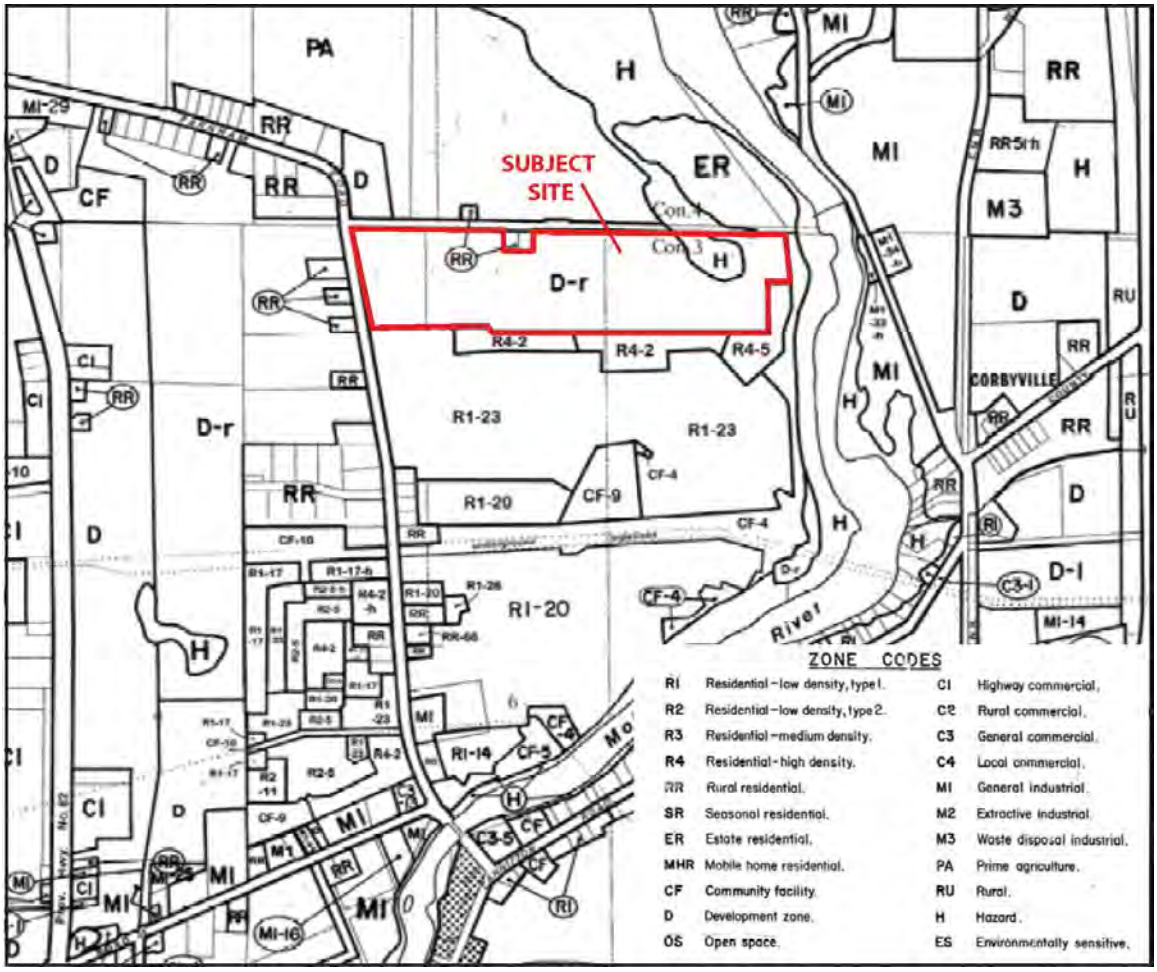


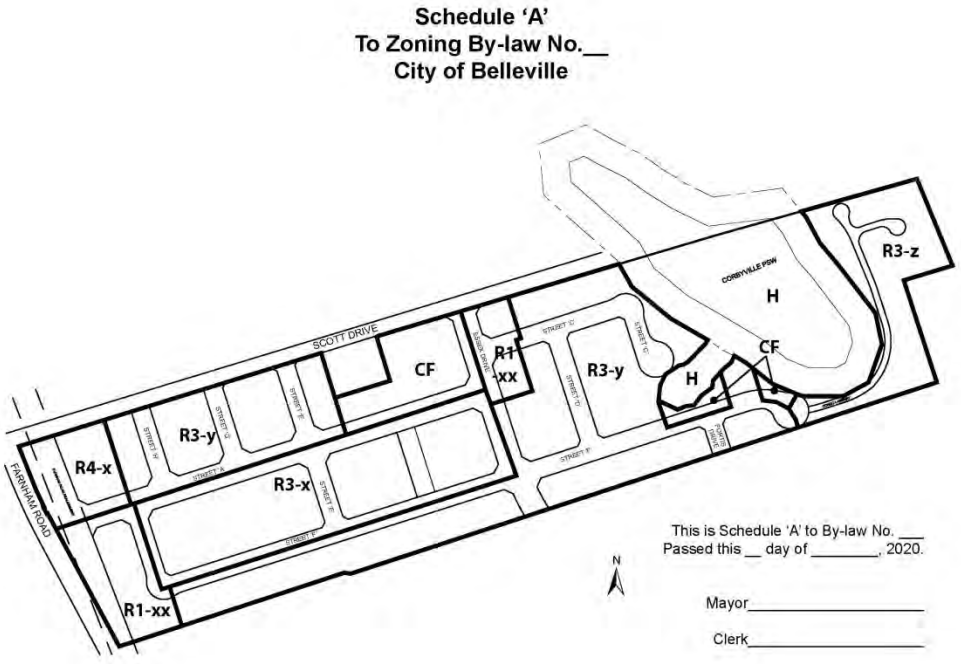
Figure 5 Existing Zoning - Excerpt of Thurlow Zoning By-law 3014

The following chart summarizes the proposed zoning provisions that are requested. For greater detail, please see the draft Zoning By-law that is provided with the application.

	Lot Frontage (Min)	Lot Area (Min)	Front Yard Depth (Min)	Rear Yard Depth (Min)	Interior Side Yard Width (Min)	Exterior Side Yard Width (Min)	Lot Coverage All Bldgs (Max)
R1 - XX Single Detached	11.0 m, 12.2 m on corner lot	340 sq m	6.0 m	7.6 m	1.2 m on one side & 0.6 m on other	2.4 m	45%
R3-X Laneway Singles, Semis and Townhouses	Singles & Semis: 8.5 m & 9.7 m on corner lot; Townhouse: 6.7 m & 9.1 m on corner lot	Singles & Semis: 270 sq m; Townhouse: 210 sq m	3.0 m	6.7 m	1.2 m one side, 0.6 m on other; Semis & Townhouse: 1.2 m, 0 m where attached	2.4 m	Singles & Semis: 65%; Townhouse: 75%
R3-Y Singles, Semis, Townhouses and Bungalow Townhouses	Singles: 11 m & 12.2 m on corner lot; Semis: 7.5 m & 8.7 m on corner lot Townhouse: 6.0 m & 9.1 m on corner lot; Single storey Townhouse: 7.5 m & 9.9 m on corner lot	Singles: 340 sq m; Semis: 230 sq m; Townhouse: 180 sq m; Single storey Townhouse: 230 sq m	6.0 m	7.0 m	Singles: 1.2 m one side & 0.6 m on other; Semis & Townhouses: 1.2 m, 0 m where attached	2.4 m	Singles: 45%; Semis: 48%; Townhouse: 48%; Single storey Townhouse: 56%
R3-Z Condo Townhouses	15.0 m for the condo lot	1 wall attached: 232 sq m; more than 1 wall attached: 105 sq. m	6.0 m	6.0 m	1.2 m, 0 m where attached	2.4 m	45%
R4-X Condo Townhouses &/or Apartment	Row dwelling: 6 m; Apartment: 30 m	4,200 sq m	6.0 m	7.0 m	Row dwelling 1.2 m, 0 m where attached Apartment: 2.4 m	2.4 m	Row dwelling: 45% Apartment: 35%

For the lots within the R3-X zone, the following provisions are requested for an accessory building to be used as a private garage with rear lane access:

- Minimum Distance to the rear of dwelling: 4.6 m
- Minimum Distance from the interior side lot line: 0.6 m on one side (except where there is an attached wall) and 2.1 m on the other side
- Minimum Distance from the exterior side lot line: 2.4 m
- Minimum Distance to the rear lot line: 0.6 m
- Notwithstanding the definition of Accessory Building or Structure, an accessory building to be used as a garage may be attached to the dwelling subject to the following regulations:
  - Maximum width of the dwelling at point of attachment to private garage : 3.5 m
  - Maximum height of the dwelling at point of attachment to private garage: 1 storey
  - Maximum height of the accessory building: 7.5 m
- For a coach house dwelling unit located above a private garage accessed by a lane, the calculation of the width for the required additional parking space may include contiguous land on an adjacent lot that is secured by an easement which is registered on title.
- All residential lots shall have rear lane access
- The maximum number of townhouse lots in one black shall be 6



The purpose of the changes to the By-law is to allow for a diverse range of housing choices that can be built within the community. The lot frontages and setback provisions for standard single detached lots are similar to other development which has occurred in Cannifton. The laneway housing which is proposed has been built and very well received in other municipalities. It creates an attractive streetscape with garages in the rear while providing for user comfort and convenience by allowing a connection to the rear garage. There are both standard townhouses as well as bungalow townhouses to address the needs of a wide demographic of homeowners.

The change in zoning provisions reflects a more contemporary approach while maintaining compatibility with development in the area. The proposed residential zoning will allow for appropriate standards of built form. The Community Facility and Hazard zones reflect the standard provisions for those zones.

5 Supporting Studies

5.1 Scoped Environmental Impact Study

A scoped environmental impact study (EIS) has been undertaken for the subject lands that includes a review of site features and potential ecological constraints taking into consideration the proposed development. The scoped EIS builds on a previous EIS completed for the property in September 2018, which included the entire the property but which did not utilize the current draft plan in undertaking the assessment of the impacts.

Terrestrial vegetation communities that occur on the subject property are considered to be common, and no Areas of Natural and Scientific Interest (ANSI's) or significant wildlife habitat has been identified on the subject lands. Two species at risk, the Barn Swallow and Eastern Meadowlark were noted in proximity to the site but were not observed on the subject lands during field investigations in 2019.

No fish habitat is present on-site and there is limited amphibian habitat and species occurring on the subject lands. No turtle habitat is interpreted to occur on-site due to a lack of sufficient surface water.

The wetland located on the subject lands is isolated from the other wetland units that form the Corbyville PSW Complex and so there is only limited hydrological connectivity with the surrounding lands. The major water source for the wetland is a spring that flows in a small channel to the wetland from the southwest. Water that flows from the spring dissipates as it enters the wetland and the wetland is dry during the summer months. The function of the wetland is considered limited due to the lack of surface water and the limited complexity of floral and faunal communities within the wetland.

Previous studies (Morris, 2012) and recent field investigations indicate that the features on the subject lands provide limited ecological functions and would not be highly sensitive to environmental disturbance. The outlet to the drainage channel along the northern edge of the property limits water attenuation within the wetland and there is limited use of the wetland by wildlife as it generally lacks surface water. The wetland is also inundated with Reed Canary Grass and doesn't have any open areas.

Due to the lack of sensitive habitats, the relatively simple flora and fauna communities observed on-site, and the low level of hydrological connectivity between the on-site

wetland and surrounding lands, a 30 m vegetated buffer surrounding the PSW is considered sufficient to protect the ecological functions of this feature.

With respect to the groundwater spring and ponded area, the Significant Wildlife Habitat Technical Guide indicates that springs that are part of some other natural vegetation community should be considered to have greater significance than those that are isolated or in disturbed habitats. In addition, springs that are important to other natural heritage features, such as fish habitat, should be considered significant.

The on-site spring does not contribute to fish habitat or any other significant natural feature and is not known to provide habitat for species of conservation concern as it is only associated with common species. The spring is within a vegetated setting but it is surrounded by farmland on three sides. As a result, a 15 m vegetated buffer of the spring and its associated channel is considered sufficient to protect their functions.

The report recommends the following mitigation measures for the proposed development:

- Development should provide a minimum of a 30 m buffer from the PSW to ensure no impacts to the ecological function of the feature. Constructing a woodchip trail within the buffer is acceptable provided the footprint is restricted to the trail construction only and erosion and sediment control barriers are installed to limit potential impacts on the adjacent PSW.

- Development should respect a buffer of a minimum of 15 m from the groundwater spring and channel to ensure no impacts to the ecological function of the feature.

- A permit from Quinte Conservation should be obtained prior to any works within 120 m of the PSW. Precautions should be taken to avoid accidental spillage or discharge of chemical contaminants (e.g. gasoline, oils and lubricants) during construction to prevent any contamination of the PSW, spring and associated surface water features. These precautions should include that refueling be carried out a minimum of 30 m from wetland and spring features in a controlled manner so as to prevent fuel spillage. In addition, all machinery should be kept out of the buffers, and an emergency spill response kit should be on site at all times. In the event of a spill, proper containment, clean up and reporting, in accordance with regulatory requirements, should be undertaken.

- It is recognized that vegetation removal will occur during construction but measures should be taken to limit vegetation removal to the fullest extent

possible in an effort to maintain the ecological integrity of the landscape. During tree removal, appropriate tree felling and grubbing procedures should be utilized in order to minimize impacts on surrounding vegetation.

5.2 Servicing Brief

The report was prepared to address servicing to accommodate the proposed development. There are existing sanitary sewers and watermains located within the Cannif Mills subdivision immediately south of the subject lands. The sewers and watermains within Cannif Mills have been oversized to accommodate servicing of the subject lands. Once the northern limits of Cannif Mills infrastructure has been constructed, they will be available for connection to the proposed Riverstone development.

The northern portions of Cannif Mills development include watermain installation along Farnham Road. It is proposed to connect to the future services located along Farnham Road and Essex Drive in order to service the proposed development.

The proposed sanitary collection system is to consist of a standard gravitational design in accordance with typical municipal standards. The sewer is proposed to be conveyed to the southeast portion of the development and connect to the Essex Drive sanitary sewer in the Cannif Mills development.

The existing sanitary pump station was designed to accommodate the subject lands, as they are currently zoned for development. However, the pump station in its existing condition may not meet the requirements of its Environmental Compliance Approval (ECA), and existing pumps may be undersized. The City is currently reviewing the pump station, and if it is determined that the pumps need to be upgraded in order to meet the requirements of the ECA and accommodate the proposed development, the developer will work with the City to make necessary upgrades to the facility to service the proposed development.

Utilities will be available to service the development and natural gas, electrical, telephone and cable utilities will be designed in accordance with the distributor's specifications and incorporated into the detailed subdivision design.

5.3 Stormwater Brief

A preliminary Stormwater Brief has been prepared to address the stormwater requirements for the proposed development.

There is existing storm sewer located within the Cannif Mills subdivision to the immediate south of the subject lands that is available for connection to the proposed development. The storm sewers within Cannif Mills have been oversized in order to accommodate development of the subject lands.

When the storm sewer system was designed for the Cannif Mills lands it assumed that there would be a catchment area of 12.63 ha from the subject lands and that development would contain a mix of single family dwellings and townhouses. The proposed development area of the subject lands is 4 ha greater than the contributing area had been assumed to be. This difference in area will require an additional storm sewer to be provided that is not conveyed toward the existing Stormwater Management (SWM) Facility in Cannif Mills.

When providing stormwater controls, both quantity and quality controls must be addressed. For 12.63 ha of the subject lands that were originally anticipated to be developed, those controls will be provided in the existing ponds in the Cannif Mills development. The approximately 4 ha of additional the development lands will be required to address quality and quantity controls. Due to the close proximity of the Moira River, quantity control mitigation measures are not required. Conveyance of the quantity event (100 year) to the wetland area and Moira River will be provided via overland drainage routes.

In order to address quality controls, overland drainage will be directed to level spreader berms located west of the wetland and at the eastern limits of the subject property. The design of these level spreader berms will provide enhanced water quality control.

An erosion and sediment control strategy will be implemented in order to minimize the transfer of silt off-site during construction. The following measures will be incorporated into the strategy as required:

- Environmental fencing and straw bales
- Regular inspection of the erosion and sediment control devices
- Removal and disposal of the erosion and sediment control devices after the site has been stabilized
- All exposed earth to be re-vegetated within thirty days.

5.4 Traffic Memo

The City undertook the Farnham Road Master Plan in 2015 which concluded that Farnham Road should be realigned and widened to a major collector roadway with a 2-lane urban cross-section (26m right of way) south of Scott Drive to Maitland Drive and a 2-lane rural cross-section north of Scott Drive (26m right of way). The report recommended that the City provide property protection along Farnham Road for a future 4-lane cross-section (30m right-of-way) between Redwood Drive/Kipling Drive and Maitland Drive. The proposed draft plan of subdivision provides for the widening and realignment of Farnham Road as outlined in the Report.

The internal roads within the proposed draft plan are 20 m wide and designed to accommodate local traffic. The extension of Essex Drive into the subdivision and Street A are both proposed to have 26 m right of ways which are the standard collector road width. Although these roads are not identified as collector roads in the Official Plan, the additional width will accommodate future traffic flows and on- street parking.

A Traffic Impact Study will be carried out when the detailed design of the subdivision is undertaken to ensure that the intersections provide for adequate turning lane configurations if warranted.

5.5 Stage 1 & 2 Archaeological Assessment

A Stage 1 and 2 Archaeological Assessment was undertaken for the subject land by Lincoln Environmental Consulting Corp for the previous owner. The assessment addressed all of the lands subject to these current applications. The report indicated that no archaeological resources were identified during the excavations. The report concludes that no further archaeological work is recommended. The study was filed with the Ministry of Tourism, Culture and Sport and has been entered into the Public Register of Archaeological Reports.

5.6 Environmental Site Assessment

Phase I and II Environmental Site Assessments (ESA) were completed in 2018 by WSP Canada Ltd. on behalf of the previous owner, and the groundwater sampling carried out by Ainley Group in 2019. In addition an Environmental Risk Information Services (ERIS) database report was completed September 27, 2019 to compare with the original ERIS

report completed on May 14, 2018. Based on all of this analysis, the ESA provided the following conclusions and recommendations:

- Groundwater samples collected on the subject property by Ainley Group met the applicable Table 1 SCS for all parameters, with the exception of Cobalt and Copper in Borehole (BH)18-2. These parameters had previously been observed to be exceeded by WSP, with WSP recording even higher concentrations. WSP noted that the elevated levels of metals in the vicinity of BH18-2 could be naturally occurring and related to the bedrock in the area.

- Drinking water for the local well users within 250m of BH18-2 should be monitored before and after construction, to ensure their well water quality is not impacted by the development. If water quality is found to have deteriorated as a result of the development, the residents can be supplied with a water service from the newly proposed watermain.

- Should any contaminants be encountered during future site activities that were beyond the scope of the reports then the appropriate investigative and remedial measures should occur to adequately address the encountered constituent.

6 Summary and Conclusions

This report has been prepared in support of Official Plan amendment, rezoning and subdivision applications for the proposed Riverstone development The subject lands contain 21.2 ha (52.36 ac) and the proposed draft plan of subdivision will create 367 residential units as shown on Figure 1 consisting of:

- Up to 79 single detached lots with frontage of 11 m (36 ft) and up
- 30 single detached lots with frontages between 8.5 and 10.5 m (32 ft) m and laneway access
- 4 semi-detached lots (8 units) with 9.8 m (32 ft) frontages and laneway access
- 48 townhouse lots with 6.7 m (22 ft) frontages and laneway access
- 66 townhouse lots with 6.0 m (20 ft) frontages
- 63 bungalow townhouses with 7.5 m (25 ft) frontages
- 1 medium density block with approximately 35 units
- 1 condominium block with approximately 42 townhouse units
- 1 park block containing 0.8 ha (2.0 ac)
- Open Space block containing the wetlands and spring plus a 30 m setback from the wetland and a 15 m setback from the spring containing 3.48 ha (8.6 ac)
- Parkette/ access to wetland block 0.11 ha (0.27 ac)
- Farnham Road realignment and road widening containing 0.69 ha (1.7 ac)
- New internal roads containing 5.11 ha (12.6 ac)
- Laneways containing 0.28 ha (0.69 ac)

A 5 m (16 ft) wide walkway block connecting the open space block to the river valley will be provided at the time of site plan approval of the condominium townhouses.

The proposed development is consistent with the PPS. It will support a strong, resilient community with an appropriate range of housing types that make efficient use of existing infrastructure and public services. It will provide park and open space opportunities, support active transportation and address water resources. It will address natural heritage features and function by protecting and buffering the wetland and spring areas.

An Official Plan amendment is proposed to relocate the Open Space lands. The portion of the subject lands that are currently designated Open Space exceed 5 percent of the total land area and are not used for commercial recreation purposes which appears to be the usual rationale for designating private land as Open Space. The relocation of the Open Space designation to a more central location within the development will improve access to active recreational opportunities for all residents. The relocation will increase

the visibility of the open space area as it will have frontage on three public roads and it will enhance the pedestrian experience and streetscapes of the main access roads into the development. The proposed walkway to the Moira River trail system will maintain a connection between the river and the wetland area. The proposed open space relocation therefore ensures the provision of both active and passive recreational opportunities and provides increased benefits to the community.

The proposed subdivision meets the Belleville Official Plan requirements for residential development and provides for a range of dwelling types. The proposal will include low, medium and high density residential although the high density is in a low rise built form of 3 storeys. The location of the medium and high density residential units meets the intent of the Official Plan with respect to the locational attributes. The development of laneway units will provide a unique form of residential development that enhances the streetscape. The overall density of the development is 20.72 units per gross ha.

The subject lands can be serviced with full municipal sanitary sewer and water services. The sanitary servicing capacity is adequate. If additional pumping station capacity is required, it will be addressed by the applicant. Stormwater will be dealt by utilizing existing stormwater management facilities in the Cannif Mills subdivision to the south and through the provision of on-site quality controls that will be developed to service the subdivision.

The road network is sufficient to accommodate the proposed development and the widening and relocation of Farnham Road has been provided for. New local streets meet or exceed current City standards and provide appropriate access. New trails will connect to the Moira River trail system and combined with new sidewalks and streetscape enhancements will encourage active transportation.

Revisions to the standard zoning criteria have been requested to allow for one site specific R1 zone, three site specific R3 zones, and one site specific R4 zone. The changes allow for more contemporary zoning provisions as well as allowing for development of unique laneway units that will enhance the streetscape. The proposed residential zoning will allow for development which provides a variety of housing types that will be compatible with the neighbourhood. The proposed Community Facility and Hazard zones reflect the uses proposed and apply the standard zoning provisions.

An Environmental Impact Study has been undertaken to address the proposed development. It states that the wetland located on the subject lands is isolated from the other wetland units that form the Corbyville PSW Complex and has limited hydrological connectivity with the surrounding lands. The major water source for the wetland is a spring that flows in a small channel to the wetland from the southwest and

the wetland is dry during the summer months. The wetland's function is limited due to the lack of surface water and the limited complexity of floral and faunal communities within it. The EIS recommends that development should provide a minimum of a 30 m buffer from the PSW to ensure no impacts to the ecological function of the feature. Constructing a woodchip trail within the buffer is acceptable provided the footprint is restricted to the trail construction only.

In conclusion, the proposed development represents a logical extension of existing development, will be compatible with the adjacent lands and will increase the diversity of residential housing options within the Cannifton community. It will ensure appropriate environmental protection and will provide a variety of open space opportunities. There are no cultural heritage attributes on the subject lands, full municipal servicing is available and there will be appropriate transportation management. The subdivision will contribute to the creation of a complete community, will provide for appropriate development of the subject lands and represents good planning.

CONSULTING ENGINEERS PLANNERS

MEMORANDUM

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File: **19503-1**

Date: August 9, 2019

Ref: **Draft EIS - Cannif North Lands**
City of Belleville, Ontario

INTRODUCTION

Ainley Group has been retained to complete a scoped environmental impact study (EIS) for the lands known as the Cannif North Lands, on the east side of Farnham Drive, immediately to the south of Scott Drive, in the City of Belleville. The scoped EIS includes a review of site features and potential ecological constraints for the property in consideration of a proposed housing development. This EIS is subsequent to a previous EIS completed for the property by Neil Morris, Consulting Ecologist (September, 2018), which included the entirety of the property; however, did not utilize the most current concept plan as part of the assessment of impacts. This EIS will build upon previously completed field work to discuss the newly proposed development concept plan for the site. A site location plan is included as **Figure 1**, and the newly proposed concept plan is provided in **Appendix A**.

The new concept plan includes a reduction of the proposed setback surrounding an isolated wetland pocket of the Corbyville Provincially Significant Wetland (PSW) from a 50 metre (m) setback as identified in the 2018 EIS, to a 30 m setback. The wetland setback reduction will allow for access to lands on the east side of the wetland. The setback reduction was discussed during a meeting with representatives from Ainley Group and Quinte Conservation Authority (QCA) staff on April 5, 2019. At the meeting the previous EIS findings were discussed, and QCA indicated that they did not have any concerns with the setback reduction; however, requested an EIS update be drafted in support. QCA noted in the meeting that the hydrologic balance of the wetland should be maintained as part of site development to preserve the function of the wetland. A woodchip path is currently shown on the draft concept plan, with anticipated future connectivity with a City owned waterfront trail along the Moira River. The location of the path, which is currently shown within the 30 m setback, was discussed with QCA and no significant concerns were raised.

Additional revisions to the Concept Plan include lot densification within the agricultural fields on the western portion of the site, including the creation of a 35 unit block, as well as Condo Block

1 (42 units). The area for Condo Block 1 was previously reviewed in the September 2018 EIS; however, additional studies were completed in the spring of 2019 for grassland birds, per recommendations in the previous EIS.

The review of constraints in this update EIS will incorporate findings from previous ecological studies of the property (e.g. Morris, 2018; MNRF, 2012) as well as reviewing existing conditions documented during field visits conducted by Ainley Group on May 26, June 7 and 21, and July 11, 2019.

SUMMARY OF PREVIOUS STUDIES

Within this EIS, and to provide additional contextual information for the site, two studies will be referenced and include: 1) Environmental Impact Study - Parkbridge - Belleville (Morris, 2018), and 2) Corbyville Wetland Evaluation Report (MNRF, 2012). These studies will be referenced to review potential ecological constraints related to reducing the wetland buffer from 50 m to 30 m and for additional development on the eastern portion of the site. A summary of each of these studies (including fieldwork and observations) is provided below.

Environmental Impact Study – September 2018

The following summarizes selected field investigation methodologies and findings from the previously completed EIS (Morris, 2018) conducted on the property.

Methodology

The scope of work was developed to meet requirements of Section 7.8.6 of the Hastings County Official Plan (OP) and Section 3.5.6 of the Belleville OP. The main areas of concern included potential impacts from the proposed development on the following features:

- Watercourses that occur on or near the subject property
- Woodlands that occur on or near the subject property and functions
- PSW and functions
- species of conservation concern (SOCC), including species at risk (SAR) and any significant wildlife or wildlife habitat that may occur on or near the property

Methodologies included a review of background information and conducting on-site studies. Various surveys were conducted from early May to late September in 2018 focusing on birds, amphibians, reptiles, mammals, ecological communities including Ecological Land Classification (ELC) methodology and aquatic features. Field survey locations from the previous EIS for breeding birds and amphibians are located in **Appendix B**.

Breeding Birds

Two point count surveys were conducted on June 11 and July 3, 2018, which along with incidental observations at the site, were used to document breeding birds at the site per the

Ontario Bird Breeding Atlas (OBBA) (Cadman et al., 2007) and the Marsh Monitoring Program (BSC, 2003).

Amphibians

Point count surveys as well as incidental observations were completed as part of amphibian monitoring activities at the site as per the Marsh Monitoring Program (BSC, 2003). Three point count surveys were conducted for amphibian surveys on May 1, June 10 and July 3, 2018.

Mammals

During all field visits, general surveillance methods were used for mammal monitoring including concentrated efforts for the detection of bats after sunset on June 10 and July 3, 2018.

Reptiles

During all field visits, general surveillance methods were used for reptile monitoring including concentrated efforts for the detection of snakes at large rock and log structures. Turtle presence on-site was noted to be unlikely due to limited aquatic habitat observed.

Ecological Communities

Three season vegetation studies were conducted including assessments using ELC methodology during all field visits, commencing in May 2018.

Aquatic Features

Aquatic features including on-site watercourses and PSW were studied for flora and fauna occurrence and hydrological connectivity during all field visits.

Results and Conclusions of September 2018 EIS (Morris)

Breeding Birds

Results of the point count surveys as well as general observations obtained during the EIS study in 2018 are located in **Appendix C**. A total of 17 bird species were observed in 2018 and no SAR were observed. A total of 46 species of birds were observed throughout the entire study, including two SAR birds: Barn Swallow and Eastern Meadowlark. Barn Swallows were observed at the farm north of the subject property and one Eastern Meadowlark was observed in proximity to the northeast meadow on the subject property in early May 2018; however, no evidence of nesting pairs was evident.

The bird community on the subject property was identified by Morris (2018) to be a moderately diverse mix of common species that use a variety of habitat types. No species were considered interior species and no stick nests were observed.

Amphibians

A total of three species, Grey Treefrog (*Hyla versicolor*), Green Frog (*Lithobates clamitans*) and Northern Leopard Frog (*Lithobates pipiens*) were tallied as a result of all amphibian surveys.

All species are considered secure (S Rank = S5) and species richness and absolute numbers were considered low due to limited permanent surface water on the subject property and breeding on-site was considered to be extremely limited or non-existent.

Mammals

Six mammal species were observed during the surveys and included White-tailed Deer (*Odocoileus virginianus*), Coyote (*Canis latrans*), Eastern Cottontail (*Sylvilagus floridanus*), Northern Raccoon (*Procyon lotor*), Red Squirrel (*Tamiasciurus hudsonicus*) and Eastern Gray Squirrel (*Sciurus carolinensis*).

Activity appeared to be concentrated in edge habitats including along the Moira River. All species were considered common and secure. No bats were observed during the surveys and the site was considered to be lacking in vegetation and features for use as roosting or hibernation sites.

Reptiles

No reptiles were observed on or adjacent to the subject property. The previous EIS noted that the lack of surface water is interpreted to preclude the presence of turtles. Common snakes may occur on-site but none were observed.

Ecological Communities

Seven ecological communities were described on-site and included Mineral Cultural Meadow (CUM1), Mineral Cultural Thicket (CUT1), Cropped Land, Dry-fresh Red Cedar Coniferous Forest (FOC2-1), Fresh-Moist Lowland Deciduous Forest (FOD7), and Reed Canary Grass Mineral Meadow Marsh (MAM2-2)(**Appendix D**).

Mineral Cultural Meadow (CUM1)

Two areas of Mineral Cultural Meadow were observed east and west of the wetland (*Appendix C*). The east meadow was dominated by a mix of graminoid plants and various forbs, while the west meadow was dominated by grasses such as Reed Canary Grass.

There were no plant species of conservation concern and the function if the community is limited to supporting non-specialized wildlife species.

Mineral Cultural Thicket (CUT1)

The small section of thicket was dominated by species typical of disturbed sites and was dominated by non-indigenous species such as Honeysuckle, Buckthorn, Prickly Ash.

Due to the small size of the area and abundance of non-indigenous plants, this community was not expected to provide meaningful ecological functions.

Cropped Land

The west field was planted with a soybean monoculture and therefore was thought to provide minimal ecological function.

Dry-fresh Red Cedar Coniferous Forest (FOC2-1)

Over 80% of the treed land on the subject property was dominated by Eastern Red Cedar. Eastern White Cedar was also common and species such as Bur Oak, Hackberry, White Elm, Sugar Maple and Ironwood were observed; however, were less abundant.

This community was indicative of formally cleared sites and lacked forest structure characteristics that would support a diverse wildlife community. Studies in 2018 indicated that this community supported limited wildlife species. Wildlife species associated with this type of community were common and not generally sensitive to disturbance.

Fresh-Moist Lowland Deciduous Forest (FOD7)

This treed community was located between the western boundary of the wetland and agricultural field, and was noted to contain a sparse stand of Green Ash, White Elm and Trembling Aspen. Grasses and forbs were abundant in the understory.

Studies in 2018 indicated that this community supported limited wildlife species. Wildlife species associated with this type of community were considered common and not generally sensitive to disturbance.

Reed Canary Grass Mineral Meadow Marsh (MAM2-2)

Approximately 1.7 ha of the property is identified as wetland unit. The wetland unit is an isolated portion of the Corbyville PSW and is dominated by Reed Canary Grass, with some Broad-leaved and Narrow-leaved Cattails. Other species observed included Purple Loosestrife, Boneset, Jewelweed, Climbing Nightshade, and several common sedges and rushes. Shrubs along the margins included Red-osier Dogwood and Willows. The previous study noted no open water habitat within the wetland and documented observations that it is completely dry in summer and autumn.

The function of the wetland was considered to be limited due to the fairly low diversity of plants and the lack of open water. The observed plant community was considered relatively tolerant to

fluctuations in water levels and was therefore considered relatively resistant to altered hydrological inputs.

Aquatic Features

Spring-fed Pond

A permanent spring was noted on-site within a cedar forest and water was observed to pool in a small excavated pond (approximately 200 m²) immediately north of the spring feature. The pond was inundated with watercress (*Nasturtium officinale*) and no fish, turtles or amphibians were observed in the pond.

Watercourses

A small watercourse approximately 0.2 m wide and 0.05 m deep conveyed overland flow from the small pond area to the wetland in a small channel that flowed in a northeast direction (**Appendix B**). No aquatic organisms were observed in this watercourse and there was no connectivity to fish habitat.

A second water feature was noted along the northern property boundary, conveying flow to the east towards the Moira River. The water feature was noted in a man-made ditch, and was noted to capture drainage from the north-west. This channel exhibited little vegetation and lacked features characteristic of fish habitat. Although this channel is directly attached to the Moira River in high water conditions, it is not expected to provide any critical habitat for fish.

One additional short channel feature that conveyed water from the PSW to the linear drainage ditch at the north limits of the subject property was observed. The concrete pipe at this location was perched at the outlet (draining to the north) and no aquatic fauna was present in the area.

The watercourses were thought to serve basic functions, but none appeared to provide meaningful function as habitat for aquatic species and were not considered to be highly susceptible to indirect effects.

Recommendations

Limited hydrological connectivity between the wetland and the area of proposed development was noted suggesting there would be a reduced risk of any effects on the hydrological balance of the wetland. As no species that are considered relatively sensitive to environmental disturbance occur on the subject PSW, a 50 m setback was considered adequate to protect ecological functions of the wetland. A setback of 30 m was suggested to protect the limited functions of the spring pond and watercourse.

With the identified presence of Eastern Meadowlark near the northwestern property boundary (in proximity to the small cleared field), additional field investigations were recommended if development was proposed in this area. The additional field investigations were to be consistent with approved protocols for detecting grassland birds.

Corbyville PSW - Wetland Evaluation Report (MNRF, 2012)

The following summarizes findings as identified in the Corbyville Wetland Evaluation Report (MNRF, 2012). The report provides an overview of the assessment process and field work pertaining to the wetland complex, including for the individual wetland unit located on the subject property (**Appendix D**).

The wetland evaluation included a larger wetland body along the Moira River, and an isolated wetland area on the subject property. Field work to delineate the PSW was conducted in 2012 on the following dates: July 10, 13, 18, 19, 20 and Aug 2, 14, 16. The entire wetland complex size was 127.4 ha while the catchment area was 199,956 ha. This area was large due to the fact that the wetland was riverine in nature and was associated with the Moira River.

The wetland unit on the subject property was identified as an isolated Reed Canary Grass marsh, with clay loam soils. The wetland unit measures at 2.42 hectares (ha). The dominant vegetation was identified as Reed Canary Grass with willow and dogwood species. Other species such as Purple Loosestrife and Narrow-leaved cattail were also noted.

FINDINGS FROM 2019 AINLEY GROUP STUDIES

Ainley Group conducted studies on the subject property **(Figure 1**) in 2019 and included breeding bird surveys with a focus on Eastern Meadowlark at the northeast meadow on May 29, June 7 and June 21 (**Figure 2**). Photographs from the 2019 field visits are included in **Appendix E**.

An additional site visit was conducted on July 11 to review existing conditions at the spring and associated watercourse, PSW and forest and meadow features surrounding the PSW to assess potential impacts of the proposed construction of a road located south of the wetland and additional housing units east of the wetland.

Eastern Meadowlark Surveys

Targeted surveys were completed for Eastern Meadowlark in accordance with MNRF SAR survey protocols. The protocol followed included the following:

- Establishment of point count stations at approximately 250 m intervals.
- Point count surveys at the identified stations were completed under field conditions with no precipitation, no or low wind speed, and good visibility. Weather conditions including wind, cloud cover, precipitation, and temperature were recorded during field events. GPS coordinates were recorded for each point count location.
- Surveys commenced at dawn and continued until no later than 9 am.
- Point count surveys included stopping at each point count location (within habitat suitable for Bobolink / Eastern Meadowlark) to undertake ten (10) minutes of observations (visual and auditory), with information recorded.

- Completion of three (3) sets of point count surveys with surveys taking place between the last week of May and the first week of July, and each separated by a week or more.
    - Surveys were completed on May 29, June 7, and June 21, 2019.

Table 1: **Point Count Bird Survey Results - 2019**

Date	Site	Common Name	Scientific Name	G Rank	S Rank
May 29	PC#1	Common Grackle	*Quiscalus quiscula*	G5	S5B
		Red-winged Blackbird	*Agelaius phoeniceus*	G5	S4
		Common Yellowthroat	*Geothlypis trichas*	G5	S5B
		Song Sparrow	*Melospiza melodia*	G5	S5B
		Blue Jay	*Cyanocitta cristata*	G5	S5
		American Robin	*Turdus migratorius*	G5	S5B
		Yellow Warbler	*Setophaga petechia*	G5	S5B
May 29	PC#2	Yellow Warbler	*Setophaga petechia*	G5	S5B
		Red-winged Blackbird	*Agelaius phoeniceus*	G5	S4
		Common Yellowthroat	*Geothlypis trichas*	G5	S5B
		Song Sparrow	*Melospiza melodia*	G5	S5B
		Blue Jay	*Cyanocitta cristata*	G5	S5
		American Robin	*Turdus migratorius*	G5	S5B
		American Goldfinch	*Spinus tristis*	G5	S5B
		Black-capped Chickadee	*Poecile atricapillus*	G5	S5
June 7	PC#1	Red-winged Blackbird	*Agelaius phoeniceus*	G5	S4
		American Robin	*Turdus migratorius*	G5	S5B
		Common Yellowthroat	*Geothlypis trichas*	G5	S5B
		Blue Jay	*Cyanocitta cristata*	G5	S5
		Yellow Warbler	*Setophaga petechia*	G5	S5B
		Eastern Meadowlark[1]	*Sturnella magna*	G5	S4B
June 7	PC#2	**Eastern Meadowlark[1]**	*Sturnella magna*	G5	S4B
		House Sparrow	*Passer domesticus*	G5	SNA
		Song Sparrow	*Melospiza melodia*	G5	S5B

Date	Site	Common Name	Scientific Name	G Rank	S Rank
		American Robin	*Turdus migratorius*	G5	S5B
		Killdeer	*Charadrius vociferus*	G5	S5B,S5N
June 21	PC#1	Red-winged Blackbird	*Agelaius phoeniceus*	G5	S4
		American Robin	*Turdus migratorius*	G5	S5B
		Common Yellowthroat	*Geothlypis trichas*	G5	S5B
		Black-capped Chickadee	*Poecile atricapillus*	G5	S5
		Gull spp.[2]	*Larus* sp.	-	-
		Blue Jay	*Cyanocitta cristata*	G5	S5
		Northern Cardinal	*Cardinalis cardinalis*	G5	S5
		Song Sparrow	*Melospiza melodia*	G5	S5B
June 21	PC#2	Red-winged Blackbird	*Agelaius phoeniceus*	G5	S4
		Eastern Meadowlark[1]	*Sturnella magna*	G5	S4B
		Blue Jay	*Cyanocitta cristata*	G5	S5
		Northern Cardinal	*Cardinalis cardinalis*	G5	S5
		Song Sparrow	*Melospiza melodia*	G5	S5B
		Black-capped Chickadee	*Poecile atricapillus*	G5	S5
		American Robin	*Turdus migratorius*	G5	S5B
		Winter Wren	*Troglodytes hiemalis*	G5	S5B

[1] Detected in fields to the north of property. No use of subject property detected during surveys.
[2] Flyover

The results of the three targeted surveys for Eastern Meadowlark did not identify individuals using the small field at the northeast corner of the property. The small size of the field is likely limiting the use of the field, as generally grassland habitats greater than 5 ha in size (contiguous) are preferred. As noted in Table 1, there were individuals audibly observed to the north; however, were not observed within the limits of the proposed development.

Findings of the Ainley Group July 11 Visit

Ainley Group conducted a field survey on July 11 to review existing conditions in the general vicinity of the PSW to further assess potential impacts to natural features by the proposed construction of an additional road south of the PSW and housing units east of the PSW.

PSW Unit

The entire on-site wetland unit on the property was dry during the July 2019 field visit. There were no open areas observed and the wetland was dominated by Reed Canary Grass (*Phalaris arundinacea*) with some Cattails (*Typha* spp.). There was no evidence of significant water levels during other times of the year observed.

Water Features

Two water features including: 1) a spring and associated pond and channel, and 2) a linear, excavated drainage channel at the north border of the subject property were observed on-site. A small amount of flow from the spring was observed (originating at the base of a large boulder), which was noted to collect in a small ponded area. Flow from the ponded area was conveyed via a small channel to the PSW. The ponded area was approximately 200 m² in area and the watercourse was approximately 0.7 m wide and 0.04 m deep with substrate material of cobble, gravels and sand. Plants observed in the pond area included Watercress (*Nasturtium officinale*), Duckweed (*Lemna* sp.), Bittersweet Nightshade (*Solanum dulcamara*) and Spotted Jewelweed (*Impatiens capensis*), amongst others. The channel conveyed groundwater from the spring water along the north edge of the south forested area toward the southwest section of the PSW. During the July 2019 visit, flow from the channel dissipated into the PSW and no flow was observed within its boundaries.

The second water feature was observed to be a dug, channelized drainage ditch that conveyed water from northwest of the subject property and then along the north margin of the property to the Moira River. Water was intermittent within the channel and stagnant. No fish were observed in the channel; however water striders and Green Frogs (*Lithobates clamitans*) were observed. The channel directs surface water from north of the subject property directly to the Moira River. Flow from the PSW at the north end also contributes to this ditch feature via a concrete culvert beneath an existing farm access road. The small PSW outlet channel (concrete pipe) exhibited no surface water during the July 2019 survey.

Birds

Bird species that were observed during the July 11, 2019 site visit are listed in **Table 2**.

Table 2: Bird Species Observed on July 11, 2019

Species - Common Name	Species – Scientific Name	G Rank	S Rank
Eastern Kingbird	*Tyrannus tyrannus*	G5	S4B
Red-winged Blackbird	*Agelaius phoeniceus*	G5	S4
Common Yellowthroat	*Geothlypis trichas*	G5	S5B
Song Sparrow	*Melospiza melodia*	G5	S5B
American Goldfinch	*Spinus tristis*	G5	S5B
American Robin	*Turdus migratorius*	G5	S5B
Gull spp.	*Larus* sp.	-	-
Blue Jay	*Cyanocitta cristata*	G5	S5

Species - Common Name	Species – Scientific Name	G Rank	S Rank
Common Grackle	*Quiscalus quiscula*	G5	S5B

During the July 11, 2019 site visit, observations were made at the northeast meadow to detect the presence of Eastern Meadowlark or Bobolink (*Dolichonyx oryzivorus*). No SAR meadow birds were observed. One Eastern Kingbird was observed preying on insects in the northeast meadow.

Herpetofauna

Turtles

No turtles were observed on the subject property including in the spring pond or channelized ditch during the July 11, 2019 site visit.

Snakes

No snakes were observed on the subject property during the July 11, 2019 site visit.

Amphibians

No amphibians were observed in the PSW on July 11, 2019 likely due to the lack of surface water. No amphibians were observed in the spring pond or associated channel. Green Frogs were observed in the channelized ditch in sections where water occurred.

Fish and Fish Habitat

No fish were observed in wetted areas on the subject property including the spring pond and channelized ditch. Fish are known to occur in the Moira River east of the subject property. In flooded conditions, fish may be able to enter the channelized ditch from the river, however this feature is considered to provide little function to support fish.

Bats

No bats or roosting or hibernation features were observed on the subject property.

POTENTIAL IMPACTS AND MITIGATION

Potential impacts from the proposed housing development are discussed in the following sections. Additional areas reviewed per the new Concept Plan include the south section of the Moist Lowland Deciduous Forest, Mineral Cultural Thicket and Red Cedar Coniferous Forest that surrounds the PSW, the south margin and southeast section of the Red Cedar Coniferous Forest and the east Mineral Cultural Meadow (**Figure 3**).

Breeding Birds and SAR

Point count surveys and historical information identify generally common species on the property; however, two SAR were also noted in proximity to the eastern portion of the site. Barn Swallow were observed off the property at the farm north of the subject property, and were not interpreted to be utilizing the subject property.

Ainley Group did not observe any Eastern Meadowlark individuals on the subject property; however, individuals were audibly noted to the north of the property. The area on the property proposed for development that was surveyed in the spring of 2019 (northeast meadow) is approximately 1.1 ha in size and is smaller than the reported minimum area preferred by Eastern Meadowlark of 5 ha (COSEWIC, 2011). Based on the absence of individuals using this area, and the small size, significant use of this field by Eastern Meadowlark is not anticipated

Herpetofauna

Turtles

No turtles have been observed on the site and are not anticipated to use the site. Insufficient water occurs on the subject property for turtle hibernation. The site is currently vegetated and no evidence of turtle nesting was observed. However, should active construction proceed in the northeast meadow and along the Moira River, consideration should be given to monitoring exposed fill piles or excluding these piles during the turtle nesting season from May 15 to June 30. If turtles are observed nesting within the fill piles, works in the area should cease and a qualified environmental specialist and/or MECP be called for direction.

Amphibians

During field visits by Ainley staff, amphibians were limited in occurrence to the channelized ditch along the north margin of the property where Green Frogs were observed. This feature is not likely to provide breeding habitat, but it is not anticipated to be altered as part of the proposed development. Amphibian abundance in the PSW is considered to be very low due to a lack of surface water and absence of individuals during amphibian surveys completed as part of the previous EIS (Morris, 2018). Impacts to amphibians are not anticipated from the proposed development or the setback reduction to 30 m surrounding the proposed development.

Fish and Fish Habitat

Potential impacts to fish and fish habitat are considered to be negligible as habitat does not occur on the subject property. It is anticipated that the 30 m treed buffer of the Moira River riparian zone will provide protection for fish and fish habitat associated with the river. It is recommended, as a secondary barrier, that erosion and sediment control measures be implemented during construction at the eastern property boundary. These measures could include silt fence at the eastern limit of construction to prevent potential sediment transport towards the Moira River.

PSW

The Corbyville PSW unit that occurs on the subject property is identified to be an isolated component of a larger PSW complex along the Moira River. The wetland area on the subject property is approximately 2.42 ha, and is comprised predominantly of Reed Canary Grass. The previous EIS noted that the hydrological connection between the wetland and surrounding on-site features is limited (Morris, 2018). The vegetation community within the wetland does not exhibit a high degree of diversity, and based on field studies completed, does not support significant amounts of surface water or amphibian breeding habitat.

Based on the isolated nature of the wetland with limited diversity and function, a setback of 30 m is determined as appropriate to limit potential impacts. The 30 m buffer should remain vegetated and have limited grading within this footprint. The current concept plan shows a woodchip path within the 30 m buffer area, which was discussed with QCA, without significant concerns raised. The location of the woodchip path should be installed as far as possible from the wetland boundary, and be constructed with means limiting intrusion and disturbance to the ground surface. Erosion and sediment controls should be implemented between the location of the path and the wetland boundary if grading is required to install the path.

In an effort to maintain the hydrologic function and water balance within the wetland, the adjacent spring on the property is also recommended for protection via implementation of a 15 m buffer.

Groundwater Spring and Ponded Area

Based on site observations, it appears that the main source of water to the PSW area originates from the spring and ponded area to the west. To maintain the inputs to the wetland, measures to protect this spring feature should be implemented, and include a 15 m setback in which no grading or clearing works should be permitted. In addition, overland flows from the future buildout on the western portion of the site should not be discharged in the vicinity of this spring to limit potential impacts to groundwater quality.

CONCLUSIONS AND RECOMMENDATIONS

Terrestrial vegetation communities that occur on the subject property are considered to be common, and no ANSI's or significant wildlife habitat has been identified on the subject property. Two species at risk, Barn Swallow and Eastern Meadowlark were noted in proximity to the site; however, were not observed on the subject property during field investigations in 2019.

No fish habitat is present on-site and limited amphibian habitat and species occurrence occurs on the subject property. No turtle habitat is interpreted to occur on-site due to a general lack of sufficient surface water.

The wetland unit on the subject property is isolated from the other wetland units of the Corbyville PSW Complex and exhibits limited surface water levels and is dry during summer

months. There is very limited hydrological connectivity with the surrounding lands. The major water source for the wetland is a spring that flows in a small channel to the wetland from the southwest. Water that flows from the spring dissipates as it enters the wetland. The function of the wetland is considered limited due to the lack of surface water and limited complexity of floral and faunal communities within the wetland.

Previous studies (Morris, 2012) and recent field investigations indicate that features of the subject property provide limited ecological functions and would not exhibit high levels of sensitivity to environmental disturbance. Water inputs to the wetland appear low and the outlet to the drainage channel along the north margin of the property further limits water attenuation within the wetland. Wildlife use of the wetland is limited as the wetland generally lacks surface water. The wetland is inundated with Reed Canary Grass and exhibits no open areas.

Considering the lack of sensitive habitats, relatively simple flora and fauna communities observed on-site, and low level of hydrological connectivity between the on-site wetland and surrounding lands, considered a 30 m vegetated buffer surrounding the PSW is sufficient in protecting the ecological functions of this feature.

With respect to the groundwater spring and ponded area, the Significant Wildlife Habitat Technical Guide (OMNR, 2000) states that springs that are part of a forest or some other natural vegetation community should be considered greater in significance than those that are in disturbed habitats or isolated. In addition, springs that are important to other natural heritage features, such as fish habitat, should be considered significant.

The on-site spring does not contribute to fish habitat or any other significant natural feature as the channel is not connected to a watercourse. In addition, this spring and forested area is not known to provide habitat for species of conservation concern and are associated only with common species. The spring is within a vegetated setting; however, is surrounded by farmland with the wetland immediately to the east. With the presence of these features, a 15 m vegetated buffer surrounding the spring and associated channel is considered sufficient in protecting the functions of these features.

Measures to mitigate impacts to the site from the proposed development are recommended as follows:

- Development on the subject property should respect a buffer of a minimum of 30 m from the PSW to ensure no impacts to the ecological function of the feature. The construction of a woodchip trail within this buffer is interpreted to be acceptable provided the footprint remains concentrated for the trail construction only and erosion and sediment control barriers are installed to limit potential impacts on the adjacent PSW.
- Development on the subject property should respect a buffer of a minimum of 15 m from the groundwater spring and channel to ensure no impacts to the ecological function of the feature.
- As work is proposed within 120 m of a PSW, a permit from Quinte Conservation should be obtained prior to any works within this area.
- To prevent any contamination of the PSW, spring and associated surface water features

during construction, precautions should be taken to avoid accidental spillage or discharge of chemical contaminants (e.g. gasoline, oils and lubricants). These precautions should include that refueling be carried out a minimum of 30 m from wetland and spring features in a controlled manner so as to prevent fuel spillage. In addition, all machinery should be kept out of the buffers, and an emergency spill response kit should be on site at all times. In the event of a spill, proper containment, clean up and reporting, in accordance with regulatory requirements, should be undertaken.

- Vegetation removal is expected during construction. However, measures should be taken to limit vegetation removal to the fullest extent possible in an effort to maintain the ecological integrity of the landscape. As part of tree removal during construction, appropriate tree felling and grubbing procedures should be utilized in order to minimize impacts on surrounding vegetation.

CLOSURE

Ainley Group has prepared this Environmental Impact Study memorandum to describe the proposed development, summarize potential impacts due to the undertaking, and identify mitigation measures to limit potential impacts.

REFERENCES

Committee on the Status of Endangered Wildlife in Canada (COSEWIC). 2011. COSEWIC assessment and status report on the Eastern Meadowlark (*Sturnella magna*) in Canada.

Morris, 2018. Environmental Impact Study- Parkbridge – Belleville.

OMNR. 2000. Significant wildlife habitat technical guide. 151p.

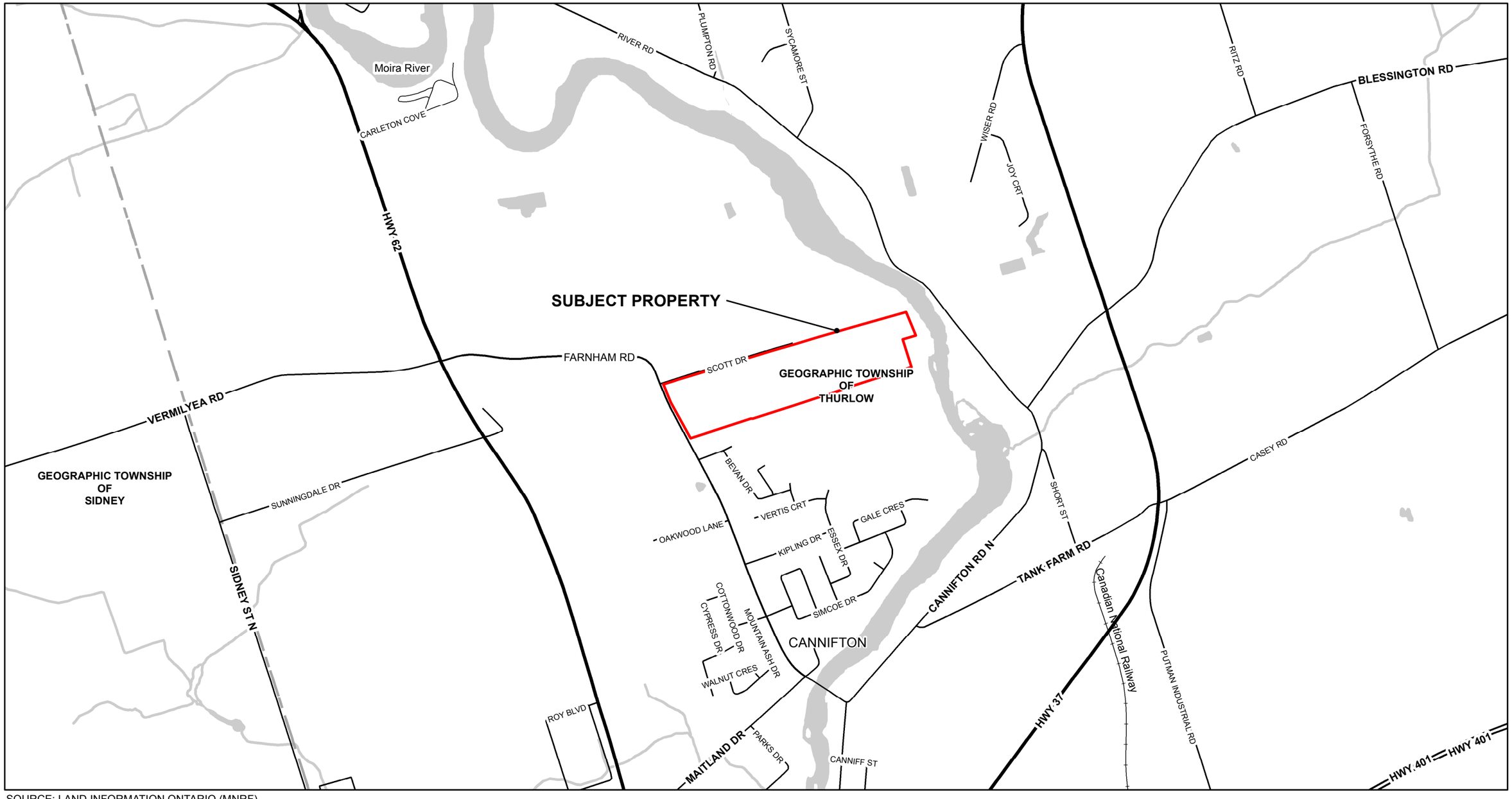
CANNIFTON NORTH LANDS

N

Ainley GROUP CONSULTING ENGINEERS PLANNERS

FIGURE 1

SITE LOCATION PLAN



SOURCE: LAND INFORMATION ONTARIO (MNRF)

N.T.S

METRIC
DIMENSIONS ARE IN METRES AND/OR MILLIMETERS UNLESS OTHERWISE SHOWN

CANNIFTON NORTH LANDS

Ainley GROUP CONSULTING ENGINEERS PLANNERS

FIGURE 2

BREEDING BIRD POINT COUNT LOCATIONS - 2019

Legend

- SUBJECT PROPERTY
- BREEDING BIRD POINT COUNT LOCATIONS (BBPC)

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Source: Land Information Ontario (MNRF)

N.T.S

METRIC

DIMENSIONS ARE IN METRES AND/OR MILLIMETERS UNLESS OTHERWISE SHOWN

CANNIFTON NORTH LANDS

N

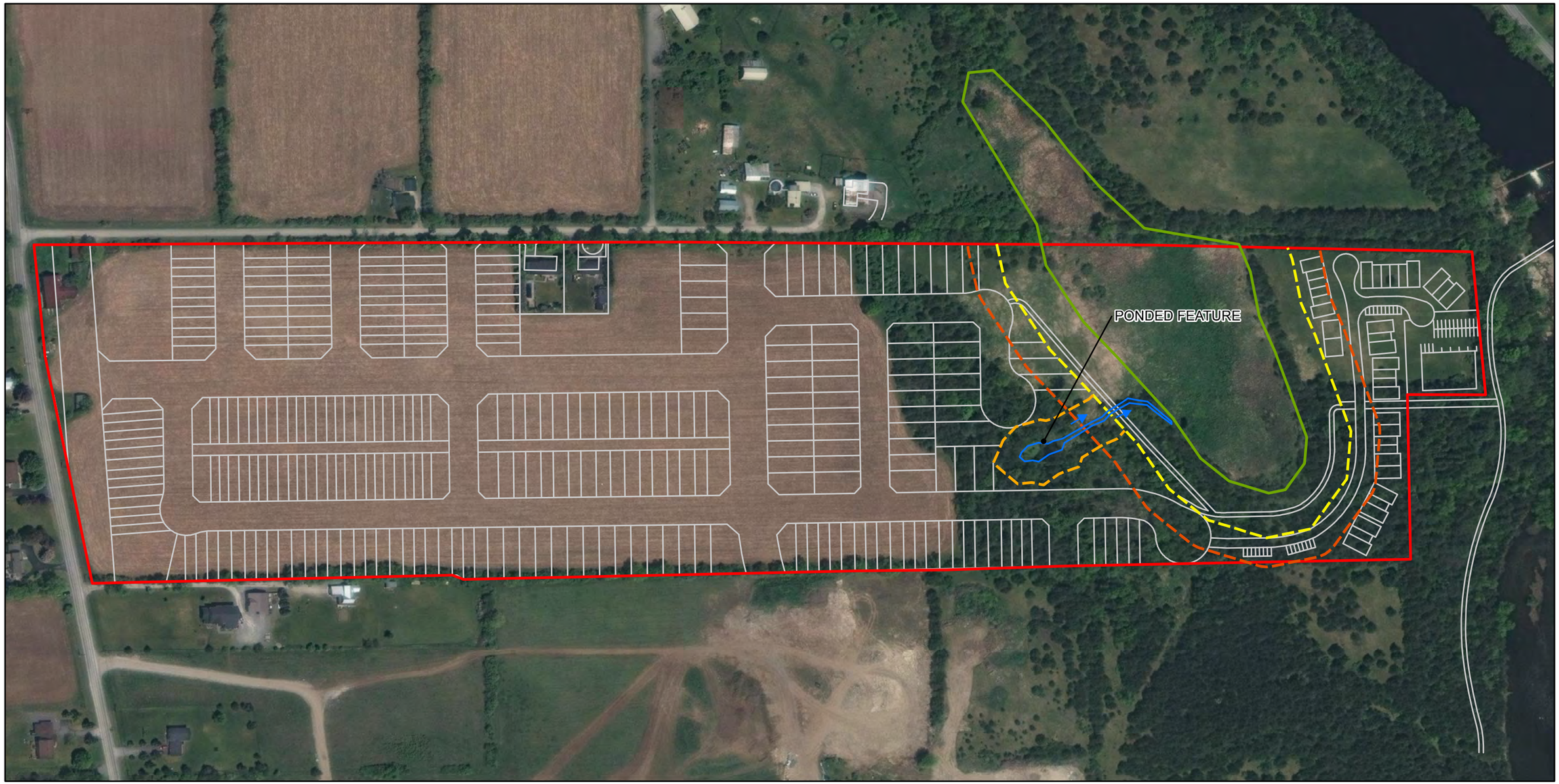
Ainley GROUP CONSULTING ENGINEERS PLANNERS

FIGURE 3

CONSTRAINTS

Legend

- SUBJECT PROPERTY
- CONCEPT PLAN
- PROVINCIALLY SIGNIFICANT WETLAND (PSW)
- SPRING AND DRAINAGE
- 15 m PROPOSED SPRING SETBACK
- 30 m PROPOSED PSW SETBACK
- 50 m EXISTING PSW SETBACK
- DRAINAGE DIRECTION



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Source: Land Information Ontario (MNRF)

N.T.S

Appendix A

LAND USE SUMMARY

		UNITS	AREA (ha)	ZONING
11.0m SINGLE DETACHED LOT		70	2.754	
8.5m/10.5m ALTERNATING SINGLE DETACHED LOT WITH LANEWAY ACCESS		60	2.226	
9.8m SEMI-DETACHED LOT WITH LANEWAY ACCESS		8	0.282	
6.0m 2-STOREY TOWNHOMES (6.0m FRONT YARD SETBACK & 7.0m REAR YARD SETBACK)		81	1.905	
7.5m BUNGALOW TOWNHOMES		63	1.821	
MEDIUM DENSITY RESIDENTIAL #1: 1-3 STOREYS		35	0.428	
CONDO BLOCK 1		42	1.854	
PARKLAND DEDICATION BLOCKS			0.802	
PARKETTE / ACCESS TO WETLAND SETBACK TRAILS			0.162	
15m SETBACK AROUND SPRING AREA			0.296	
AREA OF PROPOSED ROADWAY NETWORK: 5.108 ha				
AREA RESERVED FOR FARNHAM ROAD WIDENING: 0.693 ha				
AREA RESERVED FOR PSW & 30m SETBACK: 3.181 ha				
	TOTAL	359	21.51 Ha	

REV.#	REVISIONS	DATE	INITIAL
0	PRELIMINARY DESIGN	29/07/2019	CRS

Not Valid Unless Signed And Dated

SCALE: 1:1250
DESIGN: CRS
DRAWN: CRS
CHECKED: AJW
DATE: JULY 2019

CANNIF NORTH LANDS
CITY OF BELLEVILLE

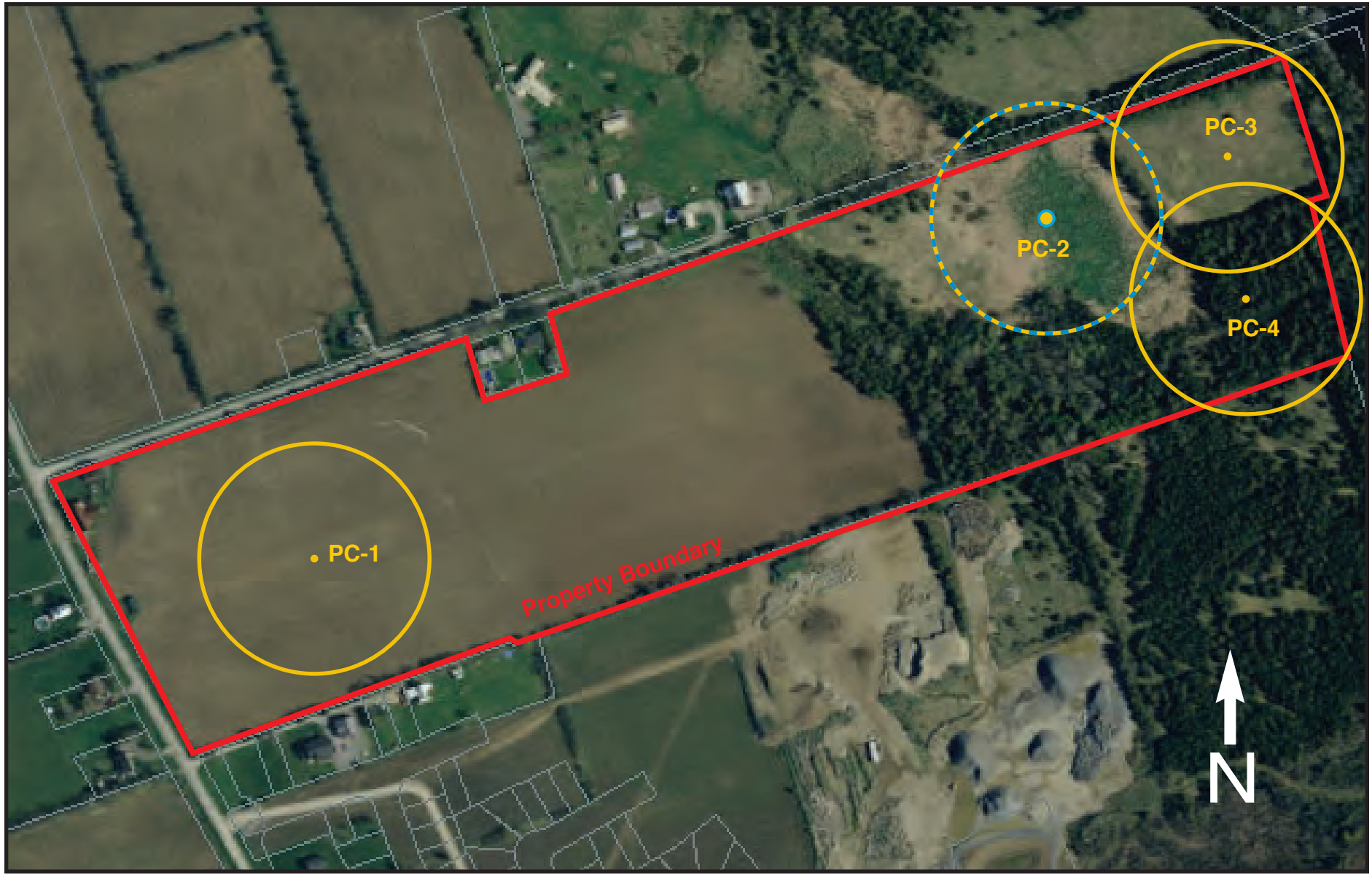
CONCEPT PLAN

Ainley GROUP — CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG 19503-CP

V:\19503-1 - Cannif North (Geotechnical)\Drawing\Cannif North Concept-Aug 16.dwg 2019-08-16 3:42 PM

Appendix B



Breeding Bird Point-count Station

Amphibian Point-count Station

Figure 3 - Ecological Monitoring Locations	
Parkbridge Belleville EIS	September 2018

Appendix C

Table 3: Summary of Bird Species Observed at the Belleville Property

Species		Breeding Status		Conservation Status		
Common name	**Scientific name**	**Site[1]**	**OBBA[2]**	**SRANK[3]**	**COSEWIC[4]**	**COSSARO[5]**
American Crow	*Corvus brachyrhynchos*	Possible	Confirmed	S5	-	-
American Goldfinch	*Carduelis tristis*	Probable	Confirmed	S5	-	-
American Redstart	*Setophaga ruticilla*	Observed	Probable	S5	-	-
American Robin	*Turdus migratorius*	Confirmed	Confirmed	S5	-	-
Barn Swallow	*Hirunda rustica*	Confirmed	Confirmed	S4	THR	THR
Belted Kingfisher	*Ceryle alcyon*	Possible	Confirmed	S4	-	-
Black-capped Chickadee	*Poecile atricapillus*	Confirmed	Confirmed	S5	-	-
Blue Jay	*Cyanocitta cristata*	Probable	Confirmed	S5	-	-
Brown Thrasher	*Toxostoma rufum*	Possible	Confirmed	S4	-	-
Brown-headed Cowbird	*Molothrus ater*	Probable	Confirmed	S4	-	-
Canada Goose	*Branta canadensis*	Possible	Confirmed	S5	-	-
Cedar Waxwing	*Bombycilla cedrorum*	Probable	Confirmed	S5	-	-
Chipping Sparrow	*Spizella passerina*	Probable	Confirmed	S5	-	-
Common Grackle	*Quiscalus quiscula*	Probable	Confirmed	S5	-	-
Common Yellowthroat	*Geothlypis trichas*	Probable	Confirmed	S5	-	-
Eastern Kingbird	*Tyrannus tyrannus*	Possible	Confirmed	S4	-	-
Eastern Meadowlark	*Sturnella magna*	Possible	Confirmed	S4	THR	THR
Eastern Phoebe	*Sayornis phoebe*	Confirmed	Confirmed	S5	-	-
European Starling	*Sturnus vulgaris*	Probable	Confirmed	SE		
Golden-crowned Kinglet	*Regulus satrapa*	Observed	NR	S5	-	-
Gray Catbird	*Dumetella carolinensis*	Possible	Confirmed	S4	-	-
Great Blue Heron	*Ardea herodias*	Possible	Possible	S4	-	-
Great Crested Flycatcher	*Myiarchus crinitus*	Probable	Confirmed	S5	-	-
Green Heron	*Butorides virescens*	Possible	Probable	S4	-	-
Hairy Woodpecker	*Picoides villosus*	Possible	Confirmed	S5	-	-
House Wren	*Troglodytes aedon*	Confirmed	Confirmed	S5	-	-
Killdeer	*Charadrius vociferus*	Probable	Confirmed	S5	-	-
Mourning Dove	*Zenaida macroura*	Probable	Confirmed	S5	-	-
Northern Cardinal	*Cardinalis cardinalis*	Probable	Confirmed	S5	-	-
Northern Flicker	*Colaptes auratus*	Possible	Confirmed	S4	-	-
Northern Harrier	*Circus cyaneus*	Confirmed	Probable	S4	NAR	NAR
Northern Oriole	*Icterus galbula*	Probable	Confirmed	S5	-	-
Palm Warbler	*Dendroica palmarum*	Observed	NR	S5	-	-
Red-winged Blackbird	*Agelaius phoeniceus*	Probable	Confirmed	S4	-	-
Ring-billed Gull	*Larus delawarensis*	Observed	NR	S5	-	-
Rock Pigeon	*Columba livia*	Possible	Confirmed	SE	-	-
Savannah Sparrow	*Passerculus sandwichensis*	Confirmed	Confirmed	S4	-	-
Sharp-shinned Hawk	*Accipiter striatus*	Possible	Confirmed	S5	-	-
Song Sparrow	*Melospiza melodia*	Confirmed	Confirmed	S5	-	-
Swamp Sparrow	*Melospiza georgiana*	Confirmed	Confirmed	S5	-	-
Tree Swallow	*Tachycinate bicolor*	Confirmed	Confirmed	S4	-	-
Turkey Vulture	*Cathartes aura*	Possible	Probable	S5	-	-
Warbling Vireo	*Vireo gilvus*	Probable	Probable	S5	-	-
White-breasted Nuthatch	*Sitta carolinensis*	Possible	Confirmed	S5	-	-
White-throated Sparrow	*Zonotrichia albicollis*	Possible	Confirmed	S5	-	-
Yellow-bellied sapsucker	*Sphyrapicus varius*	Possible	Possible	S5	-	-

1. Includes adjacent lands within 50 m of property perimeter
2, The highest breeding status reported in the OBBA for Square 18UP09 (NR = not reported)
3. Provincial Rank: , S2 - Imperiled, S3 - Vulnerable, S4 - Apparently Secure, S5 - Secure, SE - Exotic
4. Federal Status: NAR - not at risk, S - Special Concern
5. Provincial Status: NAR - not at risk, THR - Threatened
5. As specified in the Ontario Breeding Bird Atlas (OBBA)

Table 2: Summary of Point-Count Monitoring Results[1]

Species		Station Totals				Survey
Common name	**Scientific name**	**PC-1**	**PC-2**	**PC-3**	**PC-4**	**Total**
American Crow	*Corvus brachyrhynchos*				2 (2)	2 (2)
American Goldfinch	*Carduelis tristis*	1 (1)	3 (2)	2 (2)	2 (2)	8 (7)
American Robin	*Turdus migratorius*			3 (2)		3 (2)
Black-capped Chickadee	*Poecile atricapillus*				2 (1)	2 (1)
Blue Jay	*Cyanocitta cristata*			2 (1)		2 (1)
Brown-headed Cowbird	*Molothrus ater*			1 (1)		1 (1)
Cedar Waxwing	*Bombycilla cedrorum*		1 (1)			1 (1)
Chipping Sparrow	*Spizella passerina*			4 (2)		4 (2)
Common Grackle	*Quiscalus quiscula*	1 (1)	1 (1)			2 (2)
Common Yellowthroat	*Geothlypis trichas*		4 (3)			4 (3)
Northern Cardinal	*Caridinalis cardinalis*			2 (2)		2 (2)
Northern Harrier	*Circus cyaneus*		2 (2)			2 (2)
Red-winged Blackbird	*Agelaius phoeniceus*		5 (2)	2 (1)	1 (1)	8 (4)
Song Sparrow	*Melospiza melodia*		4 (2)	11 (4)	1 (1)	16 (7)
Swamp Sparrow	*Melospiza georgiana*		7 (2)			7 (2)
Rock Dove	*Columbia livia*	10 (1)				10 (1)
Savannah Sparrow	*Passerculus sandwichensis*	5 (2)				5 (2)
Species Count		4	8	8	5	17
Individual Bird Count		17	27	27	8	79

1 - summary counts include only those birds occurring within 100m of the centre of the point count station
Bracketed values indicate the number of survey intervals (5 minutes each, 2 per survey event) with the species present

Appendix D

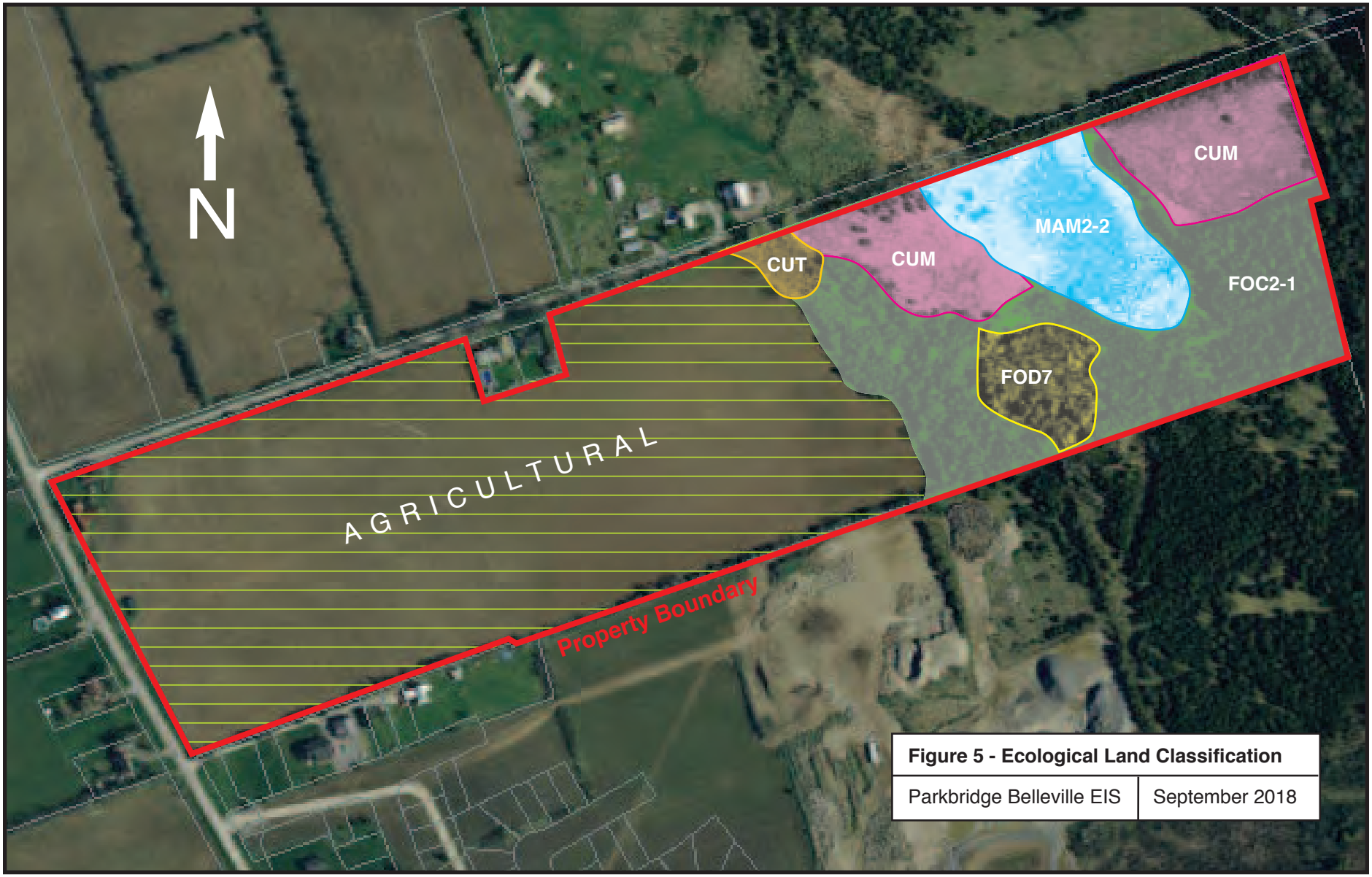


Figure 5 - Ecological Land Classification

Parkbridge Belleville EIS	September 2018

CUM - Mineral Cultural Meadow

CUT - Mineral Cultural Thicket

MAM2-2 - Mineral Meadow Marsh

FOC2-1 - Red Cedar Coniferous Forest

FOD7 - Moist Lowland Deciduous Forest

New Wetland Report

Evaluation Completion Date: **Nov 2012**

Wetland Name: ***Corbyville Wetland*** Wetland Code: KG-BEL-QC-011

New Significance: **PSW** LIO Code: 102694357

Size (ha): 127.41 Coastal: No Eco-District: 6e-8

Upper Tier Municipality: City of Belleville Conservation Authority: Quinte Conservation

Lower Tier Municipalities: n/a

Score Components	
Biological	150
Social	141
Hydrological	103
Special Features	250
Total Score	643

Field Work

July 10, 13, 18, 19, 20 and Aug 2, 14, 16, 2012 (70+ hours)

Evaluators

T. Norris, M. Bérubé, A. Margetson, G. Clark
(MNR Peterborough District)

New Update Summary Notes

A new wetland area was identified along the Moira River between Foxboro and Corbyville in the vicinity of Thurlow Twp Cons 3-5, Lots 1-10 through examination of SOLRIS predicted wetlands and 2008 aerial imagery. The sites were visited several times throughout July and August 2012 by MNR Peterborough District to evaluate the landscape using the OWES 3rd edition scoring criteria. The following evaluation was prepared based on those field observations. Over 70 hours were dedicated to field observations throughout this wetland with the kind support of local landowners.

The **mapping** of the vegetation communities was draft delineated using 2008 aerial imagery interpretation and 1998 hard copy colour IR photos with stereo scope and on-screen digitizing. The draft maps were taken in the field and refined using GPS equipment and field observations.

A catchment area of 199,956 ha. was delineated from the Enhanced Flow Direction grids using ArcGIS's Watershed tool. The enormous watershed is due to the wetland being riverine in nature on a large river. The interspersion was determined using and automated GIS script.

The **scoring** of the wetland was entered into a digital Excel scoring record (OWES 3rd edition) using notes from the field along with other GIS data sources such as NHIC rare species observations and fisheries data. The wetland achieved a Special Features component score over 200 and a total score over 600 and is thus considered a **Provincially Significant Wetland**.

Wetland Evaluation Edition	3	This Update:
		2012-Nov
Corbyville Wetland		
KG-BEL-QC-011		

Comments

Additional Information

Include relevant information that can not be entered in the wetland data record(Ex. Sections that have not been completed.)

Field work completed in several field days in July and August, 2012.
Mapping based on field notes/observations and 2008 imagery.

Official Name:	**Corbyville Wetland**				
Evaluation Edition:	3	Class:	n/a	OGF ID #:	102694357
Wetland Significance:		Last Evaluated (field):		2012-Nov	
PSW		Last Updated:		(new)	
Special Planning Considerations:				**Scores**	
Wetland Area:	127.41			Biological:	150
Dentention Area:	15,200 ha.			Social:	141
Catchment Area:	199,956 ha.			Hydrological:	103
Information Source:	New field evaluation 2012			Special Features:	250
Submitted by:	M. Bérubé, T. Norris, G. Clark, A. Margetson			Overall:	643
Approved by:	Todd Norris				
Date:	November 2nd, 2012				

Southern Ontario Wetland Evaluation, Data and Scoring Record **March 1993**

Wetland Manual

WETLAND DATA AND SCORING RECORD

i) WETLAND NAME: Moira River Wetland

ii) MNR ADMINISTRATIVE REGION: Southern **DISTRICT:** Peterborough

AREA OFFICE (if different from District): Kingston

iii) CONSERVATION AUTHORITY JURISDICTION: Quinte Conservation

(If not within a designated CA, check here: _____

iv) COUNTY OR REGIONAL MUNICIPALITY: City of Belleville

v) TOWNSHIP: n/a

vi) LOTS & CONCESSIONS: Thurlow Twp: Con 3 Lot 7, Con 4 Lots 2-9, Con 5 Lots 1-10

(attach separate sheet if necessary)

vii) MAP AND AIR PHOTO REFERENCES

a) Latitude: **44.228** Longitude: **-77.405**

b) UTM grid reference: Zone: **18** Block: **T**
Grid:E **308000** Grid:N **4899700**

c) National Topographic Series:

map name(s) **n/a**

map number(s) _____ edition _____

scale _____

d) Aerial photographs: Date photo taken: **27-Apr-08** Scale: **Digital Orthos**

Flight & plate numbers: **Drape 2008 Digital Aerial Orthophotography**
Flight Line 043 - 090-085; Flight Line 042 - 1125-1130

(attach separate sheet if necessary)

e) Ontario Base Map numbers & scale **n/a**

(attach separate sheets if necessary)

Data Summary Form

Code: 102694357
Wetland Name: Corbyville Wetland

WETLAND UNIT #	DOMINATE FORM	WETLAND TYPE	FIELD CODE	MAP CODE	AREA (ha)	SITE TYPE	SOIL	FORMS	# OF FORMS	% OPEN WATER	ha OPEN WATER	FISH HABITAT (LM / HM)	Dominate Species	Additional Species	COMMENTS
1	ne	Marsh	M1	M1	1.58	Riverine	clay/loam	ne ts gc re be f	6	40	0.63		reed canary grass	buttonbush; false nettle, jewelweed, spotted Joe-pye weed, swamp milkweed, swamp dock, square-stemmed monkey flower, ditch stonecrop, ostrich fern, sensitive fern, marsh fern; arrowhead, water plantain, moneywort ; duckweed,	*no re species listed…
1	ne	Marsh	M1	M1	1.15	Riverine	clay/loam	ne ts gc re be f	6	10	0.12		reed canary grass	buttonbush; false nettle, jewelweed, spotted Joe-pye weed, swamp milkweed, ostrich fern, sensitive fern, marsh fern; arrowhead, water plantain; duckweed	*no re species listed…
1	ne	Marsh	M1	M1	1.88	Riverine	clay/loam	ne ts gc re be f	6	10	0.19		reed canary grass	buttonbush; false nettle, jewelweed, spotted Joe-pye weed, swamp milkweed, ostrich fern, sensitive fern, marsh fern; arrowhead, water plantain; duckweed	*no re species listed…
1	ne	Marsh	M2	M2	5.58	Riverine	clay/loam	ne re ts	3	0	-		reed canary grass, buttonbush, slender willow	narrow-leaved cattail, wool rush, broad-fuited bur-reed; buttonbush, slender willow; frogbit; false nettle	
1	ne	Marsh	M2	M2	0.65	Riverine	sand	ne re	3	0	-		reed canary grass	common cattail	
1	ne	Marsh	M7	M7	0.21	Riverine	clay/loam	ne	1	70	0.15		burreed		
1	h	Swamp	S1	S1	13.26	Riverine	clay/loam	h dh gc ne	4	15	1.99		silver maple, red maple, green ash	dead hardwoods; sensitive fern, false nettle, wood nettle, dwarf raspberry, hog peanut, water smartweed, clearweed, ostrich fern, marsh fern, northern blue-flag iris, beggar ticks, American water-horehound, jack-in-the-pulpit, water plantain, ; reed canary grass, rice cut grass, tuckermans sedge, hop sedge, bladder sedge, beaked sedge,	water parsnip, arrowhead, buttonbush, water arum, duckweed
1	ts	Swamp	S15	S15	1.35	Riverine	clay/loam	ts be	2	5	0.07		buttonbush	**water parsnip**, water plantain, ***this is a gc, b**road-leaved arrowhead, water smartweed, swamp milkweed, royal fern,	marsh fern, silver maple, burreed, frogbit, duckweed
1	h	Swamp	S2	S2	6.84	Riverine	clay/loam	h gc	2	0	-		silver maple, green ash, crack willow	swamp milkweed, wood nettle, false nettle, clearweed, sensitive fern, moneywort, touch-me-not, Jack-in-the-pulpit, spotted Joe-pye weed	tuckerman's sedge, reed canary grass, buttonbush, phragmites, arrowhead
1	h	Swamp	S2	S2	8.11	Riverine	clay/loam	h gc	2	0	-		green ash, silver maple	swamp milkweed, sensitive fern, moneywort, false nettle, wood nettle, bittersweet nightshade, water parsnip, American water hore-hound, touch-me-not, Jack-in-the-pulpit, spotted Joe-pye weed, mermaid weed, beggars ticks; Tuckermann's sedge, bladder sedge, porcupine sedge, Bebb's sedge,	tuckerman's sedge, reed canary grass, buttonbush, phragmites, arrowhead
1	ts	Swamp	S3	S3	2.76	Riverine	clay/loam	ts ne	2	30	0.83		buttonbush, water willow	reed canary grass, tuckermans' sedge, burreed; frogbit; water smartweed	water willow, swamp milkweed, northern blue-flag iris, water smartweed, frogbit, duckweed
1	ls	Swamp	S4	S4	0.86	Riverine	clay/loam	ls ts	2	50	0.43		water willow	buttonbush; pickerelweed	
1	h	Swamp	S6	S6	1.63	Riverine	sand	h ts gc	3	0	-		green ash, elm, silver maple, basswood	prickly ash, European buckthorn, honeysuckle, dogwood, meadowsweet; jewelweed, wood nettle, northern blue-flag iris, bittersweet nightshade	
1	su	Marsh	W3	W3	8.11	Riverine	clay/loam	su	1	100	8.11		Flowering Rush, Common Floating Pondweed, Richardson's Pondweed, Curly-leaved Pondweed, Robbin's Pondweed, Canada Water Weed, Filifom Pondweed, Eel Grass, Coontail, Millfoil,	Illinois Pondweed, Knotty PondweedPale Water Milfoil, Greater Bladderwort	frogbit, fragrant white water lily, yellow pond lily, burreed
1	su	Marsh	W4	W4	0.19	Riverine	clay/loam	su f	1	100	0.19		Common Floating Pondweed, Curly-leaved Pondweed, Canada Water Weed, Filifom Pondweed, Coontail, Millfoil; Bullhead Lily,Fragrant Water Lily	Pickerel Weed, Frogbit,	pondweed, duckweed, burreed
1	su	Marsh	W4	W4	0.93	Riverine	clay/loam	su f	1	100	0.93		Common Floating Pondweed, Curly-leaved Pondweed, Canada Water Weed, Filifom Pondweed, Coontail, Millfoil; Bullhead Lily,Fragrant Water Lily	Pickerel Weed, Frogbit,	pondweed, duckweed, burreed
1	su	Marsh	W4	W4	0.21	Riverine	clay/loam	su f	1	100	0.21		Common Floating Pondweed, Curly-leaved Pondweed, Canada Water Weed, Filifom Pondweed, Coontail, Millfoil; Bullhead Lily,Fragrant Water Lily	Pickerel Weed, Frogbit,	pondweed, duckweed, burreed
1	su	Marsh	W4	W4	1.35	Riverine	clay/loam	su f	1	100	1.35		Common Floating Pondweed, Curly-leaved Pondweed, Canada Water Weed, Filifom Pondweed, Coontail, Millfoil; Bullhead Lily,Fragrant Water Lily	Wild Rice	pondweed, duckweed, burreed
2	ls	Swamp	S4	S4	1.17	Riverine	clay/loam	ls ts	2	10	0.12		water willow	buttonbush; pickerelweed	
2	h	Swamp	S7	S7	4.89	Riverine	clay/loam	h ts gc	3	5	0.24		silver maple	buttonbush, winterberry; arrowhead, false nettle, wood nettle, ostrich fern, royal fern, sensitive fern, marsh fern, American water-horehound, clearweed, water smartweed, water plantain; cutgrass, Tuckermann's sedge,	
2	h	Swamp	S7	S7	0.57	Riverine	clay/loam	h ts gc	3	5	0.03		silver maple	buttonbush, winterberry; arrowhead, false nettle, wood nettle, ostrich fern, water plantain, cutgrass	
2	su	Swamp	W4	W4	1.28	Riverine	clay/loam	su f	1	100	1.28		Common Floating Pondweed, Curly-leaved Pondweed, Canada Water Weed, Filifom Pondweed, Coontail, Millfoil; Bullhead Lily,Fragrant Water Lily	Pickerel Weed, Frogbit,	
3	ne	Marsh	M2	M2	0.69	Riverine	sand	ne e	3	0	-		reed canary grass	common cattail	

3	h	Swamp	S2	S2	3.02	Riverine	clay/loam	h gc	2	0	-		green ash, silver maple	swamp milkweed, sensitive fern, moneywort, Jack-in-the-pulpit, spotted Joe-pye weed	
3	ls	Swamp	S4	S4	0.39	Riverine	clay/loam	ls ts	2	10	0.04		water willow	buttonbush; pickerelweed	
3	su	Marsh	W3	W3	1.97	Riverine	clay/loam	su	1	100	1.97		Flowering Rush, Common Floating Pondweed, Richardson's Pondweed, Curly-leaved Pondweed, Robbin's Pondweed, Canada Water Weed, Filifom Pondweed, Eel Grass, Coontail, Millfoil,	Illinois Pondweed, Knotty Pondweed, Pale Water Milfoil, Greater Bladderwort	
3	su	Marsh	W4	W4	0.70	Riverine	clay/loam	su f	1	100	0.70		Common Floating Pondweed, Curly-leaved Pondweed, Canada Water Weed, Filifom Pondweed, Coontail, Millfoil; Bullhead Lily,Fragrant Water Lily	Pickerel Weed, Frogbit,	
4	su	Marsh	W3	W3	3.53	Riverine	clay/loam	su	1	100	3.53		Flowering Rush, Common Floating Pondweed, Richardson's Pondweed, Curly-leaved Pondweed, Robbin's Pondweed, Canada Water Weed, Filifom Pondweed, Eel Grass, Coontail, Millfoil,	Illinois Pondweed, Knotty Ponweed, Pale Water Milfoil, Greater Bladderwort	
5	ne	Marsh	M11	M11	2.42	Isolated	clay/loam	ne ts	2	0	-		reed canary grass	willow, dogwood	purple loosestrife, narrow-leaved cattails
6	h	Swamp	S8	S8	1.01	Palustrine	sand	h ts gc	3	0	-		green ash, american elm, willow, silver maple	European buckthorn, honeysuckle, manitoba maple; ostrich fern, sensitive fern, jewelweed, meadow rue, Jack-in-the-pulpit, Marsh Marigold	
7	h	Swamp	S5	S5	2.20	Palustrine	sand	h ts gc ne	4	0	-		silver maple, black ash, green ash	ash; false nettle, meadow rue, Jack-in-the-pulpit, jewelweed, violet, virginia creeper; reed canary grass	
8	re	Marsh	M10	M10	2.71	Palustrine	humic/mesic	re gc	2	0	-		common cattail	purple loosestrife	
8	re	Marsh	M10	M10	1.92	Palustrine	humic/mesic	re gc	2	0	-		common cattail	purple loosestrife	
8	ne	Marsh	M2	M2	1.69	Palustrine	clay/loam	ne re	2	0	-		reed canary grass	common cattail	
8	ne	Marsh	M2	M2	1.94	Palustrine	sand	ne re	2	0	-		reed canary grass	common cattail	
8	ne	Marsh	M5	M5	0.95	Palustrine	sand	ne ts	2	0	-		reed canary grass	willow, dogwood	
8	h	Swamp	S10	S10	0.64	Palustrine	sand	h ts gc	3	0	-		silver maple, trembling aspen, green ash, elm	willow, nannyberry, speckled alder, dogwood, silver maple; grasses, spotted Joe-pye weed, horsetail, hog peanut, sensitive fern, jewelweed, nighshade	common cattail, Eastern white cedar
8	h	Swamp	S10	S10	0.35	Palustrine	sand	h ts gc	3	0	-		silver maple, trembling aspen, green ash, elm	willow, nannyberry, speckled alder, dogwood, silver maple; grasses, spotted Joe-pye weed, horsetail, hog peanut, sensitive fern, jewelweed, nighshade	common cattail, Eastern white cedar
8	ts	Swamp	S11	S11	8.33	Palustrine	humic/mesic	ts dh gc re	4	0	-		willow	purple loosestrife, jewelweed, grass; common cattails	reed canary grass
8	h	Swamp	S12	S12	1.50	Palustrine	clay/loam	h ne	2	0	-		green ash, elm, trembling aspen	reed canary grass	
8	h	Swamp	S13	S13	0.83	Palustrine	humic/mesic	h ts ne	3	0	-		green ash	willow, green ash; reed canary grass	
8	h	Swamp	S2	S2	0.89	Palustrine	humic/mesic	h gc	2	0	-		silver maple, black ash, green ash	jewelweed, false nettle, grasses	lake sedge, European buckthorn
8	h	Swamp	S6	S6	1.85	Palustrine	sand	h ts gc	3	0	-		green ash		
8	h	Swamp	S6	S6	1.67	Palustrine	sand	h ts gc	3	0	-		green ash		
9	h	Swamp	S9	S9	3.52	Palustrine	clay/loam	h ls	2	95	3.34		silver maple, green ash	silver maple saplings	
10	h	Swamp	S6	S6	4.43	Isolated	clay/loam	h ts gc	3	0	-		green ash, elm, silver maple, basswood	prickly ash, European buckthorn, honeysuckle, dogwood, meadowsweet; jewelweed, wood nettle, grasses, northern blue-flag iris, bittersweet nightshade	one butternut
11	ne	Marsh	M6	M6	5.41	Palustrine	sand	ne gc re	3	0	-		narrow-leaved cattail, phragmites	purple loosestrife; reed canary grass	
12	gc	Marsh	M8	M8	0.36	Isolated	clay/loam	gc re ne f	4	55	0.20		purple loosestrife, boneset, grasses	common cattails, bulrushes; reed canary grass, giant burreed; water shield	
13	h	Swamp	S2	S2	1.23	Palustrine	clay/loam	h gc	2	0	-		silver maple	sensitive fern	
14	ne	Marsh	M2	M2	0.60	Riverine	clay/loam	ne re	2	0	-		reed canary grass	common cattail	
15	h	Swamp	S14	S14	0.49	Riverine	clay/loam	h ts	2	0	-		silver maple, red maple	buttonbush	
15	su	Marsh	W3	W3	0.62	Riverine	clay/loam	su	1	100	0.62		Flowering Rush, Common Floating Pondweed, Richardson's Pondweed, Curly-leaved Pondweed, Robbin's Pondweed, Canada Water Weed, Filifom Pondweed, Eel Grass, Coontail, Millfoil,	Illinois Pondweed, Knotty Pondweed, Pale Water Milfoil, Greater Bladderwort	
16	su	Marsh	W3	W3	0.41	Riverine	clay/loam	su	1	100	0.41		Flowering Rush, Common Floating Pondweed, Richardson's Pondweed, Curly-leaved Pondweed, Robbin's Pondweed, Canada Water Weed, Filifom Pondweed, Eel Grass, Coontail, Millfoil,	Illinois Pondweed, Knotty Pondweed, Pale Water Milfoil, Greater Bladderwort	
17	re	Marsh	M9	M9	4.58	Palustrine	clay/loam	re	1	0	-		common cattail		
					127.41						27.67				

Wetland Area
127.41

Site Type	Area	FA
Isolated	7.21	0.06
Palustrine (permanent or intermittent flow)	43.22	0.34
Riverine	76.98	0.60
Riverine (at rivermouth)	0.00	0.00
Lacustrine (at rivermouth)	0.00	0.00
Lacustrine (on enclosed bay, with barrier beach)	0.00	0.00
Lacustrine (exposed to lake)	0.00	0.00
	127.41	1.00

Soil Type	Area	FA
clay/loam	93.74	0.74
silt/marl	0.00	0.00
limestone	0.00	0.00
sand	18.99	0.15
humic/mesic	14.68	0.12
fibric	0.00	0.00
granite	0.00	0.00
	127.41	1.00

Dominate Vegetation	Area	FA
h	58.93	0.46
c	0.00	0.00
dh	0.00	0.00
dc	0.00	0.00
ts	12.44	0.10
ls	2.42	0.02
ds	0.00	0.00
gc	0.36	0.00
m	0.00	0.00
ne	24.75	0.19
be	0.00	0.00
re	9.21	0.07
ff	0.00	0.00
f	0.00	0.00
su	19.30	0.15
u (unvegetated)	0.00	0.00
	127.41	1.00

Wetland Type	Area	FA
Swamp	75.07	0.59
Marsh	52.34	0.41
Fen	0.00	0.00
Bog	0.00	0.00
	127.41	1.00

Open Water Area
27.67

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viii) WETLAND SIZE AND BOUNDARIES

a) Single contiguous wetland area: _____ hectares

b) Wetland complex comprised of 17 individual wetlands:

Wetland Unit Number (for reference)		Size of each wetland unit
		Ha
Wetland Unit No.	1	56.65
Wetland Unit No.	2	7.91
Wetland Unit No.	3	6.77
Wetland Unit No.	4	3.53
Wetland Unit No.	5	2.42
Wetland Unit No.	6	1.01
Wetland Unit No.	7	2.20
Wetland Unit No.	8	25.27
Wetland Unit No.	9	3.52
Wetland Unit No.	10	4.43
Wetland Unit No.	11	5.41
Wetland Unit No.	12	0.36
Wetland Unit No.	13	1.23
Wetland Unit No.	14	0.60
Wetland Unit No.	15	1.11
Wetland Unit No.	16	0.41
Wetland Unit No.	17	4.58
Wetland Unit No.		
Wetland Unit Totals:		127.41

(Attach additional sheets if necessary)

TOTAL WETLAND SIZE 127.41

c) Brief documentation of reasons for including any areas less than 0.5 ha in size:

To attempt to capture main wetland communities in the immediate vicinity of the main wetland body along the Moira River.

(Attach separate sheets if necessary .)

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1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1 GROWING DEGREE-DAYS/SOILS

GROWING DEGREE DAYS (check one)		MAP
1)		<2800
2)		2800 -3200
3)	X	3200 -3600
4)		3600 -4000
5)		>4000

SOILS Estimated Fractional Area	
0.74	clay/loam
0.00	silt/marl
0.00	limestone
0.15	sand
0.12	humic/mesic
0.00	fibric
0.00	granite

Determine the soil type from the appropriate OMAF soils maps

SCORING:

Growing Degree-Days	Clay-Loam	Silt-Marl	Lime-stone	Sand	Humic-Mesic	Fibric	Granite
<2800	15	13	11	9	8	7	5
2800-3200	18	15	13	11	9	8	7
3200-3600	22	18	15	13	11	9	7
3600-4000	26	21	18	15	13	10	8
>4000	30	25	20	18	15	12	8

(maximum score 30; if wetland contains more than one soil type, evaluate based on the fractional area)

Steps required for evaluation: (maximum score 30 points)

1. Select GDD line in evaluation table applicable to your wetland;
2. Determine fractional area of the wetland for each soil type;
3. Multiply fractional area of each soil type by score;
4. Sum individual soil type scores (round to nearest whole number).

In wetland complexes the evaluator should aim at determining the percentage of area occupied by the categories for the complex as a whole.

Score		
22	clay/loam	16.19
	silt/marl	0.00
	limestone	0.00
13	sand	1.94
11	humic/mesic	1.27
	fibric	0.00
	granite	0.00

Final Score Growing Degree-Days/Soils (maximum 30 points) 19

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1.1.2 WETLAND TYPE (Fractional Area = area of wetland type/total wetland area)

Estimate the Wetland Type from air photos or default to "swamp" (8)

	Fractional Area		Score
Bog	0.00	x 3	0.0
Fen	0.00	x 6	0.0
Swamp	0.59	x 8	4.7
Marsh	0.41	x 15	6.2
		Subtotal:	10.9

Wetland type score (maximum 15 points) 11

1.1.3 SITE TYPE (Fractional Area = area of site type/total wetland area)

Estimate from air photos

	Fractional Area		Score
Isolated	0.06	x 1 =	0.06
Palustrine (permanent or intermittent flow)	0.34	x 2 =	0.68
Riverine	0.60	x 4 =	2.42
Riverine (at rivermouth)	0.00	x 5 =	0.00
Lacustrine (at rivermouth	0.00	x 5 =	0.00
Lacustrine (on enclosed bay, with barrier beach)	0.00	x 3 =	0.00
Lacustrine (exposed to lake)	0.00	x 2 =	0.00
		Sub Total:	3.15

Site Type Score (maximum 5 points) 3

1.2 BIODIVERSITY

1.2.1 NUMBER OF WETLAND TYPES

(Check only one)		Score
1)	one	9 points
2) 13	two	13
3)	three	20
4)	four	30

Number of Wetland Types Score (maximum 30 points) 13

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1.2.2 VEGETATION COMMUNITIES Veg Ref

Attach a separate sheet listing community (map) codes,vegetation forms and dominant species.
Use the form on the following page to record percent area by dominant vegetation form. This information will be used in other parts of the evaluation.

Communities should be grouped by number of forms. For example, 2 form communities might appear as follows:

2 forms

Code	Forms		Dominant Species				
M6	re,	ff	re,	*Typha latifolia;*	ff,	*Lemna minor,*	*Wolffia*
S1	ts,	gc	ts,	*Salix discolor;*	gc,	*lmpatiens capensis,*	*Thelypteris palustris*

Note that the dominant species for each form are separated by a semicolon. The dominant species (maximum of 2) within a form are separated by commas.

Scoring:

Total # of communities with 1-3 forms	Total # of communities with 4 -5 forms	Total # of communities with 6 or more forms
1 = 1.5 points	1 = 2 points	1 = 3 points
2 = 2.5	2 = 3.5	2 = 5
3 = 3.5	3 = 5	3 = 7
4 = 4.5	4 = 6.5	4 = 9
5 = 5	5 = 7.5	5 = 10.5
6 = 5.5	6 = 8.5	6 = 12
7 = 6	7 = 9.5	7 = 13.5
8 = 6.5	8 = 10.5	8 = 15
9 = 7	9 = 11.5	9 = 16.5
10 = 7.5	10 = 12.5	10 = 18
11 = 8	11 = 13	11 = 19
(21 communities)		
+.5 each additional community = 13.0	+.5 each additional community = 6.5	+ 1 each additional community = 3.0

e.g., a wetland with 3 one form communities 4 two form communities 12 four form communities and 8 six form communities would score:

6 + 13.5 + 15 = 34.5 = 35 points SubTotal: 23

Vegetation Communities Score (maximum 45 points) 23

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Wetland Name:	Corbyville Wetland
Wetland Size (ha):	127.41

Vegetation Form	% area in which form is dominant
h	46.25
c	0.00
dh	0.00
dc	0.00
ts	9.76
ls	1.90
ds	0.00
gc	0.28
m	0.00
ne	19.43
be	0.00
re	7.23
ff	0.00
f	0.00
su	15.15
u (unvegetated)	0.00
Total = 100%	100.00

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1.2.3 DIVERSITY OF SURROUNDING HABITAT

(Check all appropriate items(1))

Determine from air photos

1	row crop
1	pasture
1	abandoned agricultural land
1	deciduous forest
	coniferous forest
	mixed forest (at least 25% conifer and 75% deciduous or vice versa)
	abandoned pits and quarries
1	open lake or deep river
1	fence rows with cover, or shelterbelts
	terrain appreciably undulating,hilly,or with ravines
1	creek flood plain
7	Subtotal

Diversity of Surrounding Habitat Score (1 for each, maximum 7 points) 7

1.2.4 PROXIMITY TO OTHER WETLANDS

(Check first appropriate category only) Scoring

Determine from air photos and other wetlands evaluations in the vicinity

1)	8	Hydrologically connected by surface water to other wetlands (different dominant wetlaI1d type) or to open lake or deep river within 1.5 km — 8 points
2)		Hydrologically connected by surface water to other wetlands (same dominant wetland type) within 0.5 km — 8
3)		Hydrologica11y connected by surface water to other wetlands (different dominant wetland type),or to open lake or deep river from 1.5 to 4 km away — 5
4)		Hydrologically connected by surface water to other wetlands (same dominant wetland type) from 0.5 to 1.5 km away — 5
5)		Within 0.75 km of other wetlands (different dominant wetland type) or open water body, but not hydrologically connected by surface water — 5
6)		Within 1 km of other wetlands,but not hydrologically connected by surface water — 2
7)		No wetland within 1 km — 0

Proximity to other Wetlands Score (Choose one only, maximum 8 points) 8

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1.2.5 INTERSPERSION

Optional: Complete as time permits or as scoring dictates.

Number of Intersections (Check one)			Score	
1)	26 or less		3	
2)	27 to 40		6	
3)	41 to 60		9	
4)	61 to 80		12	
5)	81 to l00		15	
6)	101 to 125		18	
7)	126 to 150		21	
8)	151 to 175		24	
9)	176 to 200	27	27	*(Count: 183)*
10)	>200		30	

Interspersion Score (Choose one only maximum 30 points) 27

1.2.6 OPEN WATER TYPES Ref

Determine from aerial photos.

Permanently flooded: (Check one)			Score
1)		type 1	8
2)	8	type 2	8
3)		type 3	14
4)		type 4	20
5)		type 5	30
6)		type 6	8
7)		type 7	14
8)		type 8	3
9)		no open water	0

Open Water Type Score (Choose one only maximum 30 points) 8

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1.3 SIZE

Score may be lower than actual if "Vegetation Community and Interspersion" have not been calculated.

127.4 hectares 86 Subtotal for Biodiversity

Size Score (Biological Component) (maximum 50 points) 31

Evaluation Table Size Score (Biological component)

Wetland size (ha)	Total Score for Biodiversity Subcomponent									
	<37	37-48	49-60	61-72	73-84	85-96	97-108	109-120	121-132	>132
<21 ha	1	5	7	8	9	17	25	34	43	50
21-40	5	7	8	9	10	19	28	37	46	50
41-60	6	8	9	10	11	21	31	40	49	50
61-80	7	9	10	11	13	23	34	43	50	50
81-100	8	10	11	13	15	25	37	46	50	50
101-120	9	11	13	15	18	28	40	49	50	50
121-140	10	13	15	17	21	31	43	50	50	50
141-160	11	15	17	19	23	34	46	50	50	50
161-180	13	17	19	21	25	37	49	50	50	50
181-200	15	19	21	23	28	40	50	50	50	50
201-400	17	21	23	25	31	43	50	50	50	50
401-600	19	23	25	28	34	46	50	50	50	50
601-800	21	25	28	31	37	49	50	50	50	50
801-1000	23	28	31	34	40	50	50	50	50	50
1001-1200	25	31	34	37	43	50	50	50	50	50
1201-1400	28	34	37	40	46	50	50	50	50	50
1401-1600	31	37	40	43	49	50	50	50	50	50
1601-1800	34	40	43	46	50	50	50	50	50	50
1801-2000	37	43	47	49	50	50	50	50	50	50
>2000	40	46	50	50	50	50	50	50	50	50

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2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1 WOOD PRODUCTS

Determine the percentage of the wetland area dominated by "h" or "c" by using aerial photograph.

Area of wetland forested (ha), i.e. dominant form is h or c. Note that this is not wetland size. (Check one only)

h:	58.93	c:	0.00

			Score
1)		<5 ha	0
2)		5 -25 ha	3
3)		26 -50 ha	6
4)	9	51- l00 ha	9
5)		101 -200 ha	12
6)		>200 ha	18

Source of information: 2012 field evaluation, 2008 imagery

Wood Products Score (Score one only, maximum 18 points) 9

2.1.2 WILD RICE

(Check one)			Score (Choose one)
Present (minimum size 0.5 ha)	1)		6 points
Absent	2)	0	0

Source of information: 2012 - field observations
Only one stem observed

Wild Rice Score (maximum 6 points) 0

2.1.3 COMMERCIAL FISH (BAIT FISH AND/OR COARSE FISH

(Check one)			Score (Choose one)
Present	1)	12	12 points
Habitat not suitable for fish	2)		0

Source of information: 2012 - field observations

If any part of the wetland is riverine or the District fisheries files indicate presence of fish score"present"

Commercial Fish Score (maximum 12 points) 12

2.1.4 BULLFROGS

(Check one)			Score (Choose one)
Present	1)	1	1 points
Absent	2)		0

Source of information: 2012 - field observations

Bullfrog Score (maximum 1 point) 1

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2.1.5 SNAPPING TURTLES

(Check one)			Score (Choose one)
Present	1)	1	1 point
Absent	2)		0

Source of information: 2012 evaluation
Conversation w Victoria Jackson

Snapping Turtle Score (maximum 1 point) 1

2.1.6 FURBEARERS Fur Ref

(Consult Appendix 9)

	Name of furbearer		Source of information
1)	Raccoon	3	2012 - field obs.
2)	Red Squirrel	3	2012 - field obs.
3)	Muskrat	3	2012 -f ield obs.
4)	Beaver	3	2012 - field obs.
5)	Fox	3	2012 - Victoria Jackson
	SubTotal	15	

Scoring: 3 points for each species. M**aximum 12**

Furbearer Score (maximum 12 points) 12

2.2 RECREATIONAL ACTIVITIES

Type of Wetland-Associated Use							
Intensity of Use	Hunting		Nature Enjoyment/ Ecosystem Study		Fishing		
High	40 points		40 points		40 points		
Moderate	20		20	20	20	20	
Low	8	8	8		8		
Not possible/NotKnown	0		0		0		
Totals		8		20		20	48

(score one level for each of the three wetland uses; scores are cumulative; maximum score 80 points)
Sources of information:

Hunting: 2012 Field Observations

Nature: 2012 Field Observations

Fishing: 2012 Field Observations

Recreational Activities Score (maximum 80 points) 48

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2.3 LANDSCAPE AESTHETICS

Score using ortho-aerial photography

2.3.1 DISTINCTNESS

(Check one)			Score (Choose one)
Clearly distinct	1)	3	3 points
Indistinct	2)		0

Landscape Distinctness Score (maximum 3 points) 3

2.3.2 ABSENCE OF HUMAN DISTURBANCE

(Check one)			Score (Choose one)
Human disturbances absent or nearly so	1)		7 points
One or several localized disturbances	2)	4	4
Moderate disturbance; localized water pollution	3)		2
Wetland intact but impairment of ecosystem quality intense in some areas	4)		1
Extreme ecological degradation, or water pollution severe and widespread	5)		0

Source of information: 2012 - field observations

Absence of Human Disturbance Score (maximum 7 points) 4

2.4 EDUCATION AND PUBLIC AWARENESS

Optional: complete as time and scoring dictates.

2.4.1 EDUCATIONAL USES

(Check one)			Score (Choose one)
Frequent	1)		20 points
Infrequent	2)		12
No visits	3)	0	0

Source of information: New field evaluation 2012

Requires contact with Local Boards of Education.

Educational Uses Score (maximum 20 points) 0

2.4.2 FACILITIES AND PROGRAMS

(check one)			Score (Choose one)
Staffed interpretation centre	1)		8 points
No interpretation centre or staff but a system of self-guiding trails or brochures available	2)		4
Facilities such as maintained paths (e.g., woodchips) boardwalks, boat launches or observation towers but no brochures or other interpretation	3)		2
No facilities or programs	4)	0	0

Source of information: 2012 - field obs.

Facilities and Programs Score (maximum 8 points) 0

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2.4.3 RESEARCH AND STUDIES

(check appropriate spaces)		Score
Long term research has been done		12 points
Research papers published in refereed scientific journal or as a thesis		10
One or more (non-research) reports have been written on some aspect of the wetland ' s flora fauna hydrology etc.		5
No research or reports	0	0
Subtotal:	0	

Attach list of known reports by above categories

Refer to ESPA, EPA and ANSI reports.

Research and Studies Score (Score is cumulative, maximum 12 points) 0

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT

Circle the highest applicable score

Distance of wetland from settlement	1) population> 10,000		2) population 2,500 -10,000		3) population <2,500 or cottage community	
1) Within or adjoining settlement	40 points		26		16	
2) 0.5 to 10 km from settlement	26	26	16		10	
3) 10 to 60 km from settlement	12		8		4	
4) >60 km from settlement	5		2		0	
		26		0		0

Name of settlement: Belleville

Proximity to Human Settlement Score (maximum 40 points) 26

2.6 OWNERSHIP (FA= fraction Area)

Select a default value of "4" if no other information exists.

					Score
FA of wetland in public or private ownership held under contract or in trust for wetland protection		x	10	=	0.00
FA of wetland area in public ownership,not as above	0.14	x	8	=	1.12
FA of wetland area in private ownership,not as above	0.86	x	4	=	3.44

Source of information: MNR GIS Data (MPAC Assessment Parcels & Crown Lake Bed)

Ownership Score (maximum 10 points) 5

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2.7 SIZE

The score may be lower than actual since economic and recreational values have not been completed.

127.4 hectares 109 Subtotal for Social

Evaluation Table for Size Score (Social Component)

Wetland Size (ha)	Total for Size Dependent Score									
	<31	31-45	46-60	61-75	76-90	91-105	106-120	121-135	136-150	>150
<2 ha	1	2	4	8	10	12	14	14	14	15
2 - 4ha	1	2	4	8	12	13	14	14	15	16
5 - 8ha	2	2	5	9	13	14	15	15	16	16
9 - 12ha	3	3	6	10	14	15	15	16	17	17
13-17	3	4	7	10	14	15	16	16	17	17
18-28	4	5	8	11	15	16	16	17	17	18
29-37	5	7	10	13	16	17	18	18	19	19
38-49	5	7	10	13	16	17	18	18	19	20
50-62	5	8	11	14	17	17	18	19	20	20
63-81	5	8	11	15	17	18	19	20	20	20
82-105	6	9	11	15	18	18	19	20	20	20
106-137	6	9	12	16	18	19	20	20	20	20
138-178	6	9	13	16	18	19	20	20	20	20
179-233	6	9	13	16	18	20	20	20	20	20
234-302	7	9	13	16	18	20	20	20	20	20
303-393	7	9	14	17	18	20	20	20	20	20
394-511	7	10	14	17	18	20	20	20	20	20
512-665	7	10	14	17	18	20	20	20	20	20
666-863	7	10	14	17	19	20	20	20	20	20
864-1123	8	12	15	17	19	20	20	20	20	20
1124-1460	8	12	15	17	19	20	20	20	20	20
1461-1898	8	13	15	18	19	20	20	20	20	20
1899-2467	8	14	16	18	20	20	20	20	20	20
>2467	8	14	16	18	20	20	20	20	20	20

Total Size Score (Social Component) 20.0

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2.8 ABORIGINAL AND CULTURAL HERITAGE VALUES

Either or both Aboriginal or Cultural Values may be scored. However, the maximum score permitted for 2.8 is 30 points. Attach documentation.

2.8.1 ABORIGINAL VALUES

Full documentation of sources must be attached to the data record.

1)	Significant		=	30 points
2)	Not Significant		=	0
3)	Unknown	0.0	=	0
	Total:	0		

2.8.2 CULTURAL HERITAGE

1)	Significant		=	30 points
2)	Not Significant		=	0
3)	Unknown	0.0	=	0
	Total:	0		

Aboriginal Values/Cultural Heritage Score (maximum 30 points) 0.0

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3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION

Estimated&Calculated values can be obtained from G.I.S. data layers.

If the wetland is a complex including isolated wetlands, apportion the l00 points according to area. For example if 10 ha of a l00 ha complex is isolated, the isolated portion receives the maximum proportional score of 10. The remainder of the wetland is then evaluated out of 90.

Step 1: Determination of Maximum Score

	Wetland is located on one of the defined 5 large lakes or 5 major rivers (Go to Step 4)
	Wetland is entirely isolated (i.e. not part of a complex) (Go to Step 4)
X	All other wetland types (Go through Steps 2,3 and 4B)

Step 2: Determination of Upstream Detention Factor (DF)

(a)	Wetland area (ha)		120.20	
(b)	Total area (ha) of upstream detention areas (include the wetland itself)		15203.00	***estimate*** ^^ Calculated with GIS
(c)	Ratio of (a):(b)		0.01	
(d)	Upstream detention factor: (c) x 2 = (maximum allowable factor = 1)	0.0	0.02	

Step 3: Determination of Wetland Attenuation Factor (AF)

(a)	Wetland area (ha)		120.20	
(b)	Size of catchment basin (ha) upstream of wetland (include wetland itself in catchment area)		199956	***calculate***
(c)	Ratio of (a):(b)		0.00	
(d)	Wetland attenuation factor: (c) x 10 = (maximum allowable factor = 1)	0.0	0.01	

Step 4: Calculation of final score

(a)	Wetlands on large lakes or major rivers		0	
(b)	Wetland entirely isolated		l00	
(b)	All other wetlands --calculate as follows:			
(c	* Complex Formula - Isolated portion	94.34		
	Initial Score		100 *	
	Upstream detention factor (DF) (Step 2)		0.02	
	Wetland attenuation factor (AF) (Step 3)		0.01	
	Final score: [(DF + AF)/2] x Initial score =		1.09	
(c	* Final score:=	7		

*Unless wetland is a complex with isolated portions (see above).

Flood Attenuation Score (maximum l00 points) 7.0

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3.2 WATER QUALITY IMPROVEMENT

3.2.1 SHORT TERM WATER QUALITY IMPROVEMENT

Step 1: **Determination of maximum initial score**

	Wetland on one of the 5 defined large lakes or 5 major rivers (Go to Step 5a)
X	All other wetlands (Go through Steps 2, 3, 4, and 5b)

Step 2: **Determination of watershed improvement factor (WIF)**

Calculation of WIF is based on the fractional area (FA) of each site type that makes up the total area of the wetland.

(FA= area of site type/total area of wetland)	Fractional Area				
FA of isolated wetland	0.06	x	0.5	=	0.03
FA of riverine wetland	0.60	x	1	=	0.60
FA of palustrine wetland with no inflow		x	0.7	=	0.00
FA of palustrine wetland with inflows	0.34	x	1	=	0.34
FA of lacustrine on lake shoreline	0.00	x	0.2	=	0.00
FA of lacustrine at lake inflow or outflow		x	1	=	0.00
			Sub Total:		0.97
			Sum (WIF cannot exceed 1.0)		0.97

Step 3: Determination of catchment land use factor (LUF)

(Choose the first category that fits upstream landuse in the catchment.)

1)		Over 50% agricultural and/or urban	1.0
2)		Between 30 and 50% agricultural and/or urban	0.8
3)	0.6	Over 50% forested or other natural vegetation	0.6

LUF (maximum 1.0) 0.60

Step 4: Determination of pollutant uptake factor (PUT)

Calculation of PUT is based on the fractional area (FA) of each vegetation type that makes up the total area of the wetland. Base assessment on the dominant vegetation form for each community except where dead trees or shrubs dominate. In that case base assessment on the domininant live vegetation. (FA = area of vegetation type/total area of wetland)

	Fractional Area				
FA of wetland with live trees, shrubs, herbs or mosses (c,h,ts,ls,gc,m)	0.58	x	0.75	=	0.44
FA of wetland with emergent, submergent or floating vegetation (re,be,ne,su,f,ff)	0.42	x	1	=	0.42
FA of wetland with little or no vegetation (u)	0.00	x	0.5	=	0.00
			Subtotal:		0.85
Estimate FA from air photos or use default factor of "0.75"			**Sum (PUT cannot exceed 1.0)**		0.85

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Step 5: **Calculation of final score**

(a)	Wetland on large lakes or major rivers	0	
(b)	All other wetlands -calculate as follows		
	Initial score	60	
	Water quality improvement factor (WQF)	0.97	
	Land use factor (LUF)	0.60	
	Pollutant uptake factor (PUT)	0.85	
	Final score: 60 x WQF x LUF x PUT =	29.89	
	Short Term Water Quality Improvement Score (maximum 60 points)		30

3.2.2 LONG TERM NUTRIENT TRAP

Determine wetland type from aerial photos and soil type from OMAF soils maps.

Step 1:

	Wetland on large lakes or 5 major rivers	0 points
X	All other wetlands (proceed to Step 2)	

Step 2: Choose only one of the following settings that best describes the wetland being evaluated

1)		Wetland located in a river mouth	10 points
2)		Wetland is a bog, fen or swamp with more than 50% of the wetland being covered with organic soil	10
3)	3	Wetland is a bog, fen or swamp with less than 50% of the wetland being covered with organic soil	3
4)		Wetland is a marsh with more than 50% of the wetland covered with organic soil	3
5)		None of the above	0
		Long Term Nutrient Trap Score (maximum 10 points)	3

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3.2.3 GROUNDWATER DISCHARGE

The final score will be underestimated since some of the wetland characteristics cannot be scored

(Circle the characteristics that best describe the wetland being evaluated and then sum the scores. If the sum exceeds 30 points assign the maximum score of 30.)

Wetland Characteristics	Potential for Discharge					
	None to Little		Some		High	
Wetland type	1) Bog = 0		2) Swamp/Marsh = 2	2	3) Fen = 5	
Topography	1) Flat/rolling = 0	0	2) Hilly = 2		3) Steep = 5	
Wetland Area: Upslope Catchment Area	Large (>50%) = 0		Moderate (5-50%) = 2		Small <(5%) = 5 **0.06%**	5
Lagg Development	1) None found = 0	0	2) Minor = 2		3) Extensive = 5	
Seeps	1) None = 0		2) = or < 3 seeps = 2	2	3) > 3 seeps = 5	
Surface marl deposits	1) None = 0	0	2) = or < 3 sites = 2		3) > 3 sites = 5	
Iron precipitates	1) None = 0	0	2) = or < 3 sites = 2		3) > 3 sites = 5	
Located within 1 km of a major aquifer	N/A = 0	0	N/A = 0		Yes = 10	
Totals		0		4		5

(Scores are cumulative maximum score 30 points)

Groundwater Discharge Score (maximum 30 points) 9

3.3 CARBON SINK

Choose only one of the following

1)	Bog, fen or swamp with more than 50% coverage by organic soil		5 points
2)	Bog, fen or swamp with between 10 to 49% coverage by organic soil	2	2
3)	Marsh with more than 50% coverage by organic soil		3
4)	Wetlands not in one of the above categories		0

Carbon Sink Score (maximum 5 points) 2

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3.4 SHORELINE EROSION CONTROL

Step 1: ***Determine from ortho-aerial photography*** Score

	Wetland entirely isolated or palustrine	0
X	Any part of the Wetland riverine or lacustrine (proceed to Step 2)	

Step 2:

Choose the **one** characteristic that best describes the shoreline vegetation (see text for a definition of shoreline)

			Score
1)	15	Trees and shrubs	15
2)		Emergent vegetation	8
3)		Submergent vegetation	6
4)		Other shoreline vegetation	3
5)		No vegetation	0

Shoreline Erosion Control Score (maximum 15 points) 15

3.5 GROUND WATER RECHARGE

3.5.1 WETLAND SITE TYPE

Score

(a) Wetland > 50% lacustrine (by area) or located on one of the five major rivers 0

(b) Wetland not as above. Calculate final score as follows:
(FA= area of site type/total area of wetland)

	Fractional Area			
FA of isolated or palustrine wetland	0.40	x 50	=	19.8
FA of riverine wetland	0.60	x 20	=	12.1
FA of lacustrine wetland (wetland <50% lacustrine)	0.00	x 0	=	0.0
		Subtotal:		31.9

Ground Water Recharge Wetland Site Type Component Score (maximum 50 points) 32

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3.5.2 WETLAND SOIL RECHARGE POTENTIAL

Determine from OMAF soils maps.

(Circle only **one** choice that best describes the hydrologic soil class of the area surrounding the wetland being evaluated.)

Dominant Wetland Type	1) Sand, loam, gravel, till		2) Clay or bedrock	
1) Lacustrine or on a major river	0		0	
2) Isolated	10		5	
3) Palustrine	7		4	
4) Riverine (not a major river)	5	5	2	
Totals		5		0

Ground Water Recharge Wetland Soil Recharge Potential Score (maximum 10 points) 5

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4.0 SPECIAL FEATURES COMPONENT

4.1 RARITY

4.1.1 WETLANDS

Ref Map

Site District 6e-8

Presence of wetland type (check one or more)

	Bog
	Fen
X	Swamp
X	Marsh

Score for rarity within the landscape and rarity of the wetland type. Score for rarity of wetland type is cumulative (maximum 80 points) based on presence or absence.

Slte District	Score for Rarity within the Landscape	Score for Rarity of Wetland Type			
		Marsh	Swamp	Fen	Bog
6-1	60	40	0	80	80
6-2	60	40	0	80	80
6-3	40	10	0	40	80
6-4	60	40	0	80	80
6-5	20	40	0	80	80
6-6	40	20	0	80	80
6-7	60	10	0	80	80
6-8	20	20	0	80	80
6-9	0	20	0	80	80
6-10	20	0	20	80	80
6-11	0	30	0	80	80
6-12	0	30	0	60	80
6-13	60	10	0	80	80
6-14	40	20	0	40	80
6-15	40	0	0	80	80
7-1	60	0	60	80	80
7-2	60	0	0	80	80
7-3	60	0	0	80	80
7-4	80	0	0	80	80
7-5	60	20	0	80	80
7-6	80	30	0	80	80

Rarity within the Landscape Score (maximum 80 points) 20

Rarity of Wetland Type Score (maximum 80 points) 20

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4.1.2 SPECIES Spp Ref

4.1.2.1 BREEDING HABITAT FOR AN ENDANGERED OR THREATENED SPECIES

	Name of species		Source of information
1)	Blanding's Turtle	250	2012 - Mrs. Jackson
2)	Eastern Musk Turtle	250	2012 - field observations
3)			
4)			
5)			
	Total:	500	

Attach documentation.

Scoring:

For each species 250 points

(score is cumulative, no maximum score)

Breeding Habitat for Endangered or Threatened Species Score (no maximum) 500

4.1.2.2 TRADITIONAL MIGRATION OR FEEDING HABITAT FOR AN ENDANGERED OR THREATENED SPECIES

	Name of species		Source of information
1)	Bobolink		2012 - field observations
2)	Barn Swallow		2012 - field observations
3)			
4)			
5)			
	Total:	225	

Attach documentation.

Scoring:

For one species 150 points
For each additional species 75

(score is cumulative, no maximum score)

Traditional Habitat for Endangered Species Score (no maximum) 225

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4.1.2.3 PROVINCIALLY SIGNIFICANT ANIMAL SPECIES Prov Ref

	Name of species	Source of information
1	River Redhorse	2012 - field observations
2	Monarch Butterfly	2012 - field observations
3	Snapping Turtle	2012 - Mrs. Jackson
4	Eastern Ribbonsnake	2012 - field observations
5	Northern Map Turtle	NHIC Species Obs, Tracked
6		
7		
8		
9		
10		
11		
12		
13		

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant animal species in the wetland:

1	species	=	50 points	14 species	=	154
2	species	=	80	15 species	=	156
3	species	=	95	16 species	=	158
4	species	=	105	17 species	=	160
5	species	=	115	18 species	=	162
6	species	=	125	19 species	=	164
7	species	=	130	20 species	=	166
8	species	=	135	21 species	=	168
9	species	=	140	22 species	=	170
10	species	=	143	23 species	=	172
11	species	=	146	24 species	=	174
12	species	=	149	25 species	=	176
13	species	=	152			

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

(no maximum score)

Provincially Significant Animal Species Score (no maximum) 115

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4.1.2.4 PROVINCIALLY SIGNIFICANT PLANT SPECIES

(Scientific names must be recorded)

	Common Name	Scientific Name	Source of information
1)	Butternut		2012 - field observations
2)			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			
11)			
12)			
13)			
14)			
15)			

Attach separate list if necessary; Attach documentation

Scoring:

Number of provincially significant plant species in the wetland:

1 species	=	50 points	14 species	=	154
2 species	=	80	15 species	=	156
3 species	=	95	16 species	=	158
4 species	=	105	17 species	=	160
5 species	=	115	18 species	=	162
6 species	=	125	19 species	=	164
7 species	=	130	20 species	=	166
8 species	=	135	21 species	=	168
9 species	=	140	22 species	=	170
10 species	=	143	23 species	=	172
11 species	=	146	24 species	=	174
12 species	=	149	25 species	=	176
13 species	=	152			

Add one point for every species past 25 (for example, 26 species = 177 points, 27 species = 178 points etc.)

Provincially Significant Plant Species Score (no maximum) 50

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4.1.2.5 REGIONALLY SIGNIFICANT SPECIES (SITE REGION) Spp Ref

Scientific names must be recorded for plant species. **Lists of significant species must be approved by MNR.**

SIGNIFICANT IN SITE REGION:

.

	Common Name	Scientific Name	Source of information
1)	None		T.Norris
2)			
3)			
4)			
5)			
6)			
7)			
8)			
9)			
10)			
11)			
12)			
13)			
14)			
15)			

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site Region

1 species	=	20	6 species	=	55
2 species	=	30	7 species	=	58
3 species	=	40	8 species	=	61
4 species	=	45	9 species	=	64
5 species	=	50	10 species	=	67

Add one point for every species past 10. (no maximum score)

Regionally Significant Species Score (Site Region)(no maximum) 0

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4.2.1.6 LOCALLY SIGNIFICANT SPECIES (SITE DISTRICT)

Scientific names must be recorded for plant species. **Lists of significant species must be approved by MNR.**

	Common Name	Scientific Name	Source of information
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Attach separate list if necessary .Attach documentation.

Scoring:

No. of species significant in Site District

1 species	=	10	6 species	=	41
2 species	=	17	7 species	=	43
3 species	=	24	8 species	=	45
4 species	=	31	9 species	=	47
5 species	=	38	10 species	=	49

For each significant species over 10 in the wetland, add 1 point.

Locally Significant Species Score (Site District) (no maximum) 0

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Additional Species						
Common Name	**Scientific Name**	**S Rank**	**G Rank**	**Wet CoE**	**Tracked**	**Comments**
Plants						
Manitoba Maple	*Acer negundo*					
Silver Maple	*Acer saccharinum*					
Red Maple	*Acer rubrum*					
Autumn Bent Grass	*Agrostis perrenans*					
Water Plantain	*Alisma Plantago-aquatica*					
Hog Peanut	*Amphicarpa bracteata*					
Canada Water Weed	*Anancharis canadensis*					
Indian Hemp	*Apocynum cannabinum*					
Jack-in-the-pulip	*Arisaema triphyllum*					
Swamp milkweed	*Asclepias incarnata*					
Devil's beggar's ticks	*Bidens frondosa*					
Nodding Bur Marigold	*Bidens cernua*					
False nettle	*Boehmeria cylindrica*					
Flowering Rush	*Butomus umbellatus*					
Marsh marigold	*Caltha palustris*					
Bebb's Sedge	*Carex bebbii*					
Bristle-leaved Sedge	*Carex eburnea*					
Graceful Sedge	*Carex gracillima*					
Great bladder sedge	*Carex intumescens*					
Lake Bank Sedge	*Carex lacustris*					
Hop sedge	*Carex lupulina*					
Tuckerman's sedge	*Carex tuckermanii*					
Yellow Sedge	*Carex flava*					
Retrorsed Sedge	*Carex retrorsa*					
Pointed Brooom Sedge	*Carex scoparia*					
Northwest Territory Sedge	*Carex utriculata*					
Fox Sedge	*Carex vulpinoidea*					
Button Bush	*Cephalanthus occidentalis*					
Common Coontail	*Ceratophyllum demersum*					
Bulbiferous water hemlock	*Cicuta bulbifera*					
Gray Dogwood	*Cornus racemosa*					
Red-osier Dogwood	*Cornus stolonifera*					
Water Willow	*Decodon verticillatus*					
Canadian Tick-trefoil	*Desmodium canadense*					
Wild Cucumber	*Echinocystis lobata*					
Needle Spikerush	*Eleocharis acicularis*					
Water Horsetail	*Equisetum fluviatle*					
Spotted Joe-Pye weed	*Eupatorium maculatum*					
Booneset	*Eupatorium perfoliatum*					
Black Ash	*Fraxinus nigra*					
Green Ash	*Fraxinus pennsylvanica*					
Marsh bedstraw	*Galium palustre*					
Rattlesnake Grass	*Glyceria canadensis*					
Common Hop	*Humulus lupulus*					
Frogbit	*Hydrocharis morsus-ranae*					
Touch-me-Not	*Impatiens capensis*					
Winterberry	*Ilex verticillata*					
Wild Blue Flag Iris	*Iris versicolor*					
Soft Rush	*Juncus effusus*					
Dudley's Rush	*Juncus dudleyi*					
Wood nettle	*Laportea canadensis*					
Rice Cut Grass	*Leersia oryzoides*					
Duck weed	*Lemna minor*					
Cardinal Flower	*Lobelia cardinalis*					
Tartarian Honeysuckle	*Lonicera tartarica*					
Water Purslane	*Ludwigia palustris*					
Water horehound	*Lycopus americanum*					
Fringed Loosestrife	*Lysimachia ciliata*					
Moneywort	*Lysimachia numularia*					
Purple loosestrife	*Lythrum salicaria*					
Ostrich Fern	*Matteucia struthiopteris*					
Moonseed	*Menispermum canadense*					
Square-stemmed monkey flower	*Mimulus ringens*					
Field Forget-me-not	*Myosotis scorpiodes*					
Pale Water-milfoil	*Myriophyllum sibericum*					
Water Cress	*Nasturtium officinale*					
Bullhead Water Lily	*Nuphar variegatum*					
Fragrant Water Lily	*Nymphaea odorata*					
Sensitive Fern	*Ononclea sensibilis*					
Royal Fern	*Osmunda regalis*					
Ditch Stonecrop	*Penthorum sedoides*					
Reed canary grass	*Phalaris arundinaceae*					
Clearweed	*Pilea pumila*					
Water Smartweed	*Polgonum amphibium*					
Pickerelweed	*Pontedaria cordata*					
Curly-leaved Pondweed	*Potomogeton crispus*					
Filiform Pondweed	*Potomogeton filiformis*					
Illinois Pondweed	*Potomogeton illinoiensis*					
Knotty Pondweed	*Potomogeton nodosus*					

Common Floating Pondweed	*Potomogeton natans*					
Richardson's Pondweed	*Potomogeton richardsonii*					
Mermaid Weed	*Proserpinaca palustris*					
Common Buckthorn	*Rhamnus cathartica*					
Poison Ivy	*Rhus radicans*					
Wild Black Currant	*Ribes americanum*					
Skunk Currant	*Ribes glandulosum*					
Dwarf Raspberry	*Rubus pubescens*					
Swamp Dock	*Rumex verticillatus*					
Broad-leaved Arrowhead	*Sagitaria latifolia*					
Crack Willow	*Salix fragilis*					
Slender Willow	*Salix peteolaris*					
Missouri Willow	*Salix eriocephala*					
Elderberry	*Sambucus canadensis*					
Red-berried Elderberry	*Sambucus pubens*					
Wool-rush	*Scirpus cyperinus*					
Dark-green Rush	*Scirpus atrovirens*					
Pale Great Bulrush	*Scirpus heterochaetus*					
Water parsnip	*Sium suave*					
Carrion Flower	*Smilax herbacea*					
Bittersweet Nightshade	*Solanum dulcamera*					
Green-fruited Bur-reed	*Sparganium emersum*					
Broad-fruited Bur-reed	*Sparganium eurycarpum*					
Early meadow-rue	*Thalictrum dioicum*					
Marsh Fern	*Thelypteris palustris*					
Broad-leaved Cattail	*Typha latifolium*					
Narrow-leaved Cattail	*Typha angustifolia*					
American Stinging Nettle	*Urtica dioica*					
Greater Bladderwort	*Utricuaria vulgaris*					
American Elm	*Ulmus americanum*					
Eel Grass	*Vallisneria americana*					
Blue Vervain	*Verbena hastata*					
Marsh Speedwell	*Veronica scutellata*					
Nannyberry	*Viburnum lentago*					
Marsh Blue Violet	*Viola cucullata*					
Water Meal	*Wolfia columbiana*					
Wild Rice	*Zizania aquatica*					
Amphibians						
Green Frog						
Northern Leopard Frog						
Bull Frog						
Wood Frog						
Mammals						
White-tailed Deer						
Beaver						2012 - field observations
Coyote						
Red Squirrel						Mrs. Jackson, 2012 field observations
Fisher						Mrs. Jackson
Muskrat						Mrs. Jackson, field observations
Otter						Mrs. Jackson
Fox						Mrs. Jackson
Raccoon						2012 field observations
Birds						
American Crow						
American Goldfinch						
American Redstart						
American Robin						
American Woodcock						
Baltimore Oriole						
Barn Swallow						
Black-capped Chickadee						
Blue Jay						
Bobolink						
Canada Goose						
Cardinal						
Cedar Waxwing						
Common Grackle						
Common Yellowthroat						
Downy Woodpecker						
Eastern Kingbird						
Great-blue Heron						
Great-crested Flycatcher						
Green Heron						
Hairy Woodpecker						
House Wren						
Killdeer						
Mallard						
Merlin						
Mourning Dove						

Northern Flicker						
Osprey (and nest)						
Purple Martin						
Red-eyed Vireo						
Red-winged Balcknbird						
Ruby-throated Hummingbird						
Song Sparrow						
Spotted Sandpiper						
Swamp Sparrow						
Warbling Vireo						
White-breasted Nuthatch						
Wild Turkey						
Wood Duck						
Wood Pewee						
Wood Thrush						
Reptiles						
Eastern Musk Turtle						
Snapping Turtle						Mrs. Jackson
Blanding's Turtle						Mrs. Jackson
Northern Water Snake						Mrs. Jackson
Eastern Ribbonsnake						2012 field observations
Northern Map Turtle						Species Observations, Provincially Tracked
Eastern Painted Turtle						
Fish						
Bluegill						
Log Perch						
Long-nosed Gar						
Minnows						
Muskellunge*						
Pumpkinseed						
River Redhorse						
Small-mouthed Bass						
Stickleback						
Lepedoptra						
Alfalfa Butterfly						
Giant Swallowtail						
Great-Spangled Fritillary						
Monarch						
Mourning Cloak						
Red Admiral						
Tiger Swallowtail						
Odonata						
12-spotted Skimmer						
Blue Dasher						
Bluets						
Clubtails						
Damsels						
Dot-tailed Whiteface						
Eastern Amberwing						
Eastern Forktail						
Eastern Pondhawk						
Green Darner						
Halloween Pennant						
Meadowhawks						
Powdered Dancer						
Slaty Skimmer						
Widow Skimmer						

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4.2 SIGNIFICANT FEATURES AND/OR FISH & WILDLIFE HABITAT

4.2.1 NESTING OF COLONIAL WATERBIRDS

Status	Name of species	Source of Information	Score	
1) Currently nesting			50	
2) Known to have nested within past 5 years			25	
3) Active feeding area (Do not include feeding by great blue herons)			15	
4) None known		2012 Field work	0	0

Consult the Ontario Heronry database at Bird Studies Canada. Subtotal: 0

Attach documentation (nest locations etc., if known)

Score highest applicable category only; maximum score 50 points.

Score for Nesting Colonial Waterbirds (maximum 50 points) 0

4.2.2. WINTER COVER FOR WILDLIFE

Score "locally significant" if trees & shrubs are present, also consult District deer yard data.

		(Check only highest level of significance) **(one only)**	Score
1)		Provincially significant	l00
2)		Significant in Site Region	50
3)		Significant in Site District	25
3)	10	Locally significant	10
4)		Little or poor winter cover present	0

Source of information: 2012 field evaluation

Winter Cover for Wildlife Score (maximum l00 points) 10

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4.2.3 WATERFOWL STAGING AND/OR MOULTING

(Check only highest level of significance for both staging and moulting; score is cumulative across columns, maximum score 15(

		Staging	Score (one only)	Moulting	Score (one only)
1)	Nationally significant		150		150
2)	Provincially significant		100		l00
3)	Regionally significant		50		50
4)	Known to occur	10	10		10
5)	Not possible		0		0
6)	Unknown		0	0	0
	Total:	10		0	
	Subtotal:		10		

Source of information: 2012 Field work

Waterfowl Moulting and Staging Score (maximum 150 points) 10

4.2.4 WATERFOWL BREEDING

		(Check only highest level of significance)	Score
1)		Provincially significant	l00
2)		Regionally significant	50
3)	10	Habitat suitable	10
4)		Habitat not suitable	0

Source of information: 2012 Field work

Waterfowl Breeding Score (maximum lOO points) 10

4.2.5 MIGRATOR PASSERINE, SHOREBIRD OR RAPTOR STOPOVER AREA

(check highest applicable category)

1)		Provincially significant	l00
2)		Significant in Site Region	50
3)		Significant in Site District	10
4)	0	Not significant	0

Source of information: 2012 Field work

Passerine, Shorebird or Raptor Stopover Score (maximum 100 points) 0

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4.2.6 FISH HABITAT

Consult District Fisheries files. If fish are present in the wetland, score 15 or 25 points depending on the size of the fish habitat present.

4.2.6. Spawning and Nursery Habitat

Table 5. Area Factors for Low Marsh, High Marsh, and Swamp Communities.

No. of ha of Fish Habitat	Area Factor
< 0.5 ha	0.1
0.5- 4.9	0.2
5.0- 9.9	0.4
10.0- 14.9	0.6
15.0 -19.9	0.8
20.0+ ha	1.0

Step 1:

_____ Fish habitat is not present within the wetland (Score = 0)

X Fish habitat is present within the wetland (Go to Step 2)

Step 2: Choose only one option

1) X Significance of the spawning and nursery habitat within the wetland is known (Go to Step 3)

2) _____ Significance of the spawning and nursery habitat within the wetland is not known (Go through Steps 4, 5, 6 and 7)

Step 3: Select the highest appropriate category below attach documentation:

1)		Significant in Site Region	l00 points
2)		Significant in Site District	50
3)	25	Locally Significant Habitat (5.0+ ha)	25
4)		Locally Significant Habitat (<5.0 ha)	15

Score for Spawning and Nursery Habitat (maximum score 100 points) 25

Step 4: **Proceed to Steps 4 to 7 only if Step 3 was not answered.**

(**Low Marsh**: marsh area from the existing water line out to the outer boundary of the wetland)

_____ Low marsh not present (Continue to Step 5)
_____ Low marsh present (Score as follows)

Scoring for Presence of Key Vegetation Groups

Scoring is based on the one most clearly dominant plant species of the dominant form in each Low Marsh vegetation community. Check the appropriate Vegetation Group (see Appendix 16 Table 16-2) for each Low Marsh community. Sum the areas of the communities assigned to each Vegetation Group and multiply by the appropriate size factor from Table 5.

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (see Table 5)	Score	Final Score (area factor x score)
1	Tallgrass				6 pts	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
5	Duckweed				2	0.0
6	Smartweed-Waterwillow				6	0.0
7	Waterlily-Lotus				11	0.0
8	Waterweed-Watercress				9	0.0
9	Ribbongrass				10	0.0
10	Coontail-Naiad-Watermilfoil				13	0.0
11	Narrowleaf Pondweed				5	0.0
12	Broadleaf Pondweed				8	0.0
Sub Total Score (maximum 75 points)						0.0
Total Score (maximum 75 points)						0.0

Step 5: (**High Marsh**: area from the water line to the inland boundary of marsh wetland type. This is essentially what is commonly referred to as a wet meadow, in that there is insufficient standing water to provide fisheries habitat except during flood or high water conditions.)

_____ High marsh not present (Continue to Step 6)
_____ High marsh present (Score as follows)

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Scoring for Presence of Key Vegetation Groups

Scoring is based on the one most clearly dominant plant species of the dominant form in each High 1Marsh vegetation community. Check the appropriate Vegetation Group (see Appendix 16 Table 16-2) for each High Marsh community. Sum the areas of the communities assigned to each Vegetation Group and multiply by the appropriate size factor from Table 5.

Vegetation Group Number	Vegetation Group Name	Present as a Dominant Form (check)	Total Area (ha)	Area Factor (see Table 5)	Score	Final Score (area factor x score)
1	Tallgrass				6 pts	0.0
2	Shortgrass-Sedge				11	0.0
3	Cattail-Bulrush-Burreed				5	0.0
4	Arrowhead-Pickerelweed				5	0.0
Sub Total Score (maximum 25 points)						0.0
Total Score (maximum 25 points)						0.0

Step 6: (**Swamp**: Swamp communities containing fish habitat,either seasonally or permanently. Determine the total area of seasonally flooded swamps and permanently flooded swamps containing fish habitat.)

_____ Swamp containing fish habitat not present (Continue to Step 7)
_____ Swamp containing fish habitat present (Score as follows)

Swamp containing fish Habitat	Present (check)	Total area (ha)	Area Factor (see Table 5)	Score	TOTAL SCORE (factor x score)
Seasonally flooded				10	0.0
Permanently flooded				10	0.0
Sub SCORE (maximum 20 points)					0.0
SCORE (maximum 20 points)					0.0

Step 7: Calculation of final score

Score for Spawning and Nursery Habitat (Low Marsh) (maximum 75) = 0.0

Score for Spawning and Nursery Habitat (High Marsh) (maximum 25) = 0.0

Score for Swamp Containing Fish Habitat (maximum 20) = 0.0

Subtotal: 0.0

Sum (maximum score 100 points) = 0.0

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4.2.6.2 Migration and Staging Habitat ***Score only if information on fish migration and staging exists, e.g. migration of northern pike through a wetland to access spawning areas.***

Step 1:

1) ____ Staging or Migration Habitat is not present in the wetland (Score = 0)

2) ____ Staging or Migration Habitat is present in the wetland significance of the habitat is known (Go to Step 2)

3) X Staging or Migration Habitat is present in the wetland significance of the habitat is not known (Go to Step 3)

NOTE: Only one of Step 2 or Step 3 is to be scored.

Step 2: Select the highest appropriate category below, attach documentation:

		Score
1)	Significant in Site Region	25 points
2)	Significant in Site District	15
3)	Locally Significant	10
4)	Fish staging and/or migration habitat present,but not as above	5

Score for Fish Migration and Staging Habitat (maximum score 25 points) 0

Step 3: Select the highest appropriate category below based on presence of the designated site type (does not have to be dominant). See Section 1.1.3. Note name of river for 2) and 3).

		Score
1)	Wetland is riverine at rivermouth or lacustrine at rivermouth	25 points
2)	Wetland is riverine,within 0.75 km of rivermouth	15
3)	Wetland is lacustrine,within 0.75 km of rivermouth	10
4)	5 Fish staging and/or migration habitat present, but not as above	5

Score for Staging and Migration Habitat (maximum score 25 points) 5

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4.3 ECOSYSTEM AGE

(Fractional Area = area of wetland/total wetland area)

	Fractional Area				Scoring
Bog	0.00	x	25	=	0.0
Fen, treed to open on deep soils floating mats or marl		x	20	=	0.0
Fen, on limestone rock		x	5	=	0.0
Swamp	0.59	x	3	=	1.8
Marsh	0.41	x	0	=	0.0
		Sub Total:			1.8

Ecosystem Age Score (maximum 25 points) 1.8

4.4 GREAT LAKES COASTAL WETLANDS

Score for coastal (see text for definition) wetlands only

Choose one only

	wetland < 10 ha	= 0 points
	wetland 10- 50 ha	= 25
	wetland 51 -lOO ha	= 50
	wetland > 100 ha	= 75

Great Lakes Coastal Wetlands Score (maximum 75 points) 0

5.0 EXTRA INFORMATION

5.1 PURPLE LOOSESTRIFE

____ Absent/Not seen			
X Present	(a)	One location in wetland	____
		Two to many locations	X
		Abundance code	
	(b)	(1 < 20 stems	____
		(2 20-99 stems	____
		(3 100-999 stems	____
		(4 >1000 stems	X

5.2 SEASONALLY FLOODED AREAS

Check one or more

Ephemeral	(less than 2 weeks)	X
Temporal	(2 weeks to 1 month)	X
Seasonal	(1 to 3 months)	X
Semi-permanent	(>3 months)	X
No seasonal flooding		____

5.3 SPECIES OF SPECIAL SIGNIFICANCE

5.3.1 Osprey

Present and nesting	____
Known to have nested in last 5 yr	____
Feeding area for osprey	____
Not as above	X

5.3.2 Common Loon

Nesting in wetland	____
Feeding at edge of wetland	____
Observed or heard on lake or river adjoining the wetland	____
Not as above	X

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INVESTIGATORS	AFFILIATION
T. Norris, M. Bérubé, G. Clark, A. Margetson	OMNR - Peterborough District (2012)

DATES WETLAND VISITED

July 10, 13, 18, 19, 20
August 2, 14, 16

DATE THIS EVALUATION COMPLETED: **November 2, 2012**

ESTIMATED TIME DEVOTED TO COMPLETING THE FIELD SURVEY IN "PERSON HOURS"

70 Hours

WEATHER CONDITIONS

i) at time of field work **dry, sunny, very hot**

(Continue in the space below if necessary)

ii) summer conditions in general Drought conditions. Above average temperatures.

OTHER POTENTIALLY USEFUL INFORMATION:

CHECKLIST OF PLANT AND ANIMAL SPECIES RECORDED IN THE WETLAND:

Attach a list of all flora and fauna observed in the wetland.

*Indicate if voucher specimens or photos have been obtained, where located, etc.

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WETLAND EVALUATION SCORING RECORD

WETLAND NAME AND/OR NUMBER	Corbyville Wetland

1.0 BIOLOGICAL COMPONENT

1.1 PRODUCTIVITY

1.1.1	Growing Degree-Days/Soils	19.4	
1.1.2	Wetland Type	10.9	
1.1.3	Site Type	3.2	
	Total for Productivity		33

1.2 BIODIVERSITY

1.2.1	Number of Wetland Types	13.0	
1.2.2	Vegetation Communities (maxixmum 45)	22.5	
1.2.3	Diversity of Surrounding Habitat (maximum 7)	7.0	
1.2.4	Proximinty to Other Wetlands	8.0	
1.2.5	Interspersion	27.0	
1.2.6	Open Water Type	8.0	
	Total for Biodiversity		86
	Sub Total for Biodiversity	86	
1.3	SIZE (Biological Component)		31
	Sub Total:		150
	TOTAL FOR BIOLOGICAL COMPONENT (not to exceed 250)		150

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2.0 SOCIAL COMPONENT

2.1 ECONOMICALLY VALUABLE PRODUCTS

2.1.1	Wood Products	9
2.1.2	Wild Rice	0
2.1.3	Commercial Fish	12
2.1.4	Bullfrogs	1
2.1.5	Snapping Turtles	1
2.1.6	Furbearers	12

Total for Economically Valuable Products: 35

2.2 RECREATIONAl ACTIVITIES (maximum 80): 48

2.3 LANDSCAPE AESTHETICS

2.3.1	Distinctness	3
2.3.2	Absence of Human Disturbance	4

Total for Landscape Aesthetics: 7

2.4 EDUCATION AND PUBLIC AWARENESS

2.4.1	Educational Uses	0
2.4.2	Facilities and Programs	0
2.4.3	Research and Studies	0

Total for Education and Public Awareness: 0

2.5 PROXIMITY TO AREAS OF HUMAN SETTLEMENT: 26

2.6 OWNERSH1P: 5

Subtotal for Social Component: 109.0

2.7 SIZE (Social Component): 20

2.8 ABORIGINAL AND CULTURAL VALUES: 0

Sub Total: 141

TOTAL FOR SOCIAL COMPONENT (not to exceed 250): 141

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3.0 HYDROLOGICAL COMPONENT

3.1 FLOOD ATTENUATION		7
3.2 WATER QUALITY IMPROVEMENT		
3.2.1 Short Term Improvement	29.9	
3.2.2 Long Term Improvement	3.0	
3.2.3 Groundwater Discharge (maximum 30)	9.0	
Total for Water Quality Improvement		42
3.3 CARBON SINK		2
3.4 SHORELINE EROSION CONTROL		15
3.5 GROUNDWATER RECHARGE		
3.5.1 Site Type	31.87	
3.5.2 Soils	5.0	
Total for Groundwater Recharge		37
Sub Total:		103
TOTAL FOR HYDROLOGICAL COMPONENT (not to exceed 250)		103

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4.0 SPECIAL FEATURES

4.1 RARITY

4.1.1 Wetlands

4.1.1.1	Rarity within the Landscape	20.0
4.1.1.2	Rarirty of Wetland Type (maximum 80)	20.0
	Total for Wetland Rarity	40

4.1.2 Species

4.1.2.1	Endangered or Threatened Species Breeding	500.0
4.1.2.2	Traditional Use by Endangered or Threatened Species	225.0
4.1.2.3	Provincially Significant Animals	115.0
4.1.2.4	Provincially Significant Plants	50.0
4.1.2.5	Regionally Significant Species	0.0
4.1.2.6	Locally Significant Species	0.0
	Total for Species Rarity	890

4.2 SIGNIFICANT FEATURES OR HABITAT

4.2.1	Colonial Waterbirds	0.0
4.2.2	Winter Cover for Wildlife	10.0
4.2.3	Waterfowl Staging and Moulting	10.0
4.2.4	Waterfowl Breeding	10.0
4.2.5	Migratory Passerine, Shorebird or Raptor Stopover	0.0
4.2.6	Fish Habitat	30.0
	Total for Significant Features and Habitat	60

4.3 ECOSYSTEM AGE 2

4.4 GREAT LAKES COASTAL WETLANDS 0

Sub Total: 992

TOTAL FOR SPECIAL FEATURES (maximum 250) 250

Southern Ontario Wetland Evaluation, Score Summary March 1993

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SUMMARY OF EVALUATION RESULT

Wetland	Corbyville Wetland
TOTAL FOR 1.0 BIOLOGICAL COMPONENT	150
TOTAL FOR 2.0 SOCIAL COMPONENT	141
TOTAL FOR 3.0 HYDROLOGICAL COMPONENT	103
TOTAL FOR 4.0 SPECIAL FEATURES COMPONENT	250
WETLAND TOTAL	643

INVESTIGATORS
T. Norris, M. Bérubé, G. Clark, A. Margetson
0
0
0
0

AFFILIATION
OMNR - Peterborough District (2012)
0
0
0
0

DATE November 2, 2012

Appendix E

Photograph 1. July 11, 2019. Spring discharge area, looking southeast.

Photograph 2. July 11, 2019. Spring pond, looking northeast.

Photograph 3. July 11, 2019. Channel flowing northeast from spring pond.

Photograph 4. July 11, 2019. Spring channel entering wetland, looking northeast.

Photograph 5. July 11, 2019. Corbyville PSW unit near northern margin of property, looking east.

Photograph 6. July 11, 2019. Outlet of PSW unit to excavated channel, looking north.

Photograph 7. July 11, 2019. Linear excavated channel along the north margin of the subject property, looking west (‘upstream’).

Photograph 8. July 11, 2019. Meadow at northeast corner of the subject property, looking northwest.

Photograph 9. July 11, 2019. Recently cleared area south of the northeast meadow, looking south.

Photograph 10. July 11, 2019. Recently cleared area south of the wetland along the south limits of the subject property, looking west.

RIVERSTONE DEVELOPMENT

Servicing Brief to Support Draft Plan of Subdivision, Zoning By-Law Amendment, and Official Plan Amendment Applications

October 2019

AINLEY GRAHAM & ASSOCIATES

CONSULTING ENGINEERS AND PLANNERS
COLLINGWOOD · BARRIE · BELLEVILLE · KINGSTON · OTTAWA

File No. 19503-1

1.0 INTRODUCTION

Ainley Group was retained to complete a preliminary servicing brief to be included with the submission of draft plan of subdivision, zoning by-law amendment, and official plan amendment applications for the proposed Riverstone residential development. The purpose of the report is to summarize the servicing requirements for the proposed development. The following services have been considered in this report.

- Transportation System
- Grading
- Stormwater Management
- Water Distribution System
- Sanitary and Storm Sewer Collection System

In addition, brief comments regarding individual utility distributions have also been provided. A number of figures have been prepared in order to facilitate future detailed design.

2.0 SITE DESCRIPTION

2.1 Existing Conditions

The property is legally described as part of Lots 8 and 9, Concession 3, former Township of Thurlow, now City of Belleville, Hastings County (registered plan no. 124). The parcel of land is approximately 21.26 hectares. The property is bounded to the north by Scott Drive and existing residential development, Moira River to the east, Cannif Mills Residential Subdivision to the south, and Farnham Road to the west.

The Corbyville Provincially Significant Wetland (PSW) occurs within the subject property. The Moira River 100-year flood line occurs to the immediate east of the property.

The property is currently vacant and partially treed. The site is predominately flat with a slope to the east. Drainage is generally conveyed to the PSW and the Moira River.

A site location plan is attached to this report as **Figure 1.**

2.2 Proposed Conditions

The property is proposed to be developed with the following:

- Seventy-nine (79) single family residential lots,
- Thirty (30) alternating single detached lots with laneway access,
- Four (4) semi-detached lots with laneway access,
- Forty-eight (48) 3-storey townhouse lots with laneway access,
- Sixty-six (66) 2-storey townhouse lots,

- Sixty-three (63) bungalow townhouse lots,
- One medium density residential block with thirty-five (35) units,
- One condo block with forty-two (42) units,
- One parkland dedication block,
- Parkette with access to wetland setback trails, and
- Approximately 5 ha of Municipal roadway network (26m and 20m roadway widths).
- Approximately 300m of private laneway within the proposed condo block (6.5m width).

The current conceptual development plan is attached to this report as **Figure 2**.

2.3 Existing Services

There is existing sanitary sewer, storm sewer, and watermain located within the Cannif Mills Residential Subdivision to the immediate south of this development. The sewers and watermain within Cannif Mills have been oversized in order to accommodate servicing the subject lands. Once the northern limits of Cannif Mills infrastructure have been constructed, they will be available for connection to the proposed Riverstone Development. Further, the northern portions of Cannif Mills development include watermain installation along Farnham Road. It is proposed to connect to the future services located along Farnham Road and Essex Drive in order to service the proposed development.

3.0 TRANSPORTATION SYSTEM

The proposed development will be accessed from three locations: Farnham Road, Scott Drive, and Essex Drive.

The internal two-lane Municipal roadways Essex Drive and Street ‘A’ will be designed to meet the typical City of Belleville minimum standards for a minor collector, urban cross section with a 26 m right-of-way as identified on the development plan (**Figure 2**). The remaining Municipal roadways will be designed to meet the typical City of Belleville minimum standards for a local roadway, urban cross section with a 20m right-of-way as shown on **Figure 2**. The roadway will be designed to meet the typical local municipal minimum standards, or as recommended by the geotechnical investigation, for earth or rock as indicated below*:

40 mm	HL3 Surface Course, over
75 mm	HL8 Binder Course, over
150 mm	Granular ‘A’, over
350 mm	Granular ‘B’ Type I

*It should be noted that confirmation of the pavement structure will be required at the time of detailed design to ensure the minimal requirements are met for both earth and rock construction.

Canada Post will be circulated at the time of detailed engineering to determine the recommended

location for the community mailboxes.

4.0 GRADING

Grading of the site will be determined during detailed design and will be based predominately on the following factors:

- Maintaining a minimum soil cover of 2.7m over the sanitary sewer at the required slopes necessary for gravitational flow to the main.

- Stormwater outfall at the available sewer connection points in Cannif Mills as well as toward the proposed level spreaders to be provided for quality control.

5.0 STORMWATER MANAGEMENT

The subject site lies within the Quinte Conservation Region. As such the stromwater management requirements are subject to the Quinte Conservation Regional Event (100-year design storm). Quality control is subject to a 'level 1' treatment and quantity control measures are required to ensure post development discharge rates do not exceed pre-development rates.

A preliminary Stormwater Management Report has been prepared to accompany the application for rezoning. The report outlines that quantity control measures are provided in the existing Cannif Mills (Essex Drive Pond) stormwater management facility, and quality control is provided in the existing Cannif Mills Simcoe Drive Pond for 12.63 ha of the subject lands. Approximately 4 ha of the development lands will require additional quality control and conveyance of the quantity event. This additional quality control will be provided via level spreader berms in two locations: 1) immediately west of the wetland and 2) at the northeastern limits of the subject property. Further detail is provided in the report under separate cover.

6.0 WATER DISTRIBUTION SYSTEM

The proposed development will be serviced by the 300mm diameter PVC Municipal watermain to be installed within Essex Drive and Farnham Road as part of the Cannif Mills Residential Development. The design of the Cannif Mills Municipal watermain has been approved by the City of Belleville. It is proposed to connect to these mains to service the development.

The distribution evaluation has been prepared under separate cover, Riverstone Development Preliminary Watermain Design Brief, October 2019.

7.0 SANITARY COLLECTION SYSTEM

The proposed sanitary collection system is to consist of a standard gravitational design at a minimum depth of 2.7m. The sewer will be designed in accordance with typical municipal standards. The sewer

from this phase is proposed to be conveyed to the southeast portion of the development and connect to the Essex Drive sanitary sewer to be installed as part of the Cannif Mills Residential Development. This sanitary sewer was designed to be oversized in order to accommodate flows from the subject lands.

Based on discussions with municipal staff, it is understood that the existing sanitary pump station was designed to accommodate the subject lands, as they are currently zoned for development. However, the pump station in its existing condition may not meet the requirements of its Environmental Compliance Approval (ECA), and existing pumps may be undersized. We understand the City is currently reviewing the pump station, and if it is determined that the pumps need to be upgraded in order to meet the requirements of the ECA and accommodate the proposed development, the developer will work with the City to make necessary upgrades to the facility to service the proposed development.

Based on the existing grades of the site and the existing sanitary sewer elevations, it is anticipated that a pump station will be required to service the proposed condo block immediately east of the wetlands. Detailed design of the pump station will be included as part of the site plan approvals process for the proposed condo development.

8.0 UTILITY DISTRIBUTIONS

The electrical, telephone, gas and cable services for the proposed development will be installed within a joint utility trench. All electrical, telephone, gas and cable services will be designed by the various agencies and installed in accordance with their specifications. During detailed engineering design, the individual providers will be requested to provide layouts and a compiled plan will be included in the engineering plans.

The street lighting design and street light illumination plans will be completed in accordance with the municipal design standards and guidelines at the time of detailed design.

9.0 CONCLUSIONS

- 79 single family residential lots, 4 semi-detached lots with laneway access, 30 alternating single detached lots with laneway access, 48 3-storey townhouse lots with laneway access, 66 2-storey townhouse lots, 63 bungalow townhouse lots a medium-density block with 35 units, and a condo block with 42 units are currently proposed within the development.

- The development will be accessed from Farnham Road, Scott Drive, and Essex Drive.

- Stormwater management for quantity and quality control is provided in the existing ponds in the Cannif Mills development for 12.63 ha of the development. Additional quality control measures will be provided via level spreader berms immediately west of the wetland as well as in the northeastern corner of the property. Conveyance of the quantity event will be

provided toward the wetland and the Moira River.

- The development will be serviced by a municipal water system within the Municipal right-of-way and private services within the plan of condo east of the wetland.

- The development will be serviced by a gravity sanitary collection system directing effluent to the existing sanitary sewer within Cannif Mills residential subdivision and ultimately the City's treatment facility. It is anticipated that a pump station will be required to service the plan of condo on the east side of the wetland.

- Natural gas, electrical, telephone and cable utilities will be designed in accordance with the distributor's specifications and incorporated into the subdivision detail design.

We trust the above information meets your needs at this time and should you have any further questions or concerns, please do not hesitate to contact our office.
Sincerely,
AINLEY GRAHAM & ASSOCIATES LIMITED

Caitlin Sheahan, M.Sc., P. Eng.
Project Engineer

Google Earth

feet 2000
meters 700

LAND USE SUMMARY

	UNITS	AREA (ha)
11.0m SINGLE DETACHED LOT (LOTS 1-20, 51-109)	79	3.252
8.5m/10.5m ALTERNATING SINGLE DETACHED LOT WITH LANEWAY ACCESS (LOTS 21-50)	30	0.973
8.5m SEMI-DETACHED LOT WITH LANEWAY ACCESS (BLOCKS 141-142)	4	0.126
6.7m 3-STOREY TOWNHOMES WITH LANEWAY ACCESS (BLOCKS 130-140)	48	1.126
6.0m 2-STOREY TOWNHOMES 6.0m FRONT YARD SETBACK & 7.0m REAR YARD SETBACK (BLOCKS 110-127)	66	1.388
7.5m BUNGALOW TOWNHOMES (BLOCKS 143-157)	63	1.819
MEDIUM DENSITY RESIDENTIAL #1: 1-3 STOREYS (BLOCK 128)	35	0.428
CONDO BLOCK 165	42	1.900
PARKLAND DEDICATION BLOCK 159		0.802
PARKETTE / ACCESS TO WETLAND SETBACK TRAILS BLOCKS 161-162		0.114
PSW & 30m SETBACK NATURAL SPRING & 15m SETBACK (BLOCK 160)		3.477
AREA OF PROPOSED ROADWAY NETWORK: 4.854 ha AREA OF PROPOSED LANEWAYS (BLOCKS 163-164): 0.280 ha AREA RESERVED FOR FARNHAM ROAD WIDENING: 0.696 ha		
TOTAL	367	21.2 Ha

ADDITIONAL INFORMATION
REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN AND SURVEYOR'S CERTIFICATE
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c) SHOWN ON KEY PLAN
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e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT AND KEY PLANS
h) FULL MUNICIPAL SERVICES
i) SOIL IS FARMINGTON LOAM AND SOLMESVILLE CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN

RIVERSTONE

DRAFT PLAN OF SUBDIVISION

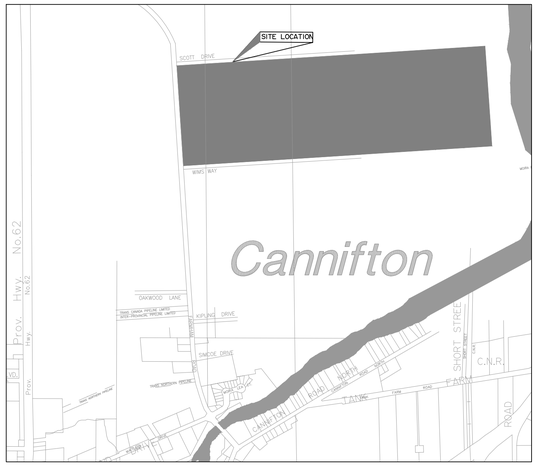
PART OF PARK LOTS 8 & 9, REGISTERED PLAN N.124
AND PART OF LOT 8, CONCESSION 3
FORMER GEOGRAPHIC TOWNSHIP OF THURLOW
NOW CITY OF BELLEVILLE
HASTINGS COUNTY
SCALE 1:1250

METRIC NOTE

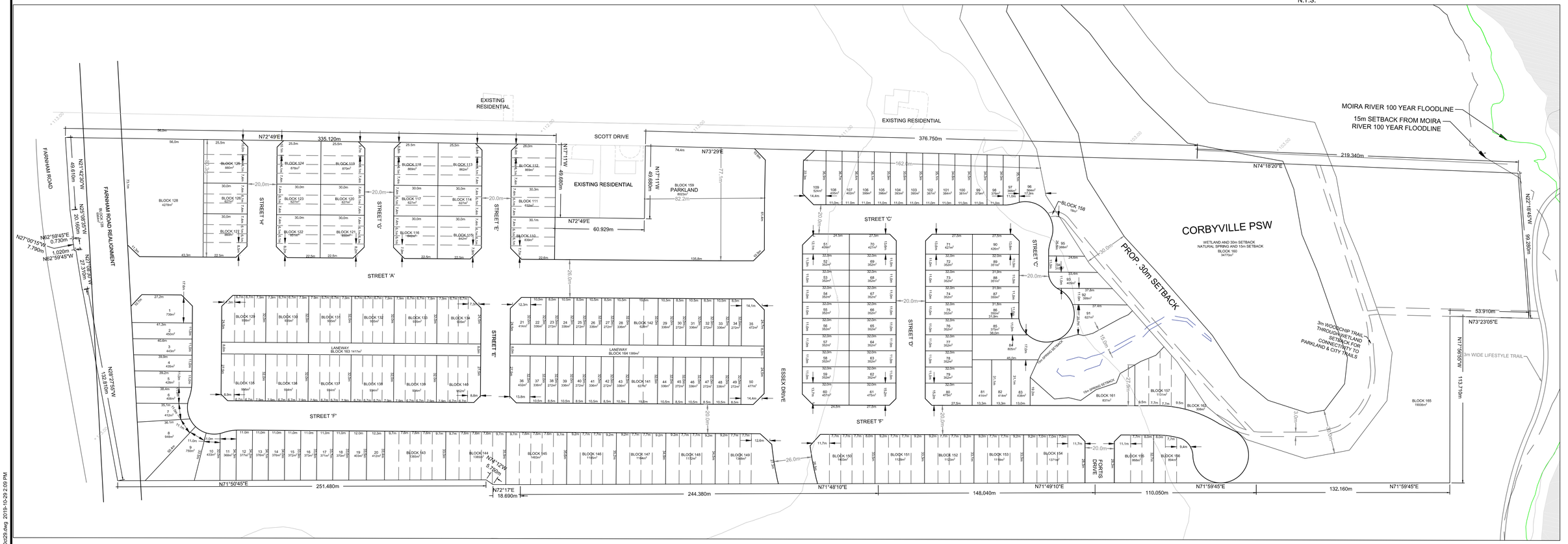
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

CONTOUR DATA

CONTOUR AND TOPOGRAPHIC INFORMATION GENERATED USING INFORMATION PROVIDED BY ONTARIO BASE MAPPING.



KEY MAP
N.T.S.



REV.#	REVISIONS	DATE	INITIAL
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CHECKED: AJW
DATE: OCT 2019

RIVERSTONE SUBDIVISION
CITY OF BELLEVILLE

DRAFT PLAN

Ainley GROUP CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG 19503-DP

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RIVERSTONE DEVELOPMENT

Stormwater Management Brief to Support Draft Plan of Subdivision, Zoning By-Law Amendment, and Official Plan Amendment Applications

October 2019

AINLEY GRAHAM & ASSOCIATES

CONSULTING ENGINEERS AND PLANNERS
COLLINGWOOD · BARRIE · BELLEVILLE · KINGSTON · OTTAWA

File No. 19503-1

1.0 INTRODUCTION

Ainley Group was retained by GCL Developments Ltd. to complete a preliminary stormwater brief to be included with the submission of applications for Draft Plan of Subdivision, Official Plan Amendment, and Zoning By-law Amendment for the proposed residential development east of Farnham Road and south of Scott Drive. The purpose of the report is to summarize the stormwater requirements for the proposed development.

2.0 SITE DESCRIPTION

2.1 Existing Conditions

The property is legally described as part of Lots 8 and 9, Concession 3, former Township of Thurlow, now City of Belleville, Hastings County (registered plan no. 124). The parcel of land is approximately 21.26 hectares. The property is bounded to the north by Scott Drive and existing residential development, Moira River to the east, Cannif Mills Residential Subdivision to the south, and Farnham Road to the west.

The Corbyville Provincially Significant Wetland (PSW) occurs within the subject property. The Moira River 100-year flood line occurs to the immediate east of the property.

The property is currently vacant and partially treed. The site is predominately flat with a slope to the east. Drainage is generally conveyed to the PSW and the Moira River.

A site location plan is attached to this report as **Figure 1.**

2.2 Proposed Conditions

The property is proposed to be developed with the following:

- Seventy-nine (79) single family residential lots,
- Thirty (30) alternating single detached lots with laneway access,
- Four (4) semi-detached lots with laneway access,
- Forty-eight (48) 3-storey townhouse lots with laneway access,
- Sixty-six (66) 2-storey townhouse lots,
- Sixty-three (63) bungalow townhouse lots,
- One medium density residential block with thirty-five (35) units,
- One condo block with forty-two (42) units,
- One parkland dedication block (0.802 ha),
- One parkette with access to wetland setback trails (0.162 ha),
- Approximately 5.108 ha of Municipal roadway network (26m and 20m roadway widths), and
- Approximately 350m of private roadway with 8m width.

The current development draft plan is attached to this report as **Figure 2**.

3.0 EXISTING STORM SEWER

There is existing storm sewer located within the Cannif Mills Residential Subdivision to the immediate south of this development. The sewers within Cannif Mills have been oversized in order to accommodate servicing the subject lands.

The catchment area assumed to be tributary from the proposed developments lands was 12.63 ha and assumed a mix of single family dwellings, and townhouse dwellings. A copy of the storm sewer contributing area plan is included in **Appendix A**.

The proposed development area of the subject lands is 4 ha greater than the assumed contributing area. This difference in area will require additional storm sewer to be provided that is not conveyed toward the existing SWM Facility. **Figure 3** shows the three areas of post-development stormwater conveyance. Area 1 will be conveyed toward the existing Cannif Mills sewers / stormwater facility whereas Areas 2 and 3 will have additional storm sewer that will be conveyed to new quality control facilities / quantity control conveyance paths as described below.

4.0 HYDROLOGY

4.1 Model Selection

Flow calculations for the post development conditions were carried out using the SWMHYMO computer program. This program is a complex hydrologic model used for the simulation and management of stormwater runoff in either small or large rural and urban areas.

4.2 Model Parameters

The SWMHYMO model has been developed with consideration of the parameters interpreted from air photos, Ontario Soils Mapping, topographic information, and the designer's knowledge of the site based on visual observations. The soils within the subject site have been identified as Soil Groups 'B' and 'C'. Areas 1 and 2 are identified as Solesville Clay Loam Soil: Soil Group 'C' with a Curve Number of 82 and Runoff Coefficient of 0.40. Area 3 is identified as Farmington Loam Soil: Soil Group 'B' with a Curve Number of 74 and Runoff Coefficient of 0.28. Supporting documentation is enclosed in **Appendix A**.

The quality storm hyetograph was developed in accordance with a typical 4-hour distribution for the 25mm quality event. Additionally, the 100-year Chicago storm was analyzed for overland conveyance purposes of runoff from the site. The MTO IDF Look-up Tool was used to determine rainfall distribution and is included in **Appendix A**.

An estimate of the contributing site impervious cover has been prepared for use in the SWMHYMO modeling. It has been estimated that Area 2 will be approximately 52% impervious, with 36%

directly connected and Area 3 will be approximately 80% impervious, with 42% directly connected. The directly connected value assumes that ½ of the roof runoff is directed to the street and ½ to the rear yards. Supporting calculations for the estimate of impervious cover are included in **Appendix A**.

4.3 Post Development

The post development SWMHYMO model was developed to evaluate the runoff rate and volume generated by the Quality (25mm) and the Quantity (100 year) events from the contributing catchment areas as outlined on **Figure 3**. The SWMHYMO output is included in **Appendix B**. A summary of the post-development flows is as follows:

- Area 2: Quality event (25mm): 0.097 m^3/s
- Area 2: Quantity event (100): 0.418 m^3/s
- Area 3: Quality event (25mm): 0.115 m^3/s
- Area 3: Quantity event (100): 0.432 m^3/s

5.0 STORMWATER QUANTITY CONTROL

Drainage of the site will be handled by an urban cross-section including curb and gutters, storm sewers, and rear yard swales. Storm sewers will be designed in accordance with the City of Belleville design standard to convey the 5 year flows. The subject lands are tributary to an existing quantity control facility located within the Cannif Mills development to the south. The facility is known as the Essex Drive SWM Facility and was designed to provide quantity control for 12.63ha of the subject lands. A copy of the Essex Pond contributing area plan is enclosed.

The proposed development area of the subject lands is 16.66 ha, which is 4 ha greater than the assumed contributing area of the existing SWM Facility. This difference in area will require additional quantity conveyance measures to be provided within the proposed development. The property lies within close proximity to the Moira River; as such, additional quantity control measures are not required. However, conveyance of the quantity event (i.e. 100-year flows) from the site to the Moira River will need to be provided. It is proposed to provide conveyance of these flows via overland flow routes consisting of shallow, gentle swales. Conveyance of the 100-year flows from Area 2 will be conveyed to the wetland setback area and wetland, whereas conveyance of the 100 year flows from Area 3 will be conveyed toward the Moira River as shown in **Figure 4**. The proposed cross-sections for the swales are included in **Appendix C**.

5.0 STORMWATER QUALITY CONTROL

The subject lands are tributary to an existing quality control facility located within the Cannif Mills development to the south. The facility is known as the Simcoe Drive SWM Facility and was designed to provide quality control for 12.63ha of the subject lands. A copy of the Simcoe Pond contributing area plan is enclosed.

The proposed development area of the subject lands is 16.66 ha (i.e. 4 ha greater than the

assumed contributing area). This difference in area will require additional quality control measures to be provided within the proposed development. Quality control to 'level 1', or enhanced, treatment will be required for the additional 4 ha. It is proposed to provide this additional quality control within two separate areas approximately 2 ha in size: 1) immediately west of the wetland (Area 2) and 2) immediately east of the wetland (Area 3). It is proposed to provide storage of the quality (25mm) event through swales with level spreader berms immediately downstream of two (2) stormwater outlets (i.e. one outlet west of the wetland, one outlet east of the wetland).

The MOE SWM Design Manual (2003) provides guidance on the design of level spreader berms for storage (**Appendix D**). MOE guidance indicates that the areas contributing to level spreader facilities be 2 ha or less. Areas 2 and 3 conform to this requirement, as they are each 2 ha in size. The manual also requires that the high groundwater table be greater than 0.5m below the bottom of the level spreader berm and planted vegetation facility. It is anticipated that the depth to high groundwater will be greater than 0.5m below the level spreader facility, based on MOE well records for the area and the depth at which groundwater was found. Further investigation (e.g., test pits) can be carried out as part of the detailed SWM design that will be required as a condition of draft plan approval to confirm the depth to groundwater for the site and the design of the level spreader facility.

Based on the manual's guidance, the length of the level spreader required for Area 2 is 5.2m and the length required for Area 3 is 6.2m and the slope for each must be <5% (**Appendix D**). The proposed location and configuration of the level spreaders are shown on **Figure 4**. As shown in **Figure 4**, the length of the proposed spreader berms and swales exceed the length recommended by the MOE design guidance, and the slopes are proposed to be <5%. Rip-rap will be placed before the level spreader in order to ensure that flow is conveyed as sheet flow rather than concentrated flow. It should be noted that the proposed level spreader and berm for Area 2 is shown within the 30m setback from the wetland; it is understood that this location will need to be supported by the Environmental Consultant and a permit will be required from Quinte Conservation.

6.0 EROSION AND SEDIMENTATION CONTROL

An erosion and sediment control strategy will be implemented as per the plan included in the detailed engineering drawing package in order to minimize the transfer of silt off-site during construction. The following measures will be incorporated into the strategy as required:

- Environmental fencing and straw bales
- Regular inspection of the erosion and sediment control devices
- Removal and disposal of the erosion and sediment control devices after the site has been stabilized
- All exposed earth to be re-vegetated within thirty days

7.0 CONCLUSIONS

- 79 single family residential lots, 4 semi-detached lots with laneway access, 30 alternating single detached lots with laneway access, 48 3-storey townhouse lots with laneway access, 66 2-storey townhouse lots, 63 bungalow townhouse lots a medium-density block with 35 units, and a condo block with 42 units are currently proposed within the development.

- Storm sewers are available for connection to the immediate south and have been sized to accommodate most of the subject lands. 4 ha of the development lands will require storm sewers to be conveyed to new quality control / quantity conveyance facilities.

- Stormwater management for quantity and quality control for 12.63 ha of the subject lands is provided in the existing ponds in the Cannif Mills development.

- Approximately 4 ha of the development lands will require additional quality control and conveyance of the quantity event.

    - Quantity control mitigation measures are not required due to the close proximity of the Moira River. Conveyance of the quantity event (100 year) to the wetland area and Moira River will be provided via overland drainage routes.
    - Overland drainage will be directed to level spreader berms located west of the wetland and at the eastern limits of the subject property, where quality control will be provided with level spreaders.

- Silt fencing and straw bale barriers will be in place during construction.

- Detailed design will be completed following Draft Plan approval.

We trust the above information meets your needs at this time and should you have any further questions or concerns, please do not hesitate to contact our office.

Sincerely,
AINLEY GRAHAM & ASSOCIATES LIMITED

Caitlin Sheahan, M.Sc., P. Eng.
Project Engineer

Google Earth

feet 2000

meters 700

LAND USE SUMMARY

	UNITS	AREA (ha)
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PARKETTE / ACCESS TO WETLAND SETBACK TRAILS BLOCKS 161-162		0.114
PSW & 30m SETBACK NATURAL SPRING & 15m SETBACK (BLOCK 160)		3.477
AREA OF PROPOSED ROADWAY NETWORK: 4.854 ha AREA OF PROPOSED LANEWAYS (BLOCKS 163-164): 0.280 ha AREA RESERVED FOR FARNHAM ROAD WIDENING: 0.696 ha		
TOTAL	367	21.2 Ha

ADDITIONAL INFORMATION
REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN AND SURVEYOR'S CERTIFICATE
b) SHOWN ON DRAFT AND KEY PLANS
c) SHOWN ON KEY PLAN
d) LAND TO BE USED IN ACCORDANCE WITH LAND USE SCHEDULE
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT AND KEY PLANS
h) FULL MUNICIPAL SERVICES
i) SOIL IS FARMINGTON LOAM AND SOLMESVILLE CLAY LOAM
j) SHOWN ON DRAFT PLAN
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l) SHOWN ON DRAFT PLAN

RIVERSTONE

DRAFT PLAN OF SUBDIVISION

PART OF PARK LOTS 8 & 9, REGISTERED PLAN N.124
AND PART OF LOT 8, CONCESSION 3
FORMER GEOGRAPHIC TOWNSHIP OF THURLOW
NOW CITY OF BELLEVILLE
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DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

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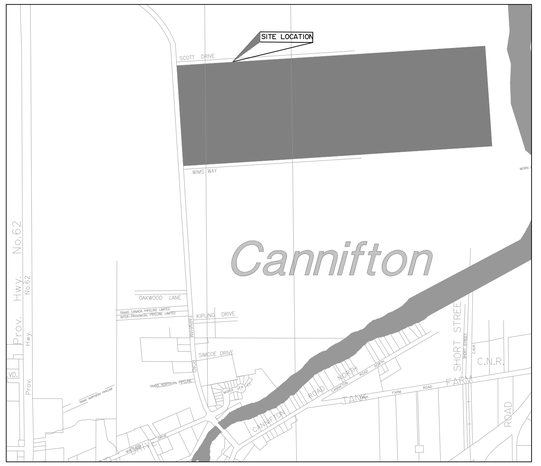
CONTOUR AND TOPOGRAPHIC INFORMATION GENERATED USING INFORMATION PROVIDED BY ONTARIO BASE MAPPING.



KEY MAP
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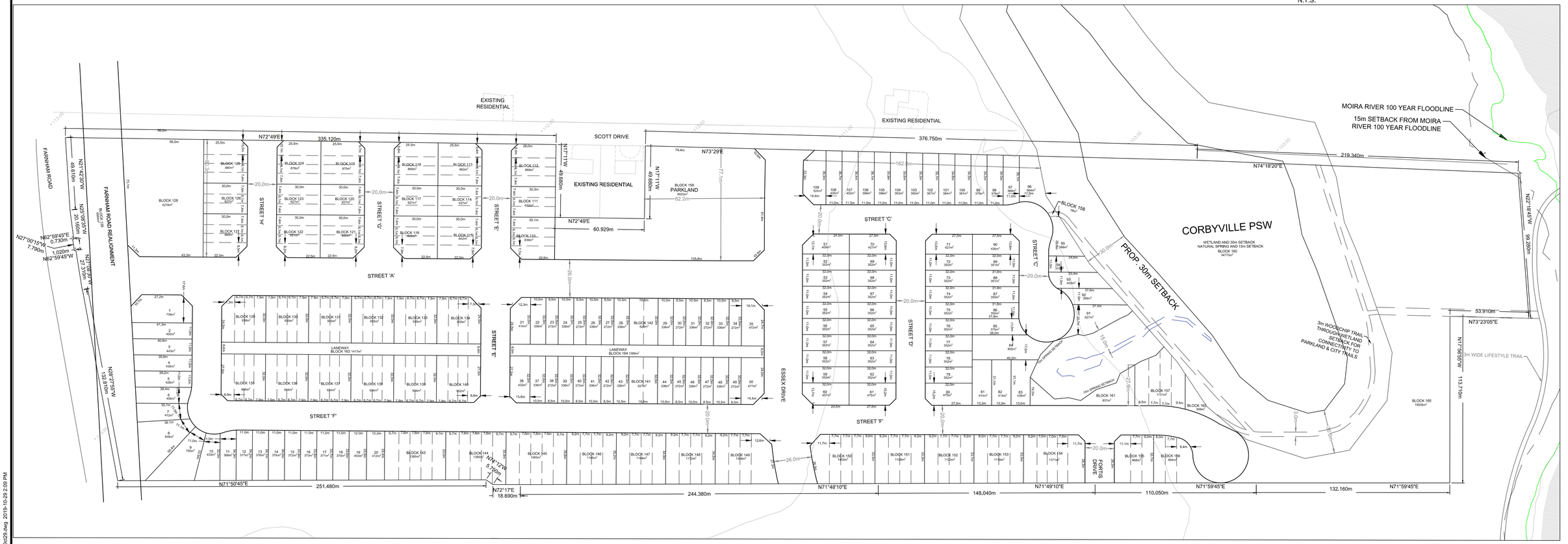

SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ARE CORRECTLY SHOWN.

KEITH WATSON
ONTARIO LAND SURVEYOR

DATE

OWNER'S CERTIFICATE
I AUTHORIZE AINLEY GROUP TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF BELLEVILLE FOR APPROVAL.

ANDY GEERTSMA

DATE

REV.#	REVISIONS	DATE	INITIAL
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Not Valid Unless Signed And Dated

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RIVERSTONE SUBDIVISION
CITY OF BELLEVILLE

DRAFT PLAN

Ainley GROUP CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG 19503-DP

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12.6 ha / 29% — DENOTES DRAINAGE AREA IN HECTARES; DENOTES PERCENT IMPERVIOUSNESS

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DATE: OCT 2019

RIVERSTONE DEVELOPMENT
CITY OF BELLEVILLE

FIGURE 3

Ainley GROUP — CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG FIGURE 3

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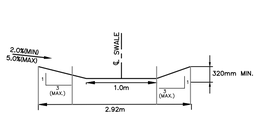

AREA 2 & AREA 3 QUANTITY
CONVEYANCE SWALE
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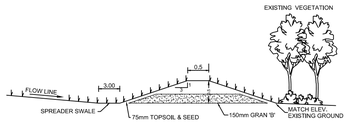

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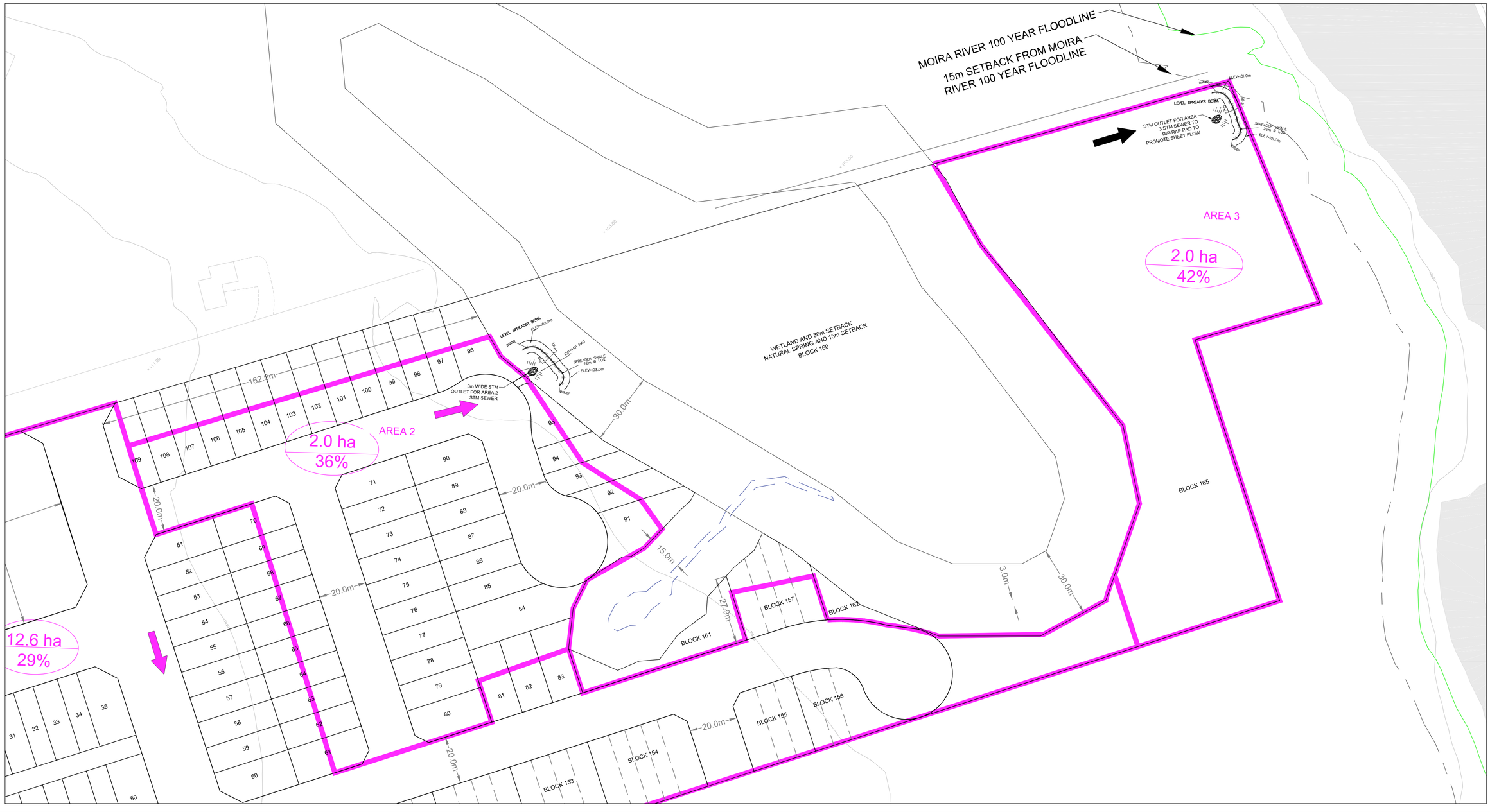

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RIVERSTONE DEVELOPMENT
CITY OF BELLEVILLE

FIGURE 4

Ainley GROUP CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG FIGURE 4

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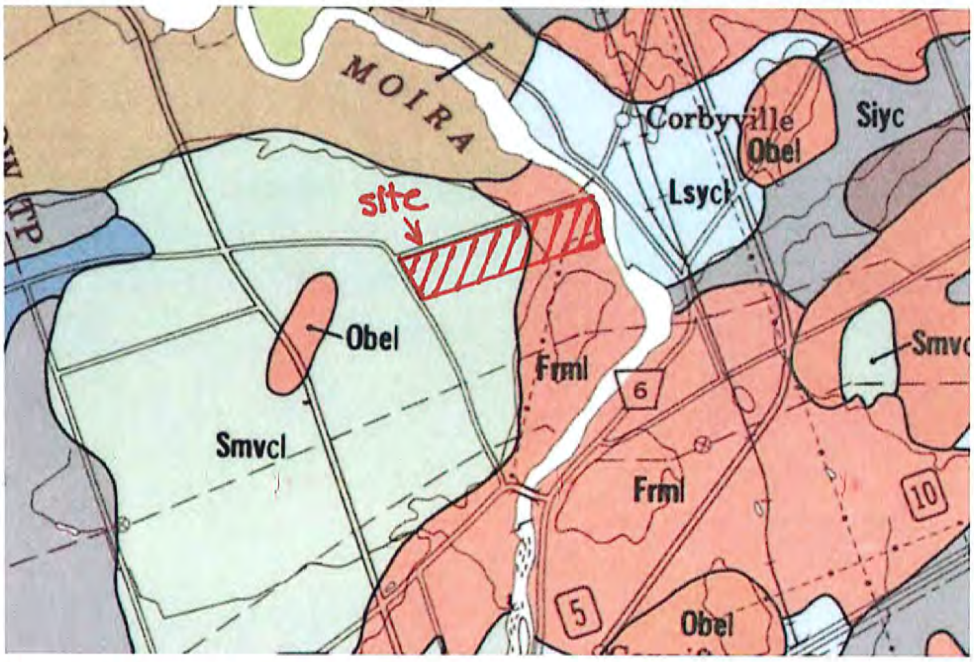
APPENDIX A

Model Parameters

Benefitting Properties
Storm Sewer

Benefitting Properties
Essex Drive SWM Facility

Benefitting Properties
Simcoe Drive SWM Facility



Frm	FARMINGTON	Brown Forest	Variable
Fzb	FOXBORO	Dark Gray Gleysolic	Poor
Gny	GRANBY	Dark Gray Gleysolic	Poor
Lsy	LINDSAY	Dark Gray Gleysolic	Poor
Lys	LYONS	Dark Gray Gleysolic	Poor
Mgl	MONTEAGLE	Podzol	Good to excessive
Obe	OTONABEE	Brown Forest	Good
Pcy	PERCY	Gray-Brown Podzolic	Good
Shy	SOUTH BAY	Gray-Brown Podzolic	Moderately well drained
Siy	SIDNEY	Dark Gray Gleysolic	Poor
Smv	SOLMESVILLE	Gray-Brown Podzolic	Imperfect

Area 3

Areas 1+2

SOIL TEXTURE

c	clay
l	loam
cl	clay loam
sl	sandy loam
sil	silt loam
fsl	fine sandy loam
gs	gravelly sand
ls	loamy sand

SOIL PHASE

b	bouldery
R	rock outcrop
s	steep
sh	shallow
st	stony

Design Chart 1.08: Hydrologic Soil Groups (Continued)

- Based on Soil Texture

Sands, Sandy Loams and Gravels	
- overlying sand, gravel or limestone bedrock, very well drained	A
- ditto, imperfectly drained	AB
- shallow, overlying Precambrian bedrock or clay subsoil	B
Medium to Coarse Loams	
- overlying sand, gravel or limestone, well drained	AB
- shallow, overlying Precambrian bedrock or clay subsoil	B
Medium Textured Loams	
- shallow, overlying limestone bedrock	B
- overlying medium textured subsoil	BC
Silt Loams, Some Loams	
- with good internal drainage	BC
- with slow internal drainage and good external drainage	C
Clays, Clay Loams, Silty Clay Loams	
- with good internal drainage	C
- with imperfect or poor external drainage	C
- with slow internal drainage and good external drainage	D

Area 3

Area 2

Source: U.S. Department of Agriculture (1972)

Design Chart 1.07: Runoff Coefficients (Continued)

- Rural

Land Use & Topography[3]	Soil Texture		
	Open Sand Loam	Loam or Silt Loam	Clay Loam or Clay
CULTIVATED			
Flat 0 - 5% Slopes	0.22	0.35	0.55
Rolling 5 - 10% Slopes	0.30	0.45	0.60
Hilly 10- 30% Slopes	0.40	0.65	0.70
PASTURE			
Flat 0 - 5% Slopes	0.10	0.28 A3	0.40 — Area 2
Rolling 5 - 10% Slopes	0.15	0.35	0.45
Hilly 10- 30% Slopes	0.22	0.40	0.55
WOODLAND OR CUTOVER			
Flat 0 - 5% Slopes	0.08	0.25	0.35
Rolling 5 - 10% Slopes	0.12	0.30	0.42
Hilly 10- 30% Slopes	0.18	0.35	0.52
BARE ROCK	COVERAGE[3]		
	30%	50%	70%
Flat 0 - 5% Slopes	0.40	0.55	0.75
Rolling 5 - 10% Slopes	0.50	0.65	0.80
Hilly 10- 30% Slopes	0.55	0.70	0.85
LAKES AND WETLANDS	0.05		

2 Terrain Slopes

3 Interpolate for other values of % imperviousness

Sources: American Society of Civil Engineers - ASCE (1960)
U.S. Department of Agriculture (1972)

Design Chart 1.09: Soil Conservation Service Curve Numbers (Continued)

Land Use or Surface	Hydrologic Soil Group						
	A	AB	B	BC	C	CD	D
Fallow (special cases only)	77	82	86	89	91	93	94
Crop and other improved land	66** (62)	70** (68)	74	78	82	84	86 AMC I
Pasture & other unimproved land	58* (38)	62* (51)	65	71	76	79	81
Woodlots and forest	50* (30)	54* (44)	58	65	71	74	77
Impervious areas (paved)							98
Bare bedrock draining directly to stream by surface flow							98
Bare bedrock draining indirectly to stream as groundwater (usual case)							70
Lakes and wetlands							50

Notes

(i) All values are based on AMC II except those marked by * (AMC III) or ** (mean of AMC II and AMC III).

(ii) Values in brackets are AMC II and are to be used only for special cases.

(iii) Table is not applicable to frozen soils or to periods in which snowmelt contributes to runoff.

Ontario IDF CURVE LOOKUP

Active coordinate

44° 13' 15" N, 77° 23' 45" W (44.220833,-77.395833)

Retrieved: Thu, 30 May 2019 18:52:43 GMT

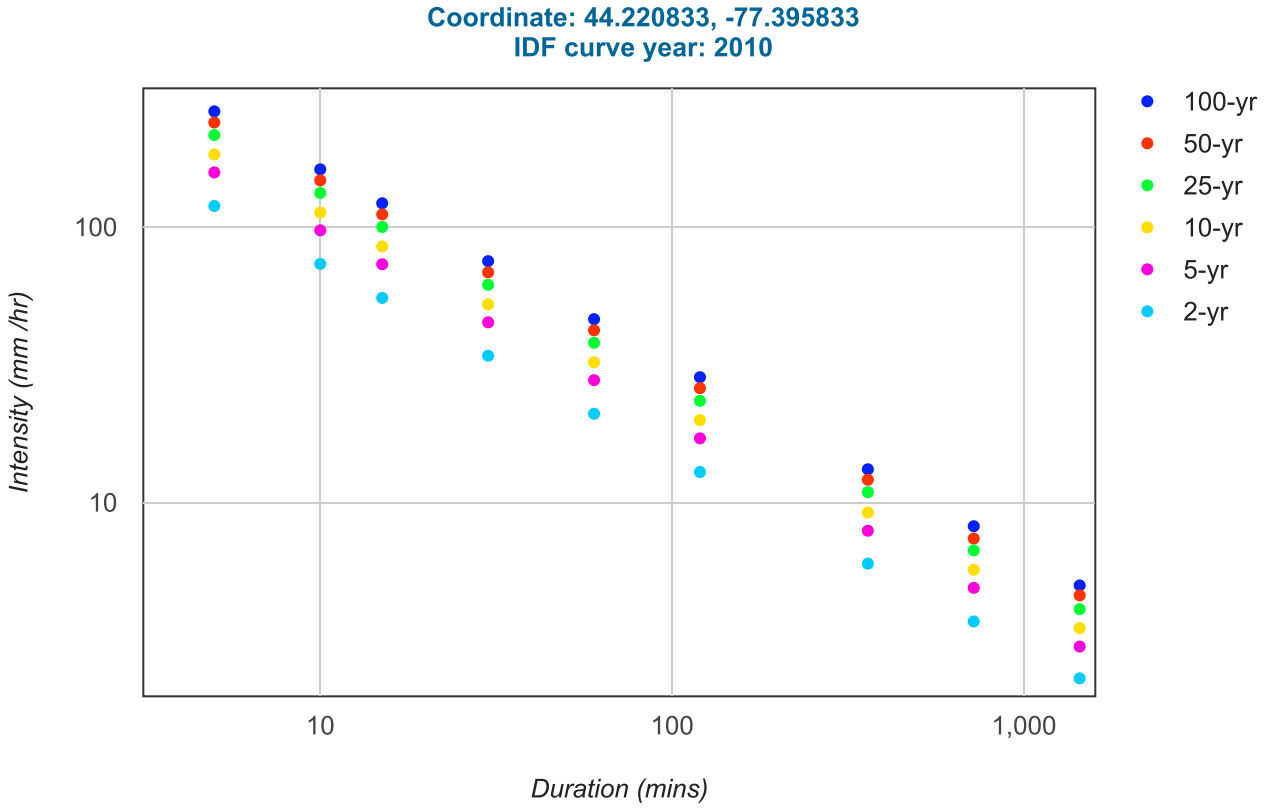
Location summary

These are the locations in the selection.

IDF Curve: 44° 13' 15" N, 77° 23' 45" W (44.220833,-77.395833)

Results

An IDF curve was found.



Coefficient summary

IDF Curve: 44° 13' 15" N, 77° 23' 45" W (44.220833,-77.395833)

Retrieved: Thu, 30 May 2019 18:52:43 GMT

Data year: 2010
IDF curve year: 2010

Return period	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
A	21.0	27.8	32.3	38.0	42.2	46.3
B	-0.699	-0.699	-0.699	-0.699	-0.699	-0.699

Statistics

Rainfall intensity (mm hr^{-1})

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	119.3	73.5	55.3	34.1	21.0	12.9	6.0	3.7	2.3
5-yr	157.9	97.3	73.3	45.1	27.8	17.1	7.9	4.9	3.0
10-yr	183.5	113.0	85.1	52.4	32.3	19.9	9.2	5.7	3.5
25-yr	215.8	133.0	100.1	61.7	38.0	23.4	10.9	6.7	4.1
50-yr	239.7	147.7	111.2	68.5	42.2	26.0	12.1	7.4	4.6
100-yr	263.0	162.0	122.0	75.2	46.3	28.5	13.2	8.2	5.0

Rainfall depth (mm)

Duration	5-min	10-min	15-min	30-min	1-hr	2-hr	6-hr	12-hr	24-hr
2-yr	9.9	12.2	13.8	17.0	21.0	25.9	36.0	44.4	54.7
5-yr	13.2	16.2	18.3	22.6	27.8	34.2	47.7	58.7	72.4
10-yr	15.3	18.8	21.3	26.2	32.3	39.8	55.4	68.2	84.1
25-yr	18.0	22.2	25.0	30.8	38.0	46.8	65.2	80.3	98.9
50-yr	20.0	24.6	27.8	34.3	42.2	52.0	72.4	89.2	109.8
100-yr	21.9	27.0	30.5	37.6	46.3	57.0	79.4	97.8	120.5

Terms of Use

Cannif North Area 1

Estimate of Impervious Cover - Post-Development					CN	C	
Total Area			**12.6**	ha	82	0.45	Directly Connected or not
	#units	**Area (m2)**					
Driveway	250	24	*6000.00*	m2	98	0.95	y
Singles	65	135	*8775.00*	m2	98	0.95	y (50%)
Towns	185	120	*22200.00*				
Med Dens Res	1	4280	*4280.00*	m2	98	0.95	y (50%)
			19055.00	m2			
Sidewalk	-	2850	*2850.00*	m2	98	0.95	y (50%)
Road		14820	*14820.00*	m2	98	0.95	y
Total			17670.00	m2			
		Total Impervious =	*36725.00*	m2			
			29.15	%			
		Directly Connected Impervious	28772.50	m2			
			22.84	%			

Average CN

	A	**CN**	**A*CN**	
Total Area	12.6			
Impervious Area	3.6725	98	359.91	
Pervious Area	8.9275	82	732.06	
		SUM	**1091.96**	**87**

Average RC

	A	**C**	**A*C**	
Total Area	12.6			
Impervious Area	3.6725	0.95	3.49	
Pervious Area	8.9275	0.45	4.02	
		SUM	**7.51**	**0.60**

Cannif North Area 2

Estimate of Impervious Cover - Post-Development					CN	C	
Total Area			**2**	ha	82	0.45	Directly Connected or not
	#units	**Area (m2)**					
Driveway	45	24	*1080.00*	m2	98	0.95	y
Singles	45	135	*6075.00*	m2	98	0.95	y (50%)
Towns	0	120	*0.00*				
Med Dens Res	0	4280	*0.00*	m2	98	0.95	y (50%)
			7155.00	m2			
Sidewalk	-	535	*535.00*	m2	98	0.95	y (50%)
Road		2792	*2792.00*	m2	98	0.95	y
Total			3327.00	m2			
		Total Impervious =	*10482.00*	m2			
			52.41	%			
		Directly Connected Impervious	7177.00	m2			
			35.89	%			

Average CN

	A	**CN**	**A*CN**	
Total Area	2			
Impervious Area	1.0482	98	102.72	
Pervious Area	0.9518	82	78.05	
		SUM	**180.77**	**90**

Average RC

	A	**C**	**A*C**	
Total Area	2			
Impervious Area	1.0482	0.95	1.00	
Pervious Area	0.9518	0.45	0.43	
		SUM	**1.42**	**0.71**

Cannif North Area 3

Estimate of Impervious Cover - Post-Development					CN	C	
Total Area			**2**	ha	74	0.45	Directly Connected or not
	#units	**Area (m2)**					
Driveway	0	24	*0.00*	m2	98	0.95	y
Singles	0	135	*0.00*	m2	98	0.95	y (50%)
Towns	0	120	*0.00*				
Med Dens Res	1	15000	*15000.00*	m2	98	0.95	y (50%)
			15000.00	m2			
Sidewalk	-	153	*153.00*	m2	98	0.95	y (50%)
Road		795	*795.00*	m2	98	0.95	y
Total			948.00	m2			
		Total Impervious =	*15948.00*	m2			
			79.74	%			
		Directly Connected Impervious	8371.50	m2			
			41.86	%			

Average CN

	A	**CN**	**A*CN**	
Total Area	2			
Impervious Area	1.5948	98	156.29	
Pervious Area	0.4052	74	29.98	
		SUM	**186.28**	**93**

Average RC

	A	**C**	**A*C**	
Total Area	2			
Impervious Area	1.5948	0.95	1.52	
Pervious Area	0.4052	0.45	0.18	
		SUM	**1.70**	**0.85**

APPENDIX B

SWMHYMO Output

```
                                     cannif
================================================================================

   SSSSS  W   W  M   M  H   H  Y   Y  M   M   OOO        999    999    =========
   S      W W W  MM MM  H   H   Y Y   MM MM  O   O      9   9  9   9
   SSSSS  W W W  M M M  HHHHH    Y    M M M  O   O  ##  9   9  9   9   Ver  4.05
       S   W W   M   M  H   H    Y    M   M  O   O       9999   9999   Sept 2011
   SSSSS   W W   M   M  H   H    Y    M   M   OOO            9      9   =========
                                                          9   9  9   9   # 2196493
        StormWater Management HYdrologic Model            999    999    =========

 ********************************************************************************
 ***************************** SWMHYMO Ver/4.05  ********************************
 *********  A single event and continuous hydrologic simulation model  *********
 *********     based on the principles of HYMO and its successors      *********
 *********                  OTTHYMO-83 and OTTHYMO-89.                  *********
 ********************************************************************************
 ********* Distributed by:  J.F. Sabourin and Associates Inc.           *********
 *********                  Ottawa,  Ontario: (613) 836-3884            *********
 *********                  Gatineau, Quebec: (819) 243-6858            *********
 *********                  E-Mail: swmhymo@jfsa.com                    *********
 ********************************************************************************

 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 +++++++++ Licensed user: Ainley Group                                  +++++++++
 +++++++++                Belleville           SERIAL#:2196493         +++++++++
 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++

 ********************************************************************************
 *********           ++++++ PROGRAM ARRAY DIMENSIONS ++++++             *********
 *********           Maximum value for ID numbers  :     10            *********
 *********           Max. number of rainfall points: 105408            *********
 *********           Max. number of flow points    : 105408            *********
 ********************************************************************************


 *********************   D E T A I L E D   O U T P U T   **********************
 ********************************************************************************
 *         DATE: 2019-05-30     TIME: 16:34:36     RUN COUNTER: 000231          *
 ********************************************************************************
 * Input   filename: U:\CAITLIN\WCPHMJ~4\cannif.dat                              *
 * Output  filename: U:\CAITLIN\WCPHMJ~4\cannif.out                              *
 * Summary filename: U:\CAITLIN\WCPHMJ~4\cannif.sum                              *
 * User comments:                                                               *
 * 1:_____________________________________________________________________________*
 * 2:_____________________________________________________________________________*
 * 3:_____________________________________________________________________________*
 ********************************************************************************

--------------------------------------------------------------------------------
--
001:0001----------------------------------------------------------------------------
--
*#*****************************************************************************
*#  Project Name: [Cannif North]    Project Number: [19503-1]
*#  Date        : 05-30-2019
*#  Modeller    : [Caitlin Sheahan]
*#  Company     : Ainley Group
*#  License #   :  2196493
*#*****************************************************************************
--------------------
| START            |  Project  dir.: U:\CAITLIN\WCPHMJ~4\

--------------------  Rainfall dir.: U:\CAITLIN\WCPHMJ~4\
```



```
                                     cannif

    TZERO =   .00 hrs on        0
    METOUT=   2 (output = METRIC)
    NRUN  = 001
    NSTORM=   0
--------------------------------------------------------------------------------
--
001:0002----------------------------------------------------------------------------
--
********************************************************************************
*
*
*Quantity Control Area 2
*
* 100 year event
*
--------------------
| CHICAGO STORM    |    IDF curve parameters: A= 951.830
| Ptotal= 65.38 mm |                          B=   1.500
--------------------                          C=    .726
                        used in:   INTENSITY =  A / (t + B)^C

                        Duration of storm  =  3.00 hrs
                        Storm time step    = 10.00 min
                        Time to peak ratio =   .33

                    The CORRELATION coefficient is = .9996760

                     TIME        ENTERED             COMPUTED
                    (min)        (mm/hr)              (mm/hr)
                       5.         263.00               244.56
                      10.         162.00               161.62
                      15.         122.00               124.36
                      30.          75.20                77.77
                      60.          46.30                47.84
                     120.          28.50                29.18
                     360.          13.20                13.22
                     720.           8.20                 8.01
                    1440.           5.00                 4.84

          TIME    RAIN |   TIME    RAIN |   TIME    RAIN |   TIME    RAIN
           hrs   mm/hr |    hrs   mm/hr |    hrs   mm/hr |    hrs   mm/hr
           .17   7.182 |   1.00 161.619 |   1.83  11.509 |   2.67   6.912
           .33   8.552 |   1.17  39.197 |   2.00  10.060 |   2.83   6.446
           .50  10.773 |   1.33  22.825 |   2.17   8.981 |   3.00   6.048
           .67  15.184 |   1.50  16.820 |   2.33   8.141 |
           .83  30.993 |   1.67  13.576 |   2.50   7.467 |

--------------------------------------------------------------------------------
--
001:0003----------------------------------------------------------------------------
--
*
*Area 2
----------------------
| CALIB STANDHYD     |   Area    (ha)=    2.00
| 01:000100 DT= 1.00 |   Total Imp(%)=   35.00   Dir. Conn.(%)=   35.00
----------------------
                                IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=         .70          1.30
     Dep. Storage     (mm)=         .60          2.50
     Average Slope     (%)=         .50          1.00
     Length            (m)=       50.00         30.00
```

```
                                    cannif
     Mannings n           =       .013         .250

     Max.eff.Inten.(mm/hr)=     161.62        78.35
               over (min)        2.00        10.00
     Storage Coeff.  (min)=       1.71 (ii)    9.77 (ii)
     Unit Hyd. Tpeak (min)=       2.00        10.00
     Unit Hyd. peak  (cms)=        .62          .11
                                                      *TOTALS*
     PEAK FLOW       (cms)=        .31          .17          .418 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.12         1.000
     RUNOFF VOLUME    (mm)=      64.78        33.33        44.337
     TOTAL RAINFALL   (mm)=      65.38        65.38        65.381
     RUNOFF COEFFICIENT   =        .99          .51          .678
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--
001:0004----------------------------------------------------------------------
--
*
*
*Area 3
----------------------
| CALIB STANDHYD     |   Area    (ha)=    2.00
| 03:000100 DT= 1.00 |   Total Imp(%)=   42.00   Dir. Conn.(%)=   42.00
----------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        .84         1.16
     Dep. Storage     (mm)=        .60         2.50
     Average Slope     (%)=        .50         1.00
     Length            (m)=      50.00        30.00
     Mannings n           =       .013         .250

     Max.eff.Inten.(mm/hr)=     161.62        54.61
               over (min)        2.00        11.00
     Storage Coeff.  (min)=       1.71 (ii)   11.03 (ii)
     Unit Hyd. Tpeak (min)=       2.00        11.00
     Unit Hyd. peak  (cms)=        .62          .10
                                                      *TOTALS*
     PEAK FLOW       (cms)=        .38          .11          .432 (iii)
     TIME TO PEAK    (hrs)=       1.00         1.15         1.000
     RUNOFF VOLUME    (mm)=      64.78        25.99        42.283
     TOTAL RAINFALL   (mm)=      65.38        65.38        65.381
     RUNOFF COEFFICIENT   =        .99          .40          .647
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  74.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--
001:0005----------------------------------------------------------------------
```



```
                                    cannif
--
*
*
* 25mm Quality Event
*
--------------------
| READ STORM       |    Filename: 25 mm 4 hr
| Ptotal=  25.00 mm|    Comments: 25 mm 4 hr
--------------------
              TIME    RAIN |   TIME    RAIN |   TIME    RAIN |   TIME    RAIN
               hrs   mm/hr |    hrs   mm/hr |    hrs   mm/hr |    hrs   mm/hr
               .17   2.071 |   1.17   5.696 |   2.17   5.194 |   3.17   2.799
               .33   2.266 |   1.33  10.777 |   2.33   4.466 |   3.33   2.622
               .50   2.524 |   1.50  50.214 |   2.50   3.949 |   3.50   2.476
               .67   2.880 |   1.67  13.366 |   2.67   3.560 |   3.67   2.346
               .83   3.382 |   1.83   8.286 |   2.83   3.252 |   3.83   2.233
              1.00   4.175 |   2.00   6.295 |   3.00   3.010 |   4.00   2.136

--------------------------------------------------------------------------------
--
001:0006----------------------------------------------------------------------
--
*
*Area 2
----------------------
| CALIB STANDHYD     |   Area    (ha)=    2.00
| 01:000100 DT= 1.00 |   Total Imp(%)=   35.00   Dir. Conn.(%)=   35.00
----------------------
                            IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        .70         1.30
     Dep. Storage     (mm)=        .60         2.50
     Average Slope     (%)=        .50         1.00
     Length            (m)=      50.00        30.00
     Mannings n           =       .013         .250

     Max.eff.Inten.(mm/hr)=      50.21         6.86
               over (min)        3.00        24.00
     Storage Coeff.  (min)=       2.73 (ii)   24.09 (ii)
     Unit Hyd. Tpeak (min)=       3.00        24.00
     Unit Hyd. peak  (cms)=        .40          .05
                                                      *TOTALS*
     PEAK FLOW       (cms)=        .09          .01          .097 (iii)
     TIME TO PEAK    (hrs)=       1.50         1.88         1.500
     RUNOFF VOLUME    (mm)=      24.40         6.47        12.742
     TOTAL RAINFALL   (mm)=      25.00        25.00        24.996
     RUNOFF COEFFICIENT   =        .98          .26          .510
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  82.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--
001:0007----------------------------------------------------------------------
--
*
*
*Area 3
----------------------
```

```
                                        cannif
| CALIB STANDHYD     |   Area    (ha)=    2.00
| 03:000100 DT= 1.00 |   Total Imp(%)=   42.00   Dir. Conn.(%)=   42.00
----------------------
                              IMPERVIOUS    PERVIOUS (i)
     Surface Area     (ha)=        .84         1.16
     Dep. Storage     (mm)=        .60         2.50
     Average Slope     (%)=        .50         1.00
     Length            (m)=      50.00        30.00
     Mannings n           =       .013         .250

     Max.eff.Inten.(mm/hr)=      50.21         4.23
               over (min)        3.00        29.00
     Storage Coeff.  (min)=       2.73 (ii)   28.65 (ii)
     Unit Hyd. Tpeak (min)=       3.00        29.00
     Unit Hyd. peak  (cms)=        .40          .04
                                                      *TOTALS*
     PEAK FLOW       (cms)=        .11          .01          .115 (iii)
     TIME TO PEAK    (hrs)=       1.50         1.98         1.500
     RUNOFF VOLUME    (mm)=      24.40         4.53        12.873
     TOTAL RAINFALL   (mm)=      25.00        25.00        24.996
     RUNOFF COEFFICIENT   =        .98          .18          .515
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.

       (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
           CN* =  74.0    Ia = Dep. Storage  (Above)
      (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
           THAN THE STORAGE COEFFICIENT.
     (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

--------------------------------------------------------------------------------
--
001:0008---------------------------------------------------------------------------
--
*
      FINISH
--------------------------------------------------------------------------------
--
********************************************************************************
**
     WARNINGS / ERRORS / NOTES
     -------------------------
 001:0003 CALIB STANDHYD
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.
 001:0004 CALIB STANDHYD
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.
 001:0006 CALIB STANDHYD
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.
 001:0007 CALIB STANDHYD
      *** ERROR: XIMP cannot be larger than TIMP.
                 XIMP was forced to equal TIMP.
   Simulation ended on 2019-05-30     at 16:34:37
================================================================================
==
```

APPENDIX C

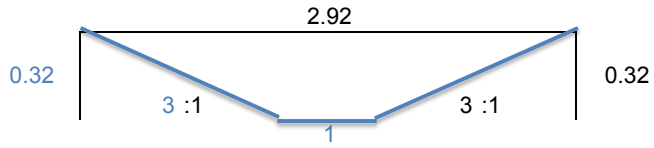
Overland Spillway Cross-Section

Hydraulic Capacity Check

100 YEAR EVENT CONVEYANCE - AREA 2

Swale Capacity/Velocity Calculation V = 1/n * (A/P)^0.667 * (S)^0.5		
Channel Bottom Width	1	m
Channel Side Slopes (X : 1)	3	to 1
Flow Depth	0.32	
Manning's n	0.035	Grass
Slope (%)	0.5	%
Calculated Area	0.63	m²
Calculated Wetted Perimeter	3.02	m
Calculated Width Required	2.92	
Velocity Calculated	0.71	m/s
Q Peak	0.444	m³/s
Required Q Peak	0.418	m³/s
Flow Depth during Required Event	0.310	m
Velocity during Required Event	0.696	m/s

Inputs

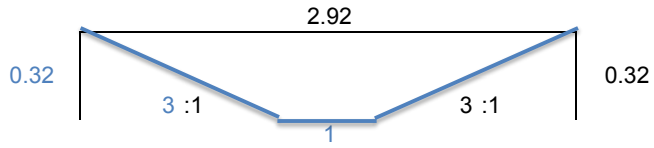


Hydraulic Capacity Check

100 YEAR EVENT CONVEYANCE - AREA 3

Swale Capacity/Velocity Calculation V = 1/n * (A/P)^0.667 * (S)^0.5		
Channel Bottom Width	1	m
Channel Side Slopes (X : 1)	3	to 1
Flow Depth	0.32	
Manning's n	0.035	Grass
Slope (%)	0.5	%
Calculated Area	0.63	m²
Calculated Wetted Perimeter	3.02	m
Calculated Width Required	2.92	
Velocity Calculated	0.71	m/s
Q Peak	0.444	m³/s
Required Q Peak	0.432	m³/s
Flow Depth during Required Event	0.310	m
Velocity during Required Event	0.696	m/s

Inputs



APPENDIX D

Level Spreader Design

One of the benefits of pervious catchbasins which are located off-line is that they can be plugged until construction has finished and the development has been stabilized. This helps to prolong the life of the exfiltration storage.

Pre-treatment of road drainage before it reaches the pervious catchbasins will enhance the longevity of the system and reduce the potential for groundwater contamination. Frequent catchbasin cleaning is required to ensure the longevity of this SWMP. Eventually, the exfiltration storage will become clogged and need to be replaced.

4.5.12 Vegetated Filter Strips

Vegetated filter strips are engineered stormwater conveyance systems which treat small drainage areas. Generally, a vegetated filter strip consists of a level spreader and planted vegetation. The level spreader ensures uniform flow over the vegetation which filters out pollutants, and promotes infiltration of the stormwater.

There are two types of vegetated filter strips: grass filter strips, and forested filter strips. There is a need for further research comparing the efficiency of these two systems for water quality enhancement, since the research to date has focussed on their individual assessment.

Vegetated filter strips are best utilized adjacent to a buffer strip, watercourse or drainage swale since the discharge will be in the form of sheet flow, making it difficult to convey the stormwater downstream in a normal conveyance system (swale or pipe).

Design Guidance

Drainage Area

Vegetated filter strips are feasible for small drainage areas (< 2 ha).

Slope and Width

Vegetated filter strips should be located in flat areas (< 10%) to promote sheet flow and maximize the filtration potential. The ideal slope in a vegetated filter strip is < 5% (1% - 5%).

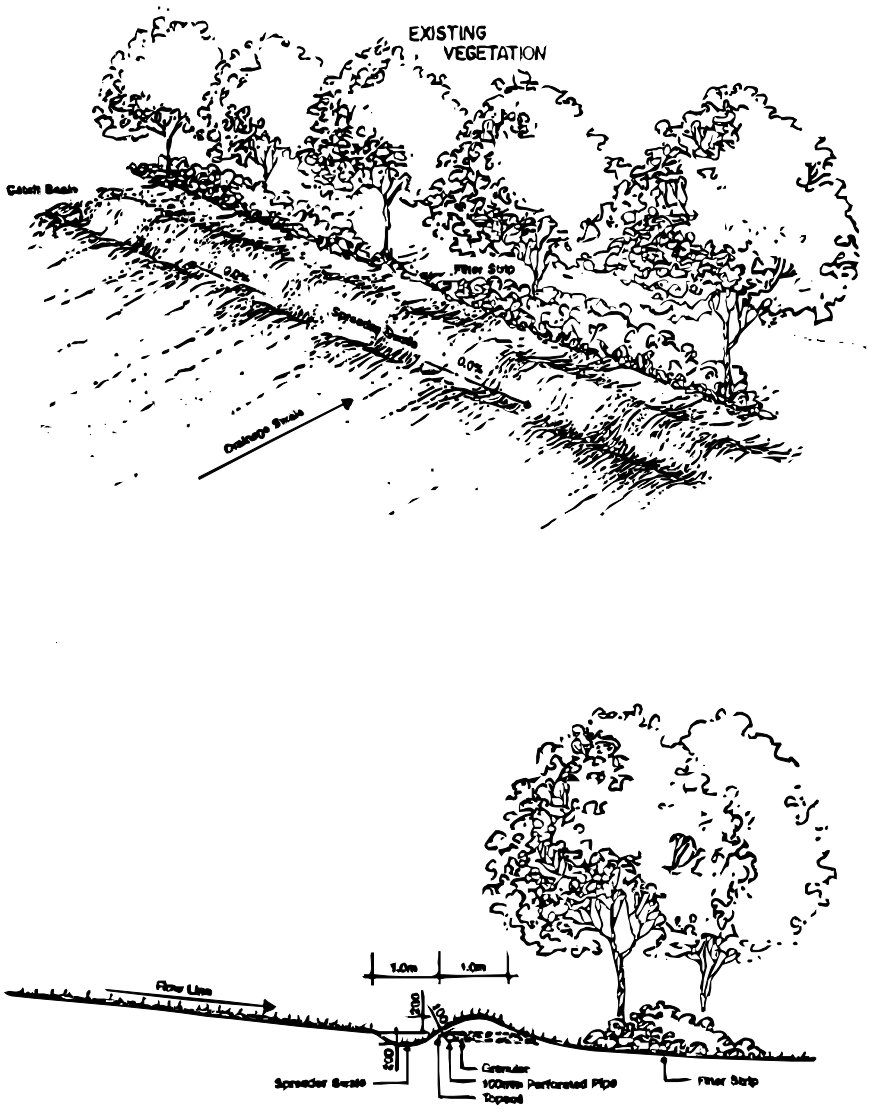
The vegetated filter strip should be 10 m - 20 m wide in the direction of flow to provide sufficient stormwater quality enhancement (Osborne et al., 1993; Metropolitan Washington Council of Governments, 1992; Minnesota Pollution Control Agency, 1989). The slope of the vegetated filter strip should dictate the actual width. Shorter vegetated filter strip widths (10 m - 15 m) are appropriate for flat slopes, whereas longer vegetated filter strips (15 m - 20 m) are required in areas with a higher slope (5% - 10%).

Level Spreader

The level spreader consists of a raised weir constructed perpendicular to the direction of flow. Water is conveyed over the spreader as sheet flow to maximize the contact area with the vegetation. Although the spreader can be engineered using concrete, more natural spreader designs/materials are recommended to maintain a natural appearance.

Figure 4.16 illustrates a typical level spreader design. A small berm is used as the level spreader. It creates a damming effect, preventing stormwater from entering the vegetation until the water level exceeds the height of the spreader. A perforated pipe (100 mm diameter) is installed in the spreader berm to ensure that any water which is trapped behind the berm after a storm can be drained. The perforated pipe should be wrapped in a filter sock to ensure that native material does not infiltrate the pipe.

Figure 4.16: Typical Filter Strip



The length of the level spreader should be chosen based on site specifics (topography, outlet location, drainage area configuration). It should be recognized, however, that a shorter level spreader necessitates the trade-off of greater upstream storage to maintain the desired flow depth over the vegetation. It is recommended that the level spreader length, and hence vegetated filter strip length, be as large as possible.

Flow Depth

The level spreader and vegetated filter strip should be designed such that the peak flow from a 4 hour Chicago 10 mm storm results in a flow depth of 50 - 100 mm through the vegetation. The flow depth over the level spreader can be calculated using a standard broad crested weir equation (Equation 4.4).

$$Q = \alpha L H^{1.5}$$ **Equation 4.4: Weir Flow**

where Q = discharge
α = coefficient
L = length of crest of weir
H = head

Storage

Storage will be required behind the level spreader depending on the level of control desired, and the length of the level spreader itself. The amount of storage required should be based on the excess runoff from a 4 hour Chicago distribution of a 10 mm storm, accounting for the flow over the weir. The 10 mm storm was chosen recognizing that 70% of all daily precipitation depths are less than or equal to this amount.

Vegetation

Species such as red fescue, tall fescue and redtop can be introduced in addition to the natural surrounding vegetation to filter out stormwater pollutants. Species native to the area should be used, where commercially available, in the planting strategy.

Technical Effectiveness

Vegetated filter strips have limited effectiveness for water quality control due to the difficulty of maintaining sheet flow (i.e., preventing channelization) through the vegetation. They are best implemented as one in a series of SWMPs in a stormwater management plan.

4.5.13 Stream and Valley Corridor Buffer Strips

Buffer strips are simply natural areas between development and the receiving waters. There are two broad resource management objectives associated with buffer strips:

- The protection of the stream and valley corridor system to ensure their continued ecological form and functions; and

Level Spreader Calculation - Area 2

Equation 4.4: Weir Flow (MOE Design Manual)
$Q = a * L * H^{1.5}$

Q (m^3/s)	0.097	
a	1.67	(broad-crested weir coefficient)
H (mm)	50	
L (m)	5.20	

L : Recommended Length of Weir / Level Spreader Berm = 5.20 m

Length provided on Figure 4 exceeds minimum length requirement

Level Spreader Calculation - Area 3

Equation 4.4: Weir Flow (MOE Design Manual)
$Q = a * L * H^{1.5}$

Q (m^3/s)	0.115	
a	1.67	(broad-crested weir coefficient)
H (mm)	50	
L (m)	6.16	

L : Recommended Length of Weir / Level Spreader Berm = 6.16 m

Length provided on Figure 4 exceeds minimum length requirement

MEMORANDUM

Ainley Graham & Associates Limited
45 South Front Street, Belleville, ON K8N 2Y5
Tel: (613) 966-4243 P Fax: (613) 966-1168

To: Steve Ashton **Copy to:** File

From: Adam Wilson

Date: October 30, 2019

Ref: Riverstone Subdivision Application – Traffic Review **File:** 19503-1

Comments:

GCL Developments Ltd. is proposing to rezone a parcel of land located east of Farnham Road, south of Scott Drive, and north of future Wims Way. The land is currently zoned D-1 for future development and is proposed to be rezoned to allow for residential development. The purpose of this memo is to provide a review of the proposed concept plan with regard to the road network and traffic flow.

City of Belleville Farnham Road Master Plan (2015)

The Mineral Road and Maitland Drive Environmental Study Report for the Farnham Road Master Plan (December 2015) included a traffic component that analyzed existing and future traffic demands for Farnham Road. The analysis considered traffic projections for development growth potential. As such, development of the subject lands was included in the projected traffic demands for the study. The review indicated that over the next 20 years, Farnham Road traffic demands are projected to double, carrying approximately 11,000 vehicles per day, as shown on **Figure 1**. As development of the City's Official Plan designated land uses continues beyond the next 20 years, Farnham Road's traffic demands are projected to increase to an estimated 13,000 vehicles per day.

The study concluded that Farnham Road should be realigned and widened to a major collector roadway with a 2-lane urban cross-section (26m right of way) south of Scott Drive to Maitland Drive and a 2-lane rural cross-section north of Scott Drive (26m right of way). Further, the report recommended that the City provide property protection along Farnham Road for a future 4-lane cross-section (30m right-of-way) between Redwood Drive/Kipling Drive and Maitland Drive. The recommendations from the study for the Farnham Road Master Plan are summarized on **Figure 2**. The current concept plan (**Figure 3**) for the development incorporates the proposed widening and realignment of Farnham Road as outlined by the Environmental Study Report.

Proposed Concept Plan Road Network

The current concept plan associated with the rezoning application includes three (3) access points for the development: 1) Farnham Road, with the intersection centered between Scott Drive and future Wims Way, 2) Essex Drive extension, and 3) Scott Drive (**Figure 3**). Six (6) Municipal roads are currently proposed on the concept plan:

1) an extension of Essex Drive to Scott Drive,
2) Street 'A' that extends between Farnham Road and Essex Drive,
3) Fortis Drive extension that is proposed to connect to Street 'F',
4) Street 'C' that will be a cul-de-sac connecting to Essex Drive,
5) Street 'D' that will be a north-south connection between Street 'C' and Street 'F',
6) Street 'E' that will be a north-south connection between Street 'A' and future Scott Drive,
7) Street 'F' that will connection south on Street 'A' extending east ending at the condo laneway, and
8) Street 'G' and Street 'H' will be a north-south connection to Street 'A' and Scott Drive.

The proposed Municipal roads show a 20m right-of-way for local roads and a 26m right-of-way for Essex Drive and Street 'A', which is consistent with the current width of the Essex Drive (collector width).

The concept shows good connectivity between Farnham Road, Scott Drive, and Essex Drive. The proposed 20m and 26m width for Municipal right of ways has ample space for any turning lanes that may be required as part of detailed design. At such a time that detailed engineering is carried out, a Traffic Impact Study will be completed to outline any intersection requirements.

'Street A' Site Generated Trips and Turning Lane Review

The Farnham Road Master Plan (December 2015) indicated that over the next 20 years, Farnham Road traffic demands are projected to double, carrying approximately 11,000 vehicles per day, as shown on **Figure 1**. As development of the City's Official Plan designated land uses continues beyond the next 20 years, Farnham Road's traffic demands are projected to increase to an estimated 13,000 vehicles per day. Trip generation rates have been determined from the Institute of Transportation Engineer's Trip Generation Manual. The applicable ITE land use category for the calculation is 'single family detached and medium density townhouse' (ITE land use code 231). The applicable trip rates and corresponding trip estimates for the peak hours are provided in **Table 1**.

Table 1: Trips Generated

Land Use	Rate/ Estimate	Units	AM Peak Hour			PM Peak Hour		
Town-house		219	In	Out	Total	In	Out	Total
	Rate		0.17	0.50	0.67	0.45	0.33	0.78
	Estimate		37.2	109.5	146.7	98.6	72.3	170.8
Single Family Detached		113	In	Out	Total	In	Out	Total
	Rate		0.19	0.56	0.75	0.64	0.37	1.01
	Estimate		21.5	63.3	84.8	72.3	41.8	114.1
Medium Density		35	In	Out	Total	In	Out	Total
	Rate		0.09	0.27	0.36	0.27	0.17	0.44
	Estimate		3.1	9.5	12.6	9.5	5.9	15.4
				Total:	244.1		Total:	300.3

The development is expected to generate 244 trips in the AM peak hour and 300 trips in the PM peak hour (both inbound and outbound trips). The need for a left turn lane at the proposed intersection was reviewed. **Figure 4** shows the MTO's Left Turn Warrant Chart for 60 km/h design speed. The anticipated number of trips generated at peak hours from the development (i.e. advancing volume) has been plotted on the MTO chart. The chart shows that, based on the opposing traffic volume of 11,000 vehicles per day (459 vehicles per hour), a left turn lane is warranted at the intersection of Street 'A' with Farnham Road and should have a storage length of 15 vehicles. MTO design criteria indicate that right turn lanes should be considered when the turning volume is anticipated to exceed 60 vehicles per hour at an unsignalized intersection. The intersection will essentially have a right turn lane, as there is no through traffic at this intersection (i.e. traffic can only proceed north or south on Farnham Road from Street "A").

Sight Line Analysis

The speed limit for the portion of Farnham Road where it intersects with Street "A" is 60 km/hour. The TAC geometric design standards indicate the minimum stopping distance for design speeds of 60 km/h is 85m. This requirement provides sufficient distance for an approaching vehicle to observe a stationary hazard in the road (such as a vehicle stopped at an intersection waiting to complete a turn) and bring their vehicle to a complete stop prior to the hazard. The available sight lines along Farnham Road as determined at the proposed Street "A" site access are 150m to the north and >200m to the south. As such, adequate sight lines are provided in both directions to ensure safe operations for vehicles turning to Farnham Road from Street "A".

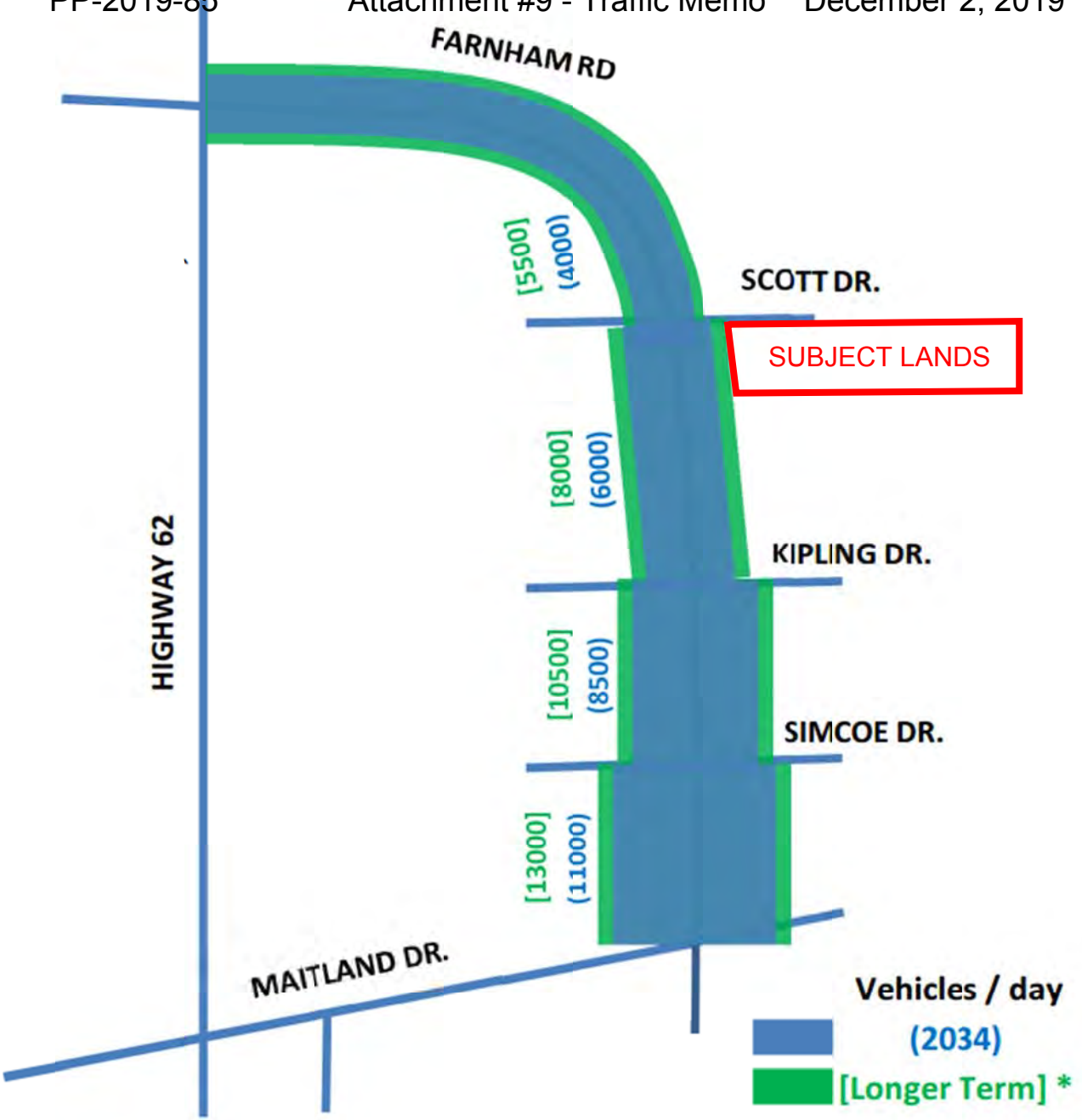
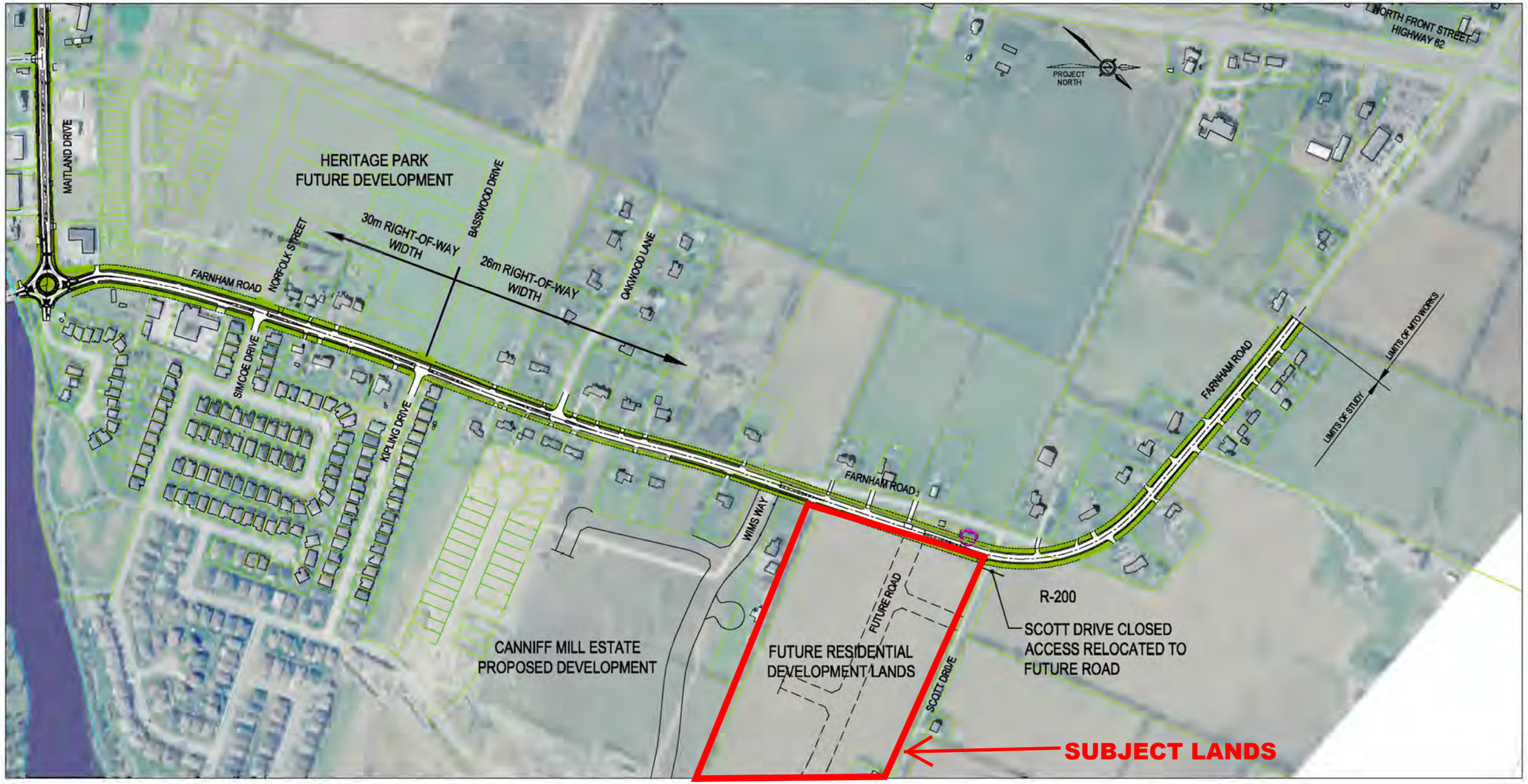


Figure 1: Projected Traffic Demands

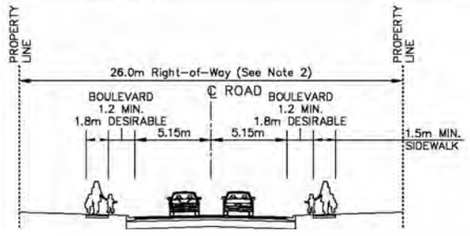


Legend:

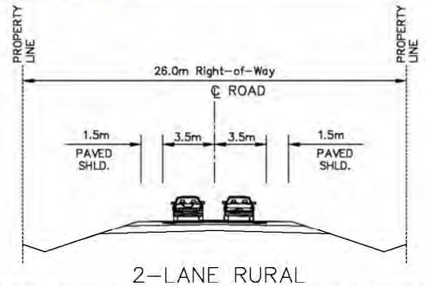
- Existing Property Fabric (See Note 1)
- Preliminary Property Requirements
- Impacted Property

Notes:

1. This is not a legal survey, existing property fabric based on City of Belleville GIS property information. Existing property fabric and preliminary proposed property requirements are approximate only further legal survey during detail design stage will determine final property requirements.
2. From Maitland Drive Road to Kipling Drive 30.0m proposed right-of-way width. Property protection for future 4 lane cross section.



2–LANE URBAN
MAJOR COLLECTOR
FROM MAITLAND DRIVE TO SCOTT DRIVE



2–LANE RURAL
FROM SCOTT DRIVE TO LIMITS OF STUDY

FIGURE 2
FARNHAM ROAD MASTER PLAN

LAND USE SUMMARY

	UNITS	AREA (ha)
11.0m SINGLE DETACHED LOT (LOTS 1-20, 51-109)	79	3.252
8.5m/10.5m ALTERNATING SINGLE DETACHED LOT WITH LANEWAY ACCESS (LOTS 21-50)	30	0.973
8.5m SEMI-DETACHED LOT WITH LANEWAY ACCESS (BLOCKS 141-142)	4	0.126
6.7m 3-STOREY TOWNHOMES WITH LANEWAY ACCESS (BLOCKS 130-140)	48	1.126
6.0m 2-STOREY TOWNHOMES 6.0m FRONT YARD SETBACK & 7.0m REAR YARD SETBACK (BLOCKS 110-127)	66	1.388
7.5m BUNGALOW TOWNHOMES (BLOCKS 143-157)	63	1.819
MEDIUM DENSITY RESIDENTIAL #1: 1-3 STOREYS (BLOCK 128)	35	0.428
CONDO BLOCK 165	42	1.900
PARKLAND DEDICATION BLOCK 159		0.802
PARKETTE / ACCESS TO WETLAND SETBACK TRAILS BLOCKS 161-162		0.114
PSW & 30m SETBACK NATURAL SPRING & 15m SETBACK (BLOCK 160)		3.477
AREA OF PROPOSED ROADWAY NETWORK: 4.854 ha AREA OF PROPOSED LANEWAYS (BLOCKS 163-164): 0.280 ha AREA RESERVED FOR FARNHAM ROAD WIDENING: 0.696 ha		
TOTAL	367	21.2 Ha

ADDITIONAL INFORMATION
REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN AND SURVEYOR'S CERTIFICATE
b) SHOWN ON DRAFT AND KEY PLANS
c) SHOWN ON KEY PLAN
d) LAND TO BE USED IN ACCORDANCE WITH LAND USE SCHEDULE
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT AND KEY PLANS
h) FULL MUNICIPAL SERVICES
i) SOIL IS FARMINGTON LOAM AND SOLMESVILLE CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN

RIVERSTONE

DRAFT PLAN OF SUBDIVISION

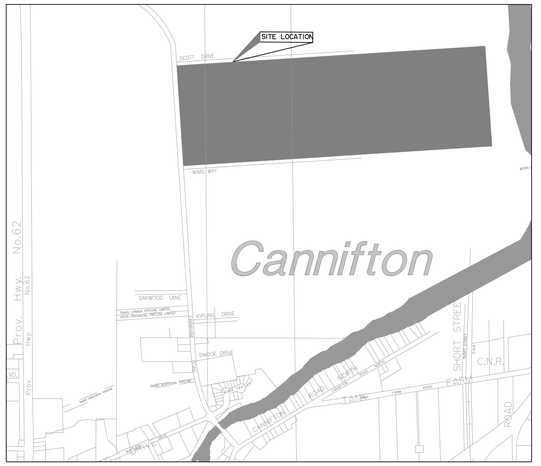
PART OF PARK LOTS 8 & 9, REGISTERED PLAN N.124
AND PART OF LOT 8, CONCESSION 3
FORMER GEOGRAPHIC TOWNSHIP OF THURLOW
NOW CITY OF BELLEVILLE
HASTINGS COUNTY
SCALE 1:1250

METRIC NOTE

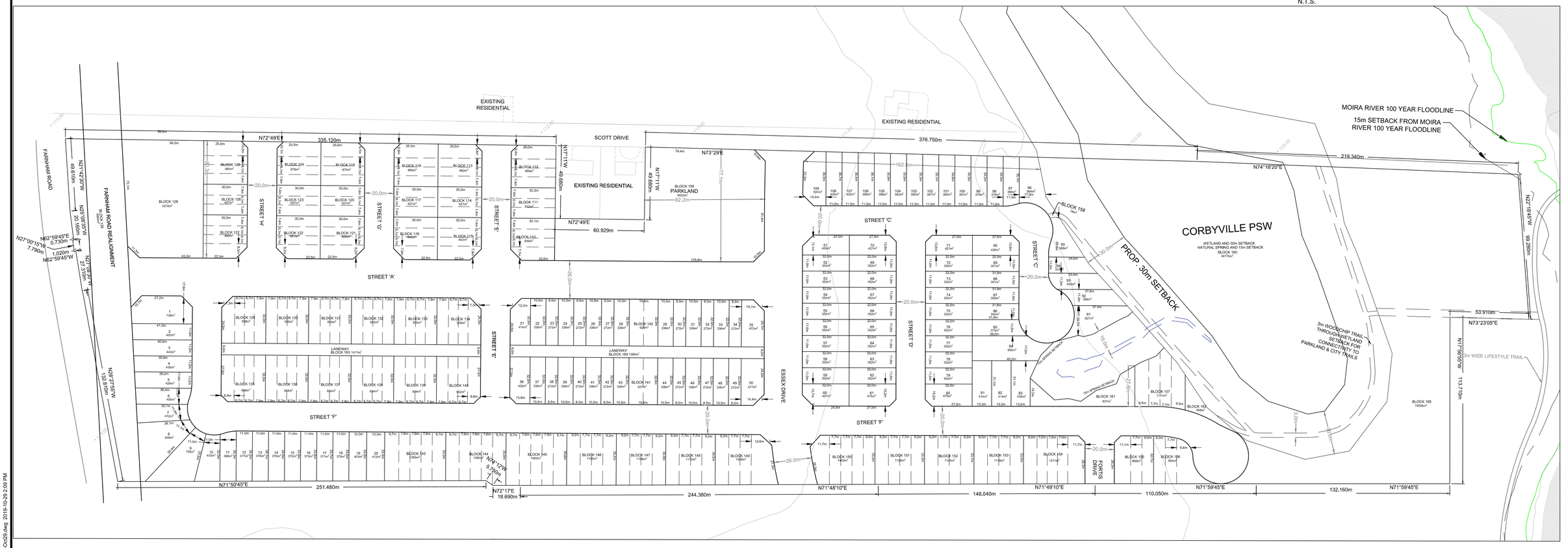
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

CONTOUR DATA

CONTOUR AND TOPOGRAPHIC INFORMATION GENERATED USING INFORMATION PROVIDED BY ONTARIO BASE MAPPING.



KEY MAP
N.T.S.



SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ARE CORRECTLY SHOWN.

KEITH WATSON
ONTARIO LAND SURVEYOR

DATE

OWNER'S CERTIFICATE
I AUTHORIZE AINLEY GROUP TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF BELLEVILLE FOR APPROVAL.

ANDY GEERTSMA

DATE

REV.#	REVISIONS	DATE	INITIAL
0	PRELIMINARY DESIGN	21/10/2019	CRS

Not Valid Unless Signed And Dated

SCALE: 1:1250
DESIGN: CRS
DRAWN: CRS
CHECKED: AJW
DATE: OCT 2019

RIVERSTONE SUBDIVISION
CITY OF BELLEVILLE

DRAFT PLAN

Ainley GROUP CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG 19503-DP

V:\19503-1 - Cannif North (Geertsema)\Drawing\Cannif North Draft Plan-Oct29.dwg, 2019-10-29 2:09 PM

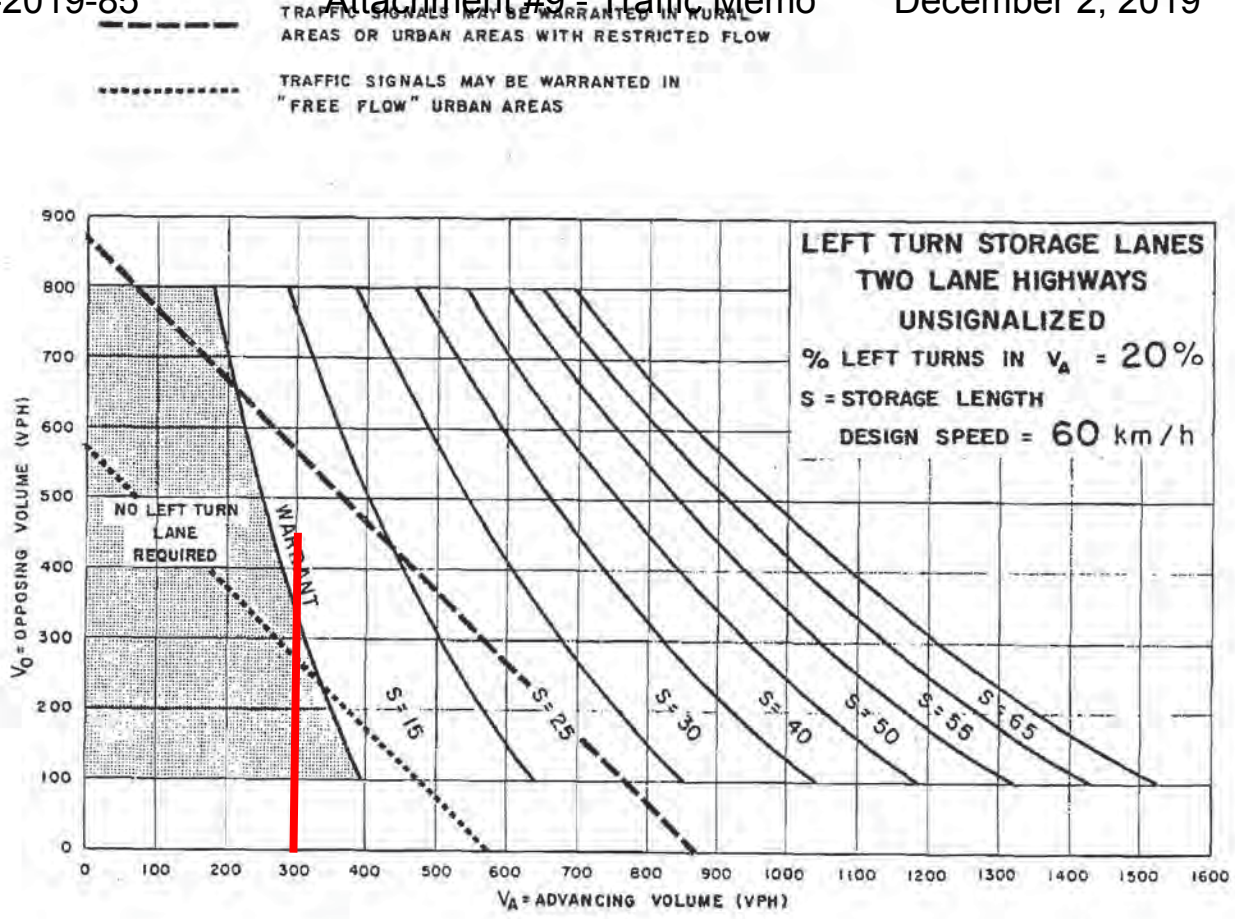


Figure EA-7

FIGURE 4
LEFT TURN LANE
WARRANT ANALYSIS

MEMORANDUM

Ainley Graham & Associates Limited
139 Front Street, Belleville, ON K8N 2Y6
Tel: (613) 966-4243 P Fax: (613) 966-1168

To: Steve Ashton **Copy to:** File

From: Caitlin Sheahan

Date: October 30, 2019

Ref: Riverstone Draft Plan and Rezoning Application – Phase I/II Summary **File:** 19503-1

ESA

Comments:

GCL Developments Ltd. is proposing a Draft Plan of Subdivision, Official Plan Amendment, and Zoning By-Law Amendment application on the east side of Farnham Road, immediately south of Scott Drive. The development property is 21.26 hectares (ha) in size, and is located between an existing residential subdivision located to the south of the subject property (Canniff Mills Subdivision) and Scott Drive to the north outlined in **Figure 1**. It is proposed to develop the land with seventy-nine (79) single family residential lots, thirty (30) alternating 8.5m/10.5m single family residential lots with laneway access, four (4) semi-detached lots, forty-eight (48) townhouse lots with laneway access, sixty-six (66) townhouse lots (2-storey), sixty-three (63) bungalow townhouse lots, one medium density residential block with thirty-five (35) units within 1-3storey buildings, and one (1) condo block with forty-two (42) units (**Figure 2**). In 2018, a Zoning By-law Amendment application was submitted for this property by a different developer, with many background studies completed to support the application. Among these studies were Phase I and II Environmental Site Assessments (ESAs). The purpose of this memo is to provide a review of the previously completed Phase I and II ESAs associated with this property.

Existing Conditions:

The property is legally described as Part of Park Lots 8 and 9, Registered Plan 124, Part of Lot 8, Concession 3, former Township of Thurlow, now City of Belleville, Hastings County. The parcel of land is approximately 21.26 hectares. The property is bounded to the north by Scott Drive and existing residential development, Moira River to the east, Canniff Mills Residential Subdivision to the south, and Farnham Road to the west. A portion of the Corbyville Provincially Significant Wetland (PSW) occurs within the subject property. The Moira River 100-year flood line occurs to the immediate east of the property. The property is mostly vacant and partially treed. There are two abandoned structures at the western property limits. The site is predominately flat with a slope to the east. Drainage is generally conveyed to the PSW and the Moira River.

Phase I ESA Summary:
A Phase One Environmental Site Assessment was completed for the subject property by WSP Canada Inc. (WSP). The assessment was based off a visual observation and a review of available or supplied factual data to identify potential contaminating activities (PCAs), areas of potential environmental concern (APECs) and potential contaminant of concerns (PCOCs). The report was comprised of site information from site reconnaissance, record reviews, and interviews.

The subject property is relatively flat with an elevation of approximately 103-113 meters. The topography of the land slopes to the east towards the Moira River. The shallow groundwater has a flow direction towards the east/southeast throughout the subject property. The property is within a drumlinized till plain physiographic region. The surficial geology in the vicinity of the site is described as 'bevelled till plains'. The underlying bedrock within the area generally consists of shale, limestone, dolostone, and siltstone of the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member, and Eastview Member. Bedrock at the property is approximately 0.5 to 2.5 meters below ground surface. Surrounding historical and current property land uses appear to have been primarily residential, agricultural and commercial uses.

PCAs within the site and/or the study area were flagged as APECs and PCOCs during the Phase I ESA. Table 1 below summarizes the PCAs that lead to the APECs and Table 2 summarizes the APECs.

Table 1: Potential Contaminating Activity Observations

PCAs	Description
PCA No. 28 Gasoline and Associated Products Storage in Fixed Tanks	Phase One Property- Based on WSP's site reconnaissance, an above-ground storage tank (AST) was located on the east side of the residential dwelling with no further information provided about its use or former operation. Due to the presence of this PCA on site, it was considered to be contributing to **APEC 1**.
PCA No. 34 Metal Fabrication	Phase One Study Area- Based on a review of the historical records, WSP noted that the property located at 176 Farnham Road was reported to operate as a 'Pre-Fabricated Metal Building and Component Manufacturing', 'All Other Miscellaneous Fabricated Metal Product Manufacturing', and 'Showcase, Partition, Shelving and Locking Manufacturing'. Due to the up-gradient to cross-gradient location of this PCA relative to the site, and groundwater flow direction, it was considered to be contributing to **APEC 2.**
PCA No. 40 Pesticides (Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-	Phase One Property- The long-term historical use of the site for agricultural purposes is associated with the application of pesticides, which was considered to contribute to **APEC 3.**

Scale Applications	
PCA No. 57 Vehicles and Associated Parts Manufacturing	Phase One Study Area- Based on the site reconnaissance, WSP noted that 'CPK Interiors' was located at 134 River Road, approximately 230 m north east of the site and was reported to be a manufacturer of vehicle parts. Due to the distance of this property to the site and the groundwater flow direction, WSP indicated that this was not anticipated to be contributing to an area of potential environmental concern for the site.
PCA No. 46 Rail Yards, Tracks and Spurs	Phase One Study Area- During the historical records review, WSP noted that a Canadian National Railway line was located near River Road approximately 230 m east of the site. Due to the relative distance of this PCA to the site and its location on the opposite side of Moira River, WSP indicated that this was not anticipated to be contributing to the area of potential environmental concern for the site.

Table 2: Summary of APECS

Area of Potential Environmental Concern	**Location of Potential Environmental concern on Phase One Property**	**Potentially Contaminating Activity**	**Location of PCA (On-Site or Off-Site)**	**Potential Contaminants of Concern***	**Media Potentially Impacted (Ground Water, Soil and/or sediment)**
APEC-1	Western portion of the Phase One Property	PCA No. 28 Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs, BTEX, VOCs	Soil & Groundwater
APEC-2	Northwestern portion of the Phase One Property	PCA No. 34 Metal Fabrication	Off-site	Metals, VOCs, PAHs	Groundwater
APEC-3	Entire Phase One Property	PCA No. 40 Pesticides (Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-site	OC pesticides	Soil

*Potential Contaminations of Concerns: Metals, petroleum hydrocarbons (PHCs), volatile organic hydrocarbons (VOCs), polycyclic aromatic hydrocarbons (PAHs), and organochlorine (OC) pesticides.

Based on the identified APECs from the completed Phase One ESA, a Phase Two ESA was required to satisfy the environmental site assessment.

Phase II ESA Summary:
A Phase Two Environmental Site Assessment was completed for the subject property by WSP Canada Inc. The assessment included the testing of soil and groundwater prior to development. It was noted that a Record of Site Condition (RSC) was not necessary as the property is not changing to a more sensitive land use.

Based off of the PCAs that contributed to the APECs outlined in **Table 1** and **Table 2**, ten (10) borehole locations were selected and drilled on May 28 and May 29, 2018. Of the ten (10) boreholes, three (3) were converted to monitoring wells for groundwater sampling taken on June 4, 2018. The soil and ground water samples were tested for the following PCOCs; metals and other regulated parameters, PHCs, VOCs, OC pesticides, and PAHs. Soil and groundwater samples were compared to the 2011 Ministry of Environment and Climate Change (MOECC) Table 1 Full Depth Background Site Condition Standard (SCS).

Nine (9) soil samples and two (2) QA/QC samples were collected on June 1, 2019. The soil test results indicated that all nine (9) soil samples met the Table 1 SCS for all parameters.

Three (3) groundwater samples were collected on June 4, 2018 and showed elevated levels of cobalt, nickel, chloroform, ethylbenzene, and toluene compared to the Table 1 SCS. Due to these elevated parameters, a second round of sampling was carried out on June 15, 2018. A summary of the sampling results is included in Table 3.

Table 3: Groundwater Samples Exceeding Table 1 Site Condition Standards (SCS)

Sample Location	Screened Depth (mbgs)	Parameter	Table 1 SCS (ug/L)	Analytical Results (ug/L) (June 4)	Analytical Results (ug/L) (June 15)
BH18-2	2.7 – 5.8	Cobalt	3.8	12.4	5.2
		Nickel	14	57	29.5
		Copper	5	4.5	10.4
		Chloroform	2	24	2.6
QACA			2	3.5	-
BH18-6	2.1 – 5.2	Chloroform	2	3	1.2
BH18-10	3.1 – 5.2	Chloroform	2	20	6.6
QAQC			2	-	6.6
BH18-10		Ethylbenzene	0.5	0.59	<0.10
		Toluene	0.8	1.2	0.72

*Red values indicate results that exceed the Table 1 SCS.

WSP noted that potable water was used to facilitate coring of the bedrock and noted that this was the likely source of the elevated chloroform within the groundwater samples. They noted the levels were reduced in the second round of sampling. Further, ethylbenzene and toluene levels met the applicable site condition standards during the second round of sampling. WSP

concluded that the elevated readings in the initial testing were likely present due to sediment in the groundwater sample.

The second round of sampling still resulted in elevated metals (cobalt, nickel, and copper); however, the levels of cobalt and nickel were reduced compared to the previous sampling results. WSP noted that these higher levels could have been naturally occurring due to the shallow bedrock in the area.

2019 Monitoring Well Sampling:
Based on the results of the previous studies carried out by WSP, Ainley Group carried out an additional round of groundwater sampling from the monitoring wells at the subject property on October 8, 2019. Water level measurements were collected at all three groundwater monitoring wells from the previous study (BH18-2, BH18-6, and BH18-10, **Figure 3**). Well sampling was only achievable from BH18-2 and BH18-10; there was insufficient water in BH18-6 to carry out sampling. In previous sampling, BH18-6 only had exceeded levels of Chloroform. Further, the exceeded Chloroform levels were only observed in the first round of sampling and, as stated by WSP, this was likely caused by the use of potable water when drilling the boreholes. As such, this borehole was not anticipated to show any elevated parameters and the area is not anticipated to be of concern.

Monitoring wells BH18-10 and BH18-2 were purged and sampled using low flow (low stress) sampling technique per the US EPA Region 1 procedure (2017). Sampling only occurred once at least a full well volume had been purged and all indicator field measurements were sufficiently stable. Purging and sampling activities were completed using dedicated 12.7 mm tubing with a peristaltic pump while wearing disposable nitrile gloves. Samples were collected in laboratory prepared and supplied bottles. The samples submitted for metal analysis were field-filtered using a single-use 0.45 micron Waterra FHT-Groundwater Filter. BH18-2 ran dry during the sampling program; as such, the sample bottle for PAHs analyses was only half full.

A total of two (2) groundwater samples (one from each borehole) were collected on the subject property and submitted to Paracel Laboratories Ltd. for analysis of metals, PHCs, PAHs, VOCs, general chemistry, and cation / anion concentrations. Groundwater analytical parameters were selected per the scope of work for the subject property. Groundwater contaminants of potential concern included PHCs, BTEX, metals and PAHs. A summary of the results of the groundwater analysis are shown in **Table 4**. The full results are included in **Appendix A**.

Table 4: 2019 Monitoring Well Sampling Summary

Sample Location	Screened Depth (mbgs)	Parameter	Table 1 SCS (ug/L)	Analytical Results (ug/L) Oct 8, 2019
BH18-10	3.67	Cobalt	3.8	ND (0.5)
		Copper	5	0.9
		Chloroform	2	ND (0.5)
		Ethylbenzene	0.5	ND (0.5)
		Toluene	0.8	ND (0.5)
BH18-2	6.55	Cobalt	3.8	4.7
		Copper	5	7.8
		Nickel	14	13
		Chloroform	2	ND (0.5)
		Benzo[a]pyrene	0.01	ND (0.02)*

*ND (0.02) – Not Detected, Detection Limit = 0.02. As the PAHs sample bottle for BH18-2 was only half full, the detection limits had to be raised for the laboratory to analyze the sample. This brought the detection limit for Benzo[a]pyrene for the sample to 0.02 ug/L, which is higher than the Table 1 SCS guideline for the parameter (0.01 ug/L). As this was not a parameter of concern in the previous sampling, it is not anticipated that the parameter would have exceeded the Table 1 regulation.

As shown in **Table 4**, the only parameters that exceeded the Table 1 SCS regulation are Copper and Cobalt in BH18-2, which is consistent with the previous sampling. However, the values have dramatically improved from the previous sampling, which could be related to the low flow (low stress) sampling technique, which prevents surging and disturbance to the well and therefore less accumulation of sediment within the sample. WSP noted that the elevated levels of metals in this area could be naturally occurring and related to the bedrock in the area. If these elevated parameters were compared to the Table 2 Regulation for Potable Water, only Cobalt would be in exceedance. If these elevated parameters were compared to the Table 3 Regulation for Non-Potable Water, no parameters would be in exceedance (**Appendix A**).

The Table 3 Regulation (non-potable water) could be applied to these lands, as the development is proposed with Municipal watermain; however, there are local well users within 250m of the well (**Figure 3**, properties on Farnham Road). It is therefore recommended that the drinking water for these local well users is monitored before and after construction, to ensure their water quality is not impacted by the development.

Current ERIS Report:

An Environmental Risk Information Services (ERIS) database report was completed September 27, 2019 to compare with the original ERIS report completed on May 14, 2018. Between this timeframe there have not been any new environmental concerns, such as spills or contamination of groundwater and soil within the 250m radius of the subject property. The current ERIS report is consistent with the one fully summarized in the WSP Phase 1 ESA 2018 report.

Conclusion and Recommendations

Based on the results of the Phase I/II ESA completed by WSP Canada Ltd., the ERIS report obtained September 2019, and the groundwater sampling carried out by Ainley Group (2019) the following conclusions and recommendations are provided:

- Groundwater samples collected on the subject property by Ainley Group met the applicable Table 1 SCS for all parameters, with the exception of Cobalt and Copper in BH18-2. These parameters had previously been observed by WSP to be in exceedance, with WSP recording even higher concentrations. WSP noted that the elevated levels of metals in the vicinity of BH18-2 could be naturally occurring and related to the bedrock in the area.
- Drinking water for the local well users within 250m of BH18-2 should be monitored before and after construction, to ensure their well water quality is not impacted by the development.
- Should any contaminants be encountered during future site activities that were beyond the scope of the previous reports and this summary memo, then the appropriate investigative and remedial measures should occur to adequately address the encountered constituent.

Google Earth

meters 700

FIGURE 1
KEY MAP

LAND USE SUMMARY

	UNITS	AREA (ha)
11.0m SINGLE DETACHED LOT (LOTS 1-20, 51-109)	79	3.252
8.5m/10.5m ALTERNATING SINGLE DETACHED LOT WITH LANEWAY ACCESS (LOTS 21-50)	30	0.973
8.5m SEMI-DETACHED LOT WITH LANEWAY ACCESS (BLOCKS 141-142)	4	0.126
6.7m 3-STOREY TOWNHOMES WITH LANEWAY ACCESS (BLOCKS 130-140)	48	1.126
6.0m 2-STOREY TOWNHOMES 6.0m FRONT YARD SETBACK & 7.0m REAR YARD SETBACK (BLOCKS 110-127)	66	1.388
7.5m BUNGALOW TOWNHOMES (BLOCKS 143-157)	63	1.819
MEDIUM DENSITY RESIDENTIAL #1: 1-3 STOREYS (BLOCK 128)	35	0.428
CONDO BLOCK 165	42	1.900
PARKLAND DEDICATION BLOCK 159		0.802
PARKETTE / ACCESS TO WETLAND SETBACK TRAILS BLOCKS 161-162		0.114
PSW & 30m SETBACK NATURAL SPRING & 15m SETBACK (BLOCK 160)		3.477
AREA OF PROPOSED ROADWAY NETWORK: 4.854 ha AREA OF PROPOSED LANEWAYS (BLOCKS 163-164): 0.280 ha AREA RESERVED FOR FARNHAM ROAD WIDENING: 0.696 ha		
TOTAL	367	21.2 Ha

ADDITIONAL INFORMATION
REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT

a) SHOWN ON DRAFT PLAN AND SURVEYOR'S CERTIFICATE
b) SHOWN ON DRAFT AND KEY PLANS
c) SHOWN ON KEY PLAN
d) LAND TO BE USED IN ACCORDANCE WITH LAND USE SCHEDULE
e) SHOWN ON DRAFT PLAN
f) SHOWN ON DRAFT PLAN
g) SHOWN ON DRAFT AND KEY PLANS
h) FULL MUNICIPAL SERVICES
i) SOIL IS FARMINGTON LOAM AND SOLMESVILLE CLAY LOAM
j) SHOWN ON DRAFT PLAN
k) ALL MUNICIPAL SERVICES TO BE PROVIDED
l) SHOWN ON DRAFT PLAN

RIVERSTONE

DRAFT PLAN OF SUBDIVISION

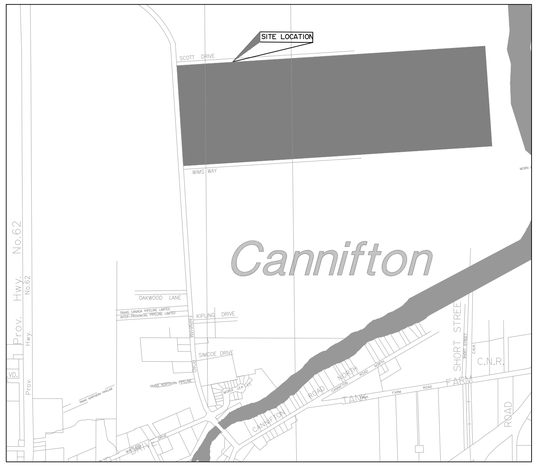
PART OF PARK LOTS 8 & 9, REGISTERED PLAN N.124
AND PART OF LOT 8, CONCESSION 3
FORMER GEOGRAPHIC TOWNSHIP OF THURLOW
NOW CITY OF BELLEVILLE
HASTINGS COUNTY
SCALE 1:1250

METRIC NOTE

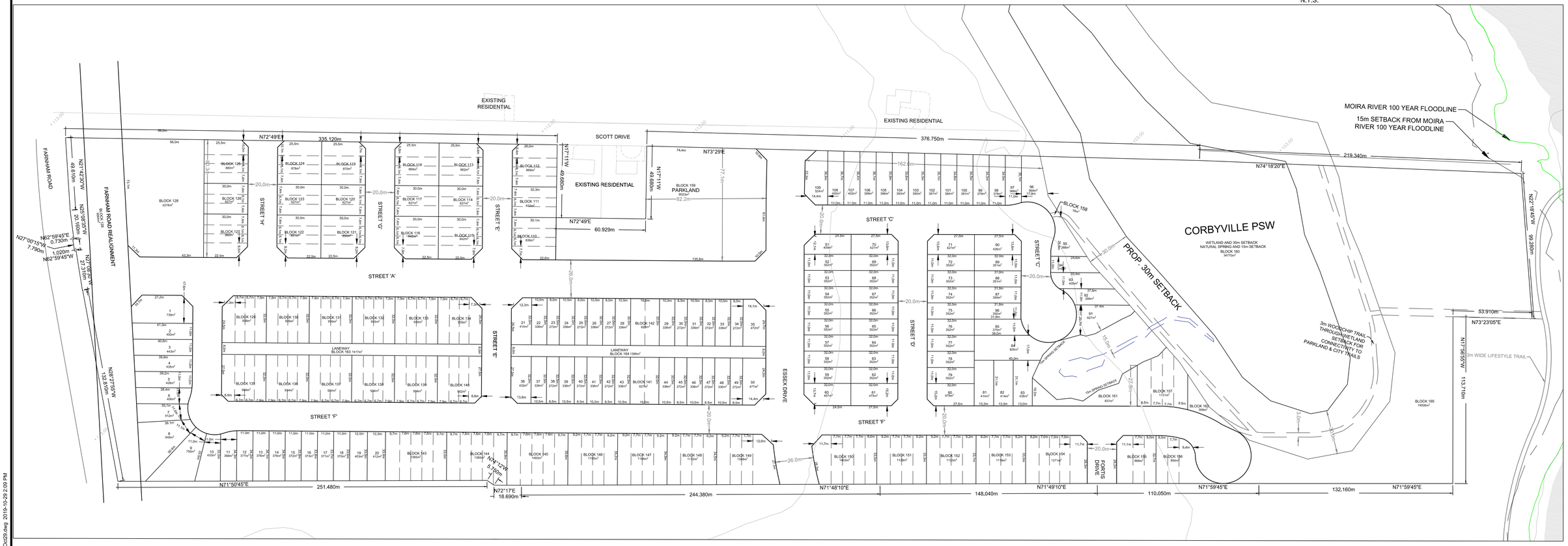
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

CONTOUR DATA

CONTOUR AND TOPOGRAPHIC INFORMATION GENERATED USING INFORMATION PROVIDED BY ONTARIO BASE MAPPING.



KEY MAP
N.T.S.



SURVEYOR'S CERTIFICATE
I CERTIFY THAT THE BOUNDARIES OF THE LAND TO BE SUBDIVIDED ARE CORRECTLY SHOWN.

KEITH WATSON
ONTARIO LAND SURVEYOR

DATE

OWNER'S CERTIFICATE
I AUTHORIZE AINLEY GROUP TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE CITY OF BELLEVILLE FOR APPROVAL.

ANDY GEERTSMA

DATE

REV.#	REVISIONS	DATE	INITIAL
0	PRELIMINARY DESIGN	21/10/2019	CRS

Not Valid Unless Signed And Dated

SCALE: 1:1250
DESIGN: CRS
DRAWN: CRS
CHECKED: AJW
DATE: OCT 2019

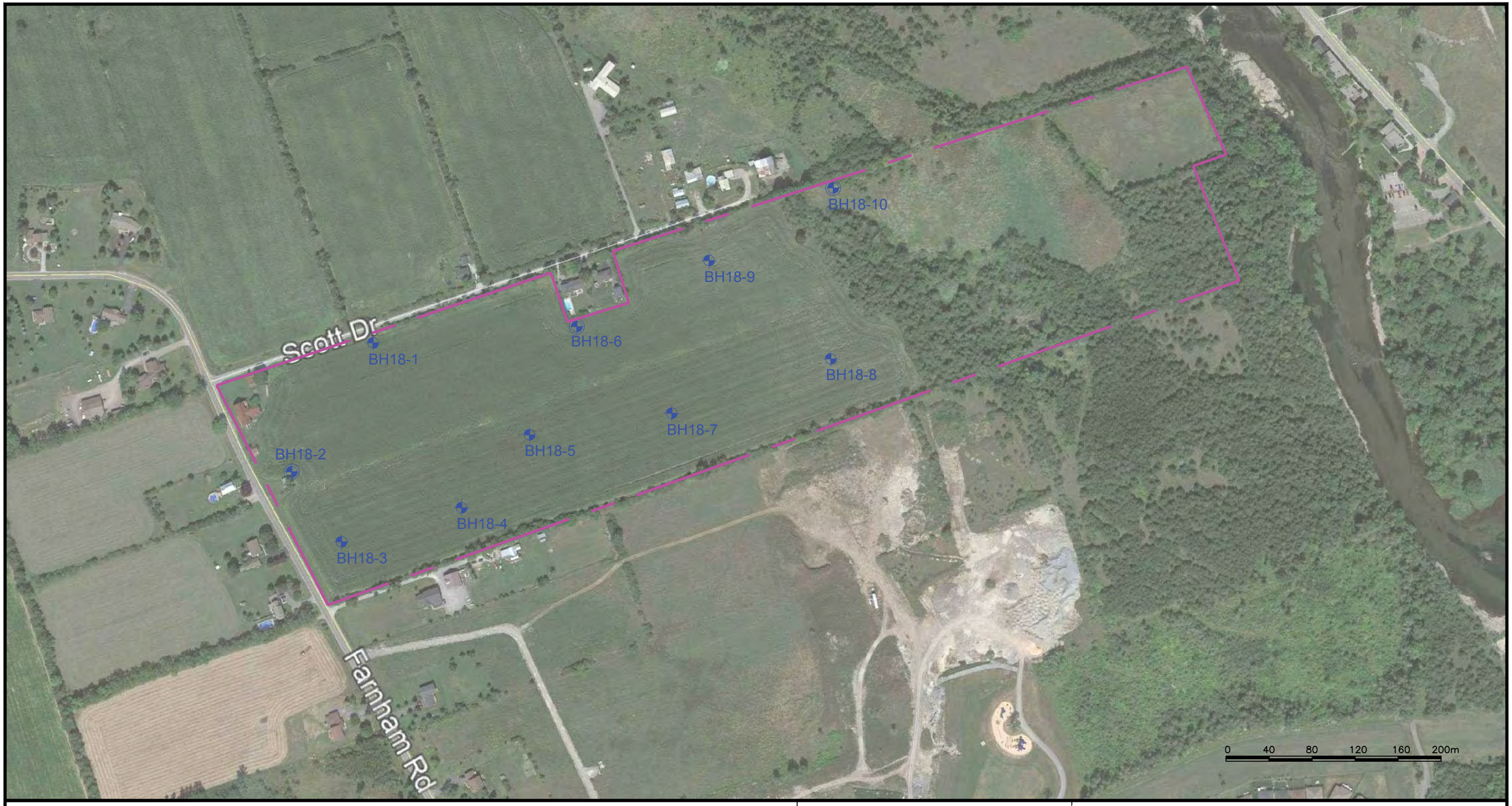
RIVERSTONE SUBDIVISION
CITY OF BELLEVILLE

DRAFT PLAN

Ainley GROUP CONSULTING ENGINEERS PLANNERS

CONTRACT No. 19503-1 DWG 19503-DP

V:\19503-1 - Cannif North (Geertsema)\Drawing\Cannif North Draft Plan-Oct29.dwg, 2019-10-29 2:09 PM



Legend:

- Phase Two Property
- Borehole
- Monitoring Well

RIVERSTONE SUBDIVISION
CITY OF BELLEVILLE

PHASE I/II PROPERTY
BOREHOLE LOCATION PLAN

Ainley GROUP
CONSULTING ENGINEERS PLANNERS

APPENDIX A

2019 Sampling Results

gw_results

Appendix A		CLIENT: Ainley Graham & Associates Limited			
PARACEL LABORATORIES LTD.		ATTENTION: Victoria Chapman			
WORKORDER: 1941307		PROJECT: 19503-1			
REPORT DATE: 10/16/2019		REFERENCE: #18-778 Ainley - MTO Enviro. Services Retainer			

Parameter	Units	MDL	Regulation	Sample	
				BH18-10 1941307-01	BH18-2 1941307-02
Sample Date (m/d/y)			Reg 153/04 (2011)-Table 1 Groundwater	10/08/2019 12:00 PM	10/08/2019 12:00 PM
Metals					
Mercury	ug/L	0.1	0.1 ug/L	ND (0.1)	ND (0.1)
Antimony	ug/L	0.5	1.5 ug/L	ND (0.5)	ND (0.5)
Arsenic	ug/L	1	13 ug/L	ND (1)	ND (1)
Barium	ug/L	1	610 ug/L	47	217
Beryllium	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Boron	ug/L	10	1700 ug/L	20	457
Cadmium	ug/L	0.1	0.5 ug/L	ND (0.1)	ND (0.1)
Chromium	ug/L	1	11 ug/L	ND (1)	ND (1)
Chromium (VI)	ug/L	10	25 ug/L	ND (10)	ND (10)
Cobalt	ug/L	0.5	3.8 ug/L	ND (0.5)	4.7
Copper	ug/L	0.5	5 ug/L	0.9	7.8
Lead	ug/L	0.1	1.9 ug/L	ND (0.1)	ND (0.1)
Molybdenum	ug/L	0.5	23 ug/L	ND (0.5)	4.8
Nickel	ug/L	1	14 ug/L	ND (1)	13
Selenium	ug/L	1	5 ug/L	ND (1)	ND (1)
Silver	ug/L	0.1	0.3 ug/L	ND (0.1)	ND (0.1)
Sodium	ug/L	200	490000 ug/L	38000	17300
Thallium	ug/L	0.1	0.5 ug/L	ND (0.1)	ND (0.1)
Uranium	ug/L	0.1	8.9 ug/L	0.6	0.9
Vanadium	ug/L	0.5	3.9 ug/L	ND (0.5)	ND (0.5)
Zinc	ug/L	5	160 ug/L	ND (5)	7
Volatiles					
Acetone	ug/L	5.0	2700 ug/L	ND (5.0)	ND (5.0)
Benzene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Bromodichloromethane	ug/L	0.5	2 ug/L	ND (0.5)	ND (0.5)
Bromoform	ug/L	0.5	5 ug/L	ND (0.5)	ND (0.5)
Bromomethane	ug/L	0.5	0.89 ug/L	ND (0.5)	ND (0.5)
Carbon Tetrachloride	ug/L	0.2	0.2 ug/L	ND (0.2)	ND (0.2)
Chlorobenzene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Chloroform	ug/L	0.5	2 ug/L	ND (0.5)	ND (0.5)
Dibromochloromethane	ug/L	0.5	2 ug/L	ND (0.5)	ND (0.5)
Dichlorodifluoromethane	ug/L	1.0	590 ug/L	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,3-Dichlorobenzene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,4-Dichlorobenzene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,1-Dichloroethane	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,2-Dichloroethane	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,1-Dichloroethylene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
cis-1,2-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
trans-1,2-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
1,2-Dichloropropane	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
cis-1,3-Dichloropropylene	ug/L	0.5		ND (0.5)	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	0.5		ND (0.5)	ND (0.5)
1,3-Dichloropropene, total	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Ethylene dibromide (dibromoethane	ug/L	0.2	0.2 ug/L	ND (0.2)	ND (0.2)
Hexane	ug/L	1.0	5 ug/L	ND (1.0)	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	400 ug/L	ND (5.0)	ND (5.0)
Methyl Isobutyl Ketone	ug/L	5.0	640 ug/L	ND (5.0)	ND (5.0)
Methyl tert-butyl ether	ug/L	2.0	15 ug/L	ND (2.0)	ND (2.0)
Methylene Chloride	ug/L	5.0	5 ug/L	ND (5.0)	ND (5.0)
Styrene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,1,1,2-Tetrachloroethane	ug/L	0.5	1.1 ug/L	ND (0.5)	ND (0.5)
1,1,2,2-Tetrachloroethane	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Tetrachloroethylene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Toluene	ug/L	0.5	0.8 ug/L	ND (0.5)	ND (0.5)
1,1,1-Trichloroethane	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
1,1,2-Trichloroethane	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Trichloroethylene	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Trichlorofluoromethane	ug/L	1.0	150 ug/L	ND (1.0)	ND (1.0)
Vinyl Chloride	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	0.5		ND (0.5)	ND (0.5)
o-Xylene	ug/L	0.5		ND (0.5)	ND (0.5)
Xylenes, total	ug/L	0.5	72 ug/L	ND (0.5)	ND (0.5)
Hydrocarbons					
F1 PHCs (C6-C10)	ug/L	25	420 ug/L	ND (25)	ND (25)
F2 PHCs (C10-C16)	ug/L	100	150 ug/L	ND (100)	ND (100)
F3 PHCs (C16-C34)	ug/L	100	500 ug/L	ND (100)	ND (100)

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F4 PHCs (C34-C50)	ug/L	100	500 ug/L	ND (100)	ND (100)
Semi-Volatiles					
Acenaphthene	ug/L	0.05	4.1 ug/L	ND (0.05)	ND (0.10)
Acenaphthylene	ug/L	0.05	1 ug/L	ND (0.05)	ND (0.10)
Anthracene	ug/L	0.01	0.1 ug/L	ND (0.01)	ND (0.02)
Benzo[a]anthracene	ug/L	0.01	0.2 ug/L	ND (0.01)	ND (0.02)
Benzo[a]pyrene	ug/L	0.01	0.01 ug/L	ND (0.01)	ND (0.02)
Benzo[b]fluoranthene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Benzo[g,h,i]perylene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
Benzo[k]fluoranthene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Chrysene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Dibenzo[a,h]anthracene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
Fluoranthene	ug/L	0.01	0.4 ug/L	ND (0.01)	ND (0.02)
Fluorene	ug/L	0.05	120 ug/L	ND (0.05)	ND (0.10)
Indeno[1,2,3-cd]pyrene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
1-Methylnaphthalene	ug/L	0.05	2 ug/L	ND (0.05)	ND (0.10)
2-Methylnaphthalene	ug/L	0.05	2 ug/L	ND (0.05)	ND (0.10)
Methylnaphthalene (1&2)	ug/L	0.10	2 ug/L	ND (0.10)	ND (0.20)
Naphthalene	ug/L	0.05	7 ug/L	ND (0.05)	ND (0.10)
Phenanthrene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Pyrene	ug/L	0.01	0.2 ug/L	ND (0.01)	ND (0.02)

gw_results

Appendix A		CLIENT: Ainley Graham & Associates Limited			
PARACEL LABORATORIES LTD.		ATTENTION: Victoria Chapman			
WORKORDER: 1941307		PROJECT: 19503-1			
REPORT DATE: 10/16/2019		REFERENCE: #18-778 Ainley - MTO Enviro. Services Retainer			
Parameter	**Units**	**MDL**	**Regulation**	**Sample**	
				BH18-10 1941307-01	**BH18-2 1941307-02**
Sample Date (m/d/y)			**Reg 153/04 (2011)-Table 2 Potable Groundwater, coarse**	**10/08/2019 12:00 PM**	**10/08/2019 12:00 PM**
Metals					
Mercury	ug/L	0.1	0.29 ug/L	ND (0.1)	ND (0.1)
Antimony	ug/L	0.5	6 ug/L	ND (0.5)	ND (0.5)
Arsenic	ug/L	1	25 ug/L	ND (1)	ND (1)
Barium	ug/L	1	1000 ug/L	47	217
Beryllium	ug/L	0.5	4 ug/L	ND (0.5)	ND (0.5)
Boron	ug/L	10	5000 ug/L	20	457
Cadmium	ug/L	0.1	2.7 ug/L	ND (0.1)	ND (0.1)
Chromium	ug/L	1	50 ug/L	ND (1)	ND (1)
Chromium (VI)	ug/L	10	25 ug/L	ND (10)	ND (10)
Cobalt	ug/L	0.5	3.8 ug/L	ND (0.5)	4.7
Copper	ug/L	0.5	87 ug/L	0.9	7.8
Lead	ug/L	0.1	10 ug/L	ND (0.1)	ND (0.1)
Molybdenum	ug/L	0.5	70 ug/L	ND (0.5)	4.8
Nickel	ug/L	1	100 ug/L	ND (1)	13
Selenium	ug/L	1	10 ug/L	ND (1)	ND (1)
Silver	ug/L	0.1	1.5 ug/L	ND (0.1)	ND (0.1)
Sodium	ug/L	200	490000 ug/L	38000	17300
Thallium	ug/L	0.1	2 ug/L	ND (0.1)	ND (0.1)
Uranium	ug/L	0.1	20 ug/L	0.6	0.9
Vanadium	ug/L	0.5	6.2 ug/L	ND (0.5)	ND (0.5)
Zinc	ug/L	5	1100 ug/L	ND (5)	7
Volatiles					
Acetone	ug/L	5.0	2700 ug/L	ND (5.0)	ND (5.0)
Benzene	ug/L	0.5	5 ug/L	ND (0.5)	ND (0.5)
Bromodichloromethane	ug/L	0.5	16 ug/L	ND (0.5)	ND (0.5)
Bromoform	ug/L	0.5	25 ug/L	ND (0.5)	ND (0.5)
Bromomethane	ug/L	0.5	0.89 ug/L	ND (0.5)	ND (0.5)
Carbon Tetrachloride	ug/L	0.2	0.79 ug/L	ND (0.2)	ND (0.2)
Chlorobenzene	ug/L	0.5	30 ug/L	ND (0.5)	ND (0.5)
Chloroform	ug/L	0.5	2.4 ug/L	ND (0.5)	ND (0.5)
Dibromochloromethane	ug/L	0.5	25 ug/L	ND (0.5)	ND (0.5)
Dichlorodifluoromethane	ug/L	1.0	590 ug/L	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	ug/L	0.5	3 ug/L	ND (0.5)	ND (0.5)
1,3-Dichlorobenzene	ug/L	0.5	59 ug/L	ND (0.5)	ND (0.5)
1,4-Dichlorobenzene	ug/L	0.5	1 ug/L	ND (0.5)	ND (0.5)
1,1-Dichloroethane	ug/L	0.5	5 ug/L	ND (0.5)	ND (0.5)
1,2-Dichloroethane	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
1,1-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
cis-1,2-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
trans-1,2-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
1,2-Dichloropropane	ug/L	0.5	5 ug/L	ND (0.5)	ND (0.5)
cis-1,3-Dichloropropylene	ug/L	0.5		ND (0.5)	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	0.5		ND (0.5)	ND (0.5)
1,3-Dichloropropene, total	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	0.5	2.4 ug/L	ND (0.5)	ND (0.5)
Ethylene dibromide (dibromoethane	ug/L	0.2	0.2 ug/L	ND (0.2)	ND (0.2)
Hexane	ug/L	1.0	51 ug/L	ND (1.0)	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	1800 ug/L	ND (5.0)	ND (5.0)
Methyl Isobutyl Ketone	ug/L	5.0	640 ug/L	ND (5.0)	ND (5.0)
Methyl tert-butyl ether	ug/L	2.0	15 ug/L	ND (2.0)	ND (2.0)
Methylene Chloride	ug/L	5.0	50 ug/L	ND (5.0)	ND (5.0)
Styrene	ug/L	0.5	5.4 ug/L	ND (0.5)	ND (0.5)
1,1,1,2-Tetrachloroethane	ug/L	0.5	1.1 ug/L	ND (0.5)	ND (0.5)
1,1,2,2-Tetrachloroethane	ug/L	0.5	1 ug/L	ND (0.5)	ND (0.5)
Tetrachloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
Toluene	ug/L	0.5	24 ug/L	ND (0.5)	ND (0.5)
1,1,1-Trichloroethane	ug/L	0.5	200 ug/L	ND (0.5)	ND (0.5)
1,1,2-Trichloroethane	ug/L	0.5	4.7 ug/L	ND (0.5)	ND (0.5)
Trichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
Trichlorofluoromethane	ug/L	1.0	150 ug/L	ND (1.0)	ND (1.0)
Vinyl Chloride	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	0.5		ND (0.5)	ND (0.5)
o-Xylene	ug/L	0.5		ND (0.5)	ND (0.5)
Xylenes, total	ug/L	0.5	300 ug/L	ND (0.5)	ND (0.5)
Hydrocarbons					
F1 PHCs (C6-C10)	ug/L	25	750 ug/L	ND (25)	ND (25)
F2 PHCs (C10-C16)	ug/L	100	150 ug/L	ND (100)	ND (100)
F3 PHCs (C16-C34)	ug/L	100	500 ug/L	ND (100)	ND (100)

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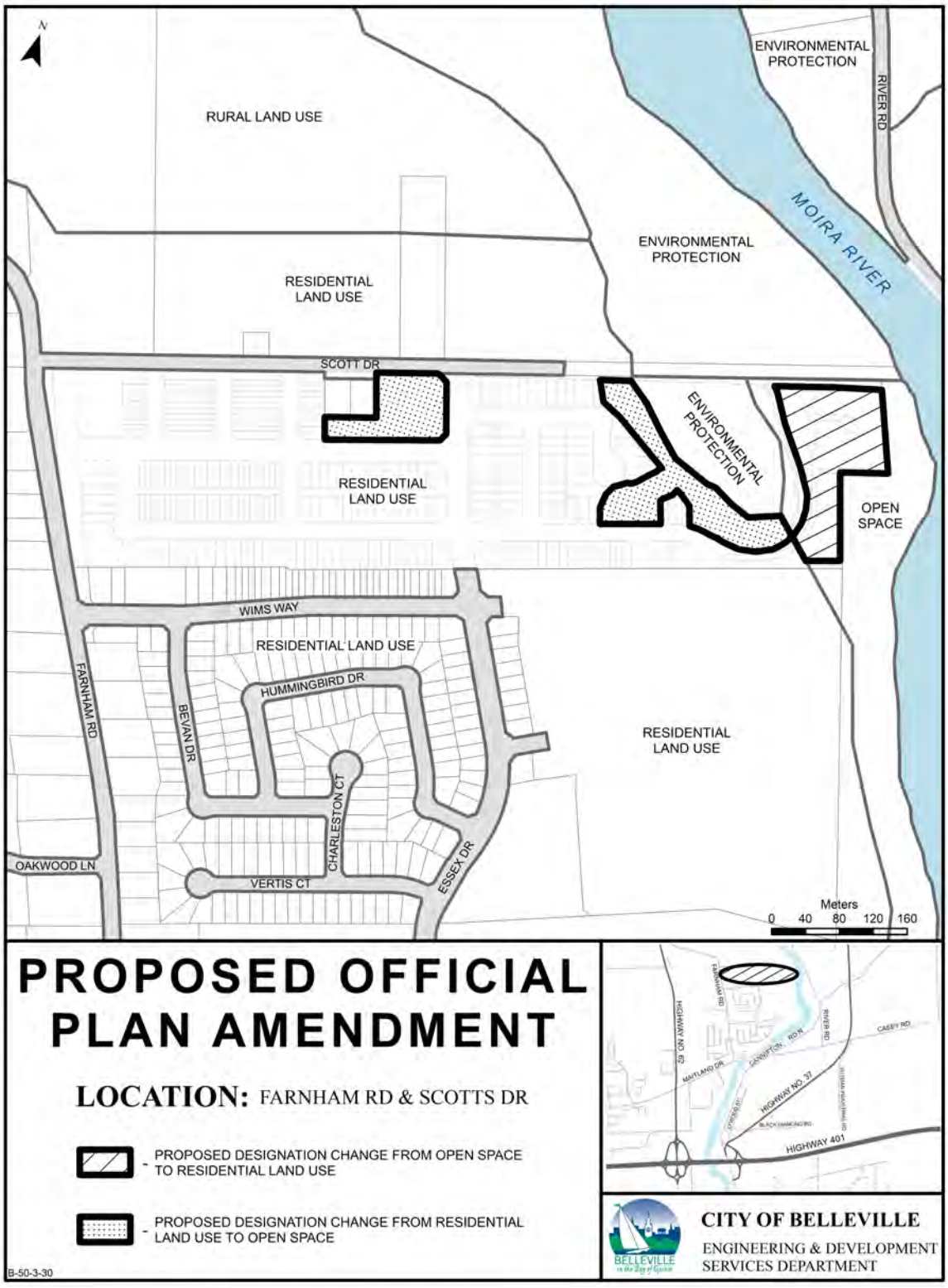
F4 PHCs (C34-C50)	ug/L	100	500 ug/L	ND (100)	ND (100)
Semi-Volatiles					
Acenaphthene	ug/L	0.05	4.1 ug/L	ND (0.05)	ND (0.10)
Acenaphthylene	ug/L	0.05	1 ug/L	ND (0.05)	ND (0.10)
Anthracene	ug/L	0.01	2.4 ug/L	ND (0.01)	ND (0.02)
Benzo[a]anthracene	ug/L	0.01	1 ug/L	ND (0.01)	ND (0.02)
Benzo[a]pyrene	ug/L	0.01	0.01 ug/L	ND (0.01)	ND (0.02)
Benzo[b]fluoranthene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Benzo[g,h,i]perylene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
Benzo[k]fluoranthene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Chrysene	ug/L	0.05	0.1 ug/L	ND (0.05)	ND (0.10)
Dibenzo[a,h]anthracene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
Fluoranthene	ug/L	0.01	0.41 ug/L	ND (0.01)	ND (0.02)
Fluorene	ug/L	0.05	120 ug/L	ND (0.05)	ND (0.10)
Indeno[1,2,3-cd]pyrene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
1-Methylnaphthalene	ug/L	0.05	3.2 ug/L	ND (0.05)	ND (0.10)
2-Methylnaphthalene	ug/L	0.05	3.2 ug/L	ND (0.05)	ND (0.10)
Methylnaphthalene (1&2)	ug/L	0.10	3.2 ug/L	ND (0.10)	ND (0.20)
Naphthalene	ug/L	0.05	11 ug/L	ND (0.05)	ND (0.10)
Phenanthrene	ug/L	0.05	1 ug/L	ND (0.05)	ND (0.10)
Pyrene	ug/L	0.01	4.1 ug/L	ND (0.01)	ND (0.02)

gw_results

Appendix A		CLIENT: Ainley Graham & Associates Limited			
PARACEL LABORATORIES LTD.		ATTENTION: Victoria Chapman			
WORKORDER: 1941307		PROJECT: 19503-1			
REPORT DATE: 10/16/2019		REFERENCE: #18-778 Ainley - MTO Enviro. Services Retainer			
Parameter	**Units**	**MDL**	**Regulation**	**Sample**	
				BH18-10 1941307-01	**BH18-2 1941307-02**
Sample Date (m/d/y)			**Reg 153/04 (2011)-Table 3 Non-Potable Groundwater, coarse**	**10/08/2019 12:00 PM**	**10/08/2019 12:00 PM**
Metals					
Mercury	ug/L	0.1	0.29 ug/L	ND (0.1)	ND (0.1)
Antimony	ug/L	0.5	20000 ug/L	ND (0.5)	ND (0.5)
Arsenic	ug/L	1	1900 ug/L	ND (1)	ND (1)
Barium	ug/L	1	29000 ug/L	47	217
Beryllium	ug/L	0.5	67 ug/L	ND (0.5)	ND (0.5)
Boron	ug/L	10	45000 ug/L	20	457
Cadmium	ug/L	0.1	2.7 ug/L	ND (0.1)	ND (0.1)
Chromium	ug/L	1	810 ug/L	ND (1)	ND (1)
Chromium (VI)	ug/L	10	140 ug/L	ND (10)	ND (10)
Cobalt	ug/L	0.5	66 ug/L	ND (0.5)	4.7
Copper	ug/L	0.5	87 ug/L	0.9	7.8
Lead	ug/L	0.1	25 ug/L	ND (0.1)	ND (0.1)
Molybdenum	ug/L	0.5	9200 ug/L	ND (0.5)	4.8
Nickel	ug/L	1	490 ug/L	ND (1)	13
Selenium	ug/L	1	63 ug/L	ND (1)	ND (1)
Silver	ug/L	0.1	1.5 ug/L	ND (0.1)	ND (0.1)
Sodium	ug/L	200	2300000 ug/L	38000	17300
Thallium	ug/L	0.1	510 ug/L	ND (0.1)	ND (0.1)
Uranium	ug/L	0.1	420 ug/L	0.6	0.9
Vanadium	ug/L	0.5	250 ug/L	ND (0.5)	ND (0.5)
Zinc	ug/L	5	1100 ug/L	ND (5)	7
Volatiles					
Acetone	ug/L	5.0	130000 ug/L	ND (5.0)	ND (5.0)
Benzene	ug/L	0.5	44 ug/L	ND (0.5)	ND (0.5)
Bromodichloromethane	ug/L	0.5	85000 ug/L	ND (0.5)	ND (0.5)
Bromoform	ug/L	0.5	380 ug/L	ND (0.5)	ND (0.5)
Bromomethane	ug/L	0.5	5.6 ug/L	ND (0.5)	ND (0.5)
Carbon Tetrachloride	ug/L	0.2	0.79 ug/L	ND (0.2)	ND (0.2)
Chlorobenzene	ug/L	0.5	630 ug/L	ND (0.5)	ND (0.5)
Chloroform	ug/L	0.5	2.4 ug/L	ND (0.5)	ND (0.5)
Dibromochloromethane	ug/L	0.5	82000 ug/L	ND (0.5)	ND (0.5)
Dichlorodifluoromethane	ug/L	1.0	4400 ug/L	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	ug/L	0.5	4600 ug/L	ND (0.5)	ND (0.5)
1,3-Dichlorobenzene	ug/L	0.5	9600 ug/L	ND (0.5)	ND (0.5)
1,4-Dichlorobenzene	ug/L	0.5	8 ug/L	ND (0.5)	ND (0.5)
1,1-Dichloroethane	ug/L	0.5	320 ug/L	ND (0.5)	ND (0.5)
1,2-Dichloroethane	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
1,1-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
cis-1,2-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
trans-1,2-Dichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
1,2-Dichloropropane	ug/L	0.5	16 ug/L	ND (0.5)	ND (0.5)
cis-1,3-Dichloropropylene	ug/L	0.5		ND (0.5)	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	0.5		ND (0.5)	ND (0.5)
1,3-Dichloropropene, total	ug/L	0.5	5.2 ug/L	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	0.5	2300 ug/L	ND (0.5)	ND (0.5)
Ethylene dibromide (dibromoethane	ug/L	0.2	0.25 ug/L	ND (0.2)	ND (0.2)
Hexane	ug/L	1.0	51 ug/L	ND (1.0)	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	470000 ug/L	ND (5.0)	ND (5.0)
Methyl Isobutyl Ketone	ug/L	5.0	140000 ug/L	ND (5.0)	ND (5.0)
Methyl tert-butyl ether	ug/L	2.0	190 ug/L	ND (2.0)	ND (2.0)
Methylene Chloride	ug/L	5.0	610 ug/L	ND (5.0)	ND (5.0)
Styrene	ug/L	0.5	1300 ug/L	ND (0.5)	ND (0.5)
1,1,1,2-Tetrachloroethane	ug/L	0.5	3.3 ug/L	ND (0.5)	ND (0.5)
1,1,2,2-Tetrachloroethane	ug/L	0.5	3.2 ug/L	ND (0.5)	ND (0.5)
Tetrachloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
Toluene	ug/L	0.5	18000 ug/L	ND (0.5)	ND (0.5)
1,1,1-Trichloroethane	ug/L	0.5	640 ug/L	ND (0.5)	ND (0.5)
1,1,2-Trichloroethane	ug/L	0.5	4.7 ug/L	ND (0.5)	ND (0.5)
Trichloroethylene	ug/L	0.5	1.6 ug/L	ND (0.5)	ND (0.5)
Trichlorofluoromethane	ug/L	1.0	2500 ug/L	ND (1.0)	ND (1.0)
Vinyl Chloride	ug/L	0.5	0.5 ug/L	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	0.5		ND (0.5)	ND (0.5)
o-Xylene	ug/L	0.5		ND (0.5)	ND (0.5)
Xylenes, total	ug/L	0.5	4200 ug/L	ND (0.5)	ND (0.5)
Hydrocarbons					
F1 PHCs (C6-C10)	ug/L	25	750 ug/L	ND (25)	ND (25)
F2 PHCs (C10-C16)	ug/L	100	150 ug/L	ND (100)	ND (100)
F3 PHCs (C16-C34)	ug/L	100	500 ug/L	ND (100)	ND (100)

gw_results

F4 PHCs (C34-C50)	ug/L	100	500 ug/L	ND (100)	ND (100)
Semi-Volatiles					
Acenaphthene	ug/L	0.05	600 ug/L	ND (0.05)	ND (0.10)
Acenaphthylene	ug/L	0.05	1.8 ug/L	ND (0.05)	ND (0.10)
Anthracene	ug/L	0.01	2.4 ug/L	ND (0.01)	ND (0.02)
Benzo[a]anthracene	ug/L	0.01	4.7 ug/L	ND (0.01)	ND (0.02)
Benzo[a]pyrene	ug/L	0.01	0.81 ug/L	ND (0.01)	ND (0.02)
Benzo[b]fluoranthene	ug/L	0.05	0.75 ug/L	ND (0.05)	ND (0.10)
Benzo[g,h,i]perylene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
Benzo[k]fluoranthene	ug/L	0.05	0.4 ug/L	ND (0.05)	ND (0.10)
Chrysene	ug/L	0.05	1 ug/L	ND (0.05)	ND (0.10)
Dibenzo[a,h]anthracene	ug/L	0.05	0.52 ug/L	ND (0.05)	ND (0.10)
Fluoranthene	ug/L	0.01	130 ug/L	ND (0.01)	ND (0.02)
Fluorene	ug/L	0.05	400 ug/L	ND (0.05)	ND (0.10)
Indeno[1,2,3-cd]pyrene	ug/L	0.05	0.2 ug/L	ND (0.05)	ND (0.10)
1-Methylnaphthalene	ug/L	0.05	1800 ug/L	ND (0.05)	ND (0.10)
2-Methylnaphthalene	ug/L	0.05	1800 ug/L	ND (0.05)	ND (0.10)
Methylnaphthalene (1&2)	ug/L	0.10	1800 ug/L	ND (0.10)	ND (0.20)
Naphthalene	ug/L	0.05	1400 ug/L	ND (0.05)	ND (0.10)
Phenanthrene	ug/L	0.05	580 ug/L	ND (0.05)	ND (0.10)
Pyrene	ug/L	0.01	68 ug/L	ND (0.01)	ND (0.02)


N
RURAL LAND USE
ENVIRONMENTAL PROTECTION
RIVER RD
MOIRA RIVER
ENVIRONMENTAL PROTECTION
RESIDENTIAL LAND USE
SCOTT DR
RESIDENTIAL LAND USE
ENVIRONMENTAL PROTECTION
OPEN SPACE
WIMS WAY
RESIDENTIAL LAND USE
HUMMINGBIRD DR
FARNHAM RD
BEVAN DR
RESIDENTIAL LAND USE
CHARLESTON CT
ESSEX DR
OAKWOOD LN
VERTIS CT
Meters
0 40 80 120 160
PROPOSED OFFICIAL PLAN AMENDMENT
LOCATION: FARNHAM RD & SCOTTS DR
PROPOSED DESIGNATION CHANGE FROM OPEN SPACE TO RESIDENTIAL LAND USE
PROPOSED DESIGNATION CHANGE FROM RESIDENTIAL LAND USE TO OPEN SPACE
HIGHWAY NO. 37
HIGHWAY 401
CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT
B-50-3-30

APPROVAL BLOCK
DE& DS

CITY OF BELLEVILLE

Thomas Deming, Principal Planner
Engineering and Development Services Department
Report No. PP-2019-88
December 2, 2019

To: Belleville Planning Advisory Committee

Subject: RECOMMENDATION REPORT
Proposed Amendment to the Official Plan and Zoning By-Law Number 10245; 375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue, City of Belleville, County of Hastings

APPLICANT/OWNER: Algonquin and Lakeshore Catholic School Board
AGENT: Todd Colbourne, Colbourne & Kembel, Architects Inc.

File: B-77-1093

Recommendation:

That the Planning Advisory Committee recommends the following to City Council:

"THAT Application B-77-1093 to amend the City of Belleville Official Plan and Zoning By-Law Number 10245, as amended for 375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue, City of Belleville, County of Hastings, be APPROVED as follows:

That Schedule 'B' Land Use Plan of the Official Plan be amended by redesignating portions of the subject lands from "Residential Land Use" to "Community Facility"; AND

That Zoning By-Law Number 10245, as amended, be amended by rezoning the subject lands to Community Facility (CF) Zone with special provisions to reduce the front yard setback, side yard setback, and parking requirements."

Executive Summary:

The application proposes to amend the Official Plan and Zoning By-Law 10245 for the expansion of the St. Joseph Catholic School. The proposal includes merging six residential lots with the larger school lot. Three of these

lots are already used as parking space by the school while the other three will include demolishing the existing dwellings. The application seeks to amend the Official Plan to redesignate the residential lots to Community Facility. The proposed zoning includes special provisions to reduce front and side yard setbacks and the required parking provisions.

Through the public consultation process, a number of concerns have been raised including access to the school property through the walkway from Hastings Drive, the impact on surrounding residential properties, and parking concerns. The Applicant has provided responses and corresponding reports on how these concerns will be addressed.

Staff have reviewed relevant policy and are of the opinion that this proposal is consistent with the Provincial Policy Statement and conforms to the Belleville Official Plan.

Strategic Plan Alignment:

The City of Belleville's Strategic Plan identifies nine strategic themes. This report aligns with each of the City's nine strategic themes and the City's mission statement by providing improved social infrastructure that will enhance the well-being of the public.

Background:

An application for the proposed amendment to the Official Plan and Zoning By-law Number 10245 was received by the City of Belleville on September 13, 2019. The application proposes that six residential lots be merged with the larger school property for the purpose of expanding the existing school. The subject lands are identified on Attachment #1 Location Map.

An initial public meeting was held in accordance with the requirements of the Planning Act. The purpose of this meeting was for Committee Members to formally hear and receive public comments. The Applicant and the Agent were present and four members of the public expressed their concerns at the meeting.

The Planning Advisory Committee reviewed Report No. PP-2019-79 (see Attachment #2). Now that input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department, Staff has prepared a recommendation report.

Site details for the subject land:

Site Review	Description
Site Location	The subject lands are located south of Bridge Street East, and west of Herchimer Avenue, and are municipally known as 375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue
Site Size	17,154 m² (1.7 ha)
Present Use(s)	Elementary school, single detached dwellings, parking lot
Proposed Use	Elementary school
Belleville Official Plan Designation	Residential & Community Facility
Present Zone Category	375 Bridge St E – R2-3 379 Bridge St E – R2-3 405 Bridge St E – CF 180 Herchimer Ave – R2 176 Herchimer Ave – R2 172 Herchimer Ave – R5-12
Proposed Zone Category	Community Facility (CF) with special provisions
Land uses to the north	Single detached dwellings
Land uses to the east	Local commercial uses
Land uses to the south	Townhomes
Land uses to the west	Single detached dwellings

In support of the application, the following was submitted:

- proposed building elevations (Attachment #3);
- a proposed floor plan (Attachment #4);
- a draft 21R- plan (Attachment #5);
- a planning justification report (Attachment #6);
- a servicing report (Attachment #7);
- a sanitary and storm sewer relocation plan (Attachment #8);
- a draft site plan (Attachment #9);
- a stormwater management plan (Attachment #10);
- a topographical survey (Attachment #11);
- a traffic report (Attachment #12);
- a tree report (Attachment #13); and
- a response to public concerns from public meeting (Attachment #14).

These documents have been available for public review at the Planning Department.

Proposal

The purpose of the application to amend the Official Plan and Zoning By-Law is to permit the expansion of St. Joseph Catholic School and the redesign of the existing parking areas.

The Applicant is proposing to demolish the two-storey portion of the existing St. Joseph Catholic School building and construct a new two-storey addition. The existing one-storey portion will remain. The new facilities will include six classrooms and a gymnasium, as well as space for an Early Years Centre (EarlyON) and Childcare Facility.

The proposed redevelopment will increase the number of classrooms from 14 to 20 and will roughly double the gross floor area of the school. Accordingly, the number of school staff will increase from 37 to 46, not including seven daycare staff and four EarlyON staff, for a total of 57 staff members. The new classrooms and daycare facilities will allow for 94 new students and 51 daycare students.

The application proposes on-site parking for staff and visitors to be provided in three parking areas. The two existing parking areas are to be maintained, and a third parking area will be established to the west of the school building. The new western parking area would contain 24 new parking spaces, including two accessible parking spaces, with a driveway providing ingress and egress off Bridge Street.

The zoning amendment proposes reducing the required front yard setback and interior side yard setback of the Community Facility (CF) Zone. A reduced front yard setback is proposed in order to provide greater side yard separation and maximize available yard space at the rear of the building. The front yard setback is not anticipated to impact the character of the street as it will be consistent with the neighbouring commercial building. The east side yard setback is proposed to be 6.8 metres and the west side yard setback is proposed to be 23.0 metres. Relief is requested to reduce the east side yard setback in order to recognize the existing condition of the subject site. While the proposed side yard and front yard setbacks are deficient, they will accommodate necessary vehicle parking, bicycle parking, and landscaping.

Provincial Policy Statement

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement. Staff is of the opinion that this project aligns with the Provincial Policy Statement by:

- ensuring public service facilities are meeting current and projected needs;
- expanding the existing school and optimizing an existing public service facility versus developing a new site;
- locating along a collector road the project is supported by local transit and nearby commercial uses; and

- using land previously owned by the applicant to ensure long-term economic success and availability of land.

Additionally, the planning justification report submitted with the application contains the Applicant's reasons the proposal is consistent with the Provincial Policy Statement:

- The proposed development represents an efficient use of available land resources. The expanded educational facility will support and promote the growth and development of youth in the City of Belleville, contributing towards the future success of the City and Province;
- The proposed development will expand existing youth educational facilities which will contribute positively towards the long-term needs of families as the population of the City of Belleville continues to grow;
- The proposed development will not cause any environmental or public health and safety concerns;
- The proposed development will expand available educational services available in the area while requiring relatively minimal additional land resources;
- The school is designed to be barrier-free and accessible for all members of society. The new portions of the building have been modelled after the ALDCSB's recently built St. Francis of Assisi Catholic School in Kingston;
- As per the findings of the Servicing Report, the existing municipal infrastructure has enough capacity to accommodate the proposed development. The proposal will result in the expansion of the existing school and will include space for an Early Years Centre (EarlyON) and Childcare Facility for the benefit of the Belleville community. This will contribute positively towards ensuring that sufficient community services are available to meet current and projected needs of residents in the City; and
- The proposed development will expand and improve the functionality of available parking areas. Details pertaining to the functionality of the parking area will be further examined at the Site Plan Control stage of the development review process.

Official Plan

The current Official Plan was adopted by City Council on June 18, 2001 and approved by the Ministry of Municipal Affairs and Housing on January 7, 2002. Since 2002, a significant number of new and updated policies and legislation have occurred at the provincial level. The City undertook a Municipal Comprehensive Review and the policies of the Official Plan are currently being updated to ensure they comply with current provincial policies and legislation. The City will have to comply with the Province's new legislation, regulations, and policies when updating the Official Plan.

The land is designated "Community Facility" and “Residential” in the City’s Official Plan (Attachment #15 – Official Plan Designation Map). The land designated Community Facility relates to the original school site and the Residential designation relates to the surrounding residential properties the school board has purchased to accommodate their proposal. The application proposes to re-designate the Residential lands to Community Facility. The Community Facility designation lists schools as a permitted use.

The Municipal Comprehensive Review undertaken by the City indicated that there is a sufficient amount of residential land to service the growth needs of Belleville over the next twenty years.

The Official Plan states that the development of institutional and/or public facilities are dependent on safe vehicular access. The school will provide access on to two collector roads (Bridge Street East and Herchimer Avenue). The Traffic Report submitted with the application indicates that the development can be accommodated without adverse impacts to the transportation network and is properly designed for sustainable modes of transportation.

The application proposes to include a space for an Early Years Centre (EarlyON) and Childcare Facility conforming to the Official Plan which encourages community facilities to provide joint or multiple uses.

The Official Plan states visual appearance of all parking lots should be enhanced through appropriate landscaping to minimize the effects of noise and fumes on nearby residential properties. The application proposes fencing and landscaping buffering between the parking lots and neighbouring residential lots.

There is an existing bus loading area along Bridge Street East long enough for up to two buses. The application proposes an expanded bus loading area on Bridge Street East that is long enough for five buses. The Official Plan requires facilities with bus drop-off areas to not conflict with vehicular movement on the roads. The Traffic Report indicates that the on-street school bus loading area requires a portion of the width of the eastbound travel lane to be taken up by buses. The report also indicates Bridge Street East is of adequate width to accommodate buses and two lanes of traffic.

Staff is of the opinion that this application conforms to the Official Plan.

Zoning By-law

The subject lands are currently zoned as follows:

Address	Zone	Current Use
375 & 379 Bridge Street East	Residential Second Density (R2-3)	Dwellings
405 Bridge Street	Community Facility (CF)	School
176-184 Herchimer Avenue	Residential Second Density (R2)	Parking lot
172 Herchimer Avenue	Residential Fifth Density (R5-12)	Dwelling

The application proposes to rezone the subject lands to Community Facility (CF) Zone with special provisions. The CF Zone lists private and public schools as a permitted use. It should be noted that the Residential Second Density (R2) Zone also permits private and public schools as a permitted use but the Residential Fifth Density (R5) Zone does not.

The special provisions include a reduction in front yard depth, interior side yard depth, and parking requirements. The proposed special provisions are outlined below:

Provision	Required	Proposed
Front Yard Depth	7.5 m or ½ the height of the building, whichever is greater	3.0 m
Interior Side Yard Depth	7.5 m or ½ the height of the building, whichever is greater	East = 6.8 m (existing non-conforming) West = 23.0 m
Parking Spaces	1 space / 28 m2 GFA (required = 205 spaces)	82 spaces
Parking Stall Dimensions	2.4 m x 6 m	2.7 m x 5.65 m
Additional Parking Requirements	1.5 m landscaping buffer from street line	Herchimer Ave = 1.0 m
Loading	GFA over 2,300 m2 = 2 loading paces	Five (5) bus loading spaces provided on Bridge Street
Loading Space Dimensions	12 m x 3.6 m, vertical clearance of 4.5 m	Off-site loading proposed

The 3.0 metre front yard setback is proposed in order to provide greater side yard separation and maximize available yard space at the rear of the building.

The reduced side yard setback of 6.8 metres is requested to recognize an existing condition on the east side of the subject site. This setback is between the school and the commercial property. The proposed side yard setback on the west side of the property, neighbouring the residential lot, is 23 metres and will exceed the required side yard setback.

The application requests a reduction in parking as the current parking requirement requires one parking space per 28 square metres of gross floor area which would require 205 spaces. This ratio is intended for uses which are not specifically listed by the zoning by-law under its parking provisions, including schools. The Traffic Impact Assessment notes that a reasonable minimum parking provision for the site is 82 spaces to accommodate the

peak demand of the school. The report concluded that the proposed parking supply of 104 parking spaces, including six accessible parking spaces and nine drop-off spaces, will exceed the daily vehicle parking needs of the site and meet demand during peak periods.

The Traffic Impact Assessment also indicated that the proposed reduced parking stall dimensions meet the minimum standards of the 2017 MTO Design Guide.

The application further requests to recognize the existing off-site loading location and condition of the subject site which is located in front of the school along Bridge Street East. The existing bus loading area is long enough for up to two buses. The application proposes an expanded bus loading area that is long enough for five buses. The Traffic Impact Assessment states that Bridge Street East has sufficient width to accommodate buses and two lanes of traffic.

Lastly, the application seeks a reduced separation area between the parking area and the street line along Herchimer Avenue. The Zoning By-Law requires a 1.5 metre landscaping strip and the application proposes a one metre landscaped separation to allow the existing paved portion of the south parking area to be utilized, allow for a more sufficient site configuration, and allow a greater number of parking spaces to be accommodated in the existing parking area.

Staff is of the opinion that the reduced setbacks and parking provisions will not disrupt the character of the neighbourhood and are reasonable changes to the Zoning By-Law.

Public Meeting and Comments

Written notice and a location map was mailed by first class mail to all registered owners of land within 120 metres of the subject property. The notice provided information that a public meeting was scheduled for November 4, 2019.

Similarly, signs were placed on the subject lands notifying the general public that a public meeting was scheduled for November 4, 2019.

Both the notice and signs stated that additional information is available in the City's planning files for review by any member of the public during business hours.

At the public meeting, four members of the public expressed concerns on a number of issues including:

- Access through the walkway from Hastings Drive;
- Buffering the western parking lot;
- Stormwater prevention; and
- Student drop off.

The Agent was contacted by the City to provide written comments related to these concerns. The corresponding responses from the Agent are provided in the table below:

Concern	Response
Fencing and Landscape Buffer: What type of fence is proposed, height of fence, other privacy mitigation (such as trees)?	The western boundary with the adjacent property on Bridge Street East, is for the construction of a 2400 mm high wood privacy fence (1800 mm high vertical boards with a 600 mm high lattice above). On behalf of the Board, the Agent has already had some discussions with the neighbour and the Board is more than willing to revise the fence design to match the recently built fence on their southern property line. They propose to use 150 x 150 posts set in concrete for better durability, as per the neighbour's concern with the new wood fence along their southern property line. Regarding landscaping, the Applicant's landscape architect has specified planting along the fence which is comprised of Cedars and Serbian Spruce, both of which are coniferous trees, to provide screening all year round. The selected plantings have a shallow, fine root system which will address noted issue. As shown on the Landscape Plan.
Stormwater: Specifically concerning the west parking lot and its impact on the neighbouring residential dwelling.	Following a discussion with the neighbour on Bridge Street, the Applicant's civil engineer has reviewed the current design and confirmed that there is sufficient fall that they can lower the grade of the proposed site works on the Board property further to create a more defined swale with a steeper grade. This work, with the neighbour adjacent to the subject land's agreement, may also include revising a small portion of their easterly lawn along the side of the house to increase the grade away from the house even further. The neighbour confirmed that they have, under the existing site conditions, experienced flooding of their residential building on a couple of occasions and the Board is willing to undertake all reasonable steps to try to help address this issue for the neighbour by improving the grade fall away from the neighbour's house. The Board is willing to work with both the City and the neighbour to try to address this issue and achieve a satisfactory resolution to the matter. This will be implemented during the site plan approval process.
West parking lot: Who will be parking here (teachers, day care workers, visitors)?	The west parking lot (adjacent to the Bridge Street neighbour) has not, at this time, been designated for any particular use, but is anticipated to be utilized primarily by visitors to the school or parents dropping off students once the school day has started.

Walkway from Hastings Drive: a. Will the school provide access to the public through to Bridge Street East? Or b. Will the pathway be gated/closed to the public? c. Will parents be permitted to drop off students on Hastings Drive to access the school through the walkway? d. Does the School Board have any concerns with permitted public access through their property?	The current proposal calls for no public access across the site and that a gate be installed at the end of the public walkway from Hastings Drive along the school's property line that would permit students to access the school during certain periods of the day (i.e. at the start and end of day) and be closed, and locked, at other times. It is the Board's practice to fence the entire school play yard and that the site is secured during the school day in order to maintain student safety. At the time this school site was originally developed it was standard practice across the province that school yards were not fenced off and secured from public spaces and that the facilities were open for use by the general public. However, this practice has since been discontinued across the province due to a number of factors (continued) including, but not limited to, Ministry and Board policy implications, societal changes, historic incident occurrences, etc. As such, the Board strongly believes that they must be able to secure the school site in order to keep their students and staff safe and provide a distinct separation. Furthermore, it should be noted that were a walkway to be continued through the school property, with the revised school building plan it would result in the creation of a significant blind spot from any public space. The Board would be unable to provide any level of supervision for this hidden space at night or on the weekends and, unfortunately, our experience across our jurisdiction has regularly shown this to result in significant issues with after-hours activities.

In addition, the City has received a number of formal written submissions from the public which are included with this report as Attachment #16. These concerns are summarized in the table below:

Concern	Response
Parking and student drop off on Hastings Drive	The municipal path is intended to act as a connection from Hastings Drive to the school property. Parking signs are posted on Hastings Drive stating no parking is permitted in that area between 8:00 a.m. until 9:00 a.m. and 3:00 p.m. until 4:00 p.m., Monday to Friday, September to June. The expanded parking area on the school property will include space for student drop off which should reduce the traffic on Hastings Drive.
The dwellings along Bridge Street East provide a noise barrier to dwellings on Hastings Drive	The application proposes privacy fencing and landscaping as a new buffer.
Is there potential to expand on existing property or use	The proposed redevelopment will increase the number of classrooms from 14 to 20 and will roughly double the gross

portables?	floor area of the school. Expanding on only the existing site would significantly reduce parking space and outdoor recreational space.
Loss of affordable housing	A resident expressed concern that demolishing the dwellings would reduce affordable housing in the City. These dwellings are already owned by the School Board and the City does not have control over their affordability.

Staff and Agency Comments

External Agency Circulation

The subject application was circulated for comment to the the Hastings & Prince Edward District School Board, Hastings and Prince Edward Health Unit, Bell Canada, Canada Post, Ontario Power Generation, Union Gas, Elexicon Energy, Hydro One, TransCanada Pipeline, Enbridge Pipelines, Trans-Northern Pipelines, and MPAC.

At the time of writing this report, Elexicon Energy and Hydro One provided general comments for the applicant but did not have concerns.

Internal Department Circulation

The subject application was circulated for comment to the Belleville Fire Department, Belleville Police Service, the Development Engineer, the General Manager of Transportation & Operations Department, General Manager of Environmental Services, the Director of Recreation, Culture and Community Services, the Manager of Parks & Open Spaces, the Chief Administrative Officer, the Manager of Economic & Strategic Initiatives, the City Clerk, the Accessibility Coordinator, and the Chief Building Official.

Transportation & Operations, Recreation, Culture & Community Services Department, Parks & Open Space, Environmental Services, and Belleville Fire and Rescue have provided correspondence and they have no comments and/or concerns.

The City's Development Engineer (In Training) provided comments that they are generally satisfied with the proposal and that final design specifications will be addressed during the site plan approval process subject to the satisfaction of the Approvals and Engineering Sections.

At the time of writing this report, no other comments have been received regarding this application.

Considerations:

Public

Circulation to the public complies with the requirements of the Planning Act, R.S.O. 1990.

Financial

The fees of the application have been received by the City.

Impact on and input from other Departments/Sources

Circulation of this application to other departments/agencies has occurred.

Analysis and Conclusion:

This application is consistent with both the Provincial Policy Statement and City's Official Plan.

The changes to the Zoning By-Law are to reduce the front yard setback, recognize the existing side yard setback, and to reduce parking standards to more appropriate standards for the use based on professional analysis and past practises.

The Applicant has addressed concerns from the public to the satisfaction of Staff and has exceeded required mitigation measures.

Staff is of the opinion that this proposal represents good planning.

The next stage for the Applicant will be to receive approval to develop this site through the City's Site Plan Process.

Respectfully submitted

_____
Thomas Deming, CPT
Principal Planner, Policy Planning
Engineering and Development Services Department

Attachments

Attachment #1 – Location Map
Attachment #2 – Report No. PP-2019-79
Attachment #3 – Proposed Building Elevations
Attachment #4 – Proposed Floor Plans
Attachment #5 – Draft 21R- Plan
Attachment #6 – Planning Justification Report
Attachment #7 – Servicing Report
Attachment #8 – Sanitary and Storm Sewer Relocation Plan
Attachment #9 – Draft Site Plan
Attachment #10 – Stormwater Management Plan
Attachment #11 – Topographical Survey
Attachment #12 – Traffic Report
Attachment #13 – Tree Report
Attachment #14 – Applicant's Response to Public Comments
Attachment #15 – Official Plan Designation Map
Attachment #16 – Public Comments

PROPOSED ZONING BY-LAW AMENDMENT

LOCATION: 375 TO 405 BRIDGE ST E & 172 TO 184 HERCHIMER AVE

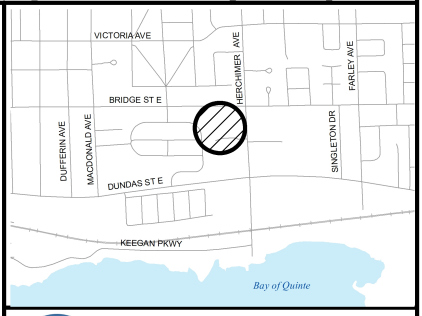
PROPOSED ZONING CHANGE FROM CF (COMMUNITY FACILITY) TO CF WITH SPECIAL PROVISIONS

PROPOSED ZONING CHANGE FROM R2 (RESIDENTIAL SECOND DENSITY) TO CF (COMMUNITY FACILITY) WITH SPECIAL PROVISIONS

PROPOSED ZONING CHANGE FROM R2-3 (RESIDENTIAL SECOND DENSITY WITH SPECIAL PROVISIONS) TO CF (COMMUNITY FACILITY) WITH SPECIAL PROVISIONS

PROPOSED ZONING CHANGE FROM R5-12 (RESIDENTIAL FIFTH DENSITY WITH SPECIAL PROVISIONS) TO CF (COMMUNITY FACILITY) WITH SPECIAL PROVISIONS

B-77-1093



CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT

APPROVAL BLOCK
DE& DS_____

CITY OF BELLEVILLE

Thomas Deming, Principal Planner
Engineering and Development Services Department

Report No. PP-2019-79
November 4, 2019

To: Belleville Planning Advisory Committee

Subject: Notice of Complete Application and Introductory Public Meeting for Proposed Amendment to the Official Plan and Zoning By-Law Number 10245
375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue
City of Belleville
APPLICANT/OWNER: Algonquin and Lakeshore Catholic School Board
AGENT: Todd Colbourne, Colbourne & Kembel, Architects Inc.

File: B-77-1093

Recommendation:

"That Report No. PP-2019-79 dated November 4, 2019 regarding Notice of Complete Application and Introductory Public Meeting for Proposed Amendment to the Official Plan and Zoning By-Law Number 10245, as Amended – 375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue, City of Belleville, County of Hastings be received as information, and;

That Staff report back at such time as input from the public, commenting agencies, and municipal departments has been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department."

Background:

An application to amend the Official Plan and Zoning By-law Number 10245 was received by the City of Belleville on September 13, 2019. The application proposes that the six individual properties be merged into one larger property for the purpose of expanding the existing school. The subject lands are identified on Attachment #1 Location Map.

The initial public meeting is held in accordance with the requirements of the Planning Act. The purpose of this meeting is for Committee Members to formally hear and receive public comments. The intent of this statutory

public planning meeting is to receive public feedback and incorporate it into a recommendation report from staff.

In support of the application, the following was submitted:

- a proposed building elevations (Attachment #2);
- a proposed floor plans (Attachment #3);
- a draft 21R- plan (Attachment #4);
- a planning justification report (Attachment #5);
- a servicing report (Attachment t #6);
- sanitary and storm sewer relocation plan (Attachment #7);
- a draft site plan(Attachment #8);
- a stormwater management plan (Attachment #9);
- a topographical survey (Attachment #10);
- a traffic report (Attachment #11); and
- a tree report (Attachment #12).

These documents are available for public review at the Engineering and Development Services Department Planning Division.

Site details for the subject land:

Site Review	Description
Site Location	The subject lands are located south of Bridge Street East, and west of Herchimer Avenue, and are municipally known as 375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue
Site Size	17,154 m² (1.7 ha)
Present Use(s)	Elementary school, single detached dwellings
Proposed Use	Elementary school
Belleville Official Plan Designation	Residential & Community Facility
Present Zone Category	375 Bridge St E – R2-3 379 Bridge St E – R2-3 405 Bridge St E – CF 180 Herchimer Ave – R2 176 Herchimer Ave – R2 172 Herchimer Ave – R5-12
Proposed Zone Category	Community Facility (CF) with special provisions
Land uses to the north	Single detached dwellings
Land uses to the east	Local commercial uses
Land uses to the south	Townhomes
Land uses to the west	Single detached dwellings

Proposal

The purpose of the application to amend the Official Plan and Zoning By-Law

is to permit the expansion of St. Joseph Catholic School and the redesign of the existing parking areas.

The applicant is proposing to demolish the two-storey portion of the existing St. Joseph Catholic School building and construct a new two-storey addition. The addition will enable the creation of new learning spaces while maintaining some portions of the existing school. New facilities will include six new classrooms and a gymnasium, as well as space for an Early Years Centre (EarlyON) and Childcare Facility.

The proposed redevelopment will increase the number of classrooms from 14 to 20 and will roughly double the gross floor area of the school from 30,850 square feet to 60,956 square feet. Accordingly, the number of school staff will increase from 37 to 46, not including seven (7) new daycare staff and four (4) new EarlyON staff, for a total of 57 staff members. The new classrooms and daycare facilities will allow for 94 new students and 51 new daycare students.

The application proposes on-site parking for staff and visitors to be provided in three parking areas. The two existing parking areas are to be maintained, and a third parking area will be established to the west of the school building. The new western parking area would contain 24 new parking spaces, including two (2) accessible parking spaces, with a driveway providing ingress and egress off Bridge Street.

Provincial Policy Statement

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement.

Planning Staff will consider the following policies in the PPS:

1.1.1 Healthy, liveable and safe communities are sustained by:

g) ensuring that necessary infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities are or will be available to meet current and projected needs;

1.6.1 Infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities shall be provided in a coordinated, efficient and cost-effective manner that considers impacts from climate change while accommodating projected needs.

Planning for infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities shall be coordinated and integrated with land use planning so that they are:

a) financially viable over their life cycle, which may be demonstrated through asset management planning; and

b) available to meet current and projected needs.

1.6.3 Before consideration is given to developing new infrastructure and public service facilities:

a) the use of existing infrastructure and public service facilities should be optimized; and

b) opportunities for adaptive re-use should be considered, wherever feasible.

1.6.5 Public service facilities should be co-located in community hubs, where appropriate, to promote cost-effectiveness and facilitate service integration, access to transit and active transportation.

1.7.1 Long-term economic prosperity should be supported by:

b) optimizing the long-term availability and use of land, resources, infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities;

Official Plan

The land is designated "Community Facility" and “Residential” in the City’s Official Plan (Attachment #13 – Official Plan Designation Map). The application proposes to re-designate the Residential lands to Community Facility. Planning Staff will use the policies within the Official Plan to make a recommendation. Official Plan policy that will be considered includes:

3.11.1 Permitted Uses

The predominant uses of the land in areas designated Community Facility are uses which exist for the benefit of the residents of the community and which are operated for the most part by the City, senior levels of government, school boards, non-profit organizations such as church groups and public service agencies. The uses permitted would include education facilities including public, separate and private schools (including staff and student housing), churches, cemeteries, hospitals, fire halls, day nurseries, police stations, libraries, museums, galleries, theatres, community centres, service clubs, banquet halls, nursing homes, homes-for-the-aged, parks and playgrounds, and similar uses.

3.11.2 Policies

b) Development of the majority of institutional or public facility uses is dependent upon vehicular access to function properly. Points of ingress and egress should be established to ensure safe movement of:

- vehicular traffic on the public street;
- vehicular traffic on the subject and adjoining lands; and
- pedestrian and cyclist traffic along the street.

Further, such uses should have sufficient parking on-site but a reduced parking standard may be applied where there is sufficient parking off-site to address the needs of such establishments during peak usage periods.

c) This Plan encourages the joint or multiple use of community facilities to provide the most efficient and effective use of physical resources in the community. This Plan also encourages grouping of community facilities to maximize use of related services and to provide convenience to the public.

d) The visual appearance of all parking lots and service areas should be enhanced through appropriate landscaping. Appropriate lighting of such areas is required to ensure public safety; lighting should be oriented however away from nearby residential properties and from interfering with visibility on public streets.

Parking lots, service areas and outdoor activity areas should be located so as to minimize the effects of noise and fumes on nearby residential properties. Measures to mitigate the impact of such facilities on adjoining residential areas by fencing or plantings, berming and buffer strips, or increased setbacks should be employed as required.

e) Community facilities should provide for safe pedestrian access and circulation onsite, and provide, as necessary, facilities such as bus drop-off areas and outdoor pedestrian crush spaces which do not conflict with vehicle movements.

Zoning By-Law

The subject lands are currently zoned as follows:

Address	Zone
375 & 379 Bridge Street East	Residential Second Density (R2-3)
405 Bridge Street	Community Facility (CF)
176-184 Herchimer Avenue	Residential Second Density (R2)
172 Herchimer Avenue	Residential Fifth Density (R5-12)

The application proposes to rezone the subject lands to Community Facility (CF) Zone with special provisions. The CF Zone lists private and public schools as a permitted use. The special provisions include a reduction in front yard depth, interior side yard depth, and parking requirements. The proposed special provisions are outlined below:

Provision	Required	Proposed
Front Yard Depth	7.5 m or ½ the height of the building, whichever is greater	3.0 m
Interior Side Yard Depth	7.5 m or ½ the height of the building, whichever is greater	East = 6.8 m (existing non-conforming) West = 23.0 m
Parking Spaces	1 space / 28 m2 GFA (required = 205 spaces)	82 spaces
Parking Stall Dimensions	2.4 m x 6 m	2.7 m x 5.65 m
Additional Parking Requirements	1.5 m landscaping buffer from street line	Herchimer Ave = 1.0 m
Loading	GFA over 2,300 m2 = 2 loading paces	Five (5) bus loading spaces provided on Bridge Street
Loading Space Dimensions	12 m x 3.6 m, vertical clearance of 4.5 m	Off-site loading proposed

Public Comments

On October 11, 2019 a written notice and location map was mailed by first class mail to all registered owners of land within 120 metres of the subject lands. The notice provided information that a public meeting was scheduled for November 4, 2019.

The initial notice indicated the walking path connecting Hastings Drive and the school property as part of the application since MPAC data indicated this was owned by the Applicant. Subsequently City Staff reviewed and determined that this was incorrect and the walking path is City-owned land. Staff have updated all corresponding documents and this will not affect the application.

A sign was placed on the subject lands notifying the general public that a public meeting was scheduled for November 4, 2019.

Both notices state that additional information is available for review at the City of Belleville Planning Department.

At the time of writing this report two members of the public have inquired about the City owned walking path connecting Hastings Drive to the school. Staff received another inquiry from the property owners to the east of the subject lands on Bridge Street East who were concerned about the impact the development would have on their property, specifically related to

stormwater management.

No other correspondence from the public has been received by the City regarding this application.

Staff and Agency Comments

External Agency Circulation

The subject application was circulated for comment to the Hastings & Prince Edward District School Board, Hastings and Prince Edward Health Unit, Bell Canada, Canada Post, Ontario Power Generation, Union Gas, Veridian Connections, Hydro One, TransCanada Pipeline, Enbridge Pipelines, Trans-Northern Pipelines, MPAC, and the Health Unit.

At the time of writing this report, no comments or concerns have been received regarding this application.

Internal Department Circulation

The subject application was circulated for comment to the Belleville Fire Department, Belleville Police Service, the Development Engineer, the General Manager of Transportation & Operations Department, General Manager of Environmental Services, the Director of Recreation, Culture and Community Services, the Manager of Parks & Open Spaces, the Chief Administrative Officer, the Manager of Economic & Strategic Initiatives, the City Clerk, and the Chief Building Official.

Belleville Fire Department and the Transportation & Operations Department, have provided correspondence and they have no concerns.

At the time of writing this report, no other comments have been received regarding this application.

Considerations:

Public

Circulation to the public complies with the requirements of the Planning Act, R.S.O. 1990.

Financial

The fees of the application have been received by the City.

Impact on and input from other Departments/Sources

Circulation of this application to other departments/agencies has occurred.

Strategic Plan Alignment

The City of Belleville's Strategic Plan identifies nine strategic themes. This report aligns with each of the City's nine strategic themes and the City's mission statement by providing improved social infrastructure that will enhance the well-being of the public.

Conclusion:

Comments received at this public meeting, as well as subsequent written comments will be considered by the Engineering and Development Services Department in analysis of the application received to amend the City of Belleville Zoning By-law 10245. A recommendation report will be brought forward upon receipt of all agency and public comments.

Respectfully submitted

_____
Thomas Deming, CPT
Principal Planner, Policy Planning
Engineering and Development Services Department

Attachments

Attachment #1 – Location Map
Attachment #2 – Proposed Building Elevations
Attachment #3 – Proposed Floor Plans
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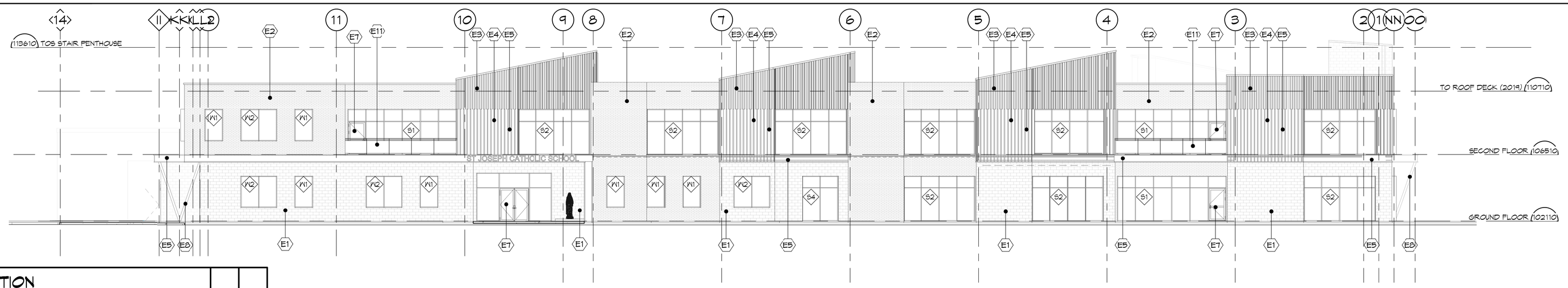
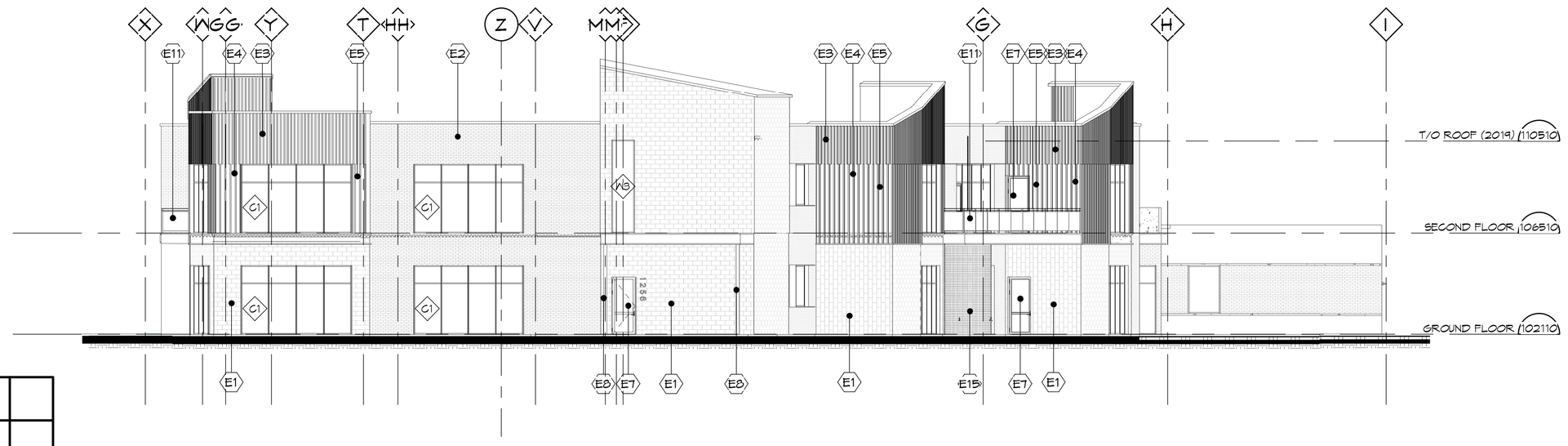
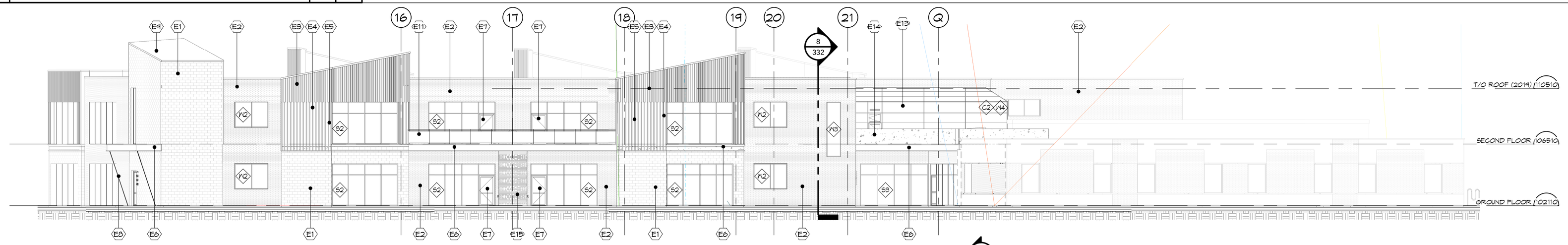
Attachment #9 – Stormwater Management Plan
Attachment #10 – Topographical Survey
Attachment #11 – Traffic Report
Attachment #12 – Tree Report
Attachment #13 – Official Plan Designation Map



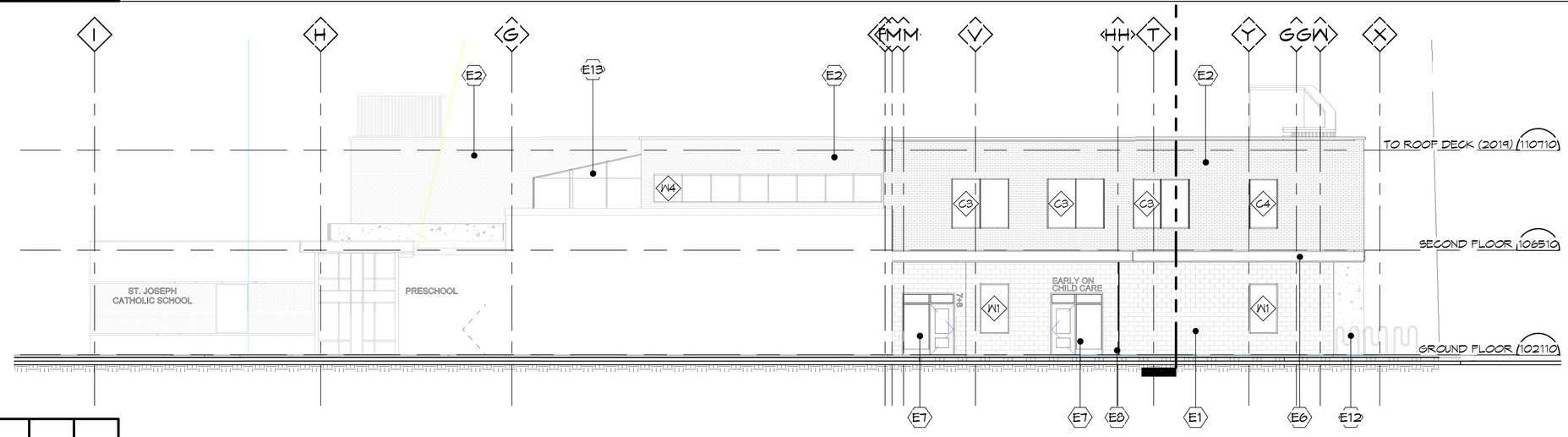
1	NORTH ELEVATION		
	SCALE: 1 : 150 0m 3m 6m 9m 12m 15m		



2	WEST ELEVATION		
	SCALE: 1 : 150 0m 3m 6m 9m 12m 15m		



3	SOUTH ELEVATION		
	SCALE: 1 : 150 0m 3m 6m 9m 12m 15m		



4	EAST ELEVATION		
	SCALE: 1 : 150 0m 3m 6m 9m 12m 15m		

ELEVATION NOTES

E1	MASONRY TYPE 1 - 200 X 400, ? COLOUR (BLOCK)
E2	MASONRY TYPE 2 - 200 X 400, ? COLOUR (BRICK)
E3	PREFINISHED VERTICAL METAL SIDING, TYPE 1 COLOUR 1 SPACING ? (TIGHT)
E4	PREFINISHED VERTICAL METAL SIDING, TYPE 1 COLOUR 1 SPACING ? (WIDE)
E5	PREFINISHED VERTICAL METAL SIDING, TYPE 2 COLOUR 2
E6	PREFINISHED METAL FLASHING, DARK GREY
E7	ALUMINUM ENTRANCE
E8	PAINTED STEEL COLUMN
E9	PREFINISHED METAL ROOFING
E11	ALUMINUM AND GLASS GUARD RAIL
E12	PREFINISHED HORIZONTAL METAL SIDING, TYPE 1 COLOUR 1
E13	ALUMINUM CURTAINWALL SYSTEM
E14	CONCRETE WALL
E15	WATER STORAGE TANK

NOTES:

ALGONQUIN LAKESHORE CDSB

TENDER NO.: T-2019-??

No.	BY	REVISIONS/SUBMISSIONS	DATE
1	TC	ISSUED FOR OP RE-ZONING	2019/04/21

ARCHITECT OF RECORD
COLBOURNE & KEMBEL, ARCHITECTS INC.
1340 ARLINGTON PARK PLACE
KINGSTON, ONTARIO K7H 6W8
TEL: 613-384-2240 FAX 613-384-1277
info@ckal.ca www.ckal.ca

DESIGN ARCHITECT
Fielding Nair International
3453 Hennepin Avenue South
Minneapolis, MN 55408
Tel: 612-200-9159
www.fieldingnair.com

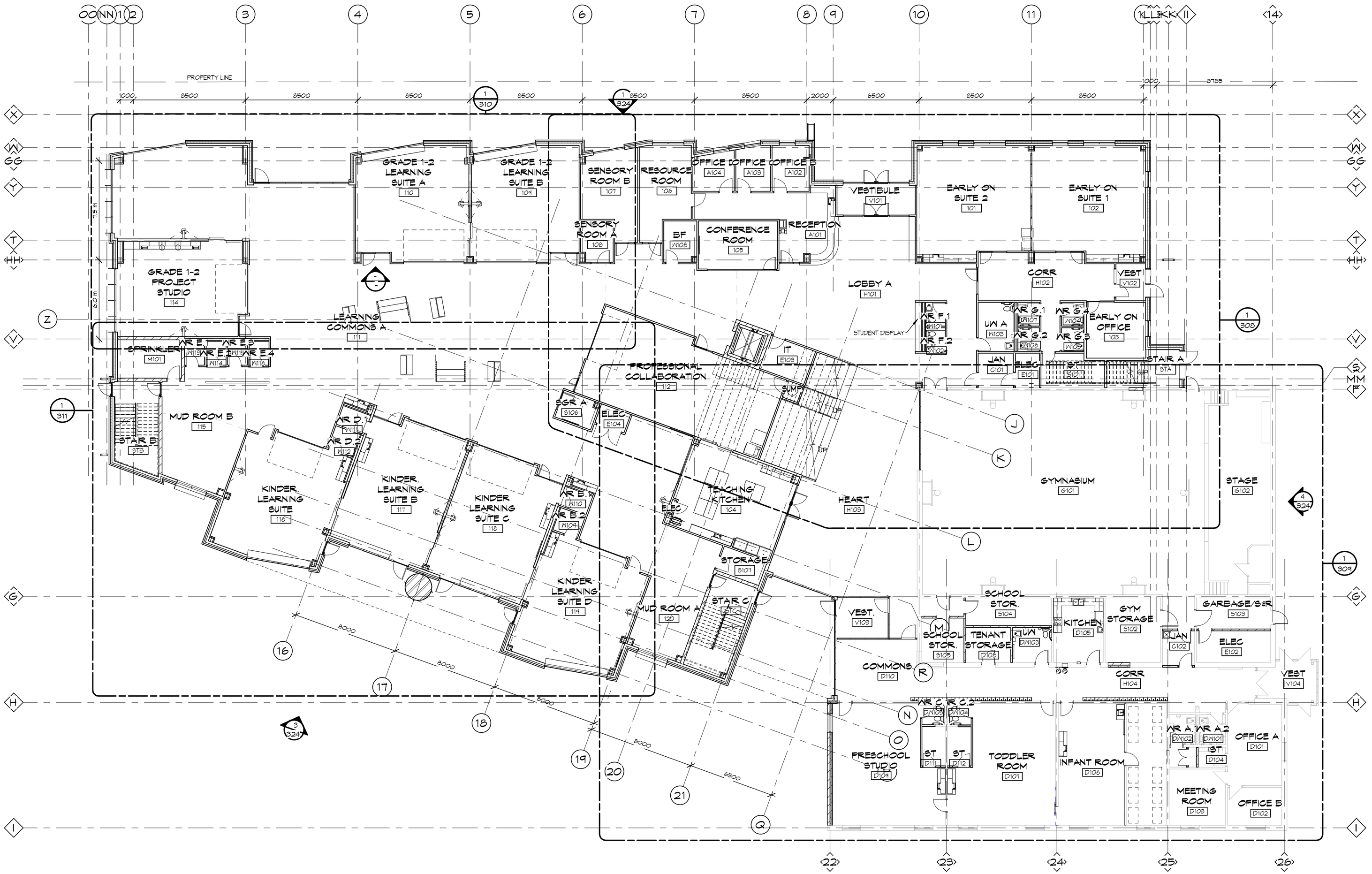
PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)

405 BRIDGE ST E
BELLEVILLE, ON

DRAWING
BUILDING ELEVATION

SCALE
1 : 150

PROFESSIONAL SEAL	DRAWN	DATE
	Author	03.2019
	CHECKED: Checker	PRINTED: 06/11/19
	REVIEWED: Designer	DRAWING No.
NOT FOR PERMIT OR CONSTRUCTION WITHOUT SEAL AND ISSUED NOTE	PROJECT No. 18075	324



1	GROUND FLOOR PLAN	
	SCALE: 1 : 150	0m 3m 6m 9m 12m 15m

NOTES:

ALGONQUIN LAKESHORE CDSB

TENDER NO.: T-2019-??

No.	BY	REVISIONS/SUBMISSIONS	DATE

ARCHITECT OF RECORD
COLBOURNE & KEMBEL, ARCHITECTS INC.
1940 ARLINGTON PARK PLACE
KINGSTON, ONTARIO K7M 8M8
TEL 613-384-2240 FAX 613-384-1277
info@ckai.ca www.ckai.ca

DESIGN ARCHITECT
fni
Fielding Nair International
3453 Hennepin Avenue South
Minneapolis, MN 55408
Tel: 612-200-9159
www.fieldingnair.com

PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)

405 BRIDGE ST E
BELLEVILLE, ON

DRAWING
GROUND FLOOR PLAN

SCALE
1 : 150

PROFESSIONAL SEAL

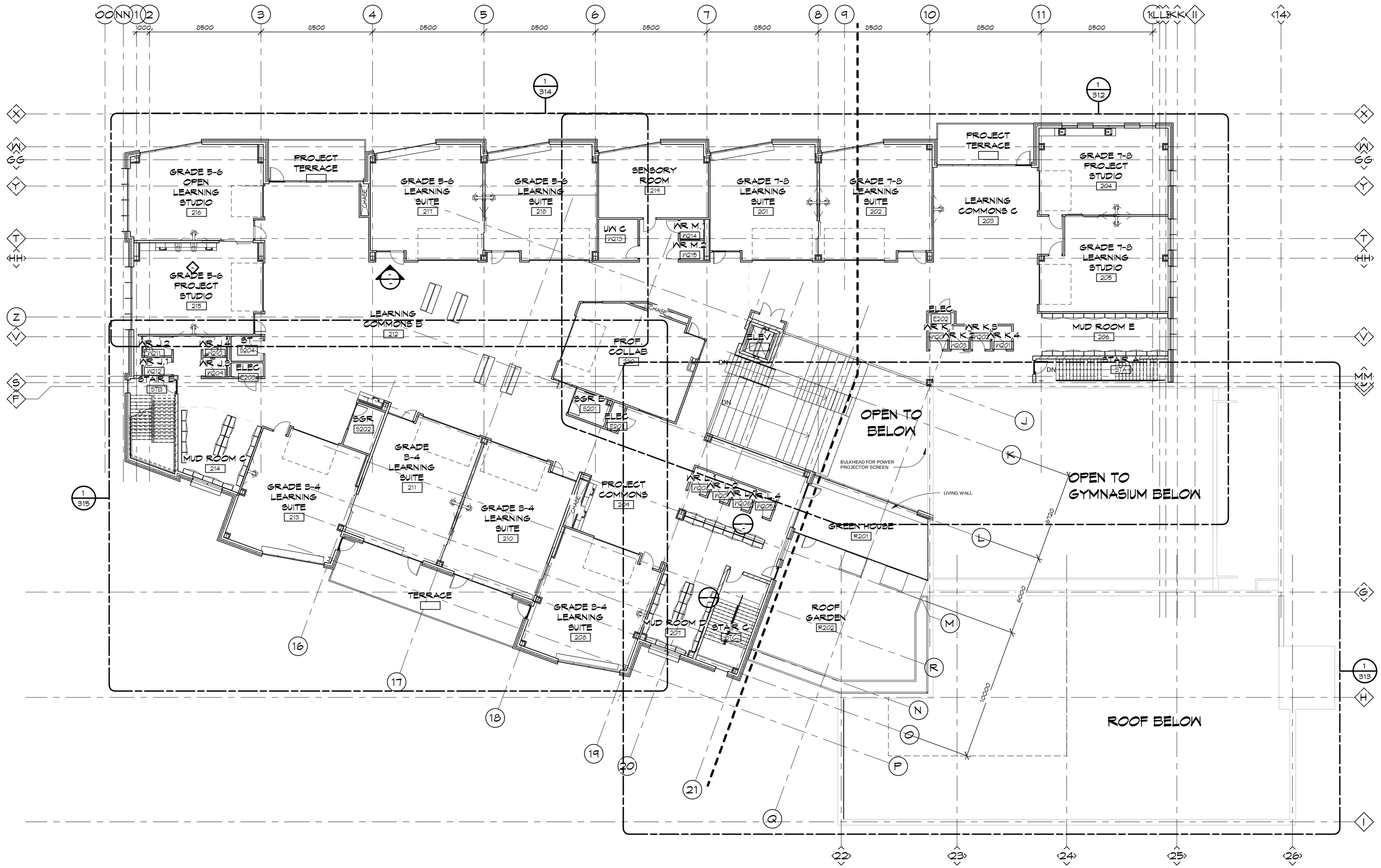
NOT FOR PERMIT OR CONSTRUCTION WITHOUT SEAL AND ISSUED NOTE

DRAWN	DATE
Author	03.2019
CHECKED	PRINTED
Checker	06/11/19
REVIEWED	DRAWING No.
Designer	
PROJECT No.	
18075	302

PP-2019-88

Attachment #4 - Proposed Floor Plans

December 2, 2019



1	SECOND FLOOR PLAN	
	SCALE: 1 : 150	0m 3m 6m 9m 12m 15m

NOTES:

ALGONQUIN LAKESHORE CDSB

TENDER NO.: T-2019-??

No.	BY	REVISIONS/SUBMISSIONS	DATE

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PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)

405 BRIDGE ST E
BELLEVILLE, ON

DRAWING
SECOND FLOOR PLAN

SCALE
1 : 150

PROFESSIONAL SEAL

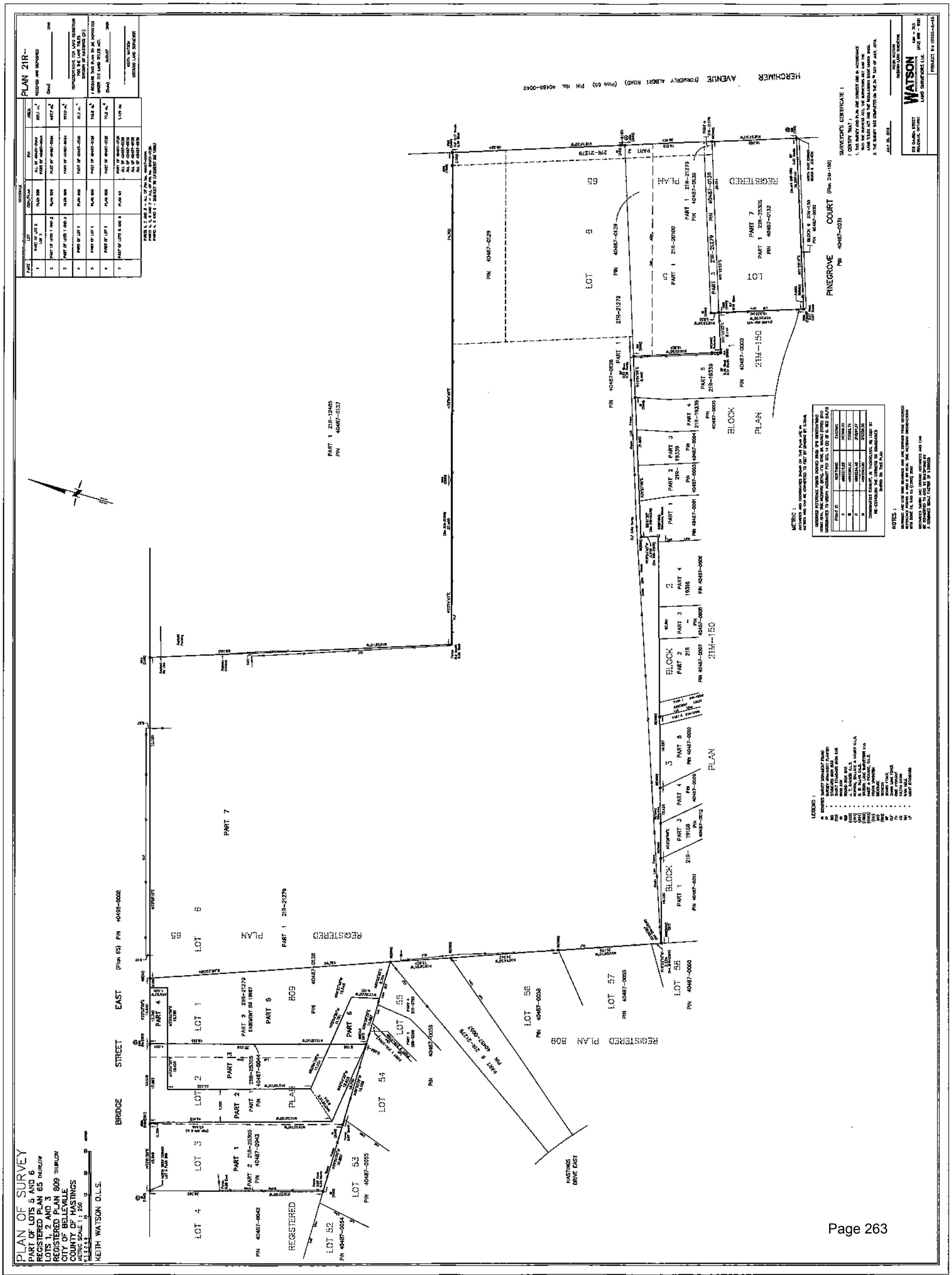
NOT FOR PERMIT OR CONSTRUCTION WITHOUT SEAL AND ISSUED NOTE

DRAWN	DATE
Author	03.2019
CHECKED	PRINTED
Checker	06/11/19
REVIEWED	DRAWING No.
Designer	
PROJECT No.	
18075	303

PP-2019-88

Attachment #4 - Proposed Floor Plans

December 2, 2019


PLAN OF SURVEY
PART OF LOTS 5 AND 6
REGISTERED PLAN 65 THURLOW
LOTS 1, 2 AND 3
REGISTERED PLAN 809 THURLOW
CITY OF BELLEVILLE
COUNTY OF HASTINGS
KEITH WATSON O.L.S.
PLAN 21R-
BRIDGE STREET EAST
HERCHIMER AVENUE (FORMERLY ALBERT ROAD) (Plan 65)
PINEGROVE COURT
HASTINGS DRIVE EAST
PART 7
REGISTERED PLAN 809
SURVEYOR'S CERTIFICATE
WATSON
METRIC
NOTES
LEGEND

FOTENN

405 Bridge Street

Planning Justification Report

Official Plan Amendment &
Zoning By-law Amendment

Prepared for:

Algonquin and Lakeshore Catholic District School Board
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September 06, 2019

CONTENTS

1.0 INTRODUCTION

1.1 Executive Summary

The purpose of this report is to assess the appropriateness of the proposed official plan amendment and zoning by-law amendment in the context of the surrounding area and the policy and regulatory framework applicable to the subject site. The subject site consists of five parcels of land which will be merged into a single land holding in order to accommodate the proposed expansion to St. Joseph Catholic School. A two-storey addition to the existing school is proposed, along with some reconfiguration of the existing parking areas to provide sufficient on-site parking for staff and visitors.

Supporting technical studies, including a stormwater management report, a servicing report, and a transportation impact assessment, have evaluated the technical aspects of the proposed redevelopment. These studies support the proposal and describe the technical need and requirements of the proposed redevelopment.

The proposal is consistent with the Provincial Policy Statement in that it represents an expansion to an existing institutional facility, improving access to youth educational and care services in the City within a compatible residential neighbourhood. An amendment to the City of Belleville Official Plan is proposed to designate the entirety of the subject site Community Facility. A zoning by-law amendment is also proposed to establish a site-specific zone which will permit the expansion of the existing school and describe appropriate performance standards. An application for site plan control is also required.

It is our opinion that this proposal is appropriate and represents good land use planning.

1.2 Introduction

Fotenn Consultants Inc. has been retained by the Algonquin Lakeshore Catholic District School Board (ALCDSB) to prepare this planning rationale in support of applications for official plan amendment and zoning by-law amendment. The purpose of the applications is to permit the expansion of St. Joseph Catholic School and the redesign of the existing parking areas. As an institutional use, a site plan control application is required to be submitted for approval prior to obtaining a building permit. The subject site has an area of 1.7 hectares, as well as 121.7 metres of frontage along Bridge Street, 78.3 metres of frontage along Herchimer Avenue, and 39 metres of frontage along Pinegrove Crescent.

A pre-application meeting was held on November 30, 2018, which identified the application requirements. Accordingly, the following are submitted in support of this application:

- Application fee(s);
- Completed application form(s);
- Topographical Survey;
- Draft R-Plan;
- Tree Report;
- Servicing Report;
- Traffic Impact Assessment;
- Stormwater Management Report;
- Site Plan;
- Floor Plans;
- Elevations;
- Perspectives; and
- This Planning Rationale.

1.3 Development Application

The property is dual-designated Community Facility and Residential Land Use on Schedule B – Land Use Plan: Urban Serviced Area, of the City of Belleville Official Plan. The site is multi-zoned Residential Second Density Zone (R2), Special Residential Second Density Zone (R2-3), Special Residential Fifth Density Zone (R5-12), and Community Facility Zone (CF) on Belleville Zoning Map #4.

The Official Plan supports community-supporting uses such as schools within both the Community Facility and Residential Land Use designation, however an official plan amendment is proposed to designate the entirety of the site Community Facility. This will establish a consistent application of official plan policies across the site and reflects the intent to maintain the entire site as a school for the long-term.

Schools are listed as a permitted use within the R2 and CF zones but are not permitted within the R5 zone. As such, a zoning by-law amendment is required to rezone the site to permit the proposed use and establish site-specific performance standards. In order to establish consistent performance standards across the entirety of the site, it is proposed to rezone the entire site to a site-specific Special Community Facility (CF-X) zone.

A Site Plan Control application is required and will be submitted following the applications for official plan amendment and zoning by-law amendment.

2.0 DEVELOPMENT PROPOSAL

2.1 Subject Site and Surrounding Context

The subject lands are located within the East End neighbourhood of the City of Belleville, on the south side of Bridge Street East. The subject site has frontage along Bridge Street East, Herchimer Avenue, and Pinegrove Crescent. The site consists of five parcels of land, which combine to form an irregularly shaped lot with a total area of 1.7 hectares. The existing school site includes the 405 Bridge Street property. The property abuts a city-owned pedestrian link which provides a pedestrian connection to Hastings Drive. The remaining three parcels of land are located adjacent to the west and south of the original school site and were recently purchased by the ALCDSB. These properties include the properties municipally known as 375 Bridge Street, 379 Bridge Street, and 172 Herchimer Avenue.

The subject lands contain the existing St. Joseph Catholic School building, two parking areas, as well as three single-detached dwellings. The three residential dwellings are located on the recently acquired parcels of land at 375 Bridge Street, 379 Bridge Street, and 172 Herchimer Avenue.

The existing school building is located at 405 Bridge Street, with its primary entrance fronting onto Bridge Street. Classes begin at 9:15 am and students are dismissed at 3:15 pm. The school contains 14 classrooms and has a gross floor area of 30,850 square feet (2,900 square metres). Most recently, the school served 387 students across all grades.

St. Joseph Catholic School has a wide catchment area, including sections of eastern Belleville, Thurlow and Point Anne, serving students in Junior Kindergarten to Grade 8. To the rear of the school building is a yard containing a variety of recreational areas for students. The yard extends from the rear of the school towards the east of the site where it abuts a parking area. A pedestrian pathway connects to the rear yard of the school from Hastings Drive.

An existing short-term parking area is located adjacent to the east side of the school building, off Bridge Street East, containing six parking spaces. The driveway and driving aisle for the short-term parking area also serves as a fire lane for emergency services, extending towards the rear of the site along the eastern façade of the school. A second parking area is located at the southeastern corner of the site, off Herchimer Avenue. The southern parking area is used primarily for short-term visitor and day parking. A parent pick-up / drop-off zone is also provided in the southern parking lot. The parking area is connected to the school by way of a pedestrian walkway through the school yard. A chain-link fence and gate currently separate the school yard from the parking area. A bus loading area with capacity for two full-size buses is provided along Bridge Street, in front of the school. Currently, three full size buses drop-off / pick-up students at the loading area each day.

Figure 1: Existing On-Site Circulation (source: Ontario AgMaps).

The surrounding neighbourhood is comprised primarily of residential dwellings, with a variety of commercial and institutional uses scattered throughout. Immediately adjacent to the site to the east is a small commercial plaza containing a variety of small businesses and a post-office. Roughly one block farther, to the east, is located the Bay View Mall, which contains a wide variety of businesses and commercial uses. The Bay of Quinte is located approximately 850 metres to the south of the subject site. Approximately 750 metres to the southwest of the site, along Dundas Street East, is located the Quinte Health Care (QHC) Belleville General Hospital. Belleville's downtown core is located approximately 2 kilometres to the west of the subject site.

The following uses are located in the immediate vicinity of the subject lands:

- **North:** Residential
- **East:** Commercial
- **South:** Residential
- **West:** Residential

The site is generally accessible by all standard modes of transportation. Pedestrian access to the site is available via sidewalks on both sides of Bridge Street East, Herchimer Avenue, and Hastings Drive. Public transit service is provided to the subject site via Route #1 of the City of Belleville operated public transit routes. The nearest available transit stop is located approximately 80 metres east of the school's Bridge Street entrance, serving passengers from the west only. The stop for passengers from the east is located at Dundas Street East. Vehicular access to the site and parking is available via Bridge Street East and Herchimer Avenue, respectively.

Figure 2: Site Context (source: Ontario AgMaps).

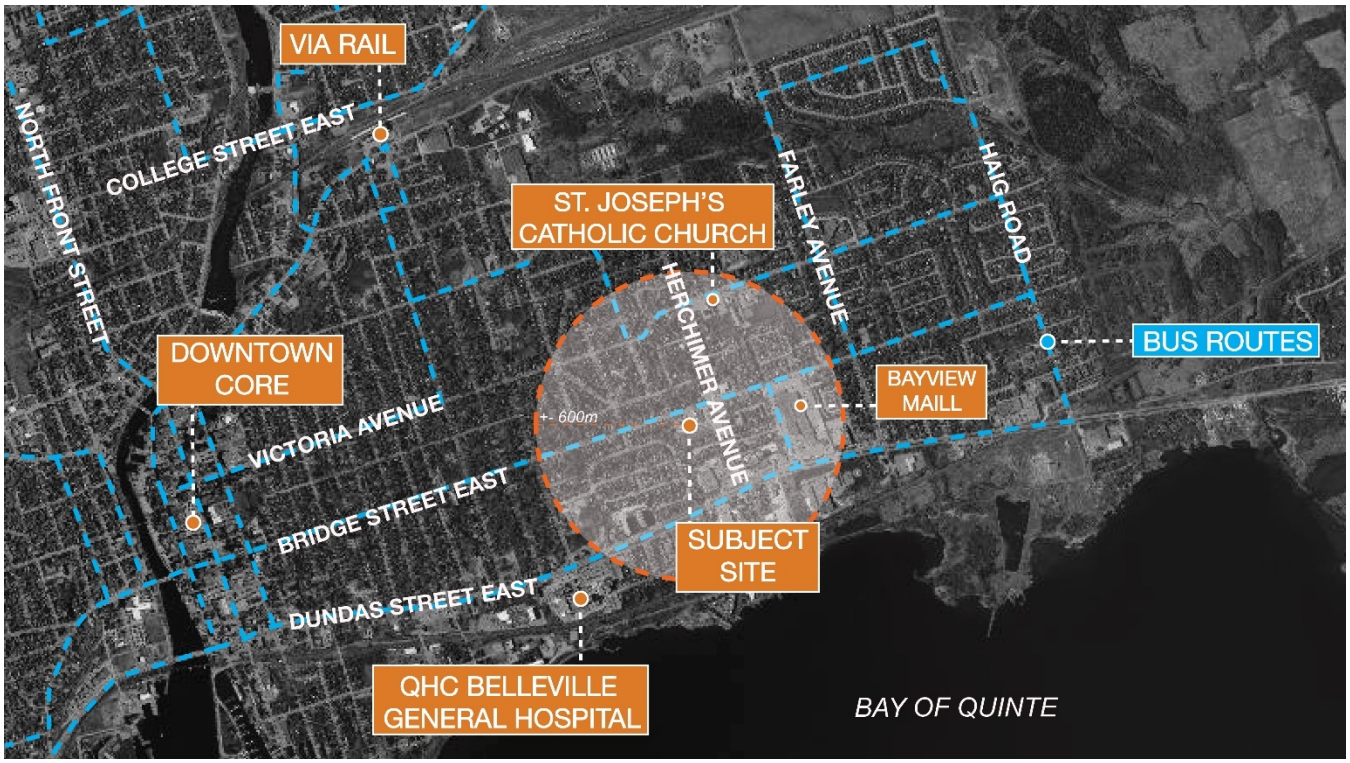


Figure 3: Area Context (source: Ontario AgMaps).

2.2 Development Proposal

The applicant is proposing to demolish the two-storey portion of the existing St. Joseph Catholic School building and construct a new two-storey addition. The addition will enable the creation of new learning spaces while maintaining some portions of the existing school. The new addition is designed to create a barrier-free learning environment, modelled on the ALCDSB's most recent new school build, St. Francis of Assisi Catholic School in Kingston. New facilities will include six new classrooms and a gymnasium, as well as space for an Early Years Centre (EarlyON) and Childcare Facility for the benefit of the Belleville community.

The proposed redevelopment will increase the number of classrooms from 14 to 20 and will roughly double the gross floor area of the school from 30,850 square feet to 60,956 square feet. Accordingly, the number of school staff will increase from 37 to 46, not including seven (7) new daycare staff and four (4) new EarlyON staff, for a total of 57 staff members. The new classrooms and daycare facilities will allow for 94 new students and 51 new daycare students. The redevelopment will therefore accommodate 145 new students, for a total of 532 students.

During the demolition and construction process, students are being temporarily relocated to the site of the former Sir Winston Churchill Public School, located at 301 MacDonald Avenue. The former school was deemed to be surplus by Hastings Edward District School Board in 2014 and has been closed ever since. Provided that the approvals and construction processes do not meet significant delays, students are scheduled to return to the school for the 2020-2021 school year. To-date, multiple community meetings have been held by the applicant to engage in a dialogue with parents, guardians, community members, students, and staff regarding the proposed development. Additional community meetings will be held through the review process.

It is the applicant's intent to merge all five parcels of land into a single property to maximize the efficient use of limited land resources. The school building itself will be expanded to the west, with the new addition being built closer to the sidewalk to create greater separation from the side lot lines and maximize available yard space behind the school.

Behind the school building, the yard will be reorganized into defined areas for various recreational and educational activities. The yard will include an outdoor learning plaza, a child care playground, a kindergarten playground, a hard surface play area, a playground, and a playing field. The yard area will continue to be fenced to ensure the safety of students, as well as to separate the playing field from the adjacent parking areas.

On-site parking for staff and visitors will be provided in three parking areas. The two existing parking areas will be maintained, and a third parking area will be established to the west of the school building. A total of 104 parking spaces will be provided on-site, including nine (9) drop-off spaces and six (6) accessible parking spaces.

The new western parking area will contain 24 new parking spaces, including two (2) accessible parking spaces, with a driveway providing ingress and egress off Bridge Street. The existing parking area on the east side of the school building will be reduced from six (6) parking spaces to four (4), including two (2) accessible parking spaces and two (2) drop-off spaces. The existing driveway will continue to provide ingress and egress to this parking area off Bridge Street, as well as provide access to the site for emergency vehicles. The existing southeastern parking area will be expanded to accommodate 69 parking spaces, including two (2) accessible spaces and seven (7) drop-off spaces. The southeastern parking area will include a one-way movement driveway and a two-way movement driveway off Herchimer Avenue. The southeastern parking area will be connected to the remainder of the school site by way of a pedestrian walkway.

The existing bus loading area will be expanded to accommodate up to five full-size school buses. The bus loading area will continue to be located along Bridge Street East, in front of the school. The parent pick-up / drop-off area will continue to be located in the southeastern parking area; however, the parking area has been reconfigured to better accommodate congestion during the peak afternoon pick-up time.

3.0 SUPPORTING STUDIES

3.1 Stormwater Management Report

A Stormwater Management Report was prepared by Josselyn Engineering Inc. on August 22, 2019. This report determines on site stormwater management for the proposed re-development of the subject site. Currently, there is a municipally owned 200mm sanitary and 300mm storm sewer passing through the subject property from Bridge Street to Hastings Drive on the west side of the existing building. These sewers will be relocated further west to allow the proposed school expansion. The report determined that an on site storm sewer shall be provided to convey drainage from the majority of the site to a proposed underground stormwater storage chamber system located in the east parking area. It was determined that the existing 300mm storm sewer is not sufficient to convey the existing flows from the site. The report recommends that this existing undersized 300mm storm sewer connecting to Herchimer Drive be replaced as part of the proposed works. It is recommended that areas which cannot be directed to the onsite storm sewer will drain uncontrolled so long as they do not represent an increase from the pre-development condition. Additional storage or controlled release may be provided in the controlled areas of the site to compensate for uncontrolled runoff. No rooftop or surface stormwater storage is proposed. Overall, the report found that stormwater management can be implemented on site to reduce post development flows to pre-development conditions. A detailed analysis of stormwater management should be undertaken as part of the Site Plan Control process.

3.2 Tree Report

A Tree Report was completed by Dogwoods on November 1st, 2018 for the five trees located at 375, 379, and 405 Bridge Street. The report includes an on-site inventory of existing trees on the subject site and recommendations for the retention of trees. The report indicates that the five trees are in moderate or moderate/poor condition. All five trees are Norway Maple trees. Where trees are to be retained through construction, the entire area within the dropline should be protected by plywood hoarding prior to any construction activity and remain in place until the completion of the project. This area should not be encroached, at any time, by equipment and/or material storage. Post construction considerations should include regular tree inspections, monitoring for pest, disease, and dead branches. Any identified problems should be removed professionally and promptly to mitigate any potential damage and injury to the tree. For trees #1-3, a Cobra support system should be considered for the larger main branches to mitigate risk of damages and injuries to the tree in the event of a structural failure. Elexicon has identified these five trees as interfering with the existing hydro line and hydro poles and are too close to the proposed school addition. As a result, the trees are scheduled to be drastically pruned to reduce their interference with existing hydro utilities and will likely be removed. As part of the Site Plan Control process, a new urban pedestrian plaza is proposed to be accommodated along the school frontage on Bridge Street which will include new trees and planting beds.

3.3 Transportation Impact Assessment

A Transportation Impact Assessment (TIA) was completed by WSP on August 27, 2019. The study area was determined in consultation with City of Belleville Staff and includes the subject site, as well as portions of Bridge Street East (from MacDonald Avenue to Herchimer Avenue) and Herchimer Avenue (from Bridget Street East to Pinegrove Crescent). More specifically, the TIA focuses on the Bridge Street East/MacDonald Avenue intersection and the Bridge Street East/Herchimer Avenue intersection.

Sidewalks are included on all roads within the study area, with each intersection featuring signalized pedestrian crosswalks. There are no dedicated cycling facilities in the study area. Public transit service is provided to the subject site via Route #1 of the City of Belleville operated public transit routes.

The existing site layout features a total of 61 parking spaces across two parking areas. A bus loading area is provided in front of the school along Bridge Street, having space for approximately two school buses. On-site pedestrian facilities connect the parking areas to the school building and the playground.

A site visit was conduction on January 31, 2019 to observe existing pick-up and drop-off operations. The following observations were made during that visit:

- Four buses dropped off students at the bus loading zone in front of the school each morning, arriving between 9:00 am and 9:15 am. Activity in the bus loading area after the 9:15 am bell was minimal. At the end of the day, three buses queued at the bus loading area. The third bus exceeded the loading zone capacity; however, it queued curbside behind the bus loading area and did not impede traffic flow along Bridge Street East.
- Parents were observed parking in the parking area and dropping students off. Parents walked students into the school until staff arrived at 9:00 am to greet the students. The parent parking area approached capacity between 9:00 am and 9:15 am, during which time accessible parking spaces were blocked. Parents began arriving for pickup at 2:50 pm and went inside to pick up students. Students existed the school to the parking area at 3:15 pm. From the 3:15 pm to 3:30 pm the parking area was over capacity and vehicles were parking in the adjacent Circle K parking lot. Vehicles cleared quickly and staff left at 3:40 pm. Traffic flow along Herchimer Avenue appeared unaffected. Pedestrian activity generally remained within the dedicated facilities. Snow accumulation reduced the availability of parking spaces by approximately five spaces.

The proposed redevelopment of the subject site will result in changes to the parking configuration. Changes will include a new parking area located to the west of the school building (west parking area), the existing six-space lot on Bridge Street E. (east parking area), an expanded Herchimer Avenue lot (south parking area), and an expanded bus loading area on Bridge Street E. The proposed reconfiguration will clearly define the pick-up / drop-off area and will include the following number of parking spaces:

- West Parking Area = 24 parking spaces (2 accessible spaces)
- East Parking Area = 4 parking spaces (2 accessible spaces, 2 drop-off only)
- South Parking Area = 69 parking spaces (2 accessible spaces) and 7 drop-off spaces
- Bus Loading Area = 5 full size bus spaces
- **Total =** 104 parking spaces (6 accessible spaces, 9 drop-off only) and 5 full sizes bus spaces

The TIA concluded that no modifications are required for either of the Bridge/MacDonald or Bridge/Herchimer intersections. The TIA included a review of other municipal school parking requirements. The City of Belleville Zoning By-law Number 10245 does not provide a minimum parking requirement for schools, therefore, the proposed development must rely on the parking requirement for land uses not listed. This results in a required parking supply of 205 parking spaces. This general parking requirement is not representative of the unique parking needs of the school, therefore, a review of the parking space requirements for the nearby City of Kingston and City of Quinte West was undertaken to determine the typical parking space requirements for schools in comparable areas. The Township of Kingston By-Law is the only of these reviewed that stated specific parking requirements for elementary schools, compared to a single parking rate for all schools, and was therefore considered the most appropriate for St. Joseph School. Based on this review, the TIA suggests that the minimum parking supply for the proposal development is 82 spaces in order to accommodate the peak demand of the elementary school.

The proposed parking supply of 104 spaces and provision of a defined pick-up / drop-off area will therefore exceed daily vehicle demand and meet the anticipated vehicle demand during peak periods (afternoon school pick-up). The parking space dimensions of 5.65 m x 2.7 m meets the minimum standards of the 2017 MTO Design Guide. The report acknowledges that bicycle parking racks are provided in multiple locations including the west parking area, beside the daycare building and in the playground area, which offers cyclists several points of access to the site. Overall, the TIA found that the proposed development is designed for sustainable modes and can be accommodated without incurring adverse impacts to the planned transportation network and services associated with the 2022 planning horizon.

3.4 Servicing Report

A Servicing Report was completed by Josselyn Engineering Inc. on June 27, 2019. The purpose of the report is to determine the servicing requirements for the proposed redevelopment of the elementary school site. The report investigated the available servicing capacity within existing sanitary, storm and water works for servicing the lands, as well as the location and availability of other utility servicing such as Bell, Gas, Hydro and Communications.

There is an existing municipally owned 200 mm diameter sanitary sewer on Bridge Street East. The existing 150mm sanitary sewer service to the existing school is connected to this sewer. The 200 mm sanitary sewer collects sewage flows from the east, west and north and flows into a municipally owned 250mm sanitary sewer on the west side of the original school property (before the purchase of the additional lots), which flows south to Hastings Drive. The 250 mm sanitary sewer on the school site is has a gradient of 0.43%. There is also a 300 mm municipal storm sewer in a common trench with the 250mm sanitary sewer.

There is an existing 150mm sanitary sewer lateral servicing the existing school which is connected to the existing 200mm sanitary sewer on Bridge Street. The existing service is vitrified clay pipe and a CCTV inspection of the service in March 2019 shows the sewer pipe to be in poor condition and may require replacement of the service within the road allowance of Bridge Street.

The proposed redevelopment of the school site will conflict with the existing sanitary and storm sewers which flow south to Hastings Drive. In order to resolve this issue, it will be necessary to re-route the existing sanitary and storm sewers to the west of the proposed construction. A new easement will be dedicated to the City of Belleville to accommodate future maintenances and access to the re-routed services. Approval from the MECP, in the form of an Environmental Compliance Approval (ECA) will be required for the proposed construction.

There is an existing 100 mm water service to the school, connected to the existing 200 mm watermain on Bridge Street East. The new school building will be provided with sprinklers for fire protection and the existing 100 mm water service is insufficient to accommodate the required water demand. The existing 100 mm water service from Bridge Street will be replaced with a new 150 mm water service to the school. The existing 100 mm water service will be removed and abandoned at the main on Bridge Street.

The provision of other utility services will be determined when a development application is made.

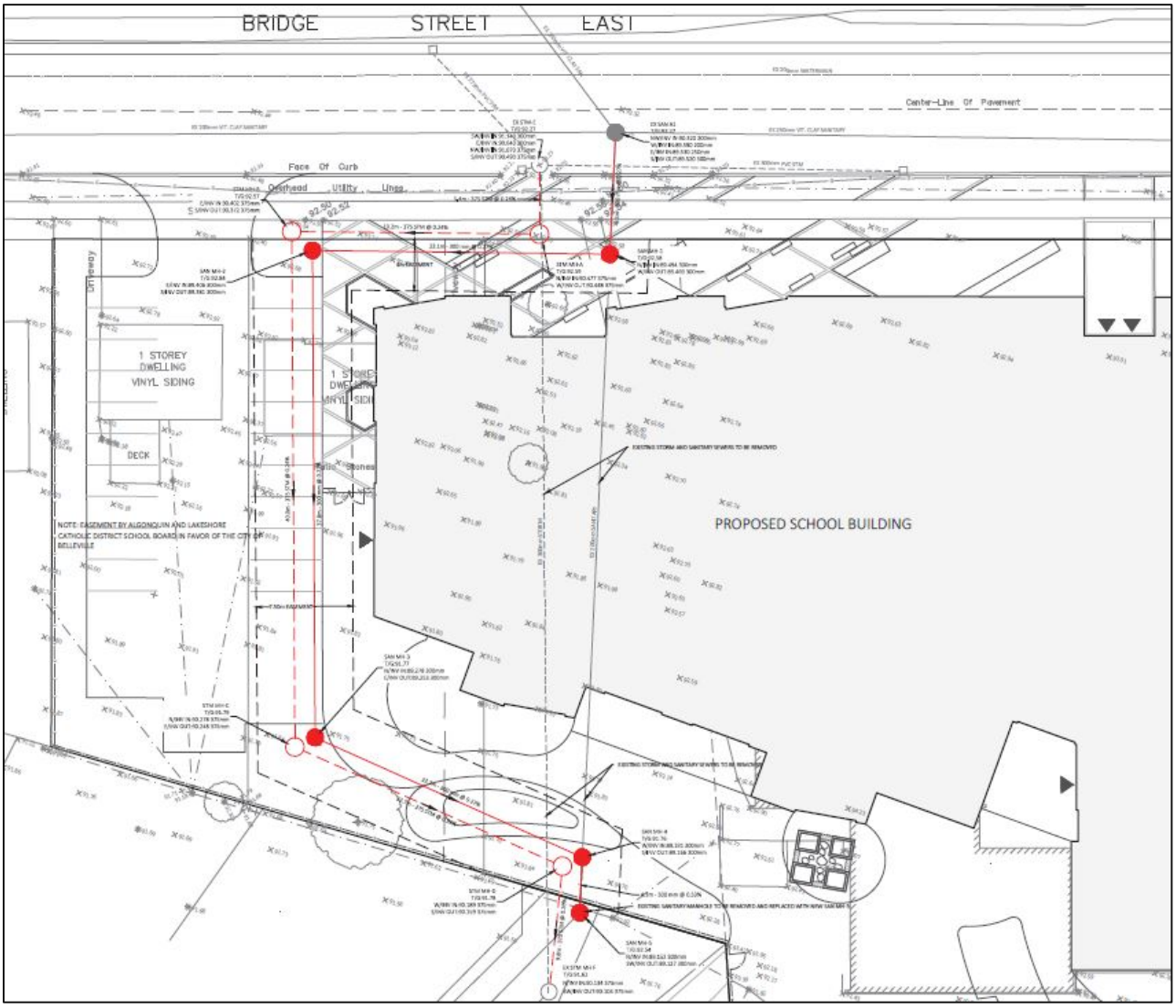


Figure 4: Sanitary & Storm Sewer Relocation (source: Josselyn Engineering Inc.).

4.0
POLICY & REGULATORY REVIEW

4.1 Provincial Policy Statement

The 2014 Provincial Policy Statement (PPS) provides high-level land use policy direction on matters of Provincial Interest as they relate to land use planning in Ontario municipalities. Decisions of municipal councils must be consistent with the PPS, which provides direction for issues such as the efficient use of land and infrastructure, the protection of natural and cultural heritage resources, maintaining a housing stock that appropriately addresses the demographic and economic diversity of households, and preserving natural resources for their future use. In relation to the proposed redevelopment, the 2014 PPS includes the following considerations:

Section 1.0 – Building Strong and Healthy Communities

Section 1 of the PPS provides direction for the creation of strong and healthy communities. The efficient use of land is supported through sustainable development patterns which consider the needs of communities, the environment, public health and safety, and economic growth. This section will address those policies which are relevant to the proposed development.

Section 1.1.1 – Healthy, liveable and safe communities are sustained by:

a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;

The proposed development represents an efficient use of available land resources. The expanded educational facility will support and promote the growth and development of youth in the City of Belleville, contributing towards the future success of the City and Province.

b) accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons), employment (including industrial and commercial), institutional (including places of worship, cemeteries and long-term care homes), recreation, park and open space, and other uses to meet long-term needs;

The proposed development will expand existing youth educational facilities which will contribute positively towards the long-term needs of families as the population of the City of Belleville continues to grow.

c) avoiding development and land use patterns which may cause environmental or public health and safety concerns;

The proposed development will not cause any environmental or public health and safety concerns.

d) avoiding development and land use patterns that would prevent the efficient expansion of settlement areas in those areas which are adjacent or close to settlement areas;

The proposed development will not prevent the efficient expansion of settlement areas.

e) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

The proposed development will expand available educational services available in the area while requiring relatively minimal additional land resources to do so.

f) improving accessibility for persons with disabilities and older persons by identifying, preventing and removing land use barriers which restrict their full participation in society;

The school is designed to be barrier-free and accessible for all members of society. The new portions of the building have been modelled after the ALDCSB's recently built St. Francis of Assisi Catholic School in Kingston.

g) ensuring that necessary infrastructure, electricity generation facilities and transmission and distribution systems, and public service facilities are or will be available to meet current and projected needs; and

As per the findings of the Servicing Report, the existing municipal infrastructure has enough capacity to accommodate the proposed development. The proposal will result in the expansion of the existing school and will include space for an Early Years Centre (EarlyON) and Childcare Facility for the benefit of the Belleville community. This will contribute positively towards ensuring that sufficient community services are available to meet current and projected needs of residents in the City.

h) promoting development and land use patterns that conserve biodiversity and consider the impacts of a changing climate.

The proposed development will not have an adverse impact on biodiversity as the site is located within an established urban residential neighbourhood. The proposed renovations and addition to the existing school will improve the energy efficiency of the site through use of contemporary design and technology.

Section 1.1.3.2 – densities and a mix of land uses which:

a) densities and a mix of land uses which:

1. *efficiently use land and resources;*
2. *are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;*
3. *minimize negative impacts to air quality and climate change, and promote energy efficiency;*
4. *support active transportation;*
5. *are transit-supportive, where transit is planned, exists or may be developed; and*
6. *are freight-supportive;*

The proposed development efficiently utilizes available land resources. Given that the school is located within an existing built-out neighbourhood, there are limited opportunities for expansion to community service and educational facilities. As per the findings of the Servicing Report, the proposed development will not require any expansion to the existing infrastructure system. The proposed expansion of the existing school will include space for an Early Years Centre (EarlyON) and Childcare Facility for the benefit of the Belleville community, thereby expanding the availability of public service facilities. The proposed development will also improve the energy efficiency of the site through contemporary design and technology. The site is accessible by pedestrians and cyclists along Bridge Street and Herchimer Avenue, as well as by way of a pedestrian pathway connecting the rear of the site to Hastings Drive. Public transit services are provided along Bridge Street, with stops in proximity to the subject site. Item *6* is not relevant to the proposed development.

Section 1.6.7.5 – Transportation and land use considerations shall be integrated at all stages of the planning process.

The proposed development will expand and improve the functionality of available parking areas. Details pertaining to the functionality of the parking area will be further examined at the Site Plan Control stage of the development review process.

Section 2.0 – Wise-Use and Management of Resources

Section 2 of the PPS considers the wise use and management of resources, which provide economic, environmental, and social benefits. This is achieved through policies which provide for the conservation of biodiversity, protection of the health of the Great Lakes, and protection of natural heritage, water, agricultural, mineral, and cultural heritage and archaeological resources. There are no significant natural features or systems which have been identified on or adjacent to the subject site. Neither the subject site nor any of the adjacent sites have been identified as containing any cultural heritage resources of value.

Section 3.0 – Protecting Public Health and Safety

Section 3 of the PPS provides direction reducing the potential for public cost or risk to Ontario residents from natural or human-made hazards. The subject site is not located on, abutting, or adjacent to lands affected by

natural or human-made hazards. As such, there are no public health and safety concerns regarding the proposed redevelopment.

It is our professional planning opinion that the proposed zoning by-law amendment conforms with the policies of the Provincial Policy Statement.

4.2 City of Belleville Official Plan

The City of Belleville Official Plan was adopted on June 18th, 2001 and was approved by the Ministry of Municipal Affairs and Housing on January 7th, 2002. The planning horizon for the Plan is the year 2021 and it is intended to provide direction for future development and growth in the City of Belleville. The Official Plan provides policy direction on matters relation to development, environmental and physical resources, growth pressures and patterns, economic development, agricultural, tourism, commerce and industry, social needs, and linkages. The subject site is dual-designated Community Facility and Residential Land Use, as per Schedule B – Land Use Plan: Urban Serviced Area.

Section 3.10 of the Official Plan provides policy direction for lands designated Residential Land Use. The Residential Land Use designation is generally intended to accommodate a wide range of residential uses, as well as some limited supporting uses such as small convenience retail, churches, or libraries.

Section 3.11 of the Official Plan provides policy direction for lands designated Community Facility. The Community Facility designation is intended to recognize and accommodate the most significant community and institutional uses through local communities. The Community Facility designation is generally located within predominantly residential neighbourhoods and permits a variety of institutional uses, including public, separate, or private schools.

An official plan amendment is required to establish a single designation across the entirety of the subject lands. Given that the site will be used exclusively as an educational institution, and given the size and scale of the proposed redevelopment, the Community Facility designation is most appropriate for the subject site.

The relevant policies of the following sections of the Official Plan are reviewed below:

- Section 2: A vision for the City of Belleville
- Section 3: Land Use Policies
- Section 5: Servicing Policies and Utilities
- Section 6: Transportation Policies
- Section 7: General Development Policies

Section 2 – A Vision for the City of Belleville

Section 2 of the Official Plan outlines the Vision Statement within which the long-range planning of the City of Belleville should occur. With regards to the proposed commercial development, the following sections of the Vision Statement are of particular relevance:

> *Section 2.2.3 – Growth Pressures*
> *The City's population is projected to increase by 7,500 people by 2021 to approximately 54,000 inhabitants, a growth rate of roughly .7% per year. However, two trends may result in a growth rate up to twice the above rate (leading to a population of approximately 62,000 inhabitants by the year 2021):*
> - *the trend towards expansion of smaller urban communities within easy traveling distance to large metropolitan urban centres; and*
> - *the trend towards the City's expansion as the regional employment and service centre for the Quinte region and areas beyond.*
>
> *This additional growth can be managed by the Municipality through capital planning to expand infrastructure as necessary and through appropriate amendments to the land use schedules to establish*

additional serviced development lands. The Municipality currently has the servicing infrastructure in place to accommodate the anticipated growth. Growth will be accommodated through efficient use of existing serviced land, the logical extension or improvement of services, and appropriate infilling. In preparing for growth, careful planning and decision-making will ensure the unique and desirable characteristics of the City are not lost in accommodating growth pressures.

As a result of the real and anticipated growth in the City, it is necessary to expand existing services. From a service delivery perspective, a growing population results in increased strain on existing education services and facilities as the number of students grows. The proposed redevelopment will result in an expansion of St. Joseph Catholic School, adding six new classrooms to the existing school for a total capacity of 532 students.

Section 2.2.9 – Social Needs

The City of Belleville will be a healthy community with a high quality of life for all of its citizens. While the City will offer an attractive location for retirees, it is intended that all age groups will find the City a pleasant and enjoyable environment in which to live. The well being of the City's residents will depend upon the effective delivery of:

- *professional health care services (i.e. a full range of professional medical service providers, public health programs, emergency care, full service hospital);*
- *affordable and well-maintained housing for people of all ages, financial capacity and levels of independence (single detached homes, multiple residential, home sharing, nursing homes, homes for the aged, etc.);*
- *health and community services including those that rely greatly on the efforts and donations of volunteers from within the community;*
- *education that provides skills for healthy living, professional development, self-fulfillment and employment opportunities within the City;*
- *recreational programs and events that encourage physical activity and social interaction for all age groups;*
- *cultural programs and activities that offer enrichment and education and that foster an appreciation of the City's cultural heritage;*
- *a healthy environment and bio-diversity to be enjoyed by all; and*
- *opportunities for investment to create employment for all ages and abilities, and services for the local population.*

Health care and social services will be community based and accessible; the urban serviced area will serve as a base for the administration of health services.

The proposed expansion of St. Joseph Catholic School will promote the effective delivery of education for youth in the City. The school's student capacity will increase as six new classrooms are proposed to be added to the existing school building.

Section 3 – Land Use Policies

Section 3 of the Official Plan provides policy direction for the orderly development of the City within the framework of the Vision Statement. Land use designations are identified on Schedules A, B, and C of the Official Plan. As per Schedule B – Land Use Plan: Urban Serviced Area, the subject lands are dual-designated Community Facility and Residential Land Use.

The proposed official plan amendment will designate the entirety of the subject lands as Community Facility. This is appropriate given the scale and size of the proposed redevelopment of the existing school. Further details regarding the appropriateness of the Community Facility designation are discussed below.

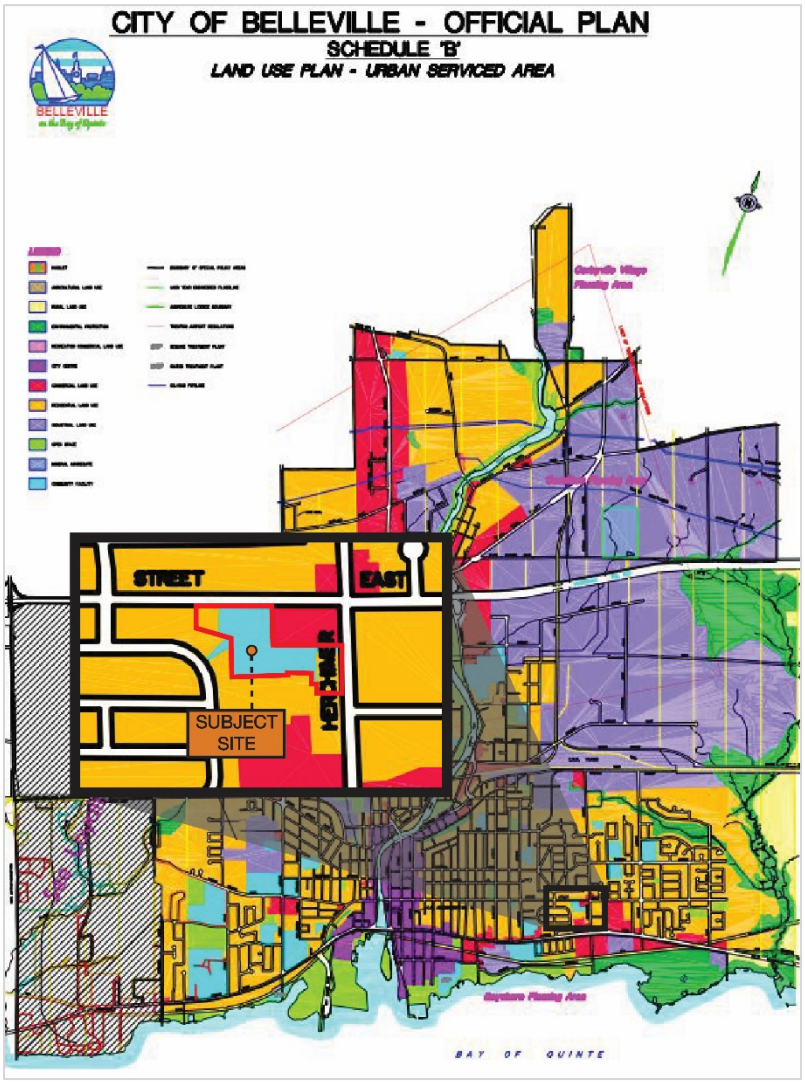


Figure 5: Schedule B – Land Use Plan (source: City of Belleville Official Plan).

Section 3.11 – Community Facility

The Community Facility designation recognizes the most significant community or institutional uses located throughout the City. These uses are typically located within predominantly residential neighbourhoods.

Section 3.11.1 – Permitted Uses

The predominant uses of the land in areas designated Community Facility are uses which exist for the benefit of the residents of the community and which are operated for the most part by the City, senior levels of government, school boards, non-profit organizations such as church groups and public service agencies. The uses permitted would include education facilities including public, separate and private schools (including staff and student housing), churches, cemeteries, hospitals, fire halls, day nurseries, police stations, libraries, museums, galleries, theatres, community centres, service clubs, banquet halls, nursing homes, homes-for-the-aged, parks and playgrounds, and similar uses. It is recognized however that not all areas so designated are appropriate for all forms or types of community facility uses. Also, commercial uses may be permitted where accessory, incidental or complementary to the community facility use.

The proposed redevelopment consists of a renovation and expansion to St. Joseph Catholic School. The existing school is a well-established elementary school within the East End neighbourhood of Belleville and is operated by the Algonquin and Lakeshore Catholic District School Board (ALCDSB).

Section 3.11.2 – Policies

a) *Uses permitted in the various areas designated Community Facility should be defined according to:*
   - *the function for which the area is designated;*
   - *the nature of access to the subject lands;*
   - *the servicing limitations of the subject lands; and*
   - *the nature of adjoining lands uses and the potential for land use conflict.*

   Facilities should be located where they are capable of adequately servicing their principal user groups and on lots which are adequately sized to accommodate buildings, parking, and landscaping.

   Where lands designated Community Facility are located in predominantly residential areas, residential uses may be permitted where it has been determined:
   - *there are no appropriate government or other institutional uses apparent for such lands; and*
   - *the residential land use is appropriate in keeping with the policies of Section 3.10 of this Plan.*

Most of the subject site is designated Community Facility and contains an existing school. The proposed Official Plan amendment will bring the entirety of the site under the Community Facility designation, ensuring that policies are applied consistently across the site and that the site be maintained as a community use in the future. Vehicular access to the site will be available via Bridge Street and Herchimer Avenue. Public transit services are available along Bridge Street and there are nearby safe active transportation facilities which connect throughout the neighbourhood. The broader neighbourhood is generally residential, with some commercial uses located adjacent to the east of the site. The site is located in proximity to other schools and parks, which are compatible community facilities. Given the pre-existing use of the site as an elementary school, an expansion to the school is appropriate, particularly within the context of the surrounding residential neighbourhood. The expansion of the school will enable greater access to educational services in the area, and broaden the range of community services offered to include a childcare facility and an EarlyOn centre.

b) *Development of the majority of institutional or public facility uses is dependent upon vehicular access to function properly. Points of ingress and egress should be established to ensure safe movement of:*
   - *vehicular traffic on the public street;*
   - *vehicular traffic on the subject and adjoining lands; and*
   - *pedestrian and cyclist traffic along the street.*

A Traffic Impact Assessment (TIA) has been completed by WSP. The findings of the TIA indicate that no modifications are required to the existing street network. Furthermore, the TIA concluded that the proposed parking supply of 104 spaces, in conjunction with the provision of a defined pick-up / drop-off area will meet the anticipated vehicle demand during peak periods (afternoon school pick-up). The report acknowledges that bicycle parking racks are provided in multiple locations including the west parking area, beside the daycare building and in the playground area, which offers cyclists several points of access to the site. Overall, the TIA found that the proposed development can be accommodated without incurring adverse impacts to the planned transportation network and services associated with the 2022 planning horizon.

c) *Further, such uses should have sufficient parking on-site but a reduced parking standard may be applied where there is sufficient parking off-site to address the needs of such establishments during peak usage periods.*

As per the zoning by-law, a minimum of one (1) parking space per 28 square metres of gross floor area is required for the proposed development, for a minimum requirement of 205 parking spaces. However, it should be noted that the required parking ratio is intended for uses which are not specifically contemplated by the zoning by-law, with a school being one of those such uses. The TIA concluded that a parking supply of 104 spaces will meet the anticipated demand during peak periods (afternoon school pick-up). The parking space dimensions of 5.65 m x 2.7 m meets the minimum standards of the 2017 MTO Design Guide.

d) *This Plan encourages the joint or multiple use of community facilities to provide the most efficient and effective use of physical resources in the community. This Plan also encourages grouping of community facilities to maximize use of related services and to provide convenience to the public.*

The proposed expansion to the existing school facility will facilitate the joint use of the new space by multiple community uses and services. In addition to St. Joseph Catholic School, space will be made available for a daycare facility and an EarlyON centre.

e) *The visual appearance of all parking lots and service areas should be enhanced through appropriate landscaping. Appropriate lighting of such areas is required to ensure public safety; lighting should be oriented however away from nearby residential properties and from interfering with visibility on public streets.*

Appropriate landscaping will be implemented throughout the site, including parking areas. Parking areas and all entrances will be lit. Details regarding more specific lighting and landscaping plans will be determined through the site plan control review process.

Parking lots, service areas and outdoor activity areas should be located so as to minimize the effects of noise and fumes on nearby residential properties. Measures to mitigate the impact of such facilities on adjoining residential areas by fencing or plantings, berming and buffer strips, or increased setbacks should be employed as required.

Parking lots and outdoor activity areas are to be located in generally the same areas as they have been previously. These locations help to ensure the safety of students, as well as minimize any potential adverse effects which may be experienced by nearby residential properties. The majority of noise or fume impacts that may result from the proposed redevelopment will generally be restricted to weekdays between the hours of 9:00a.m. and 4:00p.m.

f) *Community facilities should provide for safe pedestrian access and circulation onsite, and provide, as necessary, facilities such as bus drop-off areas and outdoor pedestrian crush spaces which do not conflict with vehicle movements.*

Safe pedestrian circulation throughout the site will be provided by way of a series of waking paths, connecting the school building to Bridge Street, the school yard, and southeastern parking area along Herchimer Avenue. A reserved bus loading area for drop-off / pick-up of students will continue to be provided at the front of the school, along Bridge Street. The existing bus loading area will be expanded to accommodate up to five full-size buses at a time. The location of the bus loading area is supported by the findings of the TIA, which indicate that there are no safety concerns for the function of the loading area. The existing parent drop-off / pick-up zone in the southeastern parking area along Herchimer Avenue will also be expanded to improve functionality and reduce congestion during peak afternoon hours. The findings of the TIA indicate that the reconfigured drop-off / pick-up area will improve the functionality of the parking area and reduce congestion overall.

Section 5 – Servicing Policies and Utilities

Section 5 of the Official Plan provides policy direction with regards to the provision of services and utilities throughout the City. The policies of Section 5, together with the policies of Section 6, address matters pertaining to roads and other transportation systems, as well as the provision and use of services and utilities.

Section 5.1 – Access to Public Roads

a) *All new development should have frontage on and direct access to an improved public road which is maintained on a year round basis by the Municipality or the Ministry of Transportation, with sufficient capacity to accommodate traffic generated by new development.*

The proposed redevelopment has access to multiple roads which are maintained on a year-round basis by the municipality. As per the findings of the TIA, the existing road network has capacity to accommodate the proposed redevelopment without the need for alterations or improvements.

Section 5.2 – Municipal Sanitary Sewer and Water Systems

a) *Development should not be permitted within the urban serviced area identified on Schedule 'B' of this Plan unless adequate municipal water and sewer services are available, except as may otherwise be permitted by specific policies of this Plan. Before committing services to any area or development proposal, Council should be satisfied that sufficient uncommitted reserve capacity exists in the municipal sewage and water systems to meet the needs of the proposed development.*

As per the findings of the Servicing Report, adequate municipal water and sewage services are available to accommodate the proposed redevelopment, pending completion of the recommended improvements and alterations to existing services.

b) *This Plan encourages an ongoing program of reconstruction and rehabilitation of the municipal water and sanitary sewer systems, including the separation of sanitary and storm sewers.*

The Servicing Report recommends certain improvements and alterations to on-site services, however the primary municipal service mains along Bridge Street will not require extension or expansion.

c) *To facilitate the cost-effective extension of municipal services, development requiring the installation of new municipal services should generally take place as logical extensions of existing development.*

The proposed redevelopment does not require the installation of new municipal services. The Servicing Report recommends certain improvements and alterations to on-site services, however the primary municipal service mains along Bridge Street will not require extension or expansion.

d) *Extensions of water and sanitary sewer services generally should be borne by private development and paid for either through direct contribution or other means such as development charges, with the Municipality assuming responsibilities in assisting with the costs of service extensions only as necessary to ensure equitable allocation of costs to all who benefit.*

Any improvements to existing services will be borne by the applicant.

e) *Prior to approving any significant infill development or redevelopment within built-up areas of the City, the Municipality should ensure that trunk water or sewer mains are adequate to service the development, or that provisions to upgrade such services can be established.*

As per the findings of the Servicing Report, adequate municipal water and sewage services are available to accommodate the proposed redevelopment, pending completion of the recommended improvements and alterations to existing services.

f) *As it is important that water and sewage treatment capacity exists to meet the needs of growth within the urban service area, the Municipality should prepare an annual update on the residual capacity in the water and sewage systems in accordance with Ministry of Environment guidelines as a planning tool to manage growth and undertake effective capital planning.*

Item *f* does not apply to the proposed redevelopment.

Section 5.5 – Stormwater Management

a) *Stormwater management is an important component of the City's broader interest in protecting water quality. Since development affects the quality and quantity of stormwater run-off, the Municipality should ensure that adequate consideration is given to stormwater management prior to permitting development to proceed. In establishing requirements for stormwater management systems, the Municipality should have regard to:*
    - *the Remedial Action Plan for the Bay of Quinte;*
    - *relevant guidelines of the Ministry of Environment; and*
    - *the recommendations of the City of Belleville Pollution Control Planning Study, 1997.*

b) *Due to the necessity of planning on a watershed basis, the Municipality should work with other agencies in preparing appropriate watershed studies for areas deemed by the Municipality to require such studies. The Municipality should have regard to the recommendations and conclusions of such studies; specifically, subwatershed plans may be used as a mechanism to co-ordinate the installation of new and the improvement of existing stormwater management facilities.*

c) *Prior to approval of any development, the Municipality may require stormwater management plans be prepared for review by the Conservation Authority, the Municipality, and other agencies that may be affected. Such plans should include a description of the stormwater management practices to be applied, and be in keeping with all relevant policies and guidelines of the Municipality, the Conservation Authority, and the Province. The Municipality may approve development conditional upon the recommendations of such studies being instituted. The policies that should be applied to the preparation of such studies are as follows:*
    i. *Increases in peak runoff from development should be controlled so as to reduce the impact of development on lands downstream, generally ensuring that peak post-development flows do not exceed pre-development rates. The Municipality may establish standards to which developments must adhere to achieve such objectives.*
    ii. *Stormwater quality should be considered in all stormwater management studies and plans, and means to address issues of quality instituted where feasible.*
    iii. *Stormwater management strategies may be employed on either a site-by-site basis or on an areas basis, as circumstances warrant. Where addressed off-site on an area basis, approval of site-specific developments may provide for payment of monies to assist with the provision of area-wide solutions.*
    iv. *On-site detention should be encouraged for large scale developments.*
    v. *Prior to the approval of any development, the Municipality in consultation with the Conservation Authority should be satisfied that adequate stormwater drainage outlets are available or can be provided.*

d) *Techniques supported by this Plan for stormwater management include but are not limited to:*
    - *detention ponds (normally dry flow-through ponds) which serve to detain water during significant storm events, used primarily to control peak runoff;*
    - *retention ponds (normally designed to retain water to support vegetation) which are used primarily to achieve water quality objectives;*
    - *artificial or man-made (engineered) wetlands which can be employed to achieve water quality objectives; and*
    - *on-site detention using site features such as appropriately designed parking areas or rooftops for detention, and landscaped areas where natural attenuation is possible, used primarily to control peak runoff.*

A Stormwater Management Report and Stormwater Management Plan has been prepared in support of the proposed redevelopment. The Stormwater Management Report prepared by Josselyn Engineering Inc. determined that the stormwater management can be implemented on site in order to reduce post development flows to pre-development conditions. A more detailed analysis of stormwater management on the subject site is forthcoming as part of the site plan control application.

Section 5.8 – Educational Facilities

a) *Educational facilities are considered an important component of any community. As such, the location of schools should be considered in the context of their importance to meeting the servicing needs of the community.*

The proposed redevelopment would result in the expansion of an existing school. The school is located within a predominantly residential neighbourhood, in relative proximity to other school and park uses in the area. The site is well serviced by public and active transportation modes. The site is well-suited to accommodate an educational facility.

b) *Elementary and secondary schools are under direct control of local public and separate school boards. This Plan should serve as a general guide for Council and school boards for future development of the public and separate school systems. In considering the location for future schools, the school boards should consider:*

- *the appropriate school size in relation to the size of the neighbourhood or catchment area which the school is intended to serve;*
- *the appropriate site size, topography and shape and its relationship to current or future abutting land uses;*
- *the geographical area the school is intended to serve, and suitability of locations to provide convenient and safe service to the greatest number of children;*
- *the nature and appropriateness of other facilities to be established in conjunction with the school;*
- *the timing of the construction of the school relative to development intended to occur in the school's vicinity;*
- *the nature of existing and future transportation systems and their suitability to meet the needs of the community for access to the school; and*
- *educational facilities are not a permitted use upon lands designated as Agricultural Land Use.*

The proposed redevelopment will not result in the creation of relocation of a school. The existing St. Joseph Catholic School building will be expanded with a two-storey addition. The school is located within a predominantly residential neighbourhood, with commercial uses located towards the east. Compatible community facility uses are located in the vicinity of the site, including other schools and park spaces. The redevelopment of the school will require the school to remain closed until construction is complete, with the school anticipated to be open for the 2020-2021 school year. In the meantime, classes are being held in the former Sir Winston Public School site, located at 301 Macdonald Avenue.

c) *Private schools providing elementary and secondary education are supported by this Plan. The guidelines pertaining to the identification of suitable locations for such schools would be as set out above for public and separate schools.*

The subject site contains St. Joseph Catholic School, an elementary school operated by the ALDCSB. The proposed redevelopment of the site will result in the renovation and expansion of the educational facilities.

d) *Loyalist College is a critical part of the educational system within the community. This Plan encourages the growth and expansion of this college to:*

- *extend its reach as a regional facility providing unique educational services;*
- *expand the range of educational programs to meet the needs of the community;*
- *establish services and programs as needed to meet the needs of local industry and commerce; and*
- *develop innovative ways of expanding the range of services (i.e. student housing) and business ventures (i.e. technology park) to strengthen the college and increase its importance as an important post-secondary educational facility in the Province of Ontario.*

Item *d* is not applicable to the proposed redevelopment.

Section 6 – Transportation Policies

Section 6 of the Official Plan provides policy direction for matters relating to maintaining a functional transportation network in the City. The transportation network includes roads, railways, recreational trails, sidewalks, cycle routes, airport facilities, and parking.

Section 6.1.2 – Municipal Roads

a) All public roads other than Provincial highways are under jurisdiction of the Municipality. Generally, all public roads are maintained year-round, although roads which are not essential, and which do not provide access to developed lands may not be maintained in an open condition during winter months.

b) Direct access to municipal roads will only be permitted in locations that can accommodate traffic in a safe manner. Where sight deficiencies exist because of curves or grades, no new access should be permitted unless the deficiency is corrected in a manner acceptable to the Municipality. New entrances should not be established unless the Municipality issues an entrance permit.

The proposed redevelopment has access to both Bridge Street and Herchimer Avenue. The two roads are maintained year-round by the municipality. As per the findings of the TIA, the proposed driveway locations are appropriate to accommodate the anticipated traffic flow on the subject site.

Section 6.1.4 – Design Criteria

b) The regulation of entrances onto roadways is required to ensure that public safety is achieved, and the function of the roadway is not compromised. In considering the nature of access to be permitted to roads from abutting lands, Council should consider the following criteria:

i. No direct access to an expressway from any abutting lot would be permitted; direct access to highways is permitted with the approval of the Ministry of Transportation. For highways under local jurisdiction, the Municipality would issue entrance permits.

ii. Direct access to major arterial roads should be permitted only from lots with large frontages; lots having narrow frontages should be developed using reverse frontages (i.e. onto an internal local road) or through consolidation of entrances. While not preferred, direct access from lots having narrow frontages to less significant arterial roads may be permitted provided the impact of entrances on the ability of the road to function as required would be minimal.

iii. Direct access to major collector and collector roads should be permitted from lots with large frontages and from lots with narrow frontages provided the impact of entrances on the ability of the road to function as required would be minimal.

iv. Direct access from abutting lots to local roads should be permitted.

The design of entrances onto any road is critical to the function of the road and the safety and convenience of the public. When approving entrances onto any road, the Municipality should consider:

- *whether the entrances would have an adverse impact on the ability of the road to perform its primary function;*
- *whether the entrances promote safe movement of traffic on the public street and on the adjoining lot through provision of adequate sight lines, and relationship with entrances on adjoining lots and lots on the opposite side of the road;*
- *traffic characteristics of the use on the lot, and the adequacy of throat storage and turning lanes to manage anticipated traffic flows;*
- *the safe movement of cyclists and pedestrians along the road; and*
- *the provisions for lighting, drainage, and signage.*

As per the findings of the TIA, the proposed driveway locations are appropriate to accommodate the anticipated traffic flow on the subject site.

Section 6.3.1 – Parking Facilities

a) *As parking is an integral component of the road transportation system, this Plan encourages the location and design of parking facilities that support the efficient and safe functioning of the transportation system.*

The proposed redevelopment includes 104 on-site parking spaces. Parking will be divided between three off-street parking areas. The first parking area will be located on the west side of the school building, off Bridge Street, and will contain 24 parking spaces, of which two (2) will be accessible spaces. The second parking area will be located on the east side of the school building, off Bridge Street, and will contain four (4) parking spaces, of which two (2) will be accessible spaces and two (2) will be drop-off spaces. The third parking area will be located in the southeastern portion of the site, with access provided via two driveways along Herchimer Avenue. The southeastern parking area will include 69 parking spaces, of which two (2) will be accessible spaces. A dedicated parent drop-off / pick-up area, with seven (7) parking spaces, will be located in this parking area, allowing for one-way vehicular movement through the drop-off zone.

b) *On-street parking may be permitted on any road upon where such parking would not cause any hazard and not adversely impact the functionality of the road. Where the issue of functionality applies to only peak traffic periods, on-street parking may be permitted in non-peak periods. Where on-street parking is permitted, care should be exercised to ensure:*
   - *good sight lines are maintained;*
   - *access to abutting lands is not adversely impacted; and*
   - *traffic flow along the street is not unreasonably impacted.*

   To ensure these conditions are met, the Municipality may restrict parking to only one side of any road, establish no-parking zones, or limit the time during which parking is permitted. To assist with winter maintenance of roads, over-night on street parking may be restricted.

   Generally, on-street parking would be prohibited on most arterial roads and would only be permitted on major collector and collector roads if interference with traffic flows would not be unreasonable. Typically, on-street parking on local streets would be permitted.

Classes begin at 9:15am and students are dismissed at 3:15pm. The findings of the TIA demonstrate that the proposed on-street bus loading area will provide a safe loading and unloading area for students without disrupting traffic flow along Bridge Street. The parent drop-off area will be located on-site and is not anticipated to cause any significant disruption to traffic flow long Herchimer Avenue.

c) *The Municipality should have regard to the following factors when considering the approval of individual parking lots and the parking component of a larger development:*
   i. *Access and exit to parking areas should be located so that:*
      - *visibility of other vehicles is not hindered by inadequate sight triangles or buildings set too close to public streets or the internal road system;*
      - *visibility is maintained between vehicles entering/exiting the site and pedestrians along the property frontage in order to minimize conflict;*
      - *there is minimal disruption to the function of the adjacent road by providing turning lanes where required; and*
      - *where practical, adjoining land uses on arterial, major collector and collector roads share access points in order to minimize traffic hazards.*
   ii. *Parking for persons with disabilities should be provided and located in respect to convenience of the user, proximity to building access points or public sidewalks.*
   iii. *Illumination of public parking areas should be provided to increase the safe and secure use of parking facilities but should be oriented so as to prevent glare onto adjoining lands or public roads.*

iv. *Parking areas should be designed to control storm water runoff in a manner that does not adversely impact abutting lands and which does not promote pooling on water on-site.*

v. *Pedestrian circulation routes through parking areas should respect natural pedestrian travel routes, minimize hazards and inconvenience and maximize pedestrian security.*

On-site parking for staff and visitors will be provided in three parking areas. Safe pedestrian circulation throughout the site will be provided by way of a series of waking paths, connecting the school building to Bridge Street, the school yard, and southeastern parking area along Herchimer Avenue. The findings of the TIA demonstrate that the proposed configuration of the site will be capable of safely accommodating the needs of pedestrians and vehicles alike.

Parental drop-off and pick-up of students will continue to occur in the parking lot at the southeastern end of the property to minimize impacts to traffic flow along Bridge Street. A bus drop-off / pick-up area will be maintained in front of the school, along Bridge Street, for school bus loading and unloading of students. The loading zone will be able to accommodate up to five full size buses at one time without impeding vehicular or pedestrian traffic along Bridge Street. The drop-off / pick-up zone will be connected to the remainder of the site by way of a pedestrian walkway. A fire lane will be maintained along the eastern façade of the school building to provide access to the site for emergency services.

Section 7 – General Development Policies

Section 7 of the Official Plan provides policy direction for matters which are common to the community as a whole. The provisions of Section 7 apply, where relevant, in addition to the policies under the specific land use designations and special policy areas identified on the land use schedules.

Section 7.1 – Community Improvement Policies

a) *The Municipality should encourage improvement to the quality of public services, community facilities and existing development, particularly within hamlets and the urban serviced area, and provide those additional community facilities as circumstances and finances permit.*

Community improvement may include:

- *upgrading and provision of improved municipal hard services (i.e. sewers, water systems, roads, hydro, sidewalks, etc.);*
- *upgrading of municipal soft services (i.e. parks, playgrounds, community centres) and improvement to the amenity of public lands;*
- *acquisition of lands to protect natural heritage areas (i.e. significant areas of flora and fauna or wildlife habitat such as the alvar or the Moira River caves);*
- *upgrading and provision of transit and traffic control systems;*
- *rehabilitation of existing buildings and structures; and*
- *replacement of inappropriate uses which have a serious negative impact upon the area with alternative uses and/or more appropriate buildings.*

The proposed redevelopment of the existing school represents an improvement to the quality of the community facilities. The redevelopment will encompass renovations and an expansion to the aging school building, providing a more contemporary and positive learning environment for students. The redevelopment will also enable additional community services to be accommodated within the building, including dedicated space for an Early Years Centre (EarlyON) and Childcare Facility for the benefit of the Belleville community. Renovations to the school yard will include an outdoor learning plaza, a child care playground, a kindergarten playground, a hard surface play area, a playground, and a playing field.

b) *Criteria used to define community improvement areas include:*

- *deficiencies in or lack of adequate municipal hard and soft services;*
- *poor building conditions due to age, design, construction, or neglect;*
- *existence of conflicting land uses; and*

- *lack of public services (i.e. parking areas, pedestrian services).*

This Plan designates the whole of the urban serviced area and lands designated Hamlet on the land use schedules as community improvement policy areas. Council may by by-law designate the whole or any part of such areas as a community improvement area. This Plan recognizes that of particular importance for community improvement initiatives are:

- *the lands designated City Centre;*
- *Special Policy Area #1 – Bayshore Planning Area; and*
- *Special Policy Area #2 – Point Anne.*

The subject site is located within the urban serviced area.

It is our professional planning opinion that the proposed zoning by-law amendment conforms with the policies of the City of Belleville Official Plan.

5.0 CURRENT & PROPOSED ZONING

The subject site is multi-zoned Residential Second Density Zone (R2), Special Residential Second Density Zone (R2-3), Special Residential Fifth Density Zone (R5-12), and Community Facility Zone (CF) in the City of Belleville Zoning By-law Number 10245. As the subject lands are split into four different zones with varying permitted uses and performance standards, it is proposed to establish a single site-specific Special Community Facility (CF-X) Zone for the subject lands. The proposed CF-X zone will permit the proposed school use, as well as describe appropriate performance standards for the subject site.

The five parcels which form the whole of the subject site are zoned as follows:

- 375 Bridge Street R2-3
- 379 Bridge Street R2-3
- 405 Bridge Street CF
- 176-184 Herchimer Avenue R2
- 172 Herchimer Avenue R5-12

The table below reflects the proposed redevelopment's conformity with the provisions of the CF zone:

Provision	Requirement	Proposed	Amendment Required?
Community Facility Zone (CF) – Part Y			
Permitted Uses	Main Community Facility Uses - Area - Armoury - Art Gallery - Board of Education Admin. Building - Church - Community Centre - Day Nursery - Fire Hall - Government Admin. Building - Library - Museum - Police Station - Public Hospital - Public, separate, or private school or college	Public school	No
Front Yard Depth (min)	7.5 m or ½ the height of the building, whichever is greater (building height = 12.0 m)	3.0 m	**Yes**
Rear Yard Depth (min)	7.5 m or ½ the height of the building, whichever is greater	11.3 m	No
Interior Side Yard Width (min)	7.5 m or ½ the height of the building, whichever is greater	East = 6.8 m (existing non-conforming) West = 23.0 m	**Yes**
Lot Coverage (max)	33%	20 % (3,430 m2/17,154 m2)	No
Part C – General Provisions			
Min. Parking Requirements (s.14)	Every building or structure not specified above = 1 space / 28 m^2 GFA (required = 205 spaces)	82 spaces	**Yes**
Accessible Parking	N/A	Per AODA Requirements (6 spaces proposed)	**Yes**

Provision	Requirement	Proposed	Amendment Required?
Parking Stall Dimensions (s.15(1)a)	2.4 m x 6 m, provided that a parking space having an angle of less than 20 degrees shall be at least 7.0 m in length.	2.7 m x 5.65 m	**Yes**
Parking Location (s.15(1)b)	All off-street parking required for any main use shall be provided on the same lot that the main use is located;	On-site parking provided	No
Ingress / Egress (s.15(1)c)	Ingress and egress directly to and from any off-street parking spaces shall be by means of a hard-surfaced aisle. For a parking angle of 90 degrees where each parking space has a minimum width of 2.7 m. the aisle may be reduced to a width of 6.7 m. for non-residential uses;	6.7 m parking aisles width proposed	No
Additional Parking Requirements (s.15(2)a)	Where parking is provided in any front yard or outside yard, the parking areas shall be separated from any adjacent street line by a strip of land not less than 1.5 m. in width, which shall be reserved for landscaping purposes and such strip shall include a curb or similar barrier, except for a driveway or driveways.	Bridge Street = 1.5 m	No
		Herchimer Ave = 1.0 m	**Yes**
Parking Buffer (s.15(2)d)	Where off-street parking abuts a Residential Zone or RH Zone, the parking area shall be separated from the abutting lot line by a strip of land at least 1.5 m. in width. Such strip of land shall be retained for landscaping purposes, and shall include at least one row of hardy shrubs not less than 1.5 m. in height and shall be maintained in a healthy growing condition except for a driveway or driveways.	2.0 m (west side of east lot) 3.0 m (west side of west lot) 2.0 m (south side of west lot)	No
Loading (s.16)	For every building or structure hereafter erected for an industrial or commercial use, except in the C5 Zone, involving the frequent shipping, loading or unloading of persons, animals, goods, wares or merchandise, there shall be provided and maintained for the premises, loading facilities on land that is not part of a street, comprised of one or more loading spaces in accordance with the gross floor area of the building or structure as follows: GFA over 2,300 m2 = 2 loading paces	Child drop-off zones provided on-site Five (5) bus loading spaces provided on Bridge Street	**Yes**
Loading Space Dimensions (s.17)	12 m x 3.6 m, vertical clearance of 4.5 m	Off-site loading proposed	**Yes**

Yard Setbacks

Relief is required as the proposed development does not meet the minimum front yard or interior side yard setbacks of the CF zone. A 3.0 metre front yard setback is proposed to provide a front yard setback similar to the existing building. A reduced front yard setback is proposed in order to provide greater side yard separation and maximize available yard space at the rear of the building. The front yard setback is not anticipated to impact the character of the street as it will be consistent with the existing building on the site. The east side yard setback is proposed to be 6.8 metres and the west side yard setback is proposed to be 23.0 metres. Relief is requested to reduce the east side yard setback in order to recognize an existing condition of the subject site. While the proposed side yard and front yard setbacks are deficient, they will accommodate necessary vehicle parking, bicycle parking and landscaping.

Parking Requirement
Relief is required to reduce the number of required parking spaces for the proposed development. The current parking requirement requires one (1) parking space per 28 square metres of gross floor area, however, this ratio is intended for uses which are not specifically contemplated by the zoning by-law, such as a school. A Traffic Impact Assessment was prepared by WSP which noted that a reasonable minimum parking provision for the site is 82 spaces in order to accommodate the peak demand of the elementary school. The report concluded that the proposed parking supply of 104 parking spaces, including six (6) accessible parking spaces and nine (9) drop-off spaces, will exceed the daily vehicle parking needs of the site and meet demand during peak periods, such as afternoon school pick-up. The proposed parking supply will not result in adverse impacts to the planned transportation network and services. The proposed parking ratio will support the needs of users of the site.

Parking Stall Dimensions
Section 15.1.b of the zoning by-law establishes minimum dimensions for all parking spaces. It is proposed to amend the dimensions of the standard spaces. Standard parking spaces are proposed to be 2.7 metres wide and 5.65 metres long. A Traffic Impact Assessment prepared by WSP noted that the proposed reduced parking stall dimensions meet the minimum standards of the 2017 MTO Design Guide. This reduced size will allow for a more efficient site configuration and allow a greater number of parking spaces to be accommodated on site.

Accessible Parking
Relief is required to allow accessible parking to be provided on-site. Accessible parking is proposed to be supplied as per the AODA guideline number 80.36 for a total of six (6) accessible parking spaces. This relief is requested in order to support the users of the subject site.

Landscaped Parking Buffer
Relief is required to allow a reduced separation area between a parking area and street line. A 1.0-metre wide separation is proposed between the south parking area and the Herchimer Avenue street line. This reduced separation area will allow the existing paved portion of the south parking area to be utilized, allow for a more sufficient site configuration, and allow a greater number of parking spaces to be accommodated in the existing parking area. This reduced setback will also maximize available yard space at the rear of the building.

Loading
Relief is required to permit off-site loading. Bus loading is proposed to be located along Bridge Street East, in front of the school, abutting the subject property. This relief will recognize the existing loading location and condition of the subject site. A Traffic Impact Assessment prepared by WSP notes that Bridge Street East is of adequate width to accommodate buses and two lanes of traffic. As well, this location will support an appropriate and efficient site design as the building's main entrance is located off Bridge Street East and will reduce the distance site users must travel to the building's main entrance. Vehicle drop-off only zones will be accommodated on site in the south and east parking lots.

6.0 CONCLUSION

The applicant is seeking to develop a two-storey addition on the existing St. Joseph Catholic School building, located at 405 Bridge Street in the City of Belleville. The proposed addition will include six (6) new classrooms, an EarlyOn Centre, and a daycare facility. The addition will be able to accommodate an additional 145 students at the school, for a total of 532 students. In order to accommodate the proposed addition, the applicant also proposes to redesign and expand the existing on-site parking configuration in order to provide adequate parking for staff and visitors, as well as to improve traffic circulation through the site during peak hours.

The proposed development conforms to the policies of the Provincial Policy Statement in that it represents an expansion to an existing institutional facility, improving access to youth educational and care services in the City within a compatible residential neighbourhood. The proposed official plan amendment will designate the entirety of the site Community Facility, which most accurately reflects the intended use of the lands. The proposed zoning by-law amendment will rezone the subject site to a site-specific Community Facility (CF-X) zone, permitting the school use across the site and describing appropriate performance standards for the school.

It is our professional planning opinion that the proposed official plan amendment and zoning by-law amendment represent good land use planning. If you have any questions or should you require any additional information, please do not hesitate to contact us at 613.542.5454.

Respectfully,

Mike Keene, MCIP, RPP
Principal, Planning + Development
Fotenn Consultants Inc

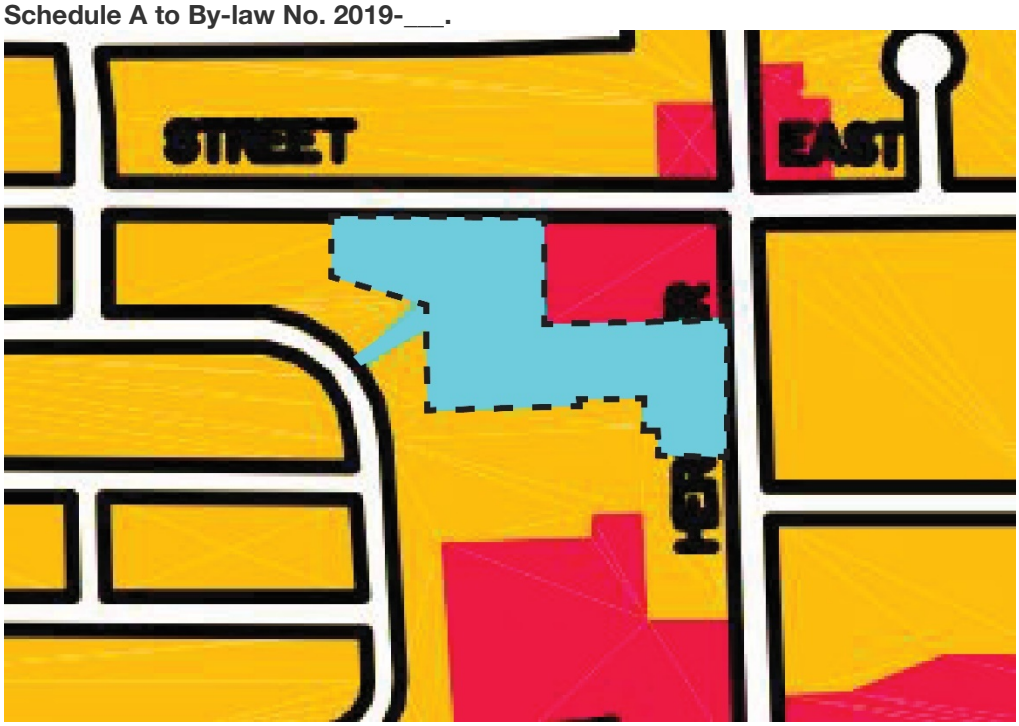
APPENDIX A
PROPOSED OFFICIAL PLAN AMENDMENT

The proposed Official Plan Amendment to the City of Belleville Official Plan will read:

Official Plan Amendment No. X

AMEND Schedule B – Land Use Plan: Urban Serviced Area, in the City of Belleville Official Plan, so as to re-designate the properties located at 375 Bridge Street, 379 Bridge Street, 405 Bridge Street, 176-178 Herchimer Avenue, and 172 Herchimer Avenue and shown on Schedule A to By-law No. 2019-___, from Residential Land Use to Community Facility.

Schedule A to By-law No. 2019-___.



APPENDIX B
ZONING BY-LAW AMENDMENT

1. The City of Belleville Zoning By-law Number 10245, as amended, is hereby further amended as follows:

1.1 The City of Belleville Zoning By-law Number 10245, as amended, is hereby further amended by rezoning the lands identified in Schedule B from the R2-3, CF, R2, and R5-12 Zone to Community Facility (CF-X) Zone, as shown on Schedule 'B' attached to and forming part of By-law Number 2019-__.

1.2 By adding a new subsection thereto, as follows:

Part Y – CF Community Facility Zone, Section 6(X) CF-X (405 Bridge Street, now City of Belleville, Hastings County)

a) Notwithstanding any sections of Parts C or Y of this by-law to the contrary, the following special provisions shall apply within the area zoned CF-X:

i. Minimum Front Yard Depth = 3.0 metres

ii. Minimum Interior Side Yard Depth = 6.8 metres

iii. Off Street Parking Requirement = 82 parking spaces

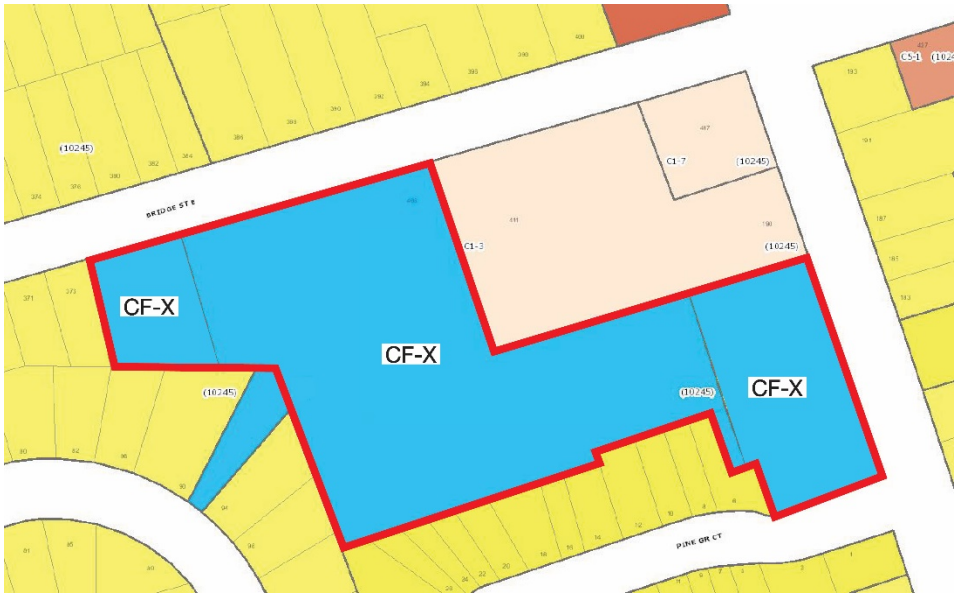
iv. Accessible Parking: Provided per AODA requirements

v. Parking Stall Dimensions: 2.7 m by 5.65 m

vi. Additional Parking Requirements: parking areas shall be separated from any adjacent street line by a minimum 1.0 metre wide strip of land

vii. Loading: Off-site loading permitted

Schedule B



ST. JOSEPHS CATHOLIC ELEMENTARY SCHOOL

405 BRIDGE STREET EAST, BELLEVILLE, ONTARIO

for Algonquin and Lakeshore Catholic District School Board

SERVICING REPORT

JOSSELYN ENGINEERING INCORPORATED
1225 Gardiners Road, Suite #105
Kingston, Ontario, K7P OG3
(613) 634-9278

September 5, 2019

JEI Project 1447

Table of Contents

1. Introduction

The purpose of this analysis is to determine the servicing requirements for the proposed additions and renovations to new St. Joseph's Catholic Elementary School site in Belleville for the Algonquin and Lakeshore Catholic District School Board. The site property is located on the south side of Bridge Street East and the west side of Herchimer Avenue, in the City of Belleville. The ALCDSB has purchased the three adjacent residential properties for the proposed expansion, two on the west side of the existing school, and one to the south, which will provide additional space for parking and expansion of the school construction. An aerial view of the existing school site and adjacent properties owned by the school board is attached as Appendix A.

This report is to advise on the following.

- Determine the perimeter municipal servicing available and determine if sufficient capacity is available within the existing sanitary, storm and water works to service the lands, and identify constraints on development that may exist.

- Determine the location and availability of other utility servicing, including Bell, Gas, Hydro and Communications.

2. Existing Conditions

The subject site is presently occupied by the existing St. Josephs school and is located on the south side of Bridge Street East and the west side of Herchimer Avenue, which are municipal roads built to an urban standard. The roads are paved, with curb/gutter, sidewalks, and with municipal services. The subject site is bordered on the west and south by residential properties and on the east by a commercial plaza. As noted previously, the ALCDSB has purchased the three adjacent properties on the west side of the existing site.

3. Proposed Renovations and Addition to Existing School

The proposed additions and renovations to the existing school will consist of the construction of a new two storey elementary school with an anticipated enrolment of 481 students. The projected floor area of the school building footprint is 3,474 m2, with a second storey floor area of 2,189 m2. The new building will be provided with sprinkler system for fire protection. A site plan is attached as Appendix B.

4. Sanitary Sewer

4.1. Sanitary Sewer Mains

There is an existing municipally owned 200 mm diameter sanitary sewer on Bridge Street East. The existing 150mm sanitary sewer service to the existing school is connected to this sewer. The 200 mm sanitary sewer collects sewage flows from the east, west and north and flows into a municipally owned 250mm sanitary sewer on the west side of the original school property (before the purchase of the additional lots), which flows south to Hastings Drive. The 250 mm sanitary sewer on the school site is has a gradient of 0.43%. There is also a 300 mm municipal storm sewer in a common trench with the 250mm sanitary sewer. A sketch showing the location of these sewers, as provided by Belleville Utilities, is attached as Appendix E.

There is an existing 150mm sanitary sewer lateral servicing the existing school which is connected to the existing 200mm sanitary sewer on Bridge Street. The existing service is vitrified clay pipe and a CCTV inspection of the service in March 2019 shows the sewer pipe to be in poor condition and may require replacement of the service within the road allowance of Bridge Street.

Construction of the school addition on the west side of the property will conflict with the existing sanitary and storm sewers which flow southerly to Hastings Drive. It will be necessary to re-route the existing sanitary and storm sewers to the west of the proposed construction. A new easement will be dedicated to the City of Belleville. See Preliminary Servicing Sketch attached as Appendix F. Design calculations for the existing condition, and the proposed new construction, are also shown in Appendix F.

The existing sanitary sewer to be replaced has a gradient of 0.43%, with a capacity of 39 l/sec. The sewer section immediately downstream has a gradient of 0.31%, and a capacity of 33.1 l/sec. Due to the increased length required by the relocation, the available gradient for the new sewer is 0.30%. This relocation will adhere to Ministry of Environment and Climate Change guidelines.

The reduction in capacity is of concern, therefore a larger pipe size (300 mm) has been provided, thereby providing an increase in capacity (53 l/sec) compared to the existing condition. Having a larger pipe discharge into a smaller pipe is not a typical practice, but in this case given constraints at each end, the increased size would be warranted.

The proposed sanitary sewer has been modeled using AutoDesk Storm and Sanitary Analysis. Based on an estimated flow of 33.1 l/sec (capacity of downstream sewer) the proposed system has adequate capacity. Modeling output profile is provided in Appendix F.

Approval from the MECP, in the form of an Environmental Compliance Approval will be required for the proposed construction.

4.2. Sanitary Sewer Service

Sanitary design flows from the project can be estimated based on the following design criteria.

- Total student population – 481 students
- Total staff – 100
- Design flow from MOE design guidelines - 140 litres per person per 8-hour day
- Infiltration flow – 0.14 l/ha/sec

Design sanitary flow from the site is calculated in Table 1 as 4.01 l/sec.

Table 1- calculation of sanitary sewage flow

Domestic flow				Infiltration			total
total population	Harmon factor (maximum = 4.0)	per capita flow (l/cap. Day)	domestic flow (l/s)	Total Area (ha)	Infiltration rate (l/ha. s)	Infiltration flow (l/s)	total flow (l/s)
581	4.00	140	3.77	1.71	0.14	0.24	4.01

A 200 mm diameter sanitary service is adequate for the design flow from the new building and will be connected to the new relocated sanitary sewer on the west side of the new school construction. The existing service on Bridge Street will be removed.

5. Storm Sewer Relocation

As noted in 4.1 above, there is a 300 mm municipal storm sewer in a common trench with the 250mm sanitary sewer. A sketch showing the location of these sewers, as provided by Belleville Utilities, is attached as Appendix E.

Construction of the school addition on the west side of the property will conflict with the existing sanitary and storm sewers which flow southerly to Hastings Drive. It will be necessary to re-route the existing storm sewer to the west of the proposed construction in conjunction with the relocation of the existing 250 mm sanitary sewer. A new easement will be dedicated to the City

of Belleville. See Preliminary Servicing Sketch attached as Appendix F. Design calculations for the existing condition, and the proposed new construction, are also shown in Appendix F.

The existing storm sewer to be replaced has a gradient of 0.58%, with a capacity of 73 l/sec. The sewer section immediately downstream has a gradient of 1.15%, and a capacity of 101.5 l/sec. Due to the increased length required by the relocation, the available gradient for the new sewer is 0.24%. This relocation will adhere to Ministry of Environment and Climate Change guidelines.

The reduction in capacity is of concern, therefore a larger pipe size (375 mm) has been provided, thereby providing an increase in capacity compared to the existing condition. Having a larger pipe discharge into a smaller pipe is not a typical practice, but in this case given constraints at each end, the increased size would be warranted.

The proposed storm sewer has been modeled using AutoDesk Storm and Sanitary Analysis. Based on an estimated 5 year flow of a tributary area of approximately 0.7ha and a runoff coefficient of 0.7 the proposed system has adequate capacity. Modeling output profile is provided in Appendix F.

A 200 mm diameter storm service is adequate for the design flow from the new building and will be connected to the new relocated storm sewer on the west side of the new school construction. The existing service on Bridge Street will be removed.

Approval from the MECP, in the form of an Environmental Compliance Approval will be required for the proposed construction.

6. Water Service

There is an existing 100 mm water service to the school connected to the existing 200 mm watermain on Bridge Street East. A sketch showing the location of this watermain as provided by Belleville Utilities is attached as Appendix E.

The new school building will be provided with sprinklers for fire protection and the existing 100mm water service is not sufficient to provide demand for a sprinklered building. The existing 100mm water service from Bridge Street will be removed and a new 150mm water service will be installed on the west side of the new school construction.

6.1. Water Demand

Water demand for the site is based on domestic demand and demand for firefighting. Domestic demand is based on population and consumption rates. Fire flow requirements are estimated in accordance with the Fire Underwriters Survey – Water Supply for Public Fire

Protection. Fire flow requirements for the subject building are attached as Appendix D. Design requirements for the subject site are summarized in Table 2.

Table 2
Water Demand for Design Conditions

Design Condition	Population	per capita consumption (l/day)	Peak Factor	Domestic flow (l/sec)	Fire flow (l/sec)	Design Condition (l/sec)	Design Condition USGPM
Average Day	581	140	1.00	0.94	0	0.94	11.09
Maximum Day	581	140	2.75	2.58	0	2.58	30.74
Maximum Hour	581	140	4.25	4.00	0	4.00	47.55
Max Day plus Fire	581	140	2.75	2.58	132	134.58	2133

6.2. Water Supply

The available water supply is based on the characteristics of the existing municipal system. Hydrant flow test result as supplied by Belleville Utilities is attached as Appendix C. The following table notes the available flow at the hydrant.

Hydrant I.D.	Location	Available Flow @ 20 psi
#471	Dundas Street East	**2,502 USGPM (9,471 l/min) (157.8 l/sec)**

Static pressure of approximately 58 psi can be expected, which meets the requirements for domestic flows. It can be seen that the available flow of 2502 USGPM at 20 psi meets the requirement of 2133 USGPM for this site.

7. Utilities

7.1. Electrical Distribution

Electrical service is provided by Elexicon Energy.

Electrical Service Info:

Electrical power peak load is estimated at 349kW based on the Ontario Electrical Safety Code Section 8 load calculation requirements for schools. At 80% max load on the overcurrent

protection this amounts to a requirement for a 600A electrical service at the desired 347/600V-3 phase – 4 wire voltage. The local electrical utility will provide the transformer size that they see fit to match the electrical load, and it is anticipated to be 500kVA pad mounted transformer on the west side of the property with primary ductbank coming from the utility high/medium voltage pole line down to the pad mounted transformer and secondary ductbank from the pad mounted transformer to the main electrical room on the east side of the building. The electrical service will come in on the west side, where the existing service is, but per architectural request and as coordinated with Elexicon Energy on site, it will now come in on the east side of the site, just east of the school's east laneway from Bridge Street.

7.2. Telephone

The Bell service is to be provided by Bell Canada. Communication services will come from the existing pole line services and through a ductbank to the building and route to the centrally location main IT room.

7.3. Natural Gas

The natural gas provider is Union Gas. There is an existing gas main on Bridge Street and service can be provided to the site from this main. For St Joseph's the estimated gas loads are:

Building Heat: 2500 MBH
Water Heating: 1000 MBH
Pressure Requested: 2-5 psi

8. Conclusions and Recommendations

Based on the above, the following conclusions are made, and recommendations presented.

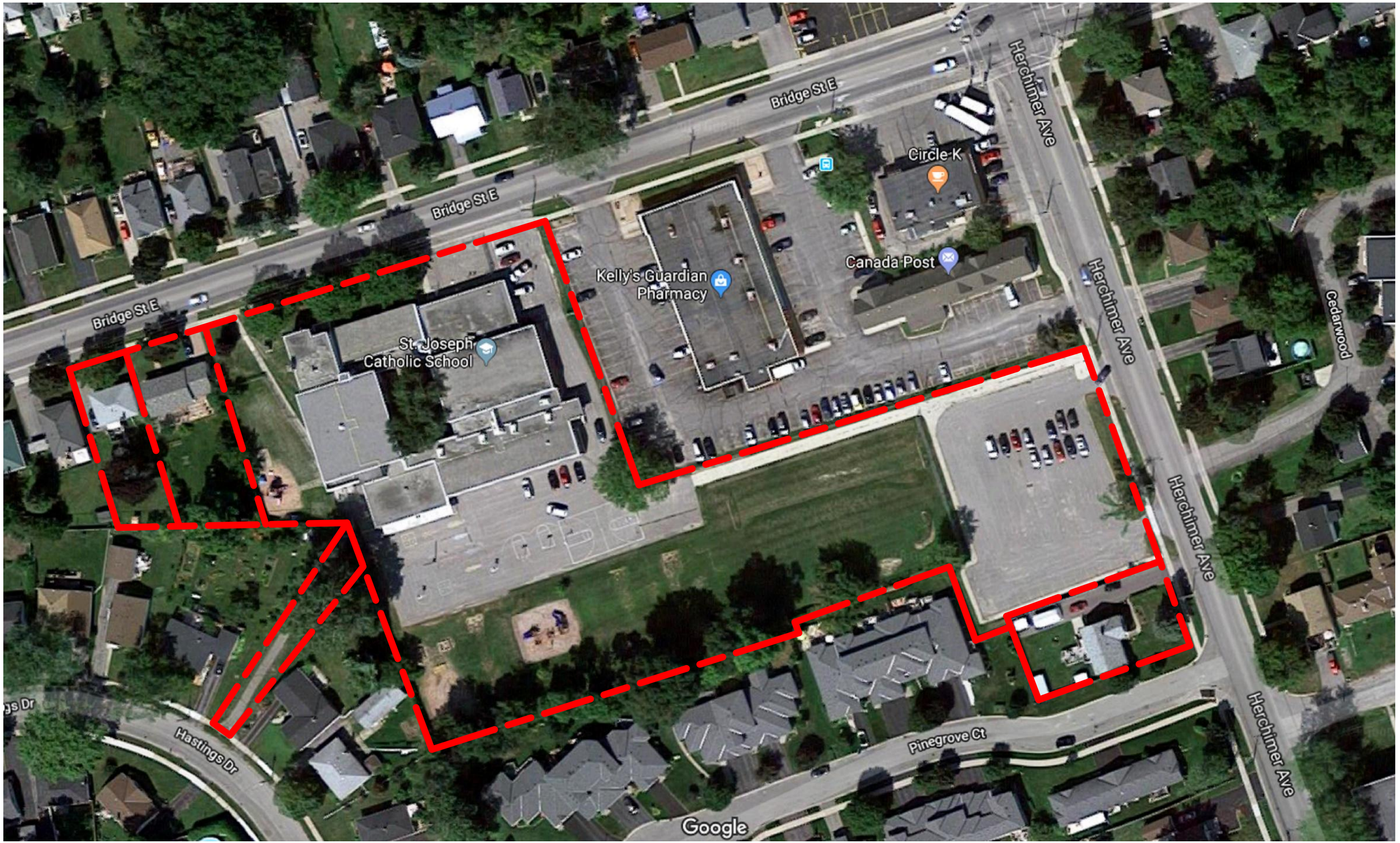
- A 200 mm diameter sanitary service is adequate for the design flow from the new building. Relocation of the existing municipal storm and sanitary sewers is recommended, in accordance with the design drawings and calculations provided herein. An ECA from MECP will be required for the relocation.

- A new 150mm water service will be installed to the school from the 200 mm municipal watermain on Bridge Street. The existing 100 mm water service will be removed and abandoned at the main on Bridge Street.

- Provision of other utility services will be determined when a development application is made.

Appendix A

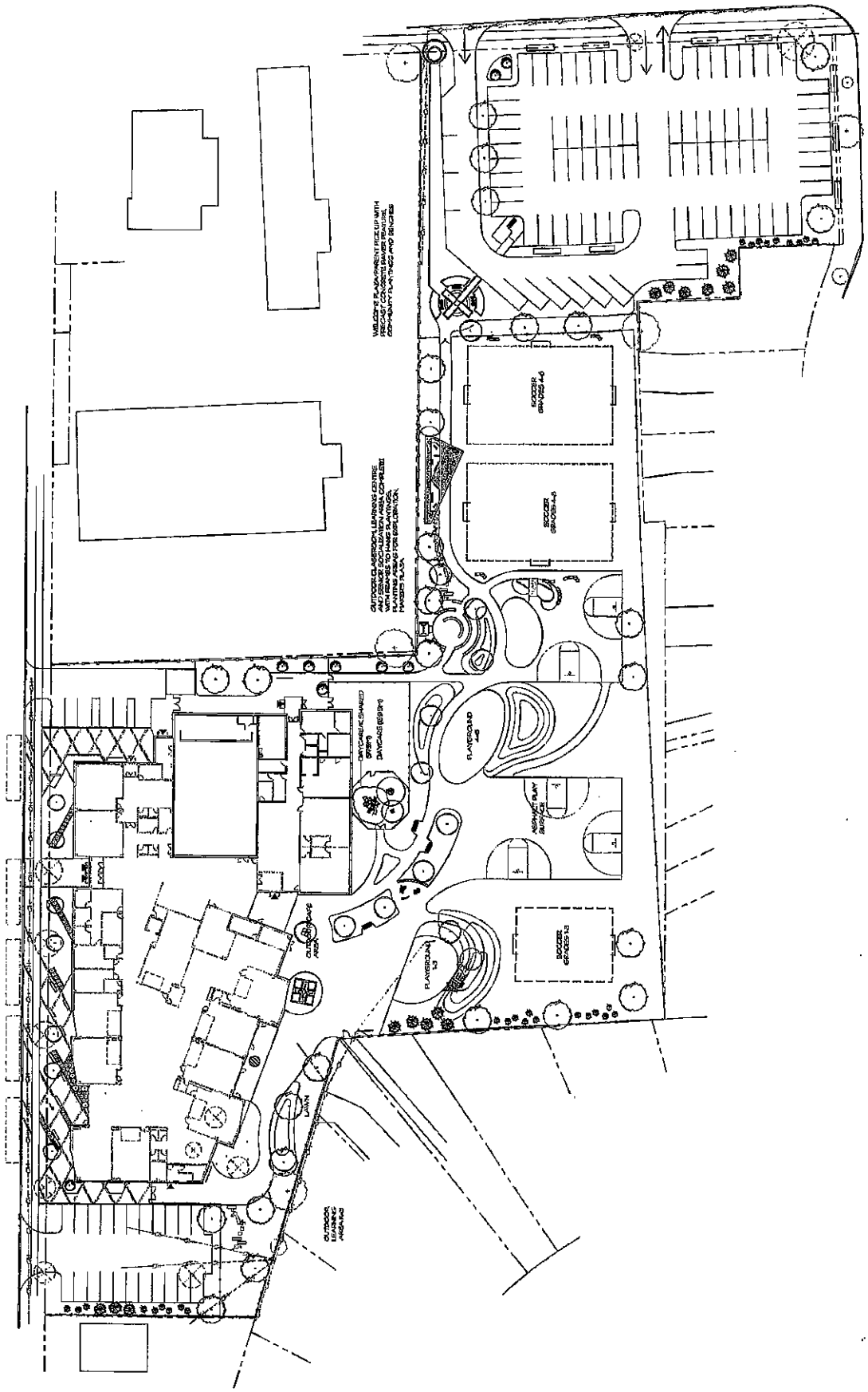
Aerial view of Existing School Property and Adjacent Properties Purchased by the Board



ST. JOSEPH- AERIAL VIEW

Appendix B

Site Plan



Appendix C

Hydrant Flow Test Results

BLUE

Routing
White - 1. Op. Mgr. 2. Draft. 3. FF bk.
Pink - File 842
Canary - Originator

Belleville Utilities Commission
459 SIDNEY STREET
P.O. BOX 939
BELLEVILLE, ONT., K8N 5B6
(613) 966-3651

FIRE HYDRANT FLOW TEST

Date: July 7 2016
Time: 10:30 a.M
Performed by Rb e CM
File: 842

Adjacent Hydrant ______ Ft. Above or Below Pitot Hydrant

Street Name Dundas E

Location on St. or name of Bldg. ______

Provide Four Pressure Readings:
Select outlets to give 10 psi drop at adjacent hydrant if possible

		OUTLETS one - 1"	one - 1 1/8"	one - 1½"	one - 2½"	two - 2½"	
Step One -	Adjacent Hydrant				62		psi (static)
Step Two -	Pitot Hydrant				55	40	psi (flow)
Step Three -	Adjacent Hydrant				60	58	psi (residual)
Step Four -	Adjacent Hydrant				62		psi (static check)

low with 20 psi residual at adjacent hydrant

$= \text{measured flow} \left(\frac{\text{available drop}}{\text{test drop}}\right)^{.54}$

Available drop is static less 20
Test drop is static less residual

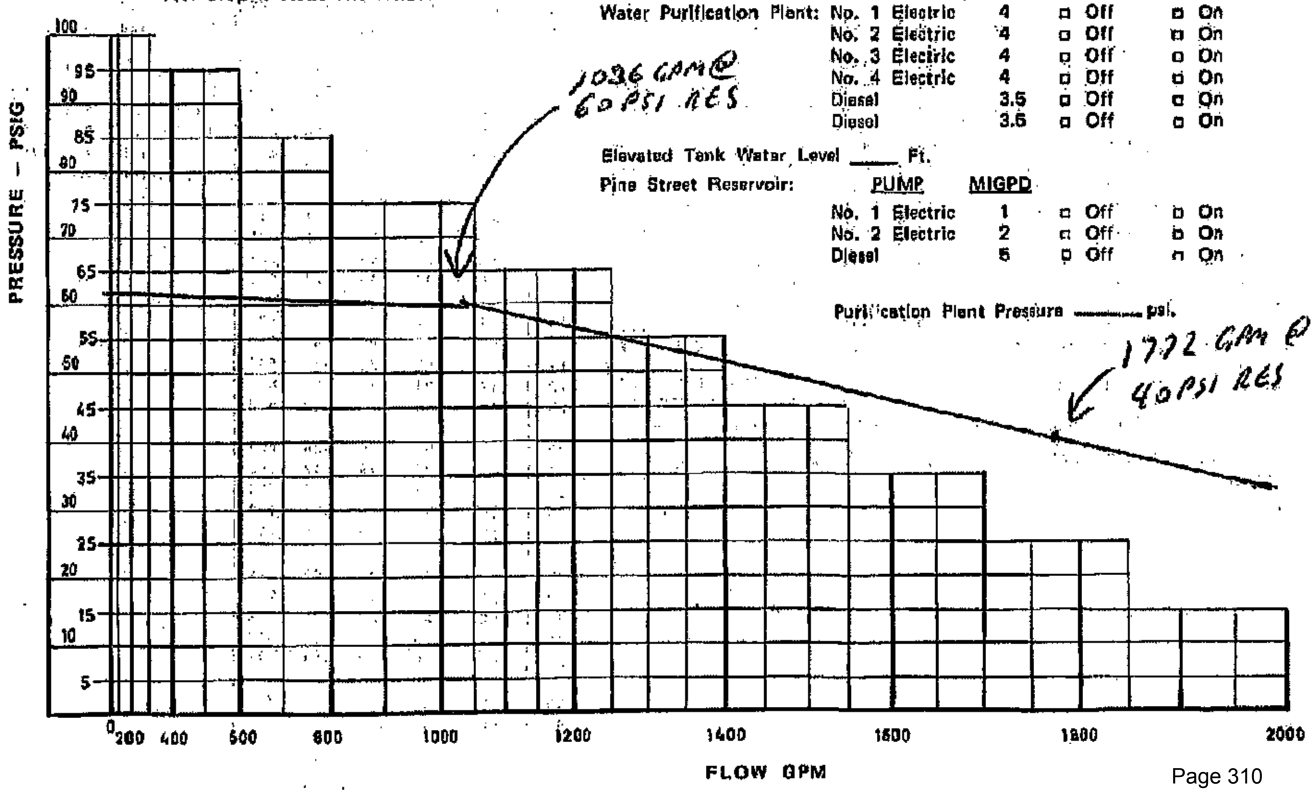
Information below can be obtained at a later date from records at Water Purification Plant.

Water Purification Plant:	PUMP	MIGPD		
	No. 1 Electric	4	◻ Off	◻ On
	No. 2 Electric	4	◻ Off	◻ On
	No. 3 Electric	4	◻ Off	◻ On
	No. 4 Electric	4	◻ Off	◻ On
	Diesel	3.5	◻ Off	◻ On
	Diesel	3.5	◻ Off	◻ On

Elevated Tank Water Level ____ Ft.

Pine Street Reservoir:	PUMP	MIGPD		
	No. 1 Electric	1	◻ Off	◻ On
	No. 2 Electric	2	◻ Off	◻ On
	Diesel	5	◻ Off	◻ On

Purification Plant Pressure ______ psi.



Appendix D

Fire Flow Calculations

St. Joseph's Catholic Elementary School - Bridge Street - Belleville
Calculation of required fire flows
Josselyn Engineering Inc. - May 6, 2019

Criteria	Non-combustible Construction		
Ground floor – 3474 m2			
Second floor – 2189 m2			
total floor area (m2)			5663
coefficient related to type of construction			0.8
Step 1 calculation (l/min)			13245
Step 2 - reduction for low hazard occupancy		-25%	-3300
Step 3 - sprinklers		-40%	-5300
Step 4 - Separation charges (see table below)			
north side		10%	
east side		5%	
south side		0%	
west side		10%	
total separation charges		25%	3300
TOTAL REQUIRED FIRE FLOW (L/MIN)			**7900**
TOTAL REQUIRED FIRE FLOW (L/SEC)			**132**

Notes: Fire Underwriters define construction types as follows:

Fire-Resistive Construction – Any structure that is considered fully protected, having at least 3-hour rated structural members and floors. For example, reinforced concrete or protected steel.

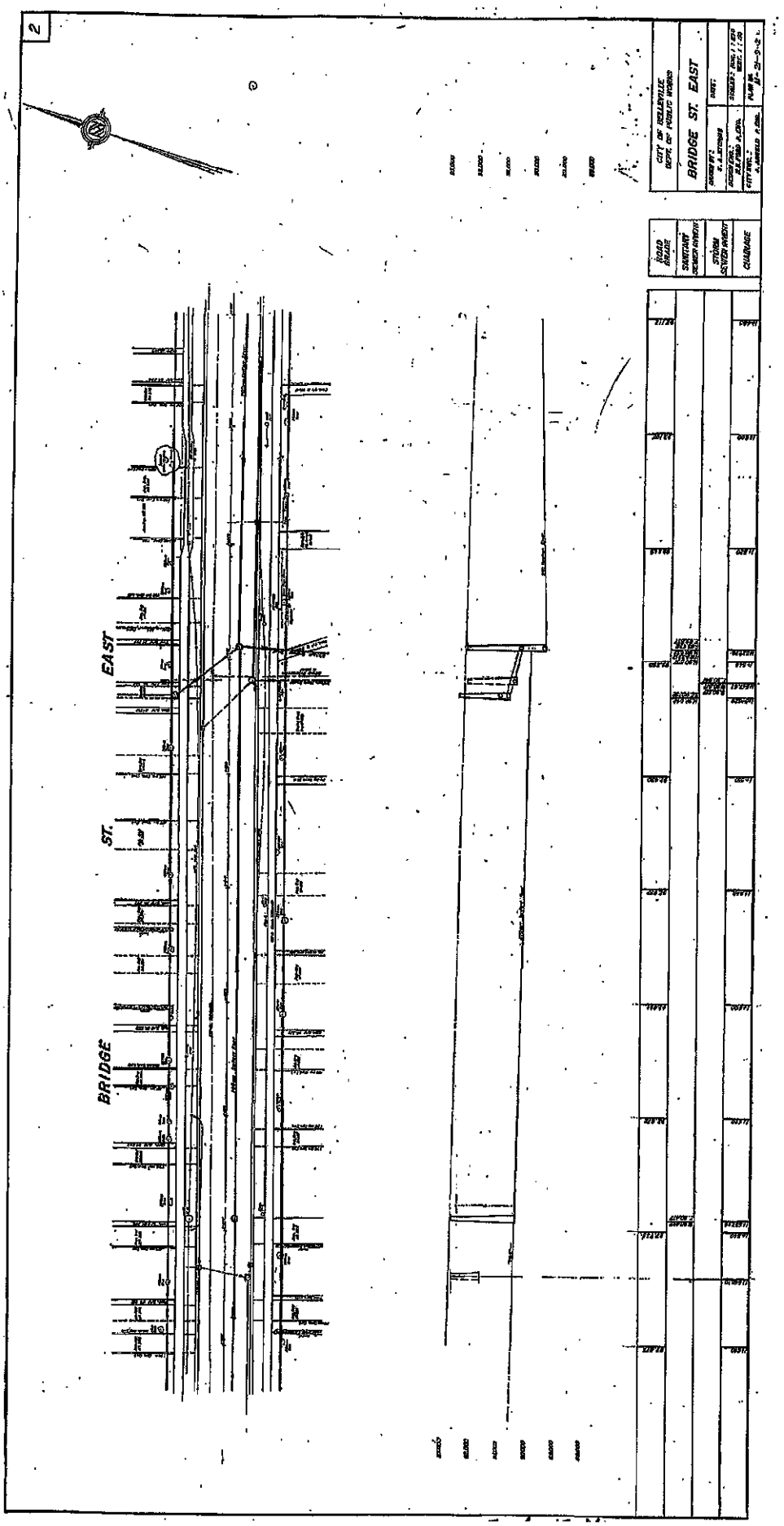
Non-combustible Construction – Any structures having all structural members including walls, columns, piers, beams, girders, trusses, floors, and roofs of non-combustible material and not qualifying as fire-resistive construction. For example, unprotected metal buildings.

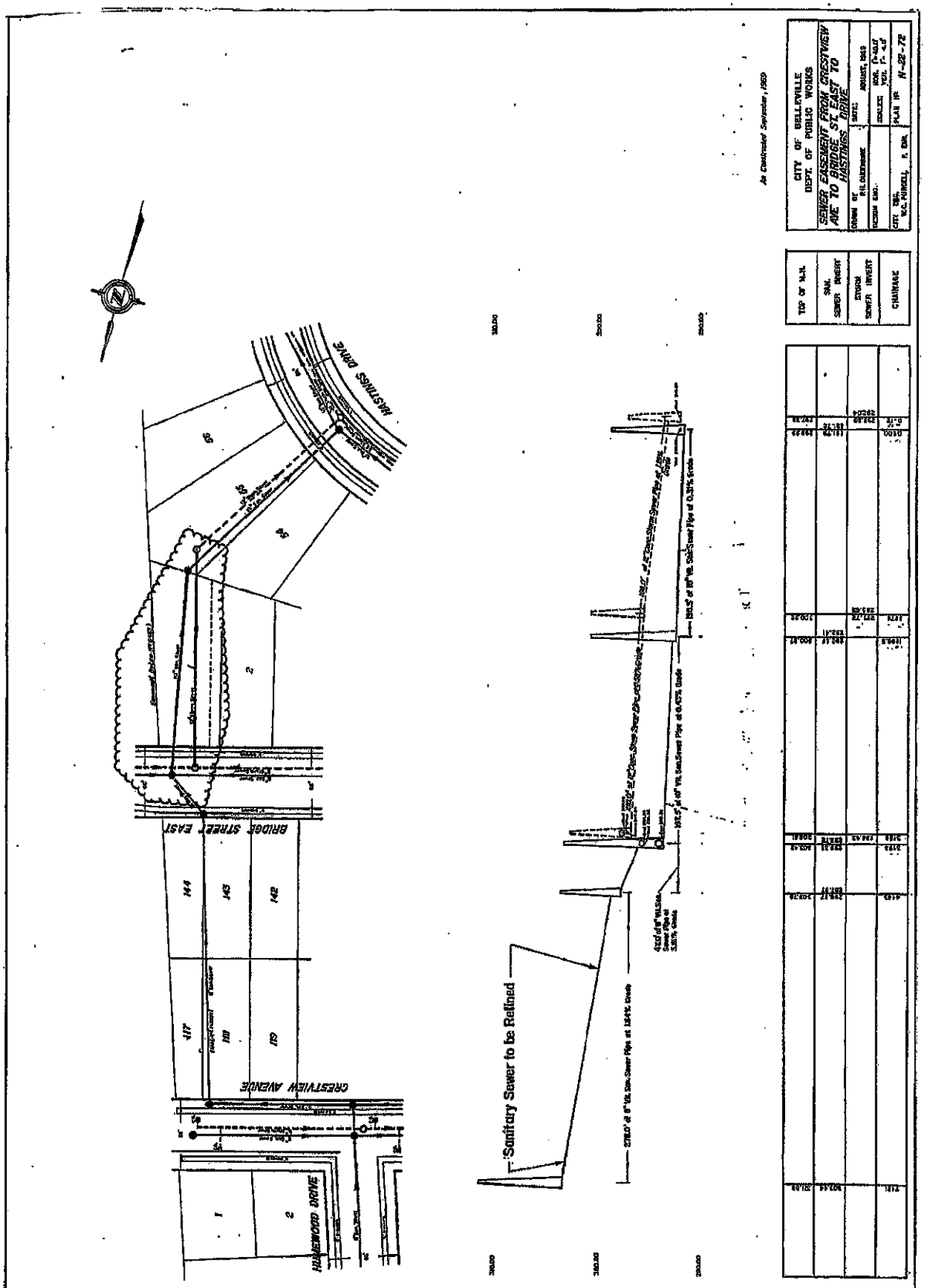
Separation	Charge	Separation	Charge
0 to 3m	25%	20.1m to 30m	10%
3.1 to 10m	20%	30.1 to 45m	5%
10.1 to 20m	15%		

The total percentage shall not exceed 75%.

Appendix E

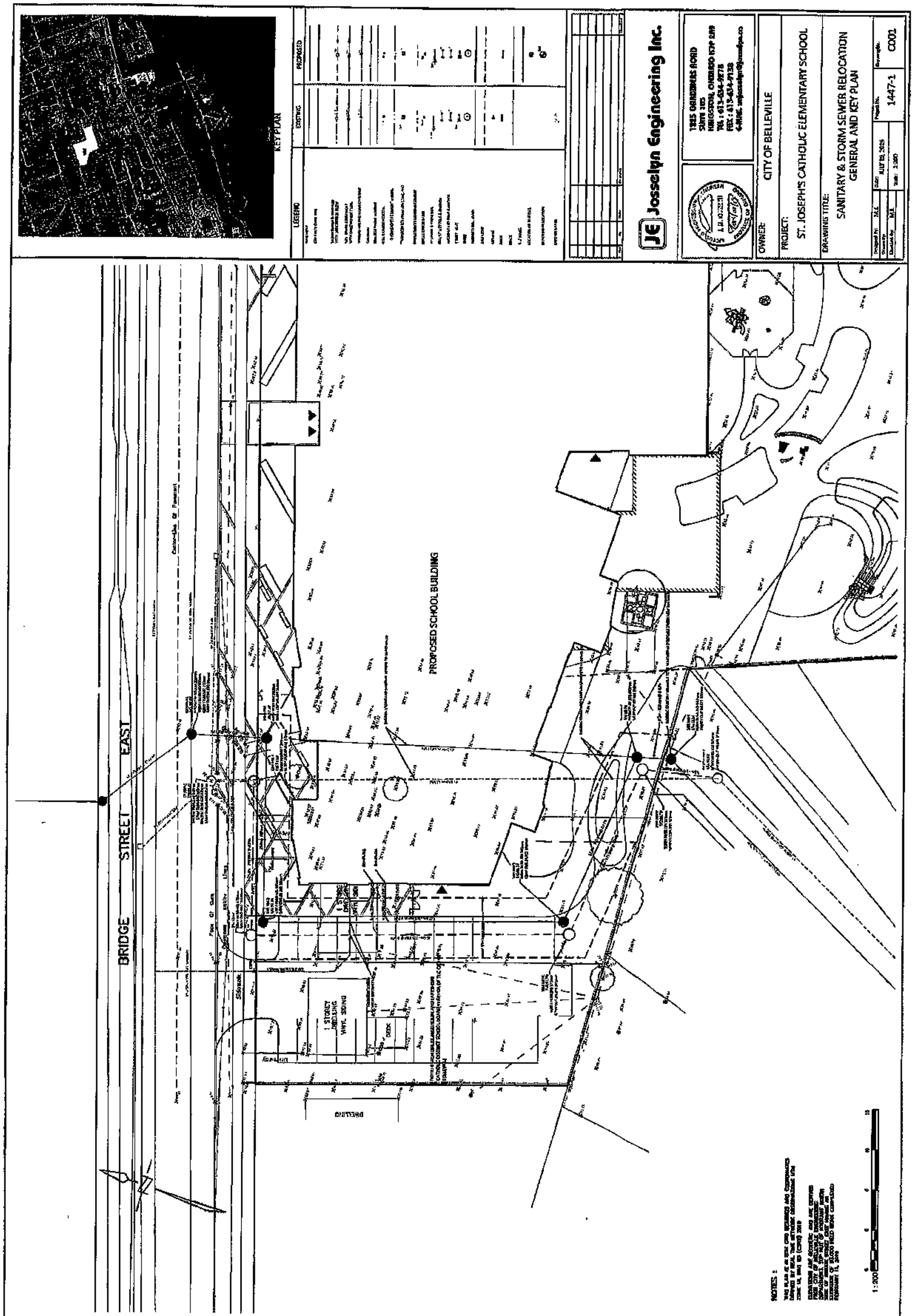
Sanitary Sewers, Storm Sewers & Watermain location sketches

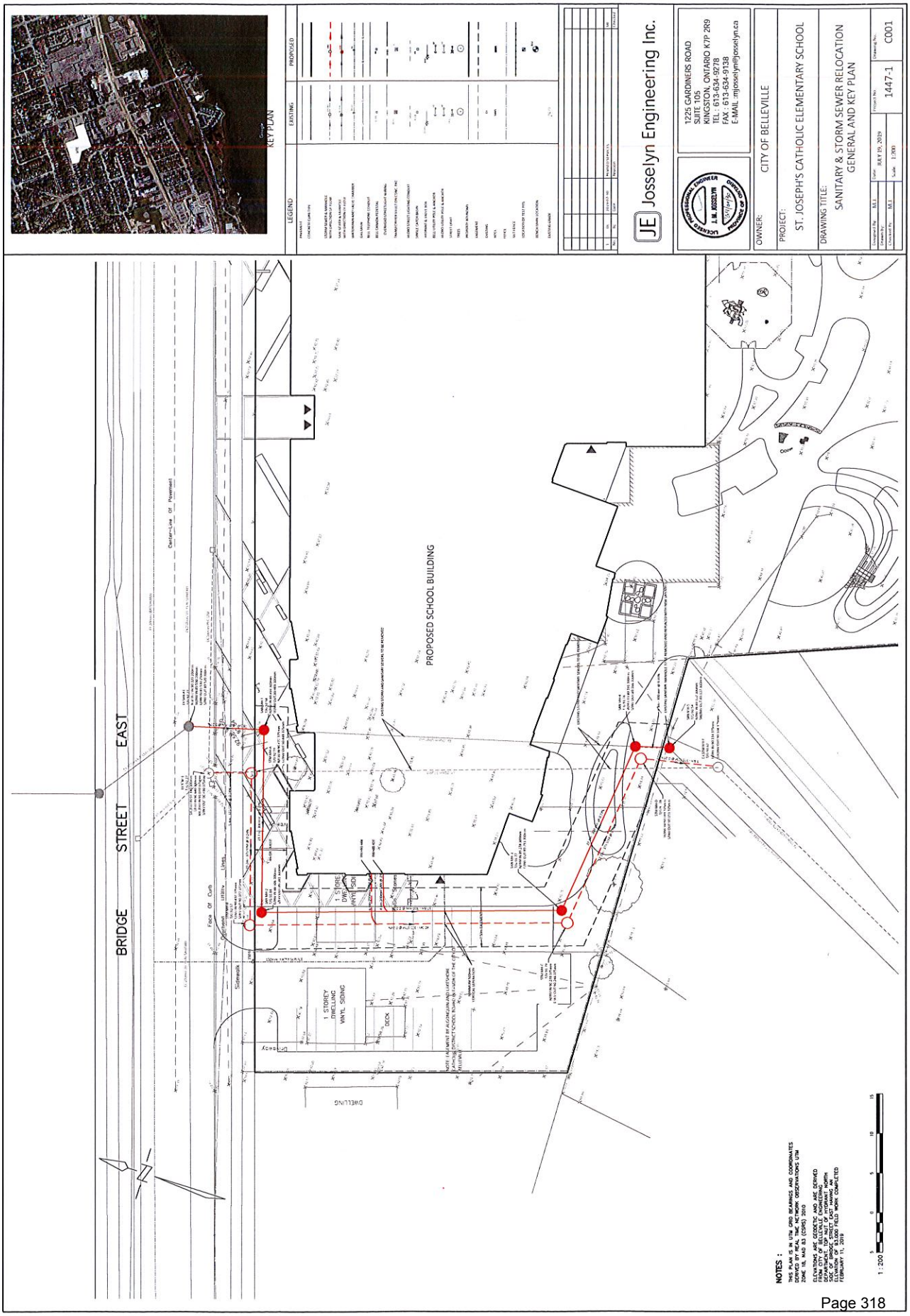

2
BRIDGE ST. EAST
EAST
ST.
BRIDGE


CITY OF BELLEVILLE
DEPT. OF PUBLIC WORKS
SEWER EASEMENT FROM CRESTVIEW AVE TO BRIDGE STREET EAST TO HASTINGS DRIVE
N-22-72
HASTINGS DRIVE
BRIDGE STREET EAST
CRESTVIEW AVENUE
HAREWOOD DRIVE
'Sanitary Sewer to be Relined

Appendix F

Servicing Plan & Design Charts


KEY PLAN
LEGEND
EXISTING
PROPOSED
Josselyn Engineering Inc.
OWNER:
CITY OF BELLEVILLE
PROJECT:
ST. JOSEPH'S CATHOLIC ELEMENTARY SCHOOL
DRAWING TITLE:
SANITARY & STORM SEWER RELOCATION
GENERAL AND KEY PLAN
1447-1
C001
PROPOSED SCHOOL BUILDING
BRIDGE STREET EAST
1 STOREY DWELLING VINYL SIDING
DECK
DWELLING
NOTES:
1:200


KEY PLAN
LEGEND
EXISTING
PROPOSED
JE Josselyn Engineering Inc.
1225 GARDINERS ROAD
SUITE 105
KINGSTON, ONTARIO K7P 2R9
TEL: 613-634-9278
FAX: 613-634-9138
E-MAIL: mjosselyn@josselyn.ca
OWNER: CITY OF BELLEVILLE
PROJECT: ST. JOSEPH'S CATHOLIC ELEMENTARY SCHOOL
DRAWING TITLE: SANITARY & STORM SEWER RELOCATION GENERAL AND KEY PLAN
Project No. 1447-1
Drawing No. C001
BRIDGE STREET EAST
PROPOSED SCHOOL BUILDING
1 STOREY DWELLING VINYL SIDING
DECK
Sidewalk
Face Of Curb
Centerline Of Pavement
DWELLING
NOTES :

SITE STATISTICS CITY OF BELLEVILLE BY-LAW 10245

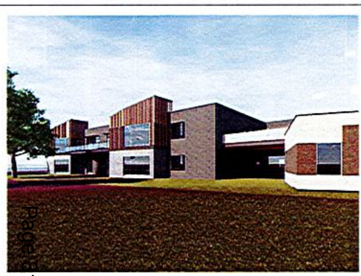
ZONING			
COMMUNITY FACILITY (CF)			
DESCRIPTION	REQUIRED/PERMITTED	PROPOSED	REMARKS
TOTAL GROSS FLOOR AREA	N/A	5,752 m²	
LOT AREA (MIN)	N/A	17,154 m²	
FRONT YARD (MIN)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	3.0m	RE-ZONING REQUIRED
INTERIOR SIDE YARD (MIN) - EAST	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	6.6m	EXISTING NON-CONFORMING
INTERIOR SIDE YARD (MIN) - WEST	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	23.0m	COMPLIES
REAR YARD (MIN)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	11.3m	COMPLIES
LOT COVERAGE (MAX) (BUILDING AREA)	30%	3,450m² (20%)	COMPLIES
HEIGHT OF BUILDING (MAX)	N/A	12.0m	
NUMBER OF STOREYS	N/A	2 STOREY	
FRONTAGE	N/A	78.5m (HERCHMER) / 121.0m (BRIDGE ST E)	
PAVED/GRAVEL AREA (AREA / PERCENT)	N/A	8080.8m² / 47%	
LANDSCAPED AREA (AREA / PERCENT)	N/A	5,623.2m² / 33%	
LOADING SPACES	2 SPACES (FOR GFA > 2,300 M²) - 12m x 2.6m	BUS LOADING ON BRIDGE STREET (EXISTING & PROPOSED)	RE-ZONING REQUIRED
PARKING REQUIREMENTS			
PARKING SPACE DIMENSIONS	2.4m X 6.0m	2.7m X 5.65m	RE-ZONING REQUIRED
SEPARATION FROM STREET LINE	1.5m WITH CURB & LANDSCAPING	1.5m ON BRIDGE ST. 1.0 ON HERCHMER AVE.	RE-ZONING REQUIRED
SEPARATION FROM RESIDENTIAL ZONE	1.5m WITH ROW OF SHRUBS 1.5m HIGH	1.5m WITH 1.8m HIGH FENCE	COMPLIES
PARKING SPACES	1 SPACE/28m² = 204 SPACES	104, INCLUDING 5 B/F AND 10 DROP-OFF	RE-ZONING REQUIRED
B/F PARKING SPACES (INCLUDED IN TOTAL)	3 SPACES FOR 1ST 100 SPACES, +1 FOR EACH 100 MORE, OR PORTION THEREOF = 5 SPACES	5 B/F SPACES	COMPLIES

SITE LEGEND

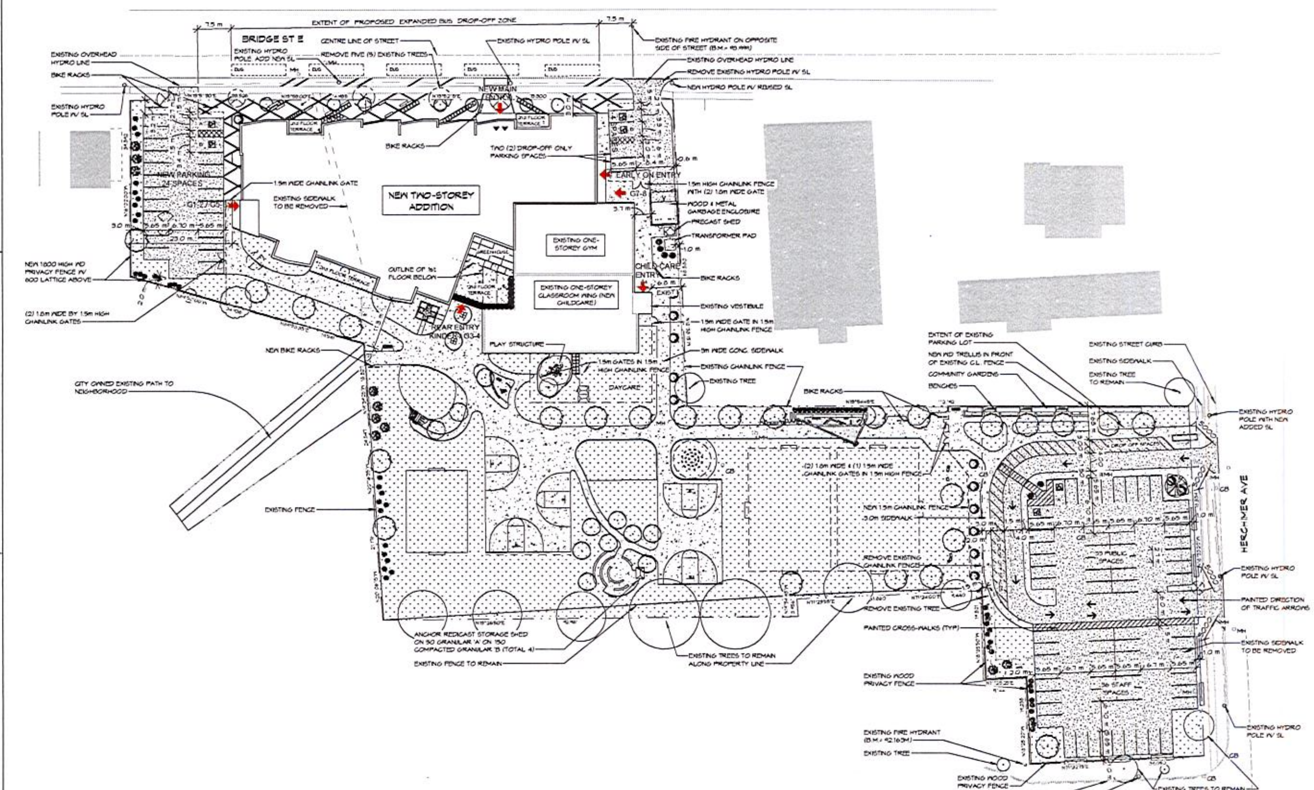
- TOPSOIL AND SOD
- NEW ASPHALT PAVING, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW CONCRETE, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW CONCRETE UNIT PAVERS, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW GRANULAR WALKWAY, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW RUBBERIZED SAFETY SURFACE, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW WOOD FIBRE SURFACING, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- CHAIN LINK FENCE AS NOTED
- ORNAMENTAL FENCE AS NOTED
- NEW TREES, REFER TO LANDSCAPE DRAWINGS FOR DETAILS
- SIGN TYPE A: BARRIER FREE REGULATORY SIGN "VAN ACCESSIBLE"
- SIGN TYPE B: BARRIER FREE REGULATORY SIGN
- SIGNAGE REQUIREMENTS IN SECTION 11 OF REGULATION 581 OF THE HIGHWAY TRAFFIC ACT
- NEW LIGHT FIXTURE(S), POLE MOUNTED, REFER TO ELECTRICAL DRAWINGS
- MANHOLE
- HYDRO POLE
- NEW LIGHT STANDARD
- NEW EXTERIOR LIGHT, REFER TO ELECTRICAL DRAWING
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED

NORTH EAST PERSPECTIVE

NORTH WEST PERSPECTIVE



SOUTH PERSPECTIVE



1 ZONING SITE PLAN
SCALE 1 : 0m 10m 20m 30m 40m 50m

NOTES
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DRAWINGS MUST NOT BE SCALED. VERIFY DIMENSIONS ON SITE.

ALGONQUIN LAKESHORE CDSB

TENDER NO.: T-2019-??

NO	BY	REVISIONS/SUBMISSIONS	DATE
1	TC	ISSUED FOR OP RE-ZONING	2019/09/21

ARCHITECT OF RECORD
COLBOURNE & KEMBEL, ARCHITECTS INC.

DESIGN ARCHITECT
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Tel: 612-200-9159
www.fieldingnair.com

PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)
405 BRIDGE ST E
BELLEVILLE, ON

DRAWING
SITE PLAN

SCALE
As indicated

DRAWN	CG	DATE	03.2019
CHECKED	TC	PRINTED	03/01/19
REVIEWED	TC	DRAWING No.	
PROJECT No.	18075		101

NOT FOR PERMIT OR CONSTRUCTION WITHOUT SEAL AND ISSUED NOTE

ALGONQUIN AND LAKESHORE CATHOLIC SCHOOL BOARD

ST. JOSEPH'S SCHOOL

405 Bridge Street, Belleville, Ontario

STORMWATER MANAGEMENT REPORT

JOSSELYN ENGINEERING INCORPORATED

1225 Gardiners Road, Suite #105

Kingston, Ontario, K7P 0G3

(613) 634-9278

August 22, 2019.

JEI Project 1447

Table of Contents

1. Introduction

The purpose of this analysis is to determine the on-site stormwater management requirements for the re-development of the existing St. Joseph School building located at 405 Bridge Street, in the City of Belleville. This report has been prepared in support of the re-zoning of the property.

The site property is located on the south side of Bridge Street East and the west side of Herchimer Avenue, in the City of Belleville. The ALCDSB has purchased the three adjacent residential properties for the proposed expansion, two on the west side of the existing school, and one to the south, which will provide additional space for parking and expansion of the school construction.

The proposed development will consist of a net 717m² building addition with approximately 1510m² of additional asphalt parking and concrete play space. The remainder of the site, shall be landscaped. The Site Plan, prepared by Colbourne and Kembel Architects Inc. is attached as Appendix A.

2. Existing Site Conditions and Drainage

The existing drainage from the 1.7ha subject site is generally tributary to the existing 750mm storm sewer on Herchimer Drive, to the east of the site, by means of an existing 300mm onsite storm sewer. The westerly portion of the site, which is currently occupied by two existing houses, drains mainly to the south and ultimately tributary to the existing storm sewer on Hastings Drive to the south. The easterly portion of the site which consists of an existing parking area drains by means of surface drainage to the adjacent parking lot. The general direction of drainage and the existing site conditions are indicated on Figure 1.

Currently there is a municipality owned 200mm sanitary and 300mm storm sewer which passes through the site from Bridge Street to Hastings Drive on the west side of the existing building. These sewers will be relocated further west to allow for the expansion of the existing school.

Pre-development flows from the site during the 2, 5 and 100-year event have been estimated using the rational method as follows.

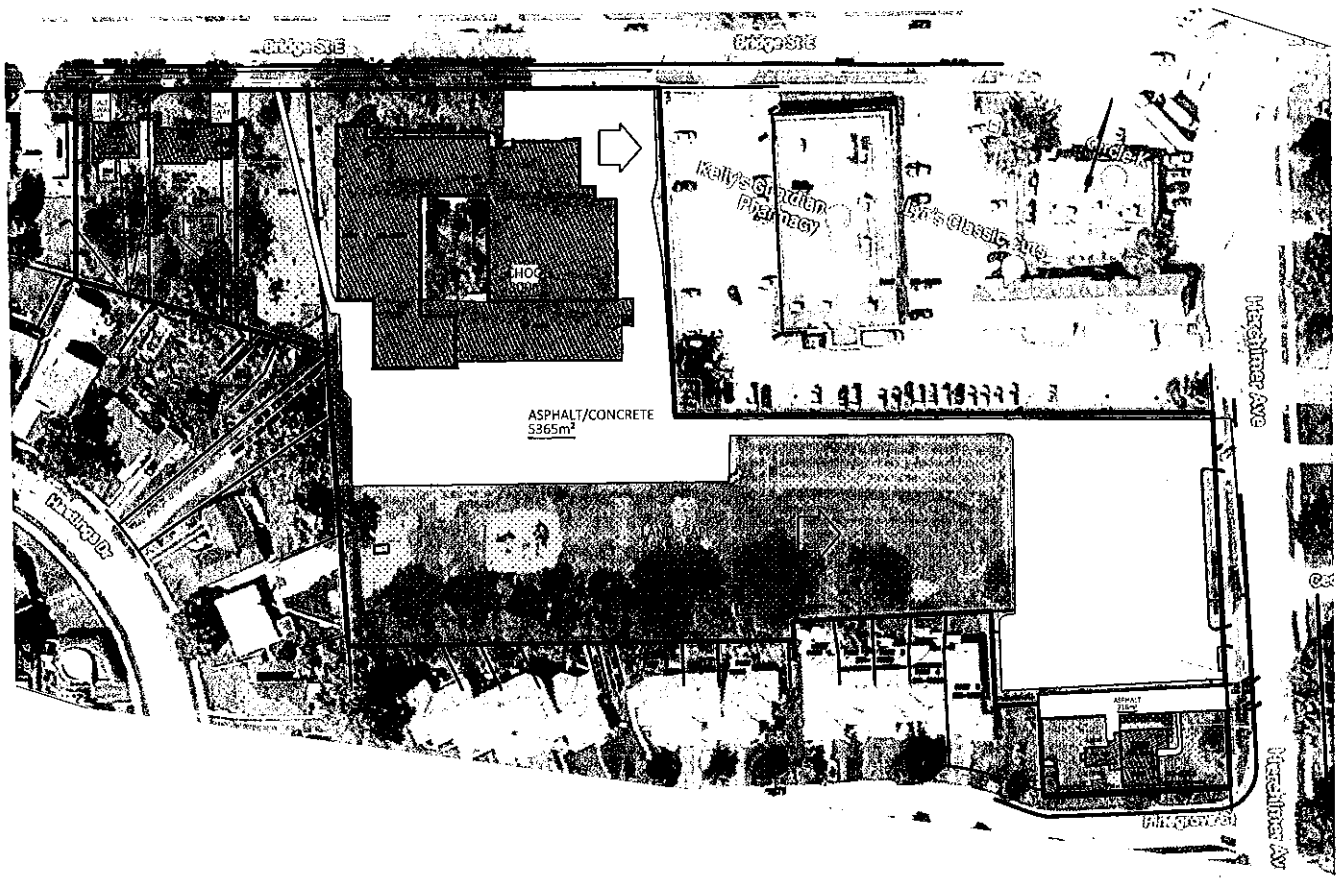
$Q = 0.00278CIA$

where: Q = release rate (m^3/s)
C = runoff coefficient
I = Rainfall Intensity (mm/hr)
A = Drainage Area (m^2)

The pre development release rates are calculated Appendix B, and are summarized in Table 1.

Table 1 – Pre-Development Rates		
2 year	**5 year**	**100 year**
0.139 m^3/s	0.181 m^3/s	0.370m^3/s

It is noted that the site has experienced past flooding due to poor drainage within the existing playground area at the rear of the building. Based on the above calculations and the detailed calculations provided in Appendix B, it could be surmised that the existing 300mm, an estimated capacity 0.03m^3/s, onsite storm sewer is undersized for this property. It is also noted that from invert elevations obtained by the surveyor, the existing 300mm sewer which connects to the Herchimer Drive sewer has a reverse slope. It is recommended that the sewer be replaced as part of the proposed works.



SITE AREA 17139.9m²

LANDSCAPED AREA PERVIOUS
8859.9m²

ROOF AREA IMPERVIOUS
2640m²

ASPHALT/HARD SURFACE IMPERVIOUS
5640m²

Owner:

CITY OF BELLEVILLE

ST. JOSEPH'S CATHOLIC ELEMENTARY SCHOOL

Josselyn Engineering Inc.
1225 GARDINERS ROAD, #105
KINGSTON, ONTARIO K7P 0G3
TEL : 613-634-9278
FAX : 613-634-9138
E-MAIL : mjosselyn@josselyn.ca

Drawing Title:

Existing Condition

Scale: NTS

Drawing File: 1037Figures.DWG

Drawn By: N.B. Checked By: M.J.

Drawing No:

FIG 1

3. Proposed Site Drainage

As the proposed works will represent an increase in stormwater runoff from the existing condition. It is recommended that onsite quantity control and storage be implemented. The general direction of drainage and the proposed site conditions are indicated on Figure 2.

An onsite storm sewer shall be provided on site to convey drainage from the majority of the site to an underground stormwater system located in the eastly parking area. The underground system shall discharge to the existing 750mm storm sewer on Herchimer Drive. Controlled release from the underground chamber system shall be controlled via a suitable sized orifice in the downstream sewer.

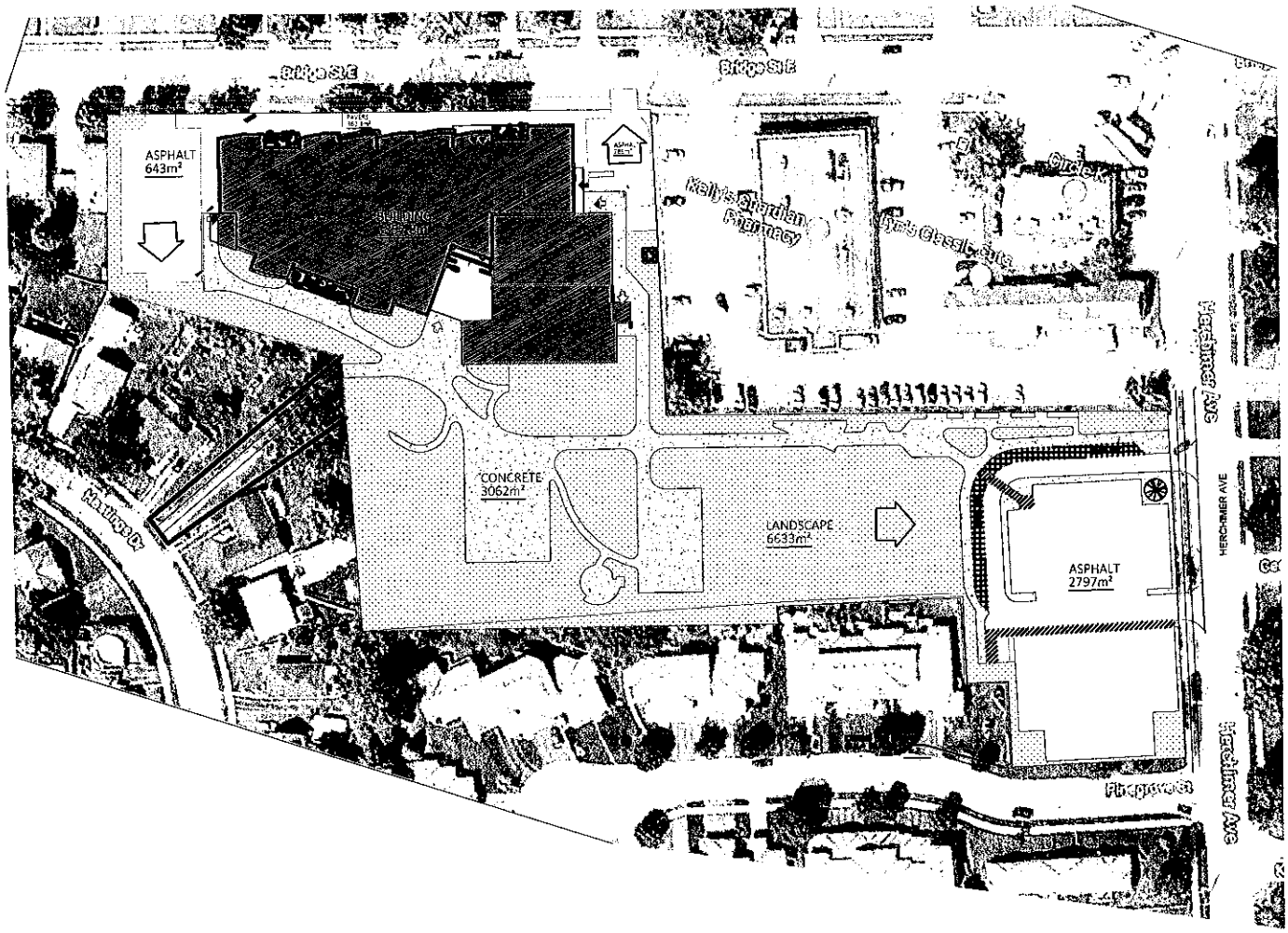
As noted in the previous section of the report the existing 300mm storm sewer which services the property is insufficient to convey the existing flows from the site. It is proposed to replace the existing sewer connection with an adequately sized pipe to convey the allowable pre-development rate.

Areas which cannot be directed to the onsite storm sewer shall drain uncontrolled so long as they do not represent an increase from the pre development condition. Alternatively, additional storage and controlled release may be provided within the controlled portion of the site in order to compensate for the uncontrolled runoff. It is noted that the tributary areas and imperviousness level will ultimately be defined as a result of the final lot grading design.

Post-development flows from the site during the 2, 5 and 100-year event have been estimated in Appendix B, and are summarized in Table 2.

Table 2 – Post-Development Rates

2 year	5 year	100 year
0.160 m^3/s	0.209 m^3/s	0.498m^3/s



SITE ARE 17139.9m²

- LANDSCAPED AREA PERVIOUS 6633m²
- ROOF AREA IMPERVIOUS 3357.8m²
- ASPHALT/HARD SURFACE IMPERVIOUS 4087.1m²
- CONCRETE HARD SURFACE IMPERVIOUS 3062m²

Owner:

CITY OF BELLEVILLE

ST. JOSEPH'S CATHOLIC ELEMENTARY SCHOOL

Josselyn Engineering Inc.
1225 GARDINERS ROAD, #105
KINGSTON, ONTARIO K7P 0G3
TEL : 613-634-9278
FAX : 613-634-9138
E-MAIL : mjosselyn@josselyn.ca

Drawing Title:

Proposed Condition

Scale: NTS

Drawing File: 1447Figures.DWG

Drawn By: N.B. Checked By: M.J.

Drawing No:

FIG 2

Post development release from the site shall be controlled through an appropriately sized orifice to meet pre-development release rates during the 2, 5 and the 100-year event. This is achieved through a suitably sized orifice in the pipe system. The size of the orifice can be calculated using the orifice equation as follows.

$$D = [\frac{0.5\,Q}{h^{1/2}}]^{1/2}$$

where D = orifice diameter (m)

Q = release rate (m3/sec)

h = loss across orifice

Through an iterative approach, an orifice that will control all events to the required levels is chosen as a 420mm at an invert of 89.70m. From Appendix C, the orifice will control the storm events to the following rates summarized in Table 3.

Table 3 – Controlled Release Rates

Storm Event	Pre-Development Rate	Controlled Release Rate
2 year	0.139m³/s	0.135 m³/s
5 year	0.181m³/s	0.184m³/s
100 year	0.325m³/s	0.322 m³/s

In order to control post-development runoff to the required levels, controlled release and on-site storage are required. The storage volume necessary to control post development runoff to the above rates can be approximated using the modified rational method, as shown in Appendix B and summarized as follows.

Table 4 –Required Storage Volume		
Storm Event	**Controlled Release Rate (m^3/s)**	**Storage Required (m^3)**
2 year event	0.135 m^3/s	60.69 m^3
5 year event	0.184m^3/s	76.40 m^3
100 year event	0.322 m^3/s	172.01 m^3

The Stormtech Chamber system has capacity for up to 177m^3 of storage at an elevation of 90.77, therefore the required storage volume during the 2, 5- and 100-year events will be provided entirely within the system. Typical details for the proposed underground system are provided in Appendix C.

Should the orifice become blocked or an event exceed the 100-year design storm surface ponding shall occur on the parking area to a maximum depth of 150mm prior to spilling off the site to the Herchimer Drive road allowance.

4. Quality Control

The StormTech system is recognized by be Ministry of the Environment as an effective treatment of stormwater, MOE Certificate of Technology Assessment is included in Appendix D. Treatment of stormwater runoff is provided by the isolator row within the system which consists of a row of chambers lined with two layers of geotextile fabric under the base of the system and one layer of non-woven fabric wrapped over the top of the system. This application basically creates a filter/detention basin that allows water to pass through the surrounding filter fabric while sediment is trapped within. Refer to Appendix C.

The treatment rate of the isolator row is variable depending on the particle distribution size, the type of chamber (contact area), and the flow rate. A summary of Isolator Row Testing is included in Appendix D. From the attachment the isolator row can provide 60% to 95% total suspended solids.

5. Erosion and Sediment Control During Construction

In order to control the quality of storm runoff from the site during construction, the following recommendations are presented, and should be incorporated into the plans for construction, and construction specifications.

Silt fences (OPSD 219.010) are to be installed wherever there is a possibility of runoff from the construction site onto adjacent streets or properties. These silt fences are to be maintained during construction, and until a good growth of vegetation is obtained on all grassed areas, and until the new hard surfaced areas are constructed.

Straw bale barriers (OPSD 219.180) are to be installed wherever there is a possibility of runoff from the construction site into the municipal storm sewer. These straw bales are to be maintained during construction, and until a good growth of vegetation is obtained on all grassed areas, and until the new hard surfaced areas are constructed.

All areas disturbed by construction are to be reinstated as soon as possible. Damage to existing vegetated areas is to be minimized by fencing the work area, to maintain construction activities to the pre-defined areas.

Stockpiles of excavated material, or stockpiled granulars, are to be located to minimize the possibility of runoff beyond the construction zone. Silt fences may be required to contain runoff from stockpiles.

6. Conclusions

Based on the above analysis, it is concluded that stormwater management can be implemented on site in order to reduce post development flows to pre development conditions.

The stormwater drainage from the site shall be conveyed by means of a new on-site storm sewer to a proposed underground storage chamber system, discharging at a controlled pre development rate via an orifice to the existing 750mm storm sewer on Herchimer Drive. The existing 300mm storm sewer connection to the municipal storm sewer is recommended to be replaced in order to convey the controlled runoff from the site.

The underground stormwater chamber system has been sized to store up to the 100 year event. No rooftop or surface storage is proposed.

Quality control shall be provided though the underground storage chambers. A minimum removal efficiency of 60% can be achieved within the underground storage chambers. Adequate quality control during construction can be achieved by implementing best management practices during construction, erosion and sediment controls shall be provided on the finalized plans.

A detailed analysis shall be required as part of the Site Plan control process.

APPENDIX A

Site Plan

SITE STATISTICS CITY OF BELLEVILLE BY-LAW 10245

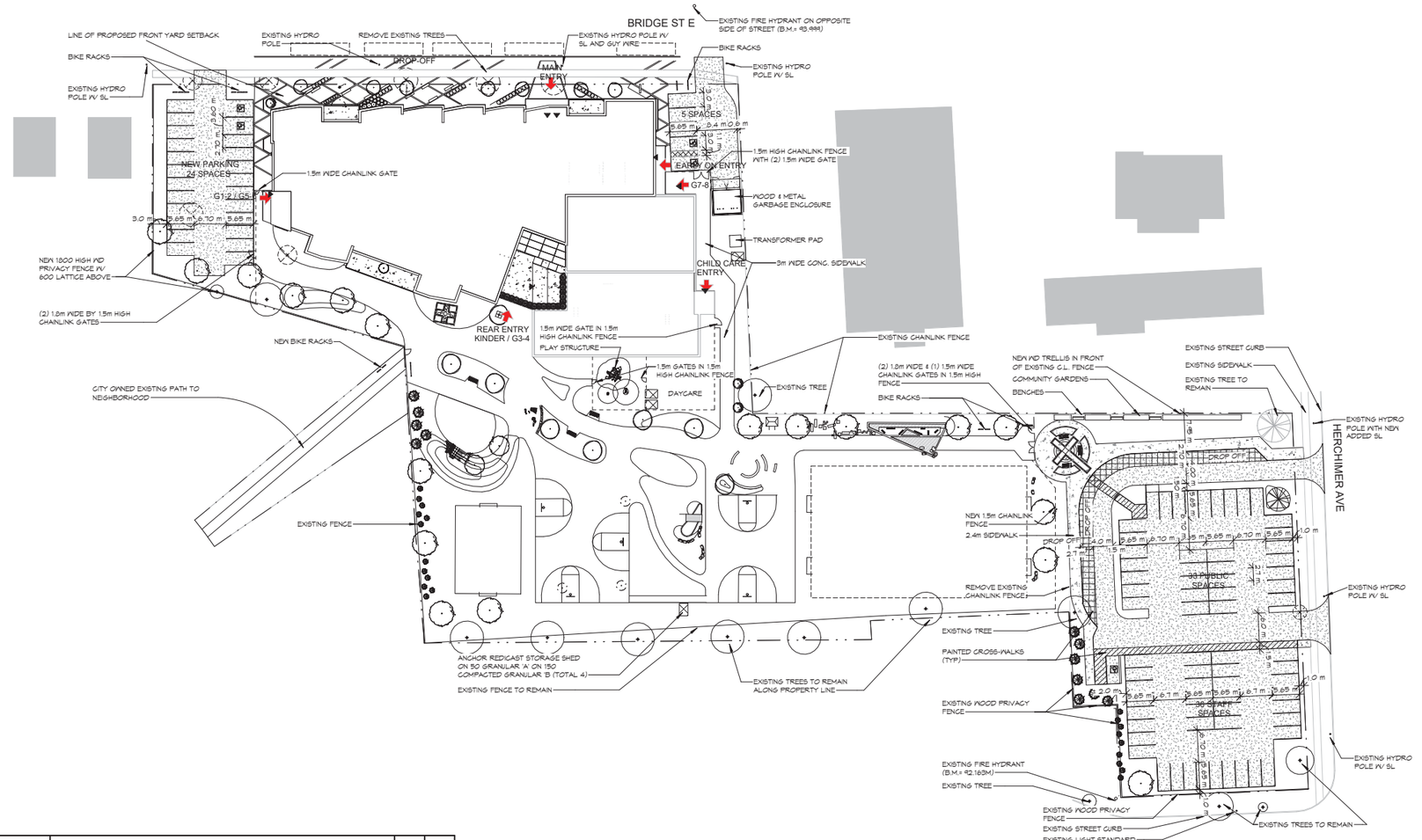
ZONING				
COMMUNITY FACILITY (CF)				
DESCRIPTION	REQUIRED/PERMITTED	EXISTING	PROVIDED	REMARKS
TOTAL BUILDING AREA	N/A	2,303 m²	3,430 m²	
LOT AREA (MIN)	N/A	14,915 m²	17,154 m²	
FRONT YARD (MIN)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT			
INTERIOR SIDE YARD (MIN)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT		7.5m	
REAR YARD (MIN)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT		59m	
LOT COVERAGE (MAX)	33%	2,303 m² (15%)	3,430m² (20%)	LOT IS BEING ENLARGED
HEIGHT OF BUILDING (MAX)			12.0m	
NUMBER OF STOREYS				
FRONTAGE			70.3m (HERCHIMER) / 121.8m (BRIDGE ST E)	
PAVED/GRAVEL AREA (AREA / PERCENT)				
GROSS AREA				
PAVED/GRAVEL AREA (AREA / PERCENT)				
LANDSCAPED AREA (AREA / PERCENT)				
BUILDING AREA COVERAGE (AREA / PERCENT)				
LOADING SPACES	2 SPACES (FOR GFA > 2,300 M²) - 12m x 2.6m		BUS LOADING ON BRIDGE STREET	
PARKING REQUIREMENTS				
PARKING SPACE DIMENSIONS	2.4m X 6.0m		2.7m X 5.65m	
B/F PARKING SPACE DIMENSIONS	3.6m X 6.0m (SINGLE) OR 3.0m X 6.0m (DOUBLE)		3.6m X 6.0m (SINGLE) OR 3.0m X 6.0m (DOUBLE)	
AISLE WIDTH	6.7m (BASED ON 2.7m WIDE PARKING SPACE)		6.7m	
PARKING INGRESS / EGRESS WIDTH	6.7m (BASED ON 2.7m WIDE PARKING SPACE)		6.7m	
SEPARATION FROM STREET LINE	1.5m WITH GURB & LANDSCAPING	3.1m (EAST)	1.0m WITH GURB & LANDSCAPING	PLUS ADDITIONAL 5.5m TO ACTUAL STREET GURB
SEPARATION FROM RESIDENTIAL ZONE	1.5m WITH ROW OF SHRUBS 1.5m HIGH		1.5m WITH 1.8m HIGH FENCE	
PARKING SPACES	1 SPACE/23m² = 122 SPACES	55 (EAST)	112, INCLUDING 4 B/F	
B/F PARKING SPACES	3 SPACES FOR 1ST 100 SPACES, +1 FOR EACH 100 MORE, OR PORTION THEREOF = 4 SPACES		4 B/F SPACES	

SITE LEGEND

- TOPSOIL AND SOD
- NEW ASPHALT PAVING, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW CONCRETE, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW CONCRETE UNIT PAVERS, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW GRANULAR WALKWAY, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW RUBBERIZED SAFETY SURFACE, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- NEW WOOD FIBRE SURFACING, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- CHAIN LINK FENCE AS NOTED
- ORNAMENTAL FENCE AS NOTED
- NEW TREES, REFER TO 600 SERIES DRAWINGS FOR DETAILS
- A — SIGN TYPE A: BARRIER FREE REGULATORY SIGN "VAN ACCESSIBLE"
- B — SIGN TYPE B: BARRIER FREE REGULATORY SIGN

SIGNAGE REQUIREMENTS IN SECTION 11 OF REGULATION 581 OF THE HIGHWAY TRAFFIC ACT

- LS — NEW LIGHT FIXTURE(S), POLE MOUNTED, REFER TO ELECTRICAL DRAWINGS
- MH — MANHOLE
- HP — HYDRO POLE
- LS — NEW LIGHT STANDARD
- NEW EXTERIOR LIGHT, REFER TO ELECTRICAL DRAWING.



1 SITE PLAN CONTROL

SCALE: 1 : 500 (0m 10m 20m 30m 40m 50m)

NOTES:

ALGONQUIN LAKESHORE CDSB

TENDER NO.: T-2019-??

No.	BY	REVISIONS/SUBMISSIONS	DATE

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PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)
405 BRIDGE ST E
BELLEVILLE, ON

DRAWING
SITE PLAN

SCALE
As indicated

PROFESSIONAL SEAL	DRAWN	DATE
	CG	03.2019
	CHECKED	PRINTED
	TC	03/01/19
	REVIEWED	DRAWING No.
	TC	A101
NOT FOR PERMIT OR CONSTRUCTION WITHOUT SEAL AND ISSUED NOTE	PROJECT No.	DATE
	19-078	

APPENDIX B

Stormwater Calculations

Pre-Development Release Rate

Surface Type	area (A)m²	Coverage %	coefficient (C)	C x A	tc (minutes)	2 year		5 year		100 year	
						intensity (mm/hr)	Pre Development Release Rate (m³/s)	intensity (mm/hr)	Pre Development Release Rate (m³/s)	intensity (mm/hr)	Pre Development Release Rate (m³/s)
Building	2640.0	15%	0.90	2376.00	15	51.89	0.034	67.48	0.045	110.07	0.077
Asphalt/concrete	5640.0	33%	0.90	5076.00	15	51.89	0.073	67.48	0.095	110.07	0.164
Landscaped	8859.9	52%	0.25	2214.98	15	51.89	0.032	67.48	0.042	110.07	0.085
Total	**17139.90**	100%	**0.56**	**9666.98**			**0.139**		**0.181**		**0.325**

Post-Development Release Rate

Surface Type	area (A)m²	Coverage %	coefficient (C)	C x A	tc (minutes)	2 year		5 year		100 year	
						intensity (mm/hr)	Post Development Release Rate (m³/s)	intensity (mm/hr)	Post Development Release Rate (m³/s)	intensity (mm/hr)	Post Development Release Rate (m³/s)
Building	3357.8	20%	0.90	3022.0	15	51.9	0.044	67.48	0.057	110.07	0.098
Asphalt/concrete	7149.1	42%	0.90	6434.2	15	51.9	0.093	67.48	0.121	110.07	0.208
Landscaped	6633.0	39%	0.25	1658.3	15	51.9	0.024	67.48	0.031	110.07	0.063
Total	**17139.90**	100%	**0.65**	11114.46			**0.160**		**0.209**		**0.368**

Controlled Release and Storage Requirements

2 Year Storage Requirements

Rainfall Duration (minutes)	Rainfall Duration (hrs)	intensity (mm/hr)	C	Tributary area)(ha)	uncontrolled runoff rate (m3/s)	Controlled release (m3/s)	storage rate (m3/s)	storage volume (m3)	notes
5	0.083	109.17	0.65	1.71	0.337	0.135	0.202	60.69	This is the maximum
10	0.167	68.28	0.65	1.71	0.211	0.135	0.076	45.59	
15	0.250	51.89	0.65	1.71	0.160	0.135	0.025	22.80	
30	0.500	32.46	0.65	1.71	0.100	0.135	-0.035	-62.49	
45	0.750	24.66	0.65	1.71	0.076	0.135	-0.059	-158.73	
60	1.000	20.30	0.65	1.71	0.063	0.135	-0.072	-260.20	

5 Year Storage Requirements

Rainfall Duration (minutes)	Rainfall Duration (hrs)	intensity (mm/hr)	C	Tributary area)(ha)	uncontrolled runoff rate (m3/s)	Controlled release (m3/s)	storage rate (m3/s)	storage volume (m3)	notes
5	0.083	141.97	0.65	1.71	0.439	0.184	0.255	76.40	This is the maximum
10	0.167	88.80	0.65	1.71	0.274	0.184	0.090	54.23	
15	0.250	67.48	0.65	1.71	0.209	0.184	0.025	22.06	
20	0.333	55.54	0.65	1.71	0.172	0.184	-0.012	-14.87	
30	0.500	42.21	0.65	1.71	0.130	0.184	-0.054	-96.45	
40	0.667	34.74	0.65	1.71	0.107	0.184	-0.077	-183.99	
50	0.833	29.87	0.65	1.71	0.092	0.184	-0.092	-275.14	
60	1.000	26.40	0.65	1.71	0.082	0.184	-0.102	-368.74	

100 Year Storage Requirements

Rainfall Duration (minutes)	Rainfall Duration (hrs)	intensity (mm/hr)	C	Tributary area (ha)	uncontrolled runoff rate (m3/s)	Controlled release (m3/s)	storage rate (m3/s)	storage volume (m3)	notes
5	0.083	231.82	0.81	1.71	0.895	0.322	0.573	172.01	This is the maximum
10	0.167	144.90	0.81	1.71	0.560	0.322	0.238	142.58	
15	0.250	110.07	0.81	1.71	0.425	0.322	0.103	92.81	
20	0.333	90.56	0.81	1.71	0.350	0.322	0.028	33.34	
30	0.500	68.80	0.81	1.71	0.266	0.322	-0.056	-101.32	
40	0.667	56.61	0.81	1.71	0.219	0.322	-0.103	-248.10	
50	0.833	48.66	0.81	1.71	0.188	0.322	-0.134	-402.21	
60	1.000	43.00	0.81	1.71	0.166	0.322	-0.156	-561.32	

Stage Storage Discharge Table

Water Surface Elevation (m)	Incremental Depth (m)	Total Volume (m^3)	Total Volume ($1000m^3$)	Quality Control Orifice diameter (m)	Invert of Orifice Elevation (m)	Centreline of Orifice Elevation (m)	head loss across orifice (m)	Calculated release from Quaility orifice (m^3/s)	Notes
89.7	0.03	0.00	0.000	0.420	89.70	89.910	0.00	0.000	
89.73	0.03	2.743	0.003	0.420	89.70	89.910	-0.18	0.000	
89.75	0.03	5.486	0.005	0.420	89.70	89.910	-0.16	0.000	
89.78	0.03	8.229	0.008	0.420	89.70	89.910	-0.13	0.000	
89.80	0.03	10.972	0.011	0.420	89.70	89.910	-0.11	0.000	
89.83	0.03	13.715	0.014	0.420	89.70	89.910	-0.08	0.000	
89.85	0.03	16.458	0.016	0.420	89.70	89.910	-0.06	0.000	
89.88	0.03	22.201	0.022	0.420	89.70	89.910	-0.03	0.000	
89.90	0.03	27.932	0.028	0.420	89.70	89.910	-0.01	0.000	
89.93	0.03	33.634	0.034	0.420	89.70	89.910	0.02	0.048	
89.95	0.03	39.304	0.039	0.420	89.70	89.910	0.04	0.074	
89.98	0.03	44.945	0.045	0.420	89.70	89.910	0.07	0.093	
90.00	0.03	50.549	0.051	0.420	89.70	89.910	0.09	0.109	
90.03	0.030	56.112	0.056	0.420	89.70	89.910	0.12	0.122	
90.06	0.03	61.635	0.062	0.420	89.70	89.910	0.15	0.135	**2 YEAR storage requirement**
90.08	0.03	67.110	0.067	0.420	89.70	89.910	0.17	0.146	
90.11	0.03	72.537	0.073	0.420	89.70	89.910	0.20	0.156	
90.13	0.03	77.909	0.078	0.420	89.70	89.910	0.22	0.166	
90.16	0.030	83.225	0.083	0.420	89.70	89.910	0.25	0.175	
90.18	0.03	88.489	0.088	0.420	89.70	89.910	0.27	0.184	**5 YEAR storage requirement**
90.21	0.03	93.682	0.094	0.420	89.70	89.910	0.30	0.193	
90.23	0.03	98.808	0.099	0.420	89.70	89.910	0.32	0.201	
90.26	0.03	103.861	0.104	0.420	89.70	89.910	0.35	0.208	
90.28	0.03	108.836	0.109	0.420	89.70	89.910	0.37	0.216	
90.31	0.03	113.730	0.114	0.420	89.70	89.910	0.40	0.223	
90.34	0.03	118.545	0.119	0.420	89.70	89.910	0.43	0.230	
90.36	0.03	123.264	0.123	0.420	89.70	89.910	0.45	0.237	
90.39	0.03	127.849	0.128	0.420	89.70	89.910	0.48	0.243	
90.41	0.03	132.312	0.132	0.420	89.70	89.910	0.50	0.250	
90.44	0.03	136.660	0.137	0.420	89.70	89.910	0.53	0.256	
90.46	0.03	140.863	0.141	0.420	89.70	89.910	0.55	0.262	
90.49	0.03	144.898	0.145	0.420	89.70	89.910	0.58	0.268	
90.51	0.03	148.731	0.149	0.420	89.70	89.910	0.60	0.274	
90.54	0.03	152.295	0.152	0.420	89.70	89.910	0.63	0.280	
90.56	0.03	155.421	0.155	0.420	89.70	89.910	0.65	0.285	
90.59	0.03	158.386	0.158	0.420	89.70	89.910	0.68	0.291	
90.61	0.03	161.203	0.161	0.420	89.70	89.910	0.70	0.296	
90.64	0.03	163.946	0.164	0.420	89.70	89.910	0.73	0.301	
90.67	0.03	166.689	0.167	0.420	89.70	89.910	0.76	0.307	
90.69	0.03	169.432	0.169	0.420	89.70	89.910	0.78	0.312	
90.72	0.03	172.175	0.172	0.420	89.70	89.910	0.81	0.317	
90.74	0.03	174.918	0.175	0.420	89.70	89.910	0.83	0.322	**100 YEAR storage requirement**
90.77	0.03	177.661	0.178	0.420	89.70	89.910	0.86	0.327	
91.20	Surface Storage			0.420	89.70	89.910	1.29	0.401	

APPENDIX C

Typical StormTech Details

StormTech SC-740 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots thus maximizing land usage for commercial and municipal applications.

StormTech®
Detention • Retention • Recharge
Subsurface Stormwater Management℠

StormTech SC-740 Chamber
(not to scale)

Nominal Chamber Specifications

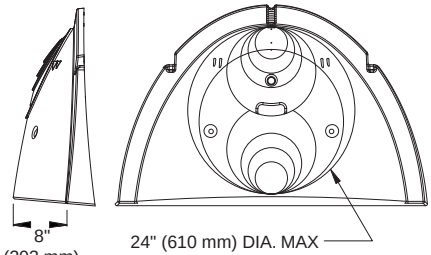
Size (L x W x H)
85.4" x 51.0" x 30.0"
(2170 x 1295 x 762 mm)

Chamber Storage
45.9 ft³ (1.30 m³)

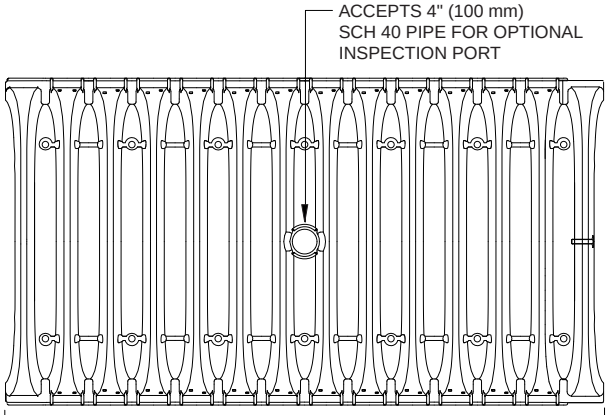
Minimum Installed Storage*
74.9 ft³ (2.12 m³)

Weight
74.0 lbs (33.6 kg)

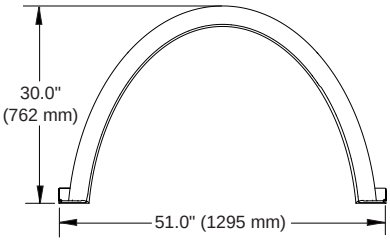
Shipping
30 chambers/pallet
60 end caps/pallet
12 pallets/truck

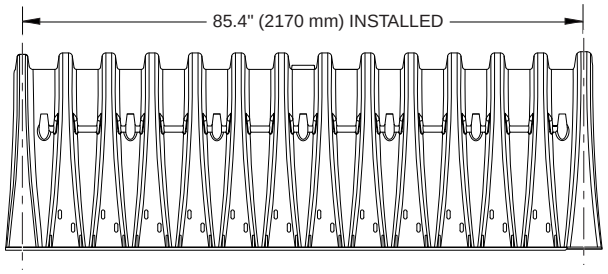


SC-740 End Cap

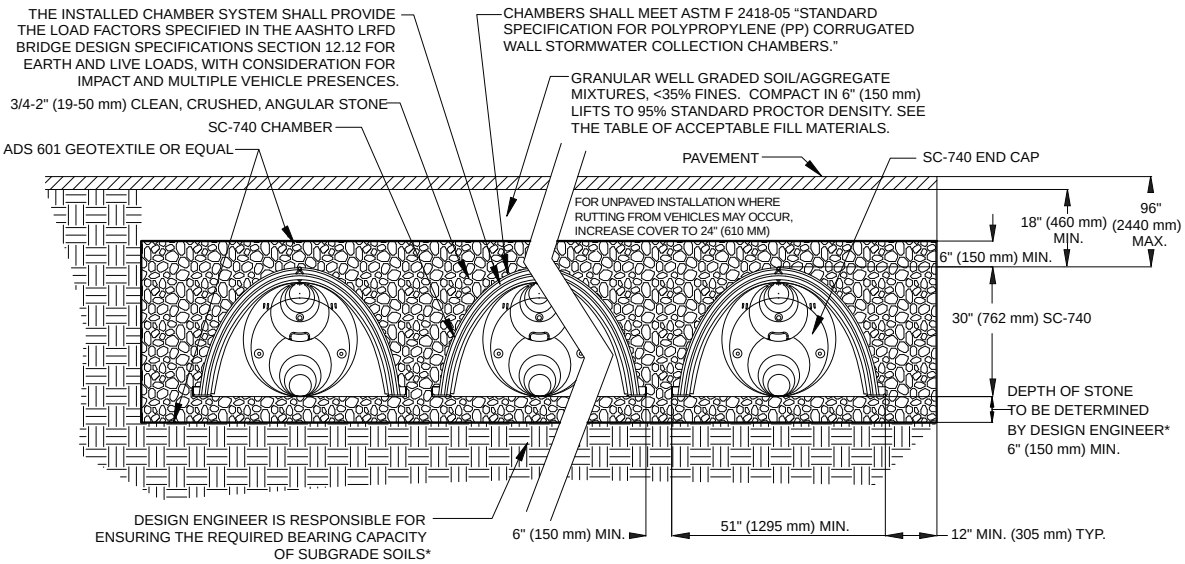


SC-740 Chamber





Typical Cross Section Detail
(not to scale)



THIS CROSS SECTION DETAILS THE REQUIREMENTS NECESSARY TO SATISFY THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS USING STORMTECH CHAMBERS

MADE IN THE U.S.A.

SC-740 Cumulative Storage Volumes Per Chamber

Assumes 40% Stone Porosity. Calculations are Based Upon a 6" (152 mm) Stone Base Under the Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage Ft³ (m³)	Total System Cumulative Storage Ft³ (m³)
42 (1067)	45.90 (1.300)	74.90 (2.121)
41 (1041)	45.90 (1.300)	73.77 (2.089)
40 (1016)	Stone 45.90 (1.300)	72.64 (2.057)
39 (991)	Cover 45.90 (1.300)	71.52 (2.025)
38 (965)	45.90 (1.300)	70.39 (1.993)
37 (948)	45.90 (1.300)	69.26 (1.961)
36 (914)	45.90 (1.300)	68.14 (1.929)
35 (889)	45.85 (1.298)	66.98 (1.897)
34 (864)	45.69 (1.294)	65.75 (1.862)
33 (838)	45.41 (1.286)	64.46 (1.825)
32 (813)	44.81 (1.269)	62.97 (1.783)
31 (787)	44.01 (1.246)	61.36 (1.737)
30 (762)	43.06 (1.219)	59.66 (1.689)
29 (737)	41.98 (1.189)	57.89 (1.639)
28 (711)	40.80 (1.155)	56.05 (1.587)
27 (686)	39.54 (1.120)	54.17 (1.534)
26 (660)	38.18 (1.081)	52.23 (1.479)
25 (635)	36.74 (1.040)	50.23 (1.422)
24 (610)	35.22 (0.977)	48.19 (1.365)
23 (584)	33.64 (0.953)	46.11 (1.306)
22 (559)	31.99 (0.906)	44.00 (1.246)
21 (533)	30.29 (0.858)	41.85 (1.185)
20 (508)	28.54 (0.808)	39.67 (1.123)
19 (483)	26.74 (0.757)	37.47 (1.061)
18 (457)	24.89 (0.705)	35.23 (0.997)
17 (432)	23.00 (0.651)	32.96 (0.939)
16 (406)	21.06 (0.596)	30.68 (0.869)
15 (381)	19.09 (0.541)	28.36 (0.803)
14 (356)	17.08 (0.484)	26.03 (0.737)
13 (330)	15.04 (0.426)	23.68 (0.670)
12 (305)	12.97 (0.367)	21.31 (0.608)
11 (279)	10.87 (0.309)	18.92 (0.535)
10 (254)	8.74 (0.247)	16.51 (0.468)
9 (229)	6.58 (0.186)	14.09 (0.399)
8 (203)	4.41 (0.125)	11.66 (0.330)
7 (178)	2.21 (0.063)	9.21 (0.264)
6 (152)	0	6.76 (0.191)
5 (127)	0	5.63 (0.160)
4 (102)	Stone Foundation 0	4.51 (0.125)
3 (76)	0	3.38 (0.095)
2 (51)	0	2.25 (0.064)
1 (25)	0	1.13 (0.032)

Note: Add 1.13 cu. ft. (0.032 m³) of storage for each additional inch (25 mm) of stone foundation.

Storage Volume Per Chamber

	Bare Chamber Storage ft³ (m³)	Chamber and Stone Stone Foundation Depth in. (mm)		
		6 (150)	12 (305)	18 (460)
StormTech SC-740	45.9 (1.3)	74.9 (2.1)	81.7 (2.3)	88.4 (2.5)

Note: Storage volumes are in cubic feet per chamber. Assumes 40% porosity for the stone plus the chamber volume.

Amount of Stone Per Chamber

	Stone Foundation Depth		
ENGLISH TONS (CUBIC YARDS)	6"	12"	18"
StormTech SC-740	3.8 (2.8 yd³)	4.6 (3.3 yd³)	5.5 (3.9 yd³)
METRIC KILOGRAMS (METER³)	**150 mm**	**305 mm**	**460 mm**
StormTech SC-740	3450 (2.1 m³)	4170 (2.5 m³)	4490 (3.0 m³)

Note: Assumes 6" (150 mm) of stone above, and between chambers.

Volume of Excavation Per Chamber

	Stone Foundation Depth		
	6" (150 mm)	12" (305 mm)	18" (460 mm)
StormTech SC-740	5.5 (4.2)	6.2 (4.7)	6.8 (5.2)

Note: Volumes are in cubic yards (cubic meters) per chamber. Assumes 6" (150 mm) of separation between chamber rows and 18" (460 mm) of cover. The volume of excavation will vary as the depth of the cover increases.

STANDARD LIMITED WARRANTY OF STORMTECH LLC ("STORMTECH"): PRODUCTS

(A) This Limited Warranty applies solely to the StormTech chambers and endplates manufactured by StormTech and sold to the original purchaser (the "Purchaser"). The chambers and endplates are collectively referred to as the "Products."

(B) The structural integrity of the Products, when installed strictly in accordance with StormTech's written installation instructions at the time of installation, are warranted to the Purchaser against defective materials and workmanship for one (1) year from the date of purchase. Should a defect appear in the Limited Warranty period, the Purchaser shall provide StormTech with written notice of the alleged defect at StormTech's corporate headquarters within ten (10) days of the discovery of the defect. The notice shall describe the alleged defect in reasonable detail. StormTech agrees to supply replacements for those Products determined by StormTech to be defective and covered by this Limited Warranty. The supply of replacement products is the sole remedy of the Purchaser for breaches of this Limited Warranty. StormTech's liability specifically excludes the cost of removal and/or installation of the Products.

(C) **THIS LIMITED WARRANTY IS EXCLUSIVE. THERE ARE NO OTHER WARRANTIES WITH RESPECT TO THE PRODUCTS, INCLUDING NO IMPLIED WARRANTIES OF MERCHANT-ABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE.**

(D) This Limited Warranty only applies to the Products when the Products are installed in a single layer. **UNDER NO CIRCUMSTANCES, SHALL THE PRODUCTS BE INSTALLED IN A MULTI-LAYER CONFIGURATION.**

(E) No representative of StormTech has the authority to change this Limited Warranty in any manner or to extend this Limited Warranty. This Limited Warranty does not apply to any person other than to the Purchaser.

(F) Under no circumstances shall StormTech be liable to the Purchaser or to any third party for product liability claims; claims arising from the design, shipment, or installation of the Products, or the cost of other goods or services related to the purchase and installation of the Products. For this Limited Warranty to apply, the Products must be installed in accordance with all site conditions required by state and local codes; all other applicable laws; and StormTech's written installation instructions.

(G) **THE LIMITED WARRANTY DOES NOT EXTEND TO INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES. STORMTECH SHALL NOT BE LIABLE FOR PENALTIES OR LIQUIDATED DAMAGES, INCLUDING LOSS OF PRODUCTION AND PROFITS; LABOR AND MATERIALS; OVERHEAD COSTS; OR OTHER LOSS OR EXPENSE INCURRED BY THE PURCHASER OR ANY THIRD PARTY. SPECIFICALLY EXCLUDED FROM LIMITED WARRANTY COVERAGE ARE DAMAGE TO THE PRODUCTS ARISING FROM ORDINARY WEAR AND TEAR; ALTERATION, ACCIDENT, MISUSE, ABUSE OR NEGLECT; THE PRODUCTS BEING SUBJECTED TO VEHICLE TRAFFIC OR OTHER CONDITIONS WHICH ARE NOT PERMITTED BY STORMTECH'S WRITTEN SPECIFICATIONS OR INSTALLATION INSTRUCTIONS; FAILURE TO MAINTAIN THE MINIMUM GROUND COVERS SET FORTH IN THE INSTALLATION INSTRUCTIONS; THE PLACEMENT OF IMPROPER MATERIALS INTO THE PRODUCTS; FAILURE OF THE PRODUCTS DUE TO IMPROPER SITING OR IMPROPER SIZING; OR ANY OTHER EVENT NOT CAUSED BY STORMTECH. THIS LIMITED WARRANTY REPRESENTS STORMTECH'S SOLE LIABILITY TO THE PURCHASER FOR CLAIMS RELATED TO THE PRODUCTS, WHETHER THE CLAIM IS BASED UPON CONTRACT, TORT, OR OTHER LEGAL THEORY.**

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APPENDIX D

Isolator Row Testing Summary

TECHNOLOGY ASSESSMENT • TECHNOLOGY ASSESSMENT

CERTIFICATE

OF TECHNOLOGY ASSESSMENT

**StormTech® Subsurface Chambers,
LandSaver™ Subsurface Chambers
and Isolator™ Row**

The Ontario Ministry of the Environment has reviewed the stormwater treatment systems designed by StormTech®. Based on the review of the documentation submitted by the Company (see Notable Aspects and Appendix), including laboratory test results, the Ministry concludes that the Isolator™ Row and chamber systems marketed as either StormTech® Subsurface Chambers or LandSaver™ Subsurface Chambers can be effective technologies which can be applied for the treatment of stormwater.

Application of this technology in Ontario sites will have to meet the requirements of the Ontario Water Resources Act and the Environmental Protection Act, and will be required to obtain a Certificate of Approval issued under the Ontario Water Resources Act.

J R Mayes

John Mayes, Director (A)
Standards Development Branch
Ontario Ministry of the Environment
(April 2007)

New Environmental Technology Evaluation Program

Promoting the development and application of new environmental technologies

Ontario

TECHNOLOGY ASSESSMENT • TECHNOLOGY ASSESSMENT

StormTech® Subsurface Chambers, LandSaver™ Subsurface Chambers and Isolator™ Row

Notable Aspects of the Technology:

√ StormTech® manufactures identical chambers of different colour under two trade names: StormTech® and LandSaver™.

√ StormTech® / LandSaver™ chambers consist of half-cylindrical polypropylene corrugated horizontal chambers which are open at the bottom. They are interconnected for stormwater detention and are usually designed to hold water temporarily and release it at a defined rate through an outlet control structure.

√ The Isolator™ Row is a row of standard StormTech®/LandSaver™ chambers surrounded with appropriate filter fabrics and connected to a maintenance access hole for easy access. The chambers basically create an extended detention basin/filter that allows water to egress through the surrounding filter fabric while sediment is trapped within the chamber.

√ The manufacturer suggests that the Isolator™ Row be designed as a first flush treatment device or sized to capture storm water in excess of the first flush. The Isolator™ Row system may also be used as part of a treatment train.

√ Exfiltration may occur in the detention system through the open bottom. The exfiltration may be controlled by a liner to create a watertight chamber system where a detention system needs to be watertight.

√ One of the key features of the StormTech®/LandSaver™ chamber system is its design flexibility. Chambers may be configured into beds or trenches of various sizes or shapes. They can be centralized or decentralized, and fit on nearly all sites, therefore, enabling its application on both existing and pre-developed site conditions. The systems can be designed to fit around utilities, natural or man-made structures and any other limiting site conditions and boundaries.

√ StormTech®/LandSaver™ currently offers two chamber sizes for stormwater management. These chambers have been designed to balance storage volume with respect to depth and area constraints. Primary considerations when selecting between the SC-740 or the SC-310 chambers are the depth to groundwater, available area for subsurface storage, and outfall restrictions.

√ In the design of the inlet configuration for an underground stormwater management system, StormTech®/LandSaver™ recommends an Isolator™ Row which may be supplemented with additional pre-treatment Best Management Practices (BMPs).

- √ Options of pre-treatment BMPs which are applicable to the StormTech®/LandSaver™ system include a simple deep-sumped manhole with a 90° bend on its outlet, swirl concentrators, baffle boxes, filtration devices grass swales and grassy strips. The purpose of pre-treatment prior to entry into the chamber system is to remove hydrocarbons and other pollutants and to extend the life of the chamber system.

- √ The Isolator™ Row should be designed to have, at its upstream end , a maintenance access hole which has an overflow weir as the entry point for the runoff. The maintenance access hole is connected to the Isolator™ Row with a short length of pipe set at the bottom of the StormTech®/LandSaver™ end cap.

- √ An upstream maintenance hole with the weir serves several purposes. It provides access to the Isolator™ Row for both inspection and maintenance and the overflow weir with its crest set even with the top of chambers allows stormwater in excess of the Isolator™ Row 's storage/conveyance capacity to bypass into the chamber system through the downstream eccentric header / manifold system.

- √ Specifying and installing proper geotextiles is essential for efficient operation and to prevent damage to the system during the JetVac maintenance process. A strip of woven geotextile is required between the chambers and their stone foundation. This filter fabric traps sediments and protects the stone base during maintenance. A strip of non-woven geotextile is draped over the Isolator™ Row chamber to prevent sediments from migrating out of the chamber's perforations while allowing modest amounts of water to flow out of the Isolator™ Row.

- √ To prevent scouring of the washed, crushed, angular stones foundation, and inlet pipe flow velocities should not exceed a maximum value as recommended in the Design Manual prepared by the manufacturer.

- √ Comprehensive procedures to size the system are documented in the manufacturer's Design Manual to guide the designers in the determination of storage volume, number of chambers, bed size, amount of stone, size of excavation, and selection of filter fabric.

- √ Laboratory results have demonstrated that the StormTech® SC-740 Isolator™ Row attained an average removal rate of about 95% for the OK-110 grade of silica at flow rates up to 0.5 cfs (14 L/s) per chamber. StormTech® recommends a more conservative design that allows for the build up of sediment over time and specifies 0.25 cfs (7 L/s) or less per SC-740 chamber.

- √ Applying a net removal rate that factors in the expected efficiency for removal of smaller particle sizes found in stormwater runoff, the Maine Department of Environmental Protection has adopted two simple guidelines for application of the StormTech® chamber for stormwater management: (i) a 50% total suspended solids (TSS) removal rate will apply to system that are sized to

provide 80% removal of the U.S. Silica grade F-95 foundry sand at a flow rate equivalent to the peak flow from a one-year 24-hour storm and, (ii) a 60% TSS removal rate will apply to systems that are sized to provide 80% removal of the U.S. grade OK-110 sand for the same flow rate.

√ StormTech has also obtained laboratory test results for smaller particle sizes based on the removal of ground silica by a recirculating test facility as evidenced by grab samples and a simple efficiency ratio calculation. Following are performance results for other particle sizes:

- √ 60% TSS Removal at 3.2 gpm/sqft for SIL-CO-SIL 106 with accumulated fines (D_{50} = 10 microns)
- √ 66% TSS Removal at 3.2 gpm/sqft for SIL-CO-SIL 106 (D_{50} = 22 microns)
- √ 71% TSS Removal at 3.2 gpm/sqft for SIL-CO-SIL 250 with accumulated fines (D_{50} < 45 microns)
- √ 88% TSS Removal at 1.7 gpm/sqft for SIL-CO-SIL 250 with accumulated fines (D_{50} < 45 microns)

√ Since Isolator™ Row does not provide removal of floating hydrocarbons, it is therefore recommended that pre-treatment devices be applied in precedence to the StormTech®/LandSaver™ chambers.

√ Inspection can be carried out at the maintenance access point or optional inspection ports on an Isolator™ Row. If it is found that sediment has accumulated to an average depth exceeding 7.6 cm, or if flow rates through the Isolator™ Row have decreased over time, clean out of the chambers is required. Clean out of sediment accumulated in the chamber can be accomplished through the JetVac process which utilizes a high pressure water nozzle to propel itself down the Isolator™ Row while scouring and suspending the sediments. The suspended sediments will then be flushed back to the maintenance hole and removed using a vacuum truck.

√ Our review did not include architectural, mechanical, structural, electrical or instrumentation components of the technology. The review did not include any assessment of the relative economical viability of the technology.

APPENDIX

The following documents were submitted by StormTech:

- StormTech® Catalog (4 pp);
- StormTech® Design Manual - StormTech® Chamber System for Stormwater Management;
- LandSaver™ Design Manual;
- StormTech® Subsurface Stormwater Management - Installation Instructions;
- "Hydraulic Performance and Sediment Trap Efficiency in StormTech® SC-740 Isolator™ Row", a Laboratory Testing Report prepared by the Tennessee Technological University;
- " Isolator™ Row Performance Test Results"- a two-page summary presenting the Tennessee laboratory testing results on the StormTech® SC-740 Isolator™ Row;
- "StormTech® SC-740 Isolator™ Row OK-110 Sand SSC (TSS) Removal Confirmation Test", November 8, 2004;
- Memorandum prepared by Department of Environmental Protection, State of Maine, U.S., dated December 13, 2004;
- Laboratory Testing Protocol for Manufactured Stormwater Treatment Systems, Maine Department of Environmental Protection.
- Performance evaluation of sediment removal efficiency - StormTech® Isolator™ Row, Vincent Neary, Ph.D., P.E., Tennessee Tech University, Cookeville, Tennessee, U.S., dated October 6, 2006.

StormTech®
Detention • Retention • Recharge
Subsurface Stormwater Management™

Isolator Row Testing Summary

Thank you for your interest in the StormTech Isolator Row testing done to date. Below is a summary of the testing that has been completed on the StormTech Isolator Row. The most current testing done by the University of New Hampshire is probably the best data to use for proof of 80% removal of TSS since this test was done in the field as opposed to a lab test. Any of the referenced reports are available upon request.

- February 23, 2005 - Tennessee Tech University summarized laboratory testing on the Isolator Row in accordance with Maine DEP testing protocol. Tests demonstrated the following:
  - 95% TSS overall removal at 8.1 gpm/sqft for US Silica OK-110 (110 micron).
  - 80% captured on fabric, 15% captured in stone

- October 20, 2006 - Tennessee Tech University summarized laboratory testing on the Isolator Row in accordance with New Jersey Center for Advanced Technologies (NJCAT) testing protocol. Tests demonstrated the following:
  - 60% TSS Removal at 3.2 gpm/sqft for Sil-Co-Sil 106 with accumulated fines (D_{50} = 10 microns)
  - 66% TSS Removal at 3.2 gpm/sqft for Sil-Co-Sil 106 (D_{50} = 22 microns)
  - 71% TSS Removal at 3.2 gpm/sqft for Sil-Co-Sil 250 (D_{50} = 45 microns)
  - 88% TSS Removal at 1.7 gpm/sqft for Sil-Co-Sil 250 (D_{50} = 45 microns)

- August, 2007 – NJCAT summarized its third party evaluation of the Tennessee Tech test results and produced the “NJCAT Technology Verification Report StormTech Isolator Row”. Their verification is summarized as follows:

  - **Claim 1:** A StormTech® SC-740 Isolator™ Row, sized at a treatment rate of no more than 2.5 gpm/ft^2 of bottom area, using two layers of woven geotextile fabric under the base of the system and one layer of non-woven fabric wrapped over the top of the system and a mean event influent concentration of 270 mg/L (range of 139 – 361 mg/L) has been shown to have a TSS removal efficiency (measured as SSC) of at least 60% for SIL-CO-SIL 106, a manufactured silica product with an average particle size of 22 microns, in laboratory studies using simulated stormwater.

  - **Claim 2:** A StormTech® SC-740 Isolator™ Row, sized at a treatment rate of no more than 2.5 gpm/ft^2 of bottom area, using two layers of woven geotextile fabric under the base of the system and one layer of non-woven fabric wrapped over the top of the system and a mean event influent concentration of 318 mg/L (range of 129 – 441 mg/L) has been shown to have a TSS removal efficiency (measured as SSC) of 84% for SIL-CO-SIL

250, a manufactured silica product with an average particle size of 45 microns, in laboratory studies using simulated stormwater.

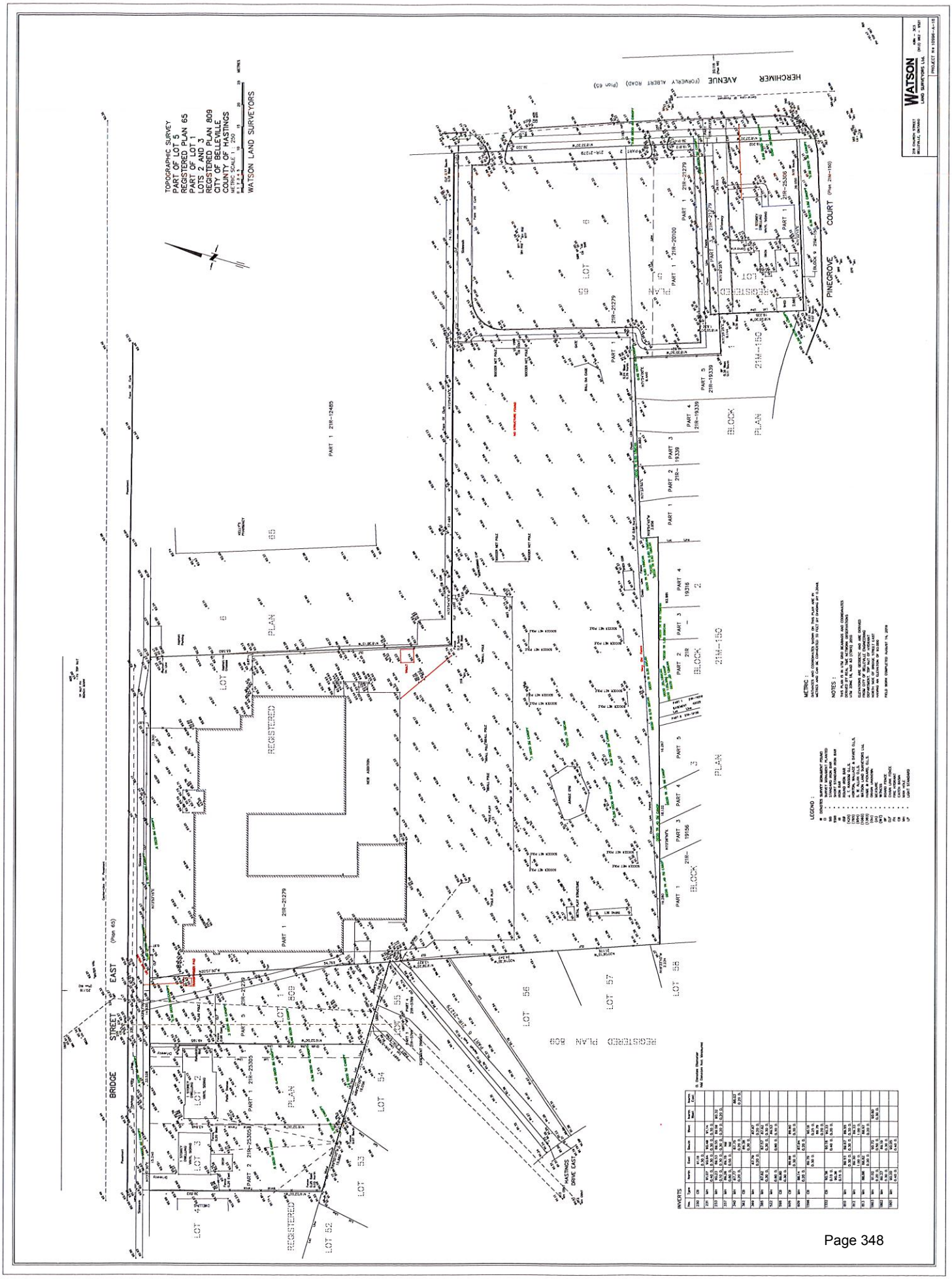
- **Claim 3:** A StormTech® SC-740 Isolator™ Row, sized at a treatment rate of no more than 6.5 gpm/ft^2 of bottom area, using a single layer of woven geotextile fabric under the base of the system and one layer of non-woven fabric wrapped over the top of the system and a mean event influent concentration of 371 mg/L (range of 116 – 614 mg/L) has been shown to have a TSS removal efficiency (measured as SSC) of greater than 95% for OK-110, a manufactured silica product with an average particle size of 110 microns, in laboratory studies using simulated stormwater.

- June 2008 – The University of New Hampshire Stormwater Center releases the Final Report on Field Verification Testing of the StormTech Isolator Row Treatment Unit. Testing consisted of determining the water quality performance for multiple stormwater pollutants. As of the June report, data was recorded for 17 storm events.

  - TSS median removal efficiency – 80%
  - Petroleum Hydrocarbons median removal efficiency – 90%
  - Zinc median removal efficiency – 53%
  - Phosphorus median removal efficiency – 49%

References:

1. February 23, 2005 Tenn Tech report
2. October 20, 2006 Tenn Tech report
3. August 2007 NJCAT Verification
4. June 2008 UNH report


TOPOGRAPHIC SURVEY
PART OF LOT 5
REGISTERED PLAN 65
PART OF LOT 1
LOTS 2 AND 3
REGISTERED PLAN 809
CITY OF BELLEVILLE
COUNTY OF HASTINGS
METRIC SCALE 1 : 250
WATSON LAND SURVEYORS
WATSON
LAND SURVEYORS Ltd.
HERCHIMER AVENUE (FORMERLY ALBERT ROAD) (Plan 65)
PINEGROVE COURT (Plan 21M-150)
BRIDGE STREET EAST (Plan 65)
HASTINGS DRIVE EAST
REGISTERED PLAN 809
BLOCK PLAN
LEGEND :
NOTES :
METRIC :
INVERTS

ALGONQUIN AND LAKESHORE CATHOLIC SCHOOL BOARD

TRAFFIC IMPACT ASSESSMENT FOR ST. JOSEPH CATHOLIC SCHOOL

405 BRIDGE STREET EAST, BELLEVILLE, ON

AUGUST 27, 2019

TRAFFIC IMPACT ASSESSMENT FOR ST. JOSEPH CATHOLIC SCHOOL

405 BRIDGE STREET EAST, BELLEVILLE, ON

ALGONQUIN AND LAKESHORE CATHOLIC SCHOOL BOARD

PROJECT NO.: OUR REF. NO. 181-10514-00
DATE: AUGUST 27, 2019

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August 28, 2019

ALGONQUIN AND LAKESHORE CATHOLIC SCHOOL BOARD
151 Dairy Avenue
Napanee, ON
K7R 4B2

Attention: Bryan Davies, Manager of Capital Projects

Dear Madam/Sir:

Subject: TRANSPORTATION IMPACT ASSESSMENT FOR ST. JOSEPH CATHOLIC SCHOOL EXPANSION

WSP is pleased to provide the attached Traffic Impact Assessment for the proposed expansion of St. Joseph Catholic School in Belleville, Ontario. The expansion will accommodate additional classrooms, a new daycare centre and an EarlyON child and family centre. Vehicular traffic near the site is expected to operate with an acceptable Level of Service with the school expansion in place. The proposed modifications to the parking areas support the an effective arrival and departure of pedestrians, cyclists, and vehicles while reducing the risk of conflict between travel modes.

Yours sincerely,

Sarah McDonald, P. Eng.
Project Manager, Transportation Planning

WSP ref.: 181-10514-01

SIGNATURES

PREPARED BY

Carly MacEacheron

Carly MacEacheron, P. Eng
Engineer, Transportation Planning

August 24, 2019
Date

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APPROVED[1] BY

Sarah McDonald

Sarah McDonald, P. Eng.
Project Manager, Transportation Planning

August 28, 2019
Date

LICENSED PROFESSIONAL ENGINEER
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Aug 28, 2019
PROVINCE OF ONTARIO

[1] Approval of this document is an administrative function indicating readiness for release and does not impart legal liability on to the Approver for any technical content contained herein. Technical accuracy and fit-for-purpose of this content is obtained through the review process. The Approver shall ensure the applicable review process has occurred prior to signing the document.

TABLES

FIGURES

APPENDICES

1 PROJECT DESCRIPTION

The Algonquin and Lakeshore Catholic District School Board with Colbourne & Kembel, Architects Inc. are planning and designing significant additions and renovations to St. Joseph Catholic School in Belleville, Ontario. The school is located at 405 Bridge Street East and serves students in Junior Kindergarten to Grade 8. The existing building has 14 classrooms and a gross floor area of approximately 30,850 ft^2 (2,900 m^2). The proposed expansion of the existing school building includes a new daycare facility, a new EarlyON centre and six new school classrooms. To accommodate the expansion, two new parking areas and an expanded bus drop-off area are also proposed.

The school covers a wide catchment area including a large section of eastern Belleville, Thurlow and Point Anne. Student transportation is provided by Tri-Board Student Transportation Services Inc.

The City of Belleville Zoning By-law No. 10245 designates the existing school site as a Community Facility Zone and sections of the remaining school site as Residential Zones with varying densities. It is anticipated that the proposed school expansion will require Official Plan and Zoning By-law amendments to permit the proposed uses and contain the entire site within one zoning boundary.

The Study Area was determined in consultation with City of Belleville staff and is shown in **Figure 1**.

Figure 1: Study Area

2 EXISTING CONDITIONS

2.1 ROADS

Bridge Street is a collector road with an east-west alignment from the Moira River east to the urban limit at Haig Road. Its urban cross-section includes concrete curb and sidewalk on both sides of the road and one travel lane in each direction, though there is no marked centreline. There are several stop-controlled and signalized intersections along the corridor and closely-spaced private driveway accesses. In the Study Area, the posted speed limit is 40 km/h Monday to Friday between 8AM and 5PM, and 50 km/h at all other times. On-street parking is prohibited

along both sides of Bridge Street E adjacent to the school, but not on the north side to the east and west of the school.

Herchimer Avenue is a collector road with a north-south alignment from the rail line south to the Bay of Quinte waterfront. Its urban cross-section includes concrete curb and sidewalk on both sides of the road and one travel lane in each direction, demarked with a painted centreline. Private driveways and side streets are accessible via Herchimer Avenue. Through traffic along the corridor is controlled by signalized intersections at Dundas Street E and Bridge Street E, and a four-way stop-controlled intersection at Victoria Avenue. In the Study Area, the posted speed limit is 40 km/h Monday to Friday between 8AM and 5PM, and 50 km/h at all other times. On-street parking is prohibited on the east side of the roadway but is permitted on the west side adjacent to the school parking / drop-off area. On-street parking is prohibited on both sides of the road north and south of the Study Area.

MacDonald Avenue is a local road with a north-south alignment between Emily Street and Dundas Street E. It is a two-way, two lane road with no marked centreline and a posted speed limit of 40 km/h. There are signalized intersections at Bridge Street E and Dundas Street E, and several stop-controlled intersections and private driveways along the corridor.

2.2 INTERSECTIONS

The two intersections in our Study Area that selected in consultation with City of Belleville staff include:

The **Bridge Street E / Herchimer Avenue** intersection is signalized with a through-right and auxiliary left-turn lane on all approaches. Signalized pedestrian crosswalks with standard transverse pavement markings are located across each approach.

The **Bridge Street E / MacDonald Avenue** intersection is signalized with a single approach lane in all directions. Signalized pedestrian crosswalks with standard transverse pavement markings are located across each approach.

2.3 PEDESTRIAN AND CYCLING FACILITIES

The City of Belleville's pedestrian network includes sidewalks on all Study Area roads and painted crosswalks at signalized intersections. Specific pedestrian facilities in the study area are listed below.

- Bridge Street E includes continuous sidewalks on both sides of the road. There is no dedicated pedestrian crossing at the school entrance but there are signalized painted crossings 150m to the east at the Herchimer Avenue intersection. There are also painted crosswalks with 'School Crossing' signage on the east leg of the stop-controlled Bertram Boulevard intersection and painted signalized crossings at the east and west legs of the MacDonald Avenue intersection.
- Herchimer Avenue includes continuous sidewalks on both sides of the road. There are no pedestrian crossings at the school parking / loading area, which also provides a pedestrian pathway into the rear of the school building and the playground area. Pedestrian crossings to the school from the residential and commercial area to the east of Herchimer Avenue are limited to the signalized Bridge Street E intersection or the signalized Dundas Street E intersection located approximately 250m to the south.
- MacDonald Avenue includes sidewalks on both sides of the roadway south of the Bridge Street E intersection, and on the east side north of the intersection.

The are no dedicated cycling facilities in the study area.

2.4 PUBLIC TRANSIT SERVICE

The City of Belleville operates 11 bus routes that serve the urban area. The St. Joseph Catholic School site is served by Route 1 (**Figure 2**), which operates in the downtown area east of the Moira River, primarily eastbound along Bridge Street E and westbound on Dundas Street E. This route operates at a 30-minue frequency Monday to Saturday between 6:30 AM and 6:00 PM and Sunday at a one-hour frequency Sunday between 9:30 AM and 5:30 PM. The transit stop located approximately 80m east of the school's Bridge Street E entrance serves passengers from the west only; the closest stop for passengers from the east is Dundas Street E.

Figure 2: City of Belleville public transit map

2.5 SCHOOL ACCESS AND PARKING

The existing site has two parking areas and a curbside bus loading area (**Figure 3**). The parking area on Bridge Street E has one full movement access. There are 6 parking spaces and the area is marked with short-term visitor parking signage. The parking area on Herchimer Avenue has two accesses: a right-in only at the north end and a full movement access at the south. There are 55 parking spaces and the area is marked for staff and parent parking. The on-street school bus loading area on Bridge Street E is too narrow (approximately 2m) for a school bus and requires that some width of the eastbound travel lane is taken up by buses, but Bridge Street E is of adequate width to accommodate buses and two lanes of traffic. The bus loading area is long enough for approximately two school buses.

In the south parking area (Herchimer), the vehicle drop-off / pick-up activity occurs along the north and west curbs of the parking lot. There are two accesses to the parking area providing one-way circulation. There are pavement markings directing vehicles from the northern access to the southern access and the south exit has 'Exit Only' signage.

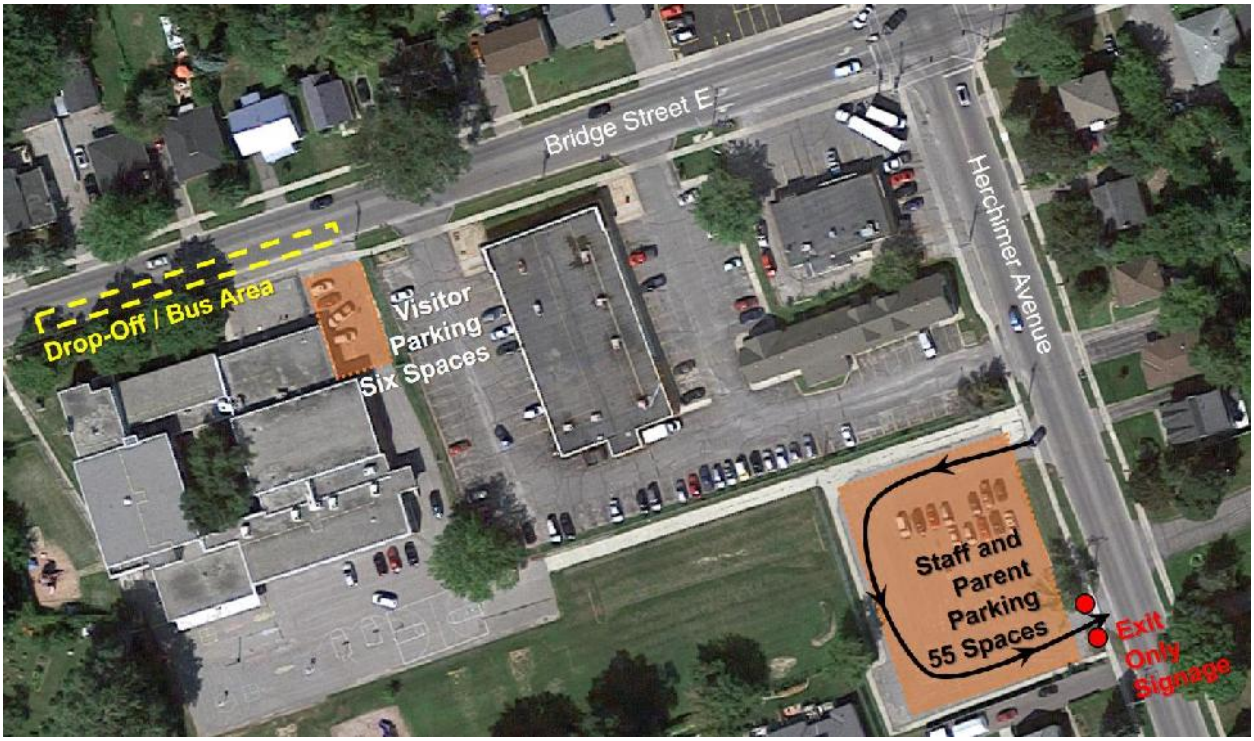


Figure 3. Existing Access, Parking, and Vehicle Circulation

There are on-site pedestrian facilities that provide connections from parking areas to the school building and playground. The include:

- A concrete sidewalk between the playground and the staff / parent parking area
- A concrete pathway between Bridge Street E and the west side of the school building
- An asphalt pathway from Hasting Drive to the playground connecting the subdivision to school

3 SITE VISIT

WSP conducted a site visit on Thursday, January 31, 2019 to observe the existing pick-up and drop-off operations.

3.1 OBSERVATIONS AT THE BRIDGE STREET E BUS LOADING AREA

Morning Observations. Pylons were placed along the entrance to the parking area before the drop-off period commenced to prohibit vehicle movements as students unloaded and provide a clear path for students. The first bus arrived at 9 AM and unloaded. The second and third buses queued in the bus loading area at 9:05 AM and unloaded in succession. A fourth bus arrived at 9:10 AM and waited until the third bus departed to unload. Activity after the 9:15 AM bell was minimal, with some parents walking students into the school from the parking area. Buses unloading did not impede traffic flow along Bridge Street E.

Afternoon Observations. Three buses were observed queuing at the bus loading area. With the loading zone capacity of approximately two school buses, the third bus queued curbside, but did not impede traffic flow along Bridge Street E. Students were accompanied out and loaded on the first two buses in the loading area. Students waited on the sidewalk to load the third bus. Buses began arriving at 3:00 PM and all buses had left by 3:35 PM, before and after which little activity was observed at this access.

3.2 OBSERVATIONS AT THE HERCHIMER AVENUE PARKING AREA

Morning Observations. Parents were observed parking in the parking area and walking children into the school until 8:50 AM. Staff arrived at the gated entrance to the playground behind the school to greet students at 9:00 AM, after which parents were observed dropping off rather than parking and walking in. The parking area was approaching capacity between 9:00 AM and 9:15 AM. The curbside loading area was full at some points and was blocking the accessible parking spaces at the northwest corner of the lot during most of the observation period (**Photo 1**). Queues of approximately three vehicles were observed at the exit to the parking area.

Photo 1: Curbside loading area at Herchimer Avenue school lot

Afternoon Observations. Parents began arriving at 2:50 PM, and began going inside at 3:00 PM to pick up students. Students began exiting the school into the parking area at 3:15 PM. The parking / loading area was over capacity approximately between 3:15 PM and 3:30 PM (**Photo 2**). Vehicles were lined along both sides of the aisle and several parents parked in the Circle K parking lot. The curbside loading blocked the accessible parking spaces. Vehicles cleared quickly at 3:30 PM and staff left at 3:40 PM.

Traffic operations on Herchimer Avenue appeared to be largely unaffected by the overflowing school parking / loading area during the afternoon observation period. On-street parking / loading was not observed adjacent the site during either observation period, nor was on-street queuing observed.

One student was observed jaywalking across Herchimer Avenue during the afternoon observation period, but pedestrian activity otherwise remained within dedicated facilities. Accumulated snow also impacted circulation and parking; a pile of cleared snow in the southwest corner reduced the number of available parking spaces by approximately five, and snow / ice cover had several vehicles driving over the curb bump-out at the entrance.

Photo 2: Over capacity school parking / loading area at Herchimer Avenue lot during PM pick-up

4 PROPOSED DEVELOPMENT

4.1 OVERVIEW

The proposed addition and renovation to St. Joseph Catholic School includes a building expansion of the first floor and a two-storey addition. There will be six additional classrooms and a new daycare centre, increased parking area, reconstructed and expanded playground area, and increased school bus loading area. The proposed school building has a total gross floor area of 60,956ft^2 (5,663m^2). The school is expected to be in operation by January 2022. The proposed growth is summarized in **Table 1**.

Table 1. Existing, Proposed, and Total School Size

ELEMENT	EXISTING	EXPANSION	TOTAL
STAFF	37 school staff	9 school staff 7 daycare staff 4 EarlyON staff	46 school staff 7 daycare staff 4 EarlyON staff
STUDENTS	387 students (JK-8)	94 students (JK-8) 51 students (daycare)	481 school students (JK-8) 51 students (daycare)
CLASS ROOMS	14	6	20
GFA	30,850 sq/ft	30,106 sq/ft	60,956 sq/ft

The main school entrance will be located on the north side of the building facing Bridge Street E. The proposed site plan with entrances identified by red arrows is illustrated in **Figure 4**, and a larger version is attached in **Appendix C**.

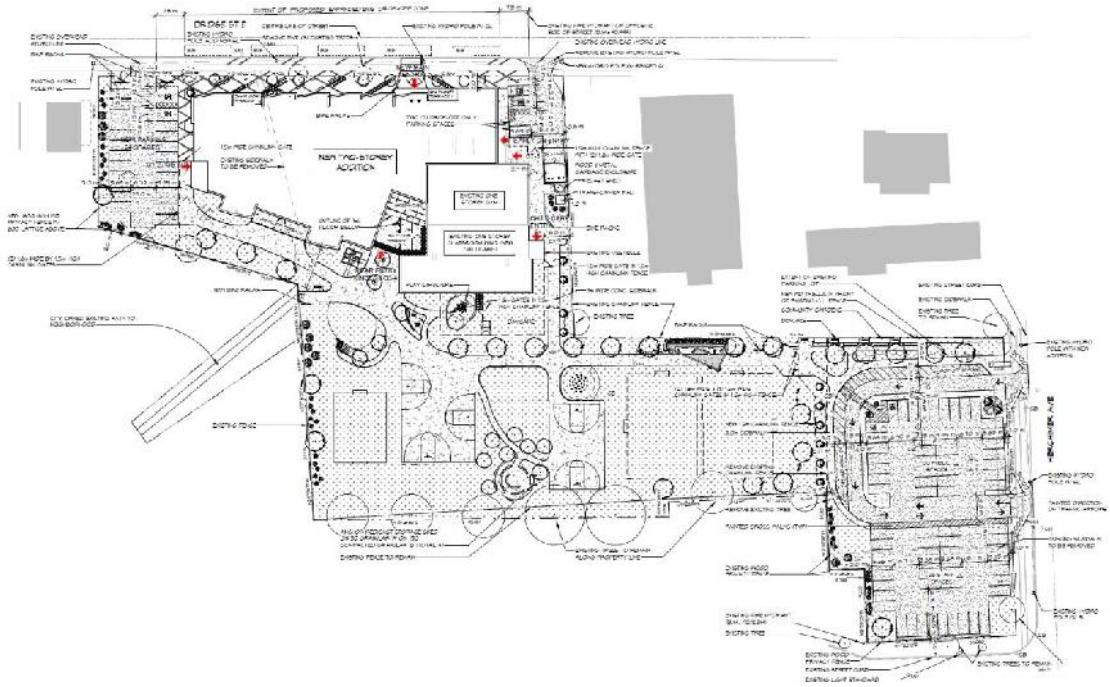


Figure 4: Proposed additions and renovations to St. Joseph Catholic School

4.2 PARKING

Improvements to the parking configuration are proposed as part of the school expansion. There will be a new parking area located to the west of the school building, the existing six-space lot on Bridge Street E, an expanded bus loading area on Bridge Street E, and an expanded Herchimer Avenue lot. The changes in the parking configuration are summarized in **Table 2**.

Table 2. Existing and Proposed Parking Areas

PARKING AREA	LOCATION	EXISTING CONFIGURATION	PROPOSED CONFIGURATION
West	Bridge Street E 240m west of Herchimer Avenue	N/A	24 parking spaces (2 accessible)
East	Bridge Street E 150m west of Herchimer Avenue	6 parking spaces	4 parking spaces (2 accessible)
South	Herchimer Avanue 70m south of Bridge Street E	55 parking spaces	69 parking spaces (2 accessible) and 7 drop-off spaces
Bus Loading	Bridge Street E along property frontage	2 full size buses	5 full size buses

The bus loading area is located on Bridge Street E where there is adequate space for five school buses. The outlined bus space shown design vehicle shown in **Figure 5** represents a 12.2m long school bus (TAC B-12 design vehicle).

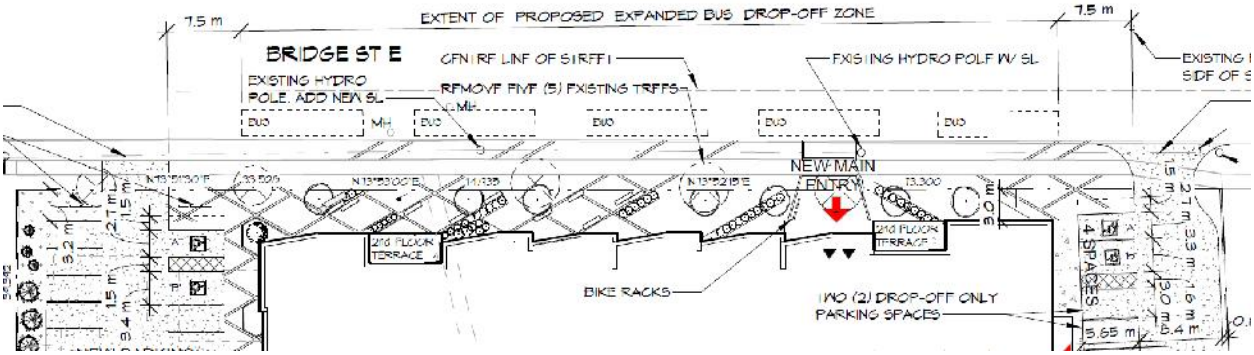


Figure 5. Bus Loading Area

In the south parking area (**Figure 6**) accessed from Herchimer Avenue, vehicle circulation will continue to be from the north to the south as existing, but with curb guiding pick-up / drop-off circulation and the south access converted for two-way traffic. The drop-off / pick-up activity will be similar under this configuration, with students and parents walking into the school through the fence and playgrounds to the rear of the building. School staff will be encouraged to park in the south section to provide more space for parent parking and loading in the north section lot.

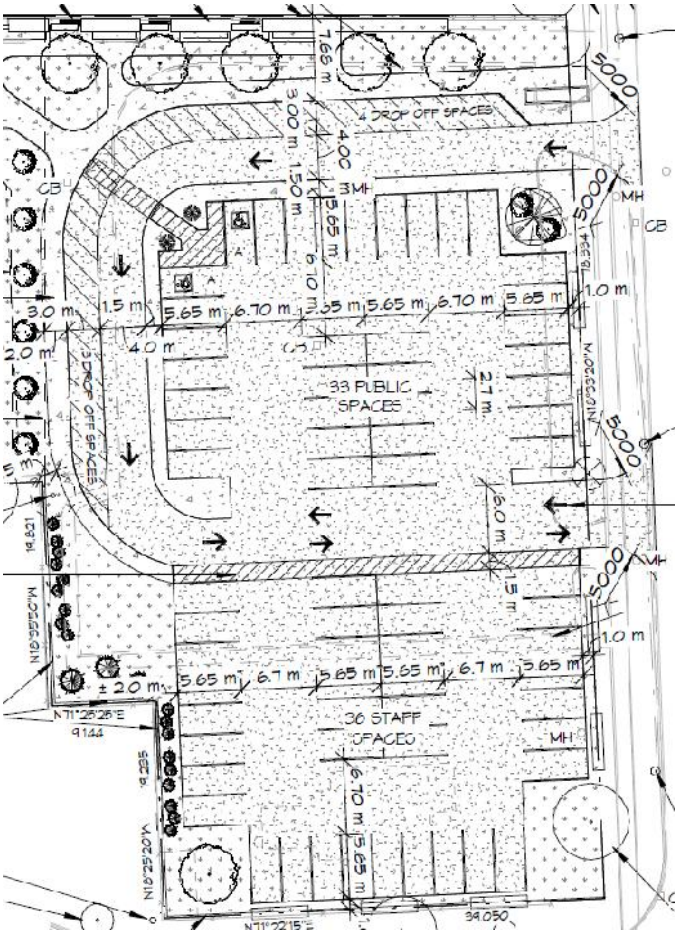


Figure 6. New Herchimer Parking Area

5 TRAFFIC OPERATIONS

5.1 METHODOLOGY

The Level of Service (LOS) of a transportation facility is a performance measure that represents quality of service from the traveler's perspective. The Highway Capacity Manual (HCM) defines six LOS, ranging from A to F where 'A' represents the best operating conditions and 'F' represents the worst. The assigned LOS is based on the ranges of delay identified in **Table 3**.

Table 3. Highway Capacity Manual 2010, LOS Criteria for Signalized Intersections

LEVEL OF SERVICE	DELAY (S)
A	≤10
B	>10-20
C	>20-35
D	>35-55
E	>55-80
F	>80

The existing and future conditions were analyzed using Synchro v10, a macroscopic traffic analysis software, using the weekday peak hour traffic and traffic signal timing obtained from the City of Belleville.

5.2 EXISTING CONDITIONS

WSP collected turning movement counts on Thursday, January 31, 2019 that identified peak hours of:

- AM Peak Hour: 9:00 AM to 10:00 AM
- PM Peak Hour: 3:45 PM to 4:45 PM.

It is noted that the peak hours identified capture the morning school bell timing (9:15 AM) but are slightly later than the afternoon school bell (3:45 PM). This may indicate intersection peak hour timing is not driven by existing school traffic. The existing traffic volumes for each peak hour are identified in **Figure 7**. The complete traffic counts are attached in **Appendix A**.

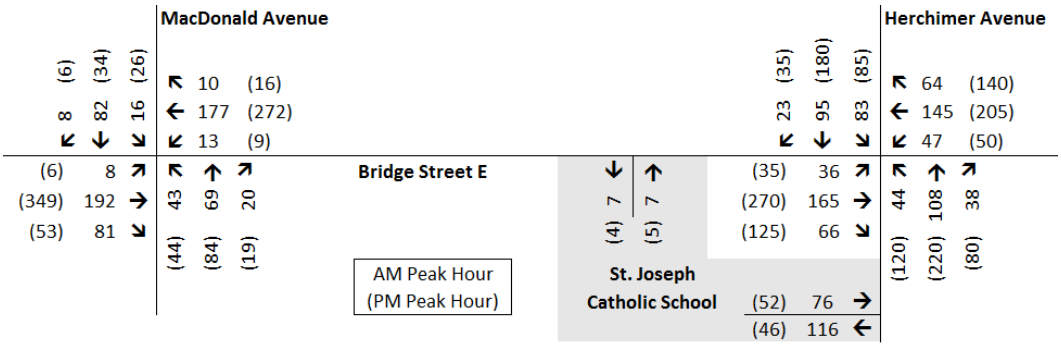


Figure 7: Existing (2019) Weekday Peak Hour Traffic Volumes

The existing conditions operational analysis is summarized in **Table 4** and the detailed Synchro output is included as **Appendix B**. The results of the analysis indicate that both intersections are operating with an acceptable LOS 'B' during the peak hours with less than 15s of delay experienced by drivers.

Table 4: Summary of Traffic Operations Analysis – Existing Conditions (2019)

SIGNALIZED INTERSECTION WITH BRIDGE STREET E	AM PEAK HOUR			PM PEAK HOUR		
	DELAY	LOS	CRITICAL MOVEMENT	DELAY	LOS	CRITICAL MOVEMENT
MacDonald Avenue	11.1	B	-	10.8	B	-
Herchimer Avenue	11.7s	B	-	13.5	B	-

5.3 TRIP GENERATION AND ASSIGNMENT

To estimate the number of individual vehicle trips that will generated by the school expansion we calculated a trip generation rate for the existing school using data obtained during our January site visit. Trips generated by the daycare and EarlyON were projected using data from the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). The resulting trip generation estimates for the expansion are summarized in **Table 5**.

Table 5: Trip Generation for School Expansion

AM PEAK HOUR

Land Use	ITE Code	Size	Unit	Avg. Rate	% in	% out	Total Trips	Trips In	Trips Out
Elementary School	Local Data	94	Students	0.54	54%	46%	51	27	23
Daycare	565	51	Students	0.78	53%	47%	40	21	19
Community Centre	495	4	Employees	2	67%	33%	8	5	3
						Total New Trips	**99**	**54**	**45**

PM Peak Hour

Land Use	ITE Code	Size	Unit	Avg. Rate	% in	% out	Total Trips	Trips In	Trips Out
Elementary School	Local Data	94	Students	0.28	48%	52%	26	13	14
Daycare	565	51	Students	0.79	47%	53%	40	19	22
Community Centre	495	4	Employees	2.66	44%	56%	11	5	6
						Total New Trips	**77**	**36**	**41**

The trip generation estimates include a total of 54 inbound and 45 outbound trips during the weekday morning peak hour, and 36 inbound and 41 outbound trips during the weekday afternoon peak hour. As observed at the existing school accesses, inbound and outbound trips are close to balanced for school and daycare trips because of drop-off activity, where vehicles making these trips would be both entering and exiting during a short timeframe.

The new trips were assigned to the three proposed parking areas (**Table 6)** based on existing activity, the number and type of parking spaces available at each lot, the proposed building layout, and the nature of the trips for each of the three facilities at the site. The different user types considered during the assignment were:

- Staff who park their vehicles for the entire day
- Parents of older children who stop their vehicle briefly to allow their child(ren) to enter / exit the vehicle
- Daycare parents and parents of younger school aged children who park and leave their vehicles for a very short timeframe to pick-up / drop-off their child
- EarlyON parents who park and leave their vehicles for the duration of a program

Table 6. Trip Assignment

	AM		PM	
PARKING AREA	**Enter**	**Exit**	**Enter**	**Exit**
West	53	42	26	29
East	12	8	10	12
South	113	90	51	57

5.4 FUTURE BACKGROUND CONDITIONS

The planning horizon for this Transportation Impact Assessment is 2022, which is the anticipated year of complete school occupancy. The City of Belleville indicated that a 2% annual traffic growth rate should be applied to determine the future background traffic conditions.

The 2% growth rate is appropriate considering the City of Belleville's Official Plan (2002) population estimates. The Official Plan (2002) projected that the City's population would increase by 7,500 to 54,000 total inhabitants by 2021, representing an average annual population growth rate of 0.7%. The Official Plan also noted that the population growth rate may reach more than double the projected rate due to Belleville's increasing role as a regional employment and service centre.

The 2022 background traffic volumes are shown in **Figure 8**.

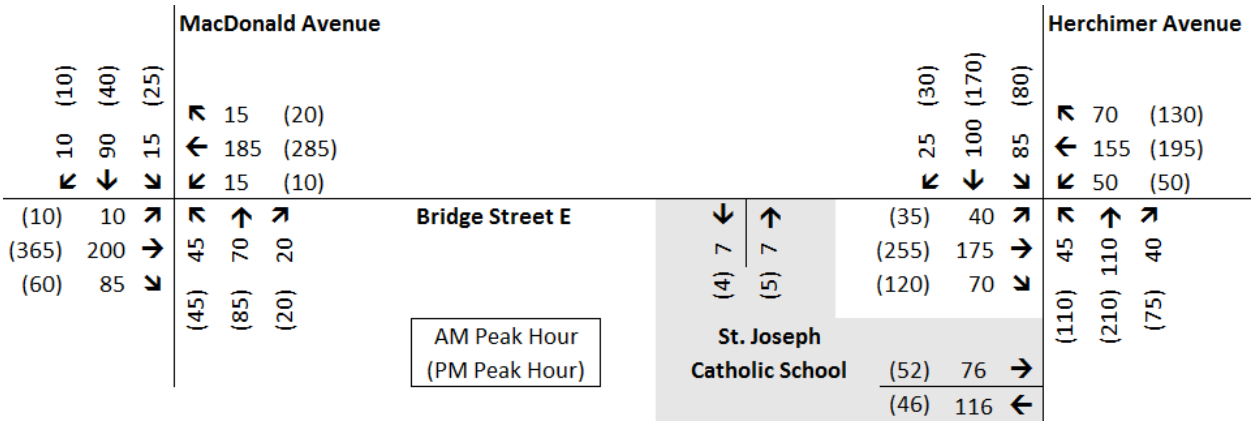


Figure 8: 2022 Background Traffic Volumes

The 2022 background conditions were analyzed to establish a baseline to assess the impacts of site generated trips. This analysis was carried out using the Synchro 10 software. The results of the projected traffic operations in 2022 without the school expansion are summarized in **Table 7**. The detailed Synchro outputs are attached in **Appendix D**.

The results of the analysis indicate that both intersections continue to operate with an acceptable LOS 'B' during the peak hours with less than 15s of delay experienced by drivers. Considering the detailed outputs (**Appendix D**), the volume to capacity ratios indicate that projected volumes are well within intersection capacity and that all queue lengths are expected to be within available storage lengths at the intersection approaches.

Table 7: Summary of Traffic Operations Analysis – Future Background (2022)

SIGNALIZED INTERSECTION WITH BRIDGE STREET E	AM PEAK HOUR			PM PEAK HOUR		
	DELAY	LOS	CRITICAL MOVEMENT	DELAY	LOS	CRITICAL MOVEMENT
MacDonald Avenue	11.2s	B	-	11.1s	B	-
Herchimer Avenue	11.8s	B	-	13.9s	B	-

5.5 FUTURE TOTAL CONDITIONS

The trips generated by the expanded school (**Section 5.3**) were added to the 2022 background traffic (**Section 5.4**) to obtain the 2022 total traffic estimates in the Study Area. The projected 2022 traffic volumes with site generated trips are illustrated in **Figure 9**.

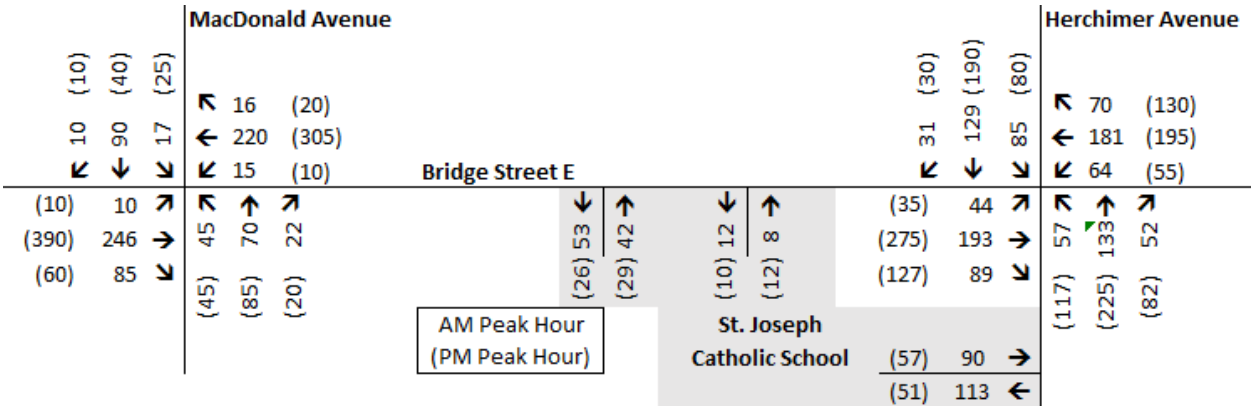


Figure 9: Total projected 2022 total traffic volumes

Traffic analysis was carried out for the 2022 total traffic conditions using Synchro 10 software. Results are summarized in **Table 8**, and detailed in **Appendix D**.

Table 8: Summary of traffic operations analysis – 2022 total traffic

SIGNALIZED INTERSECTION WITH BRIDGE STREET E	AM PEAK HOUR			PM PEAK HOUR		
	DELAY	LOS	CRITICAL MOVEMENT	DELAY	LOS	CRITICAL MOVEMENT
MacDonald Avenue	11.2s	B	-	11.2s	B	-
Herchimer Avenue	12.2s	B	-	14.5s	B	-

The results of the analysis indicate that both intersections continue to operate with an acceptable LOS ‘B’ during the peak hours with less than 15s of delay experienced by drivers. Considering the detailed outputs (**Appendix D**), the volume to capacity ratios indicate that projected volumes are to be well within intersection capacity and that all queue lengths are expected to be within available storage lengths at the intersection approaches.

The additional traffic generated by the school expansion has no impact to the LOS experienced by drivers when compared to the 2022 background traffic condition. It is noted that higher queuing and delays may be expected than the traffic analysis describes since drop-off / pick-up activity is concentrated around school bell times and peak periods for school traffic are therefore generally shorter.

6 PARKING REVIEW

6.1 BY-LAW REVIEW

The City of Belleville's Zoning By-Law does not provide minimum parking space requirements for schools. For land uses not listed in the parking requirements (Part C, Section 14), the minimum requirement is two parking spaces (including one visitor space) for every 12 children enrolled in a daycare facility and one parking space for every 28 m^2 of gross floor area. To meet the minimum requirement, the proposed 51-student daycare would require nine parking spaces and the school / EarlyON centre would require 180 parking spaces, totalling approximately 190 spaces for the proposed site. However, the use of general parking requirements is not representative of the unique parking needs of an elementary school and the minimum of 190 spaces is likely an overestimation for the proposed school expansion.

A review of the parking space requirements for the nearby City of Kingston and City of Quinte West was undertaken to determine the typical parking space requirements for schools in comparable areas (**Table 9**). The Township of Kingston By-Law is the only of those reviewed that stated specific parking requirements for elementary schools (as opposed to a single rate for all schools) and was therefore considered the most comparable to St. Joseph Catholic School. Combined with the most conservative estimate for required daycare spaces, a minimum of 66 spaces would be required. The review therefore indicates that the 104 spaces (including 7 drop-off spaces) could be acceptable.

Table 9. By-Law Parking Requirement Review

CITY ZONING BY-LAW	SCHOOL / EARLYON PARKING SPACES	DAYCARE PARKING SPACES	TOTAL PARKING SPACES
Belleville By-Law 10245, Part C, Section 14	180 (1 space for every 28 m^2 GFA)	9 (2 spaces for every 12 children)	190
City of Kingston By-law 8499, Section 5.3.A	25 (1 space for every 2 employees)	5 (1 space for every 117m^2 of GFA)	30
Kingston Township (City of Kingston) By-Law 76-26, Section 5.16	42 (2.1 spaces per elementary school classroom)	-	-
Quinte West By-law 18-009, Section 5.13	80 (4 spaces per school classroom)	22 (1.5 spaces per daycare classroom plus one space per 30m^2 of a daycare)	102

6.2 PARKING DEMAND

Parking demand for the proposed site was estimated using parking generation rates from the ITE *Parking Generation Manual* (4th Edition). The estimates presented in **Table 10** were based on average rates for each land use's peak period. Based on these estimates, the proposed 97 parking spaces and 7 pick-up / drop-off spaces can accommodate estimated parking demands for the proposed expanded school.

It is noted that including the daycare and EarlyON centre is conservative in estimating peak period parking demands. As observed during the site visit (**Section 3**), the parking areas for the existing school were most utilized during the afternoon pick-up between 3:00 PM and 3:30 PM. However, vehicles will likely access the daycare and EarlyON parking outside of this time period and the estimated elementary school parking demand of 82 spaces may be easily accommodated during the school peak period.

Table 10: Peak Parking Demand Estimates for Proposed Expanded School

ELEMENT	ITE CODE	SIZE	UNIT	AVERAGE RATE	PARKING DEMAND
Elementary School	520	481	Students	0.17	82
Daycare	565	51	Students	0.24	13
Community Centre	495	2.5	1,000 sq. ft. GFA	3.2	8
				TOTAL	**103**

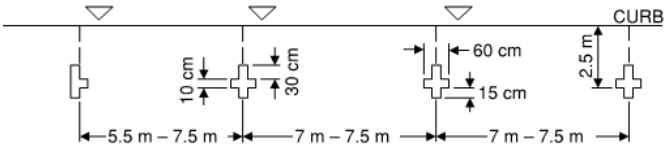
7 SITE PLAN REVIEW

7.1 DESIGN COMPLIANCE CHECK

A design compliance check (**Table 11**) was completed for the accesses and parking areas considering the following requirements, guidelines and best practices:

- City of Belleville Zoning By-Law #10245
- City of Belleville, Site Plan Guidelines (2005)
- Ontario Traffic Manual Book 11, Pavement Markings (March 2000)
- Transportation Association of Canada, Geometric Design Guide for Canadian Roads (June 2017)
- Ministry of Transportation of Ontario Design Supplement to the TAC Geometric Design Guide (2017)
- Accessibility for Ontarians with Disabilities Act, 2005 (O.Reg. 191/11, Integrated Accessibility Standards)

Table 11. Parking and Access Design Compliance

DESIGN ELEMENT	MINIMUM REQUIRED	PROVIDED	REVIEW
Parallel Parking Space (Drop-Off Area)	7.0m width 2.4m depth	7.0m width 3.0m depth	The By-Law requirement is met. According to the OTM Book 11, the minimum interior parallel parking stall size is 7.0m x 2.5m. Furthermore, an exterior stall could have a reduced painted width (5.5m) since there is an area to maneuver in advance of the painted lines. Reducing the width of the exterior stall from 7.0m to 5.5m would move the front of the parked car away from the crosswalk. This would provide more visibility for pedestrians and improve sight lines.  *Ontario Traffic Manual Book 11 – Pavement Markings*
Perpendicular Parking Space	2.4m width 6.0m depth	2.7m width 5.65m depth	The By-Law requirement is not met. However, this depth of parking space will accommodate most passenger vehicles. For comparison, the parking requirements of nearby cities are: — City of Ottawa specifies a minimum width of 2.6m and length of 5.2m. — City of Kingston specifies a minimum width of 2.7m and length of 6.0m. — City of Cornwall specifies a minimum width of 2.75m and length of 5.5m The MTO Design Supplement to the TAC Geometric Design Guide (2017) recommends a minimum stall depth for perpendicular parking stalls of 5.5m and a stall width between 2.5m and 3.0m. It is assumed that the proposed parking area can accommodate longer (6.0m) passenger vehicle such as long trucks and vans since larger vehicles can overhang curbs along the perimeter of the parking area.
Barrier Free Parking Space	2 Type ‘A’ (3.4m width) 2 Type ‘B’ (2.4m width)	2 Type ‘A’ (3.4m width) 4 Type ‘B’ (2.7m width)	The AODA Integrated Accessibility Standards (O.Reg 191/11, 80.32-80.38) indicates that the number / type of parking spaces are calculated / determined for each off-street parking facility provided for a site. Therefore, the barrier free parking requirements are: — 97 spaces → 4% = 2 Type A and 2 Type B spaces The AODA indicates that these spaces may be distributed among the off-street parking facilities in a manner than provides substantially equivalent or greater accessibility. The AODA standard is met.

DESIGN ELEMENT	MINIMUM REQUIRED	PROVIDED	REVIEW
One-way Drive Aisle	3.9m	4.0m	The By-Law requirement is met. Note that this applies to routes not intended for emergency vehicle access (fire routes), garbage trucks, or delivery vehicles (Belleville Site Plan Guidelines).
Two-way Drive Aisle at Entrance	3.0m – 9.0m	6.0m	The By-Law requirement is met.
Internal Drive Aisle	6.7m	6.7m	The By-Law requirement is met. Note that the By-Law allows for a 6.7m width only when the adjacent parking stalls are at a minimum of 2.7m wide. If the stalls were less than 2.7m wide, then the drive aisle would need to widen to 7.3m to meet the By-Law requirements and provide adequate space for maneuvering.
Corner Clearance from Signalized	75m	150m Bridge Street E 70m Herchimer Avenue	The Site Plan Guidelines (5.1, Commercial & Institutional med. Volume) are met for the accesses provided on Bridge Street E, but not for the north access on Herchimer Avenue. This access is in an existing location and traffic patterns will not be impacted.
Off-set from street	1.5m	1.5m Bridge Street E 1.0m Herchimer Avenue	The By-Law requirement is met for the parking areas at Bridge Street E, but not at Herchimer Avenue.
Entrance Width	3.9m (one-way traffic) 6.4m (two-way traffic)	West Lot: 6.9m (2-way) East Lot: 6.0 (2-way) South Lot: 6.0m (2-way) and 4.0m (1-way)	The By-Law requirement is met for the west lot. The east and south lot entrance widths are 0.4m less than the requirement for two-way traffic, however 6.0m will accommodate two passenger vehicles side by side (TAC design width for a passenger car is 2.0m).
Entrance Design	-	-	Entrance design details were not shown on the Site Plan. Applying the Ontario Provincial Standard Drawing 310.050 (Concrete Sidewalk Driveway Entrance Details) would maintain pedestrian connectivity across the driveway access.

Generally, the proposed parking layout and access configuration meet the current best practices and accepted design guidance. However, there are some recommended modifications to the site plan that would improve design compliance, as follows:

- If spatial constraints allow, increase offset of south parking area by 0.5m to 1.5m from the street line; and
- Increase the east Bridge Street E parking area entrance and south Herchimer Street two-way entrance to 6.4m.

7.2 SITE CIRCULATION

The Institute of Transportation Engineers (ITE) provides guidance on key elements for designing a well-functioning school site in their Safe Routes to School (SRTS) Briefing Sheets. We considered these key elements when reviewing the site plan for suitability from a transportation perspective.

The physical routes provided for vehicles, buses, pedestrians, bicycles, and delivery vehicles should be separated as much as possible at school sites to provide safe and efficient access. The anticipated site circulation (**Figure 10**) at the proposed school generally conforms to the ITE Safe Routes to School best practices, by providing:

- Separate access for parent traffic and bus traffic to improve efficiency and reduce conflict
- Drop-off / pick-up zones that are one-way in a counter clockwise direction so that students are unloaded / loaded directly to the curb / sidewalk
- Separate accesses for parent traffic and staff parking area

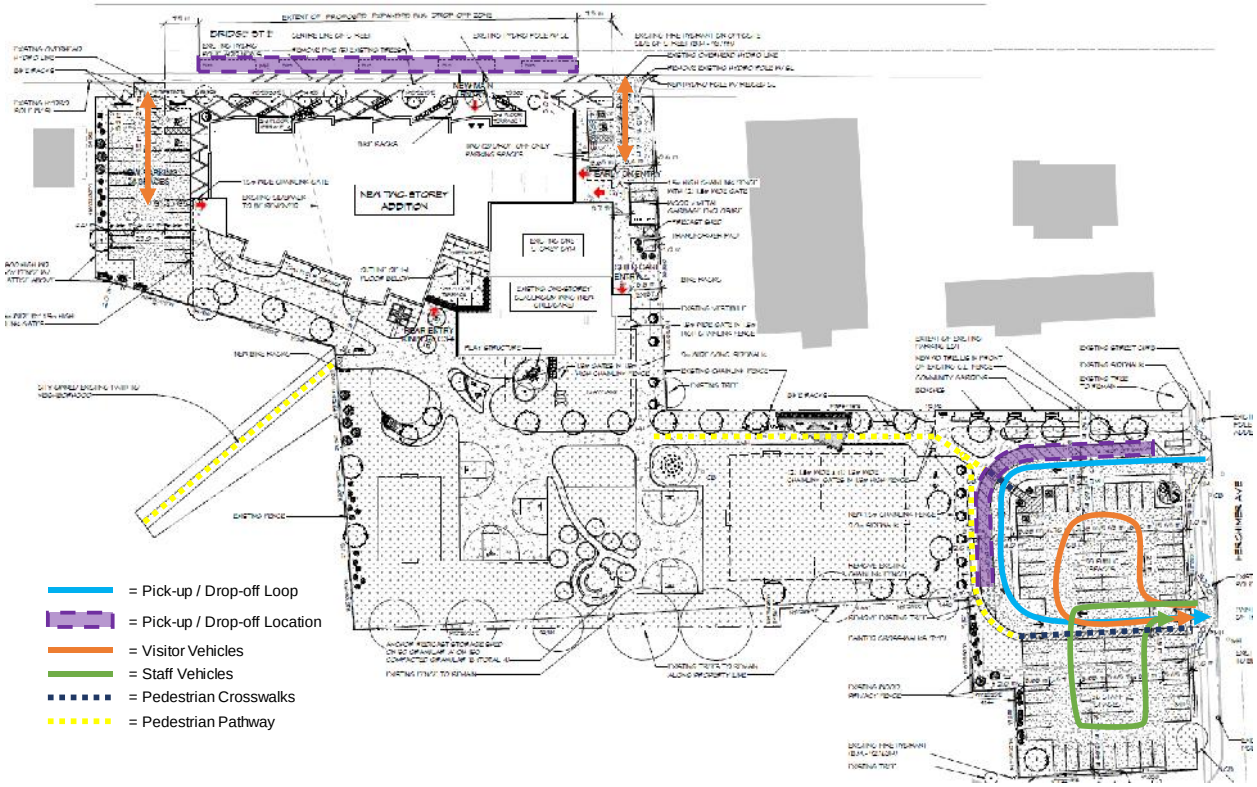


Figure 10. Proposed Site Circulation

When compared to the existing conditions, the most significant change is at the south parking area. Vehicles who are arriving to pick-up / drop-off students will continue to enter at the north access and will travel counter-clockwise around a pick-up / drop-off loop before exiting at the south access. Circulation will be formalized with curbs guiding the drop-off loop.

The 4.0m drive aisle at the one-way entrance and loading areas eliminates the issues observed during the site visit where vehicles were lining up on both sides of the aisle during the PM peak. There is risk under this configuration of loading vehicles spilling onto Herchimer Avenue, but with additional parking available and drop-off / pick-up activity permitted a significant issue is not anticipated. 'Drop-off / pick-up entrance only' will be posted at the north entrances to further guide proper circulation.

School staff will be encouraged to park in the expanded area, thereby avoiding queuing in the drop-off / pick-up loop. 'parking entrance only' signage should be placed at the south access entrance to discourage drop-offs / pick-ups from this aisle or travelling counter flow through the drop-off loop.

Other proposed changes to site circulation, including the new east parking area and expanded bus loading area, are not expected to result in significant changes to operations in the area. Drop-off / pick-up activity at the new east parking area will require vehicles to stop in a parking space rather than in a drop-off loop, and the parking area will function as a standard parking area with a single aisle. The expanded bus loading area will operate as existing, with the Bridge Street E cross-section being of sufficient width to accommodate buses without impeding traffic flow if buses do queue past the loading zone. Students will likely continue to queue on the sidewalk while waiting for buses, but this is not expected to significantly impact pedestrian flow in the area.

7.3 PEDESTRIAN AND CYCLISTS

Observations of pedestrian activity at the existing school saw strong compliance with existing pedestrian facilities and crossings. The school will continue to be accessible from the existing sidewalks and the pathway from Hastings Avenue. No additional pedestrian crossings or other pedestrian improvements are required on Bridge Street E or Herchimer Avenue to support the school expansion.

Crosswalk markings have been shown on the site plan for pedestrian crossing locations in the south parking area. Crosswalk markings define and delineate the path of pedestrians to cross the roadway. Ladder crosswalk markings provide enhanced visibility of crosswalks and increases the drivers' awareness of potential conflicts. The typical dimensions for ladder crosswalks as defined in the Ontario Traffic Manual – Book 15 (Pedestrian Crossing Treatments) are shown in **Figure 11**.

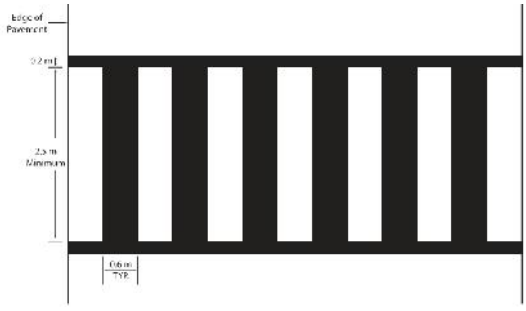


Figure 11. Pavement Markings for Ladder Crosswalk

Depressed curbs should be provided where sidewalks / pathways meet a pedestrian crosswalk to maintain accessibility throughout the site. The Ministry of Transportation of Ontario provides Ontario Provincial Standards for these applications:

- OPSD 310.033, Concrete Sidewalk Ramps and Unsignalized Intersections
- OPSD 310.039, Concrete Sidewalk Ramps Tactile Walking Surface Indicators Component

Bicycle parking is provided at the west parking area, beside the daycare building and in the playground area. Multiple bike rack locations provide several options for cyclists to access the school on-street and through the parking areas and/or via the pathway network.

8 CONCLUSIONS

A summary of transportation improvements proposed as part of this Transportation Impact Assessment carried out and the proposed modifications are presented as follows:

1. Intersection Operations

a) Bridge Street E and MacDonald Avenue: No modifications are proposed. The operational analysis indicates that the intersection is operating within acceptable limits and that there is sufficient capacity to accommodate projected future growth as well as traffic generated by the expanded school.

b) Bridge Street E and Herchimer Avenue: No modifications are proposed. The operational analysis indicates that the intersection is operating within acceptable limits and that there is sufficient capacity to accommodate projected future growth as well as traffic generated by the expanded school.

Reference: Section 5

2. Parking Supply

c) The proposed parking supply of 97 parking spaces and 7 pick-up / drop-off spaces will meet the anticipated parking demand during the peak period (afternoon school pick-up). The proposed parking supply is below the By-Law requirement, which is for a general land use and not specific to an elementary school site, but meets the requirement for elementary school parking at a nearby municipality.

d) The estimated parking demand suggests that the minimum parking supply is 82 parking spaces to accommodate the peak demand of the elementary school.

Reference: Section 6

3. Site Plan Elements

e) The perpendicular parking stall depth (5.65m) does not meet the By-Law requirement (6.0m). However, recent provincial guidelines (MTO Design Supplement to the TAC Geometric Design Guide for Canadian Roads, 2017) provides an acceptable minimum stall depth of 5.5m and larger vehicles can park overhanging the curb along the perimeter of the parking areas.

Reference: Section 7.1

4. Site Circulation

f) The defined pick-up / drop-off area along the north and west curb in the south parking area improves traffic operations by providing a dedicated space for very short-term loading / unloading of passengers.

g) Install ‘parking entrance only’ and ‘drop-off / pick-up entrance only’ signage at entrance to the upper and lower half, respectively, of the south parking to guide proper circulation.

h) Install a depressed curb at all locations where a pedestrian sidewalk or pathway meets a crosswalk to maintain accessibility throughout the site (OPSD 310.033, OPSD 310.039).

Reference: Section 7.2

5. Summary

Based on the results of this Transportation Impact Assessment, the proposed expansion to St. Joseph Catholic School:

a) Is appropriately designed for sustainable modes,

b) Is aligned with the City of Belleville’s broader city-building objectives, and

c) Can be accommodated without adverse impacts to the planned transportation network and services associated with the 2022 planning horizon.

A TRAFFIC COUNTS

Turning Movement Counts - Bridge Street E / Herchimer Avenue

Study Name Traffic Impact Assessment for Addition and Renovations to St. Joseph Catholic School
Intersection Bridge Street E / Herchimer Avenue
Study Date 01/31/2019
Start Time 6:30 AM & 2:30 PM
Classification Totals

	Herchimer Avenue Southbound				Bridge Street E Westbound				Herchimer Avenue Northbound				Bridge Street E Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:30 AM	3	5	7	0	6	6	3	0	1	4	5	0	1	10	3	0
6:45 AM	3	10	15	0	9	11	2	0	1	7	1	0	6	24	1	0
7:00 AM	3	6	9	0	10	7	0	0	0	9	2	0	7	15	3	0
7:15 AM	5	30	14	0	6	18	1	0	1	14	8	0	2	15	1	0
7:30 AM	4	24	18	0	10	19	5	0	3	21	4	0	9	21	2	0
7:45 AM	8	22	23	0	13	35	1	0	3	30	9	0	11	32	6	0
8:00 AM	6	33	33	0	16	32	7	0	4	19	9	0	12	49	6	0
8:15 AM	4	25	55	0	11	45	3	0	3	27	8	0	9	44	1	0
8:30 AM	7	18	28	0	14	29	4	0	5	17	5	0	20	34	5	0
8:45 AM	7	27	21	0	15	37	8	0	9	31	8	0	24	35	6	0
9:00 AM	4	29	20	0	13	28	20	0	11	29	13	0	23	35	14	0
9:15 AM	10	19	20	0	19	42	8	0	12	17	11	0	15	44	7	0
9:30 AM	3	18	22	0	9	43	8	0	6	30	9	0	15	54	3	0
9:45 AM	6	29	21	0	23	32	11	0	9	32	11	0	13	32	12	0
2:30 PM	7	38	17	0	27	39	6	0	10	42	9	0	24	57	4	0
2:45 PM	4	40	30	0	26	49	6	0	13	37	19	0	20	52	8	0
3:00 PM	7	43	18	0	29	45	18	0	14	42	15	0	16	68	6	0
3:15 PM	6	39	16	0	21	44	11	0	13	43	18	0	24	57	11	0
3:30 PM	5	40	32	0	21	37	5	0	29	51	22	0	24	59	17	0
3:45 PM	12	36	22	0	17	49	9	0	21	40	20	0	33	58	5	0
4:00 PM	5	48	15	0	25	52	7	0	10	61	25	0	28	70	10	0
4:15 PM	6	42	18	0	26	36	12	0	21	43	27	0	23	53	5	0
4:30 PM	5	37	20	0	57	47	16	0	21	56	35	0	27	61	9	0
4:45 PM	7	31	12	0	31	32	7	0	16	42	16	0	29	59	6	0
5:00 PM	8	30	19	0	26	40	4	0	16	49	26	0	27	65	18	0
5:15 PM	7	37	13	0	22	42	4	0	9	45	14	0	28	54	5	0
5:30 PM	5	33	24	0	12	30	2	0	12	35	15	0	19	46	7	0
5:45 PM	4	31	19	0	12	31	4	0	17	39	14	0	14	39	8	0
6:00 PM	9	24	24	0	15	33	3	0	7	34	16	1	17	26	8	0
6:15 PM	6	26	12	0	16	25	2	0	10	27	12	0	24	43	8	0

Turning Movement Counts - Bridge Street E / MacDonald Avenue

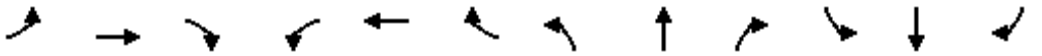
Study Name Traffic Impact Assessment for Addition and Renovations to St. Joseph Catholic School
Intersection Bridge Street E / MacDonald Avenue
Study Date 01/31/2019
Start Time 6:30 AM & 2:30 PM
Classification Totals

	MacDonald Avenue Southbound				Bridge Street E Westbound				MacDonald Avenue Northbound				Bridge Street E Eastbound			
Start Time	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn	Right	Thru	Left	U-Turn
6:30 AM	0	4	2	0	0	13	0	0	0	4	1	0	12	9	0	0
6:45 AM	0	2	5	0	1	18	0	0	0	3	1	0	12	21	0	0
7:00 AM	1	8	3	0	1	8	0	0	0	8	1	0	17	19	1	0
7:15 AM	1	15	1	0	1	25	2	0	0	7	3	0	16	14	2	0
7:30 AM	2	15	2	0	5	23	3	0	1	9	8	0	27	26	1	0
7:45 AM	2	23	2	0	3	33	7	0	9	16	9	0	29	42	1	0
8:00 AM	3	34	7	0	2	46	0	0	5	29	21	0	26	45	3	0
8:15 AM	2	14	0	0	3	57	1	0	2	14	8	0	13	53	2	0
8:30 AM	1	11	7	0	2	41	5	0	4	10	5	0	13	52	2	0
8:45 AM	1	8	5	0	1	53	2	0	4	5	3	0	11	64	0	0
9:00 AM	2	7	5	0	2	48	1	0	2	6	4	0	14	61	0	0
9:15 AM	2	4	3	0	4	55	1	0	3	5	3	0	9	55	0	1
9:30 AM	1	8	8	0	5	48	1	0	3	10	3	0	14	48	0	0
9:45 AM	5	15	6	0	3	37	0	0	2	14	8	0	12	49	1	0
2:30 PM	2	10	8	0	4	54	1	0	14	39	11	0	17	70	2	0
2:45 PM	6	9	8	0	5	51	3	0	3	14	7	0	12	61	1	0
3:00 PM	2	10	5	0	5	63	1	0	7	10	6	0	15	86	3	0
3:15 PM	2	8	7	0	5	65	3	0	5	15	5	0	15	77	1	0
3:30 PM	3	12	6	0	8	63	2	0	8	26	12	0	20	72	3	0
3:45 PM	2	7	7	0	6	65	1	0	7	15	11	0	10	88	1	0
4:00 PM	1	5	2	0	3	72	4	0	5	30	10	0	12	91	1	0
4:15 PM	1	13	10	0	3	58	3	0	5	24	12	0	16	73	3	0
4:30 PM	2	9	7	0	4	77	1	0	2	15	11	0	15	97	1	0
4:45 PM	0	7	9	0	9	52	2	0	7	16	8	0	16	75	2	0
5:00 PM	2	8	9	0	5	46	2	0	5	17	3	0	10	78	2	0
5:15 PM	2	17	13	0	5	61	1	0	1	12	5	0	14	74	1	0
5:30 PM	0	5	7	0	4	38	1	0	2	10	3	0	10	62	3	0
5:45 PM	3	2	5	0	5	35	0	0	1	14	10	0	6	51	1	0
6:00 PM	4	6	4	0	4	44	1	0	0	6	9	0	10	49	2	0
6:15 PM	4	7	5	0	4	39	0	0	1	13	2	0	6	64	1	0

B EXISTING TRAFFIC ANALYSIS (SYNCHRO)

TIA - St. Joseph School Expansion
3: Herchimer Avenue & Bridge Street E

Existing AM
05/17/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	165	66	47	145	64	44	108	38	83	95	23
Future Volume (vph)	36	165	66	47	145	64	44	108	38	83	95	23
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1532	1634		1659	1655		1696	1650		1708	1670	
Flt Permitted	0.61	1.00		0.60	1.00		0.67	1.00		0.65	1.00	
Satd. Flow (perm)	990	1634		1049	1655		1201	1650		1177	1670	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	40	183	73	52	161	71	49	120	42	92	106	26
RTOR Reduction (vph)	0	15	0	0	17	0	0	14	0	0	10	0
Lane Group Flow (vph)	40	241	0	52	215	0	49	148	0	92	122	0
Confl. Peds. (#/hr)	6		12	12		6	8		1	1		8
Heavy Vehicles (%)	11%	5%	0%	2%	2%	5%	0%	4%	5%	0%	5%	0%
Bus Blockages (#/hr)	0	2	2	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		20.0	20.0		20.0	20.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		20.0	20.0		20.0	20.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	403	665		427	674		444	611		435	618	
v/s Ratio Prot		c0.15			0.13			c0.09			0.07	
v/s Ratio Perm	0.04			0.05			0.04			0.08		
v/c Ratio	0.10	0.36		0.12	0.32		0.11	0.24		0.21	0.20	
Uniform Delay, d1	9.9	11.1		10.0	10.9		11.2	11.8		11.6	11.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.7		0.3	0.6		0.2	0.4		0.5	0.3	
Delay (s)	10.1	11.8		10.2	11.5		11.4	12.2		12.1	11.9	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		11.6			11.3			12.0			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion
6: MacDonald Avenue & Bridge Street E

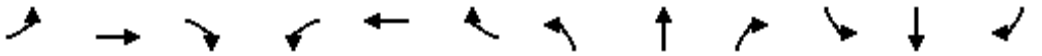
Existing AM
05/17/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	192	81	13	177	10	43	69	20	16	82	8
Future Volume (vph)	8	192	81	13	177	10	43	69	20	16	82	8
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0			4.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		1656			1725			1620			1693	
Flt Permitted		0.99			0.97			0.88			0.94	
Satd. Flow (perm)		1645			1686			1454			1601	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	9	213	90	14	197	11	48	77	22	18	91	9
RTOR Reduction (vph)	0	12	0	0	1	0	0	9	0	0	4	0
Lane Group Flow (vph)	0	300	0	0	221	0	0	138	0	0	114	0
Confl. Peds. (#/hr)	4		7	7		4	1		12	12		1
Heavy Vehicles (%)	0%	3%	2%	8%	3%	0%	9%	4%	10%	0%	4%	13%
Bus Blockages (#/hr)	0	2	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		32.0			32.0			17.0			15.0	
Effective Green, g (s)		32.0			32.0			17.0			15.0	
Actuated g/C Ratio		0.54			0.54			0.29			0.25	
Clearance Time (s)		6.0			6.0			4.0			6.0	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		892			914			418			407	
v/s Ratio Prot												
v/s Ratio Perm		c0.18			0.13			c0.10			0.07	
v/c Ratio		0.34			0.24			0.33			0.28	
Uniform Delay, d1		7.6			7.1			16.5			17.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			0.3			1.0			0.8	
Delay (s)		8.0			7.4			17.5			18.5	
Level of Service		A			A			B			B	
Approach Delay (s)		8.0			7.4			17.5			18.5	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion
3: Herchimer Avenue & Bridge Street E

Existing PM
05/17/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	242	111	44	184	125	107	200	73	75	163	28
Future Volume (vph)	29	242	111	44	184	125	107	200	73	75	163	28
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1696	1663		1668	1651		1705	1713		1690	1740	
Flt Permitted	0.51	1.00		0.46	1.00		0.63	1.00		0.54	1.00	
Satd. Flow (perm)	913	1663		802	1651		1122	1713		968	1740	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	32	269	123	49	204	139	119	222	81	83	181	31
RTOR Reduction (vph)	0	17	0	0	26	0	0	14	0	0	7	0
Lane Group Flow (vph)	32	375	0	49	317	0	119	289	0	83	205	0
Confl. Peds. (#/hr)	11		7	7		11	3		2	2		3
Heavy Vehicles (%)	0%	2%	0%	2%	1%	1%	0%	0%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	2	2	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.4	23.4		23.4	23.4		21.2	21.2		21.2	21.2	
Effective Green, g (s)	23.4	23.4		23.4	23.4		21.2	21.2		21.2	21.2	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	377	687		331	682		420	641		362	651	
v/s Ratio Prot		c0.23			0.19			c0.17			0.12	
v/s Ratio Perm	0.04			0.06			0.11			0.09		
v/c Ratio	0.08	0.55		0.15	0.47		0.28	0.45		0.23	0.32	
Uniform Delay, d1	10.1	12.6		10.4	12.1		12.4	13.3		12.1	12.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	1.6		0.4	1.1		0.8	1.1		0.7	0.6	
Delay (s)	10.3	14.1		10.8	13.1		13.2	14.4		12.8	13.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		13.8			12.8			14.0			13.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	56.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion
6: MacDonald Avenue & Bridge Street E

Existing PM
05/17/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	349	53	9	272	16	44	84	19	26	34	6
Future Volume (vph)	6	349	53	9	272	16	44	84	19	26	34	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0			4.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.99			0.98	
Satd. Flow (prot)		1732			1776			1725			1732	
Flt Permitted		0.99			0.98			0.90			0.86	
Satd. Flow (perm)		1724			1752			1580			1513	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	388	59	10	302	18	49	93	21	29	38	7
RTOR Reduction (vph)	0	5	0	0	2	0	0	7	0	0	5	0
Lane Group Flow (vph)	0	449	0	0	328	0	0	156	0	0	69	0
Confl. Peds. (#/hr)	4		7	7		4	1		12	12		1
Heavy Vehicles (%)	0%	1%	0%	0%	0%	6%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	2	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		32.0			32.0			17.1			15.1	
Effective Green, g (s)		32.0			32.0			17.1			15.1	
Actuated g/C Ratio		0.54			0.54			0.29			0.26	
Clearance Time (s)		6.0			6.0			4.0			6.0	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		933			948			457			386	
v/s Ratio Prot												
v/s Ratio Perm		c0.26			0.19			c0.10			0.05	
v/c Ratio		0.48			0.35			0.34			0.18	
Uniform Delay, d1		8.4			7.6			16.6			17.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.8			0.5			0.9			0.5	
Delay (s)		9.2			8.1			17.5			17.6	
Level of Service		A			A			B			B	
Approach Delay (s)		9.2			8.1			17.5			17.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	59.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

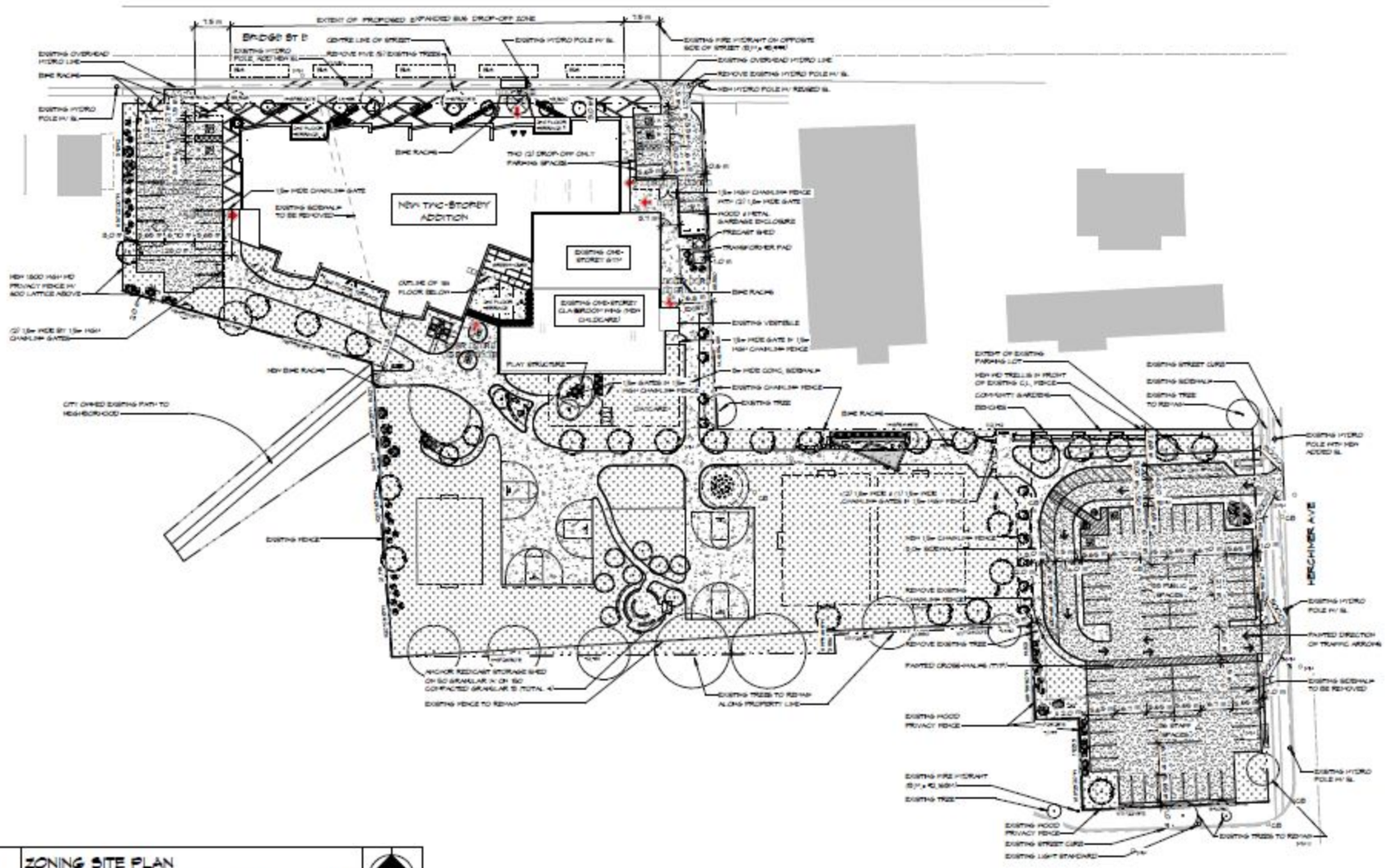
C PROPOSED SITE PLANS

SITE STATISTICS — CITY OF BELLEVILLE BY-LAW 10245

ZONING			
COMMUNITY FACILITY (CF)			
DESCRIPTION	REQUIRED/PERMITTED	PROPOSED	REMARKS
TOTAL GROSS FLOOR AREA	N/A	9,152 m²	
LOT AREA (min)	N/A	17,194 m²	
FRONT YARD (min)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	8.0±	RE-ZONING REQUIRED
INTERIOR SIDE YARD (min) - EAST	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	6.3±	EXISTING NON-CONFORMING
INTERIOR SIDE YARD (min) - WEST	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	28.0±	COMPLIES
REAR YARD (min)	GREATER OF 7.5m OR 1/2 BUILDING HEIGHT	11.0±	COMPLIES
LOT COVERAGE (max) (BUILDING AREA)	35%	5,450m² (32%)	COMPLIES
HEIGHT OF BUILDING (max)	N/A	12.0±	
NUMBER OF STOREYS	N/A	2 STOREY	
FRONTAGE	N/A	79.5± (HERCHIMER) / 121.9± (BRIDGE ST E)	
PAVED (GRAVEL) AREA (AREA / PERCENT)	N/A	8050.0m² / 47%	
LANDSCAPED AREA (AREA / PERCENT)	N/A	9,429.2m² / 55%	
LOADING SPACES	2 SPACES (FOR GFA > 2,800 m²) - 12± x 2.6±	SUB LOADING ON BRIDGE STREET (EXISTING & PROPOSED)	RE-ZONING REQUIRED
PARKING REQUIREMENTS			
PARKING SPACE DIMENSIONS	2.4± X 6.0±	2.7± X 5.6±	RE-ZONING REQUIRED
SEPARATION FROM STREET LINE	1.5± WITH CURB & LANDSCAPING	1.3± ON BRIDGE ST, 1.0 ON HERCHIMER AVE	RE-ZONING REQUIRED
SEPARATION FROM RESIDENTIAL ZONE	1.5± WITH ROW OF SHRUBS 1.5± HIGH	1.5± WITH 1.8± HIGH FENCE	COMPLIES
PARKING SPACES	1 SPACE/28m² x 204 SPACES	101 INCLUDING 5 B.F. AND 9 DROP-OFF	RE-ZONING REQUIRED
B.F. PARKING SPACES (INCLUDED in TOTAL)	5 SPACES FOR 1ST 100 SPACES, +1 FOR EACH 100 MORE, OR PORTION THEREOF = 5 SPACES	5 B.F. SPACES	COMPLIES

SITE LEGEND

- TOPSOIL AND SOD
- HSH ASPHALT PAVING. REFER TO SOD SERIES DRAWINGS FOR DETAILS
- HSH CONCRETE. REFER TO SOD SERIES DRAWINGS FOR DETAILS
- HSH CONCRETE UNIT PAVERS. REFER TO SOD SERIES DRAWINGS FOR DETAILS
- HSH GRANULAR WALKWAY. REFER TO SOD SERIES DRAWINGS FOR DETAILS
- HSH RUBBERIZED SAFETY SURFACE. REFER TO SOD SERIES DRAWINGS FOR DETAILS
- HSH WOOD FIBRE SURFACING. REFER TO SOD SERIES DRAWINGS FOR DETAILS
- CHAIN LINK FENCE AS NOTED
- ORNAMENTAL FENCE AS NOTED
- HSH TREES. REFER TO LANDSCAPE DRAWINGS FOR DETAILS
- EXISTING TREE TO BE RETAINED
- EXISTING TREE TO BE REMOVED
- SASH TYPE A BARRIER FREE REGULATORY SIGN "VAN ACCESSIBLE"
- SASH TYPE B BARRIER FREE REGULATORY SIGN
- SIGNAGE REQUIRED AS PER SECTION 11 OF REGULATION 581 OF THE HIGHWAY TRAFFIC ACT
- HSH LIGHT FIXTURE(S) POLE MOUNTED. REFER TO ELECTRICAL DRAWINGS
- MH MANHOLE
- HP HYDRO POLE
- LS HSH LIGHT STANDARD
- HSH EXTERIOR LIGHT. REFER TO ELECTRICAL DRAWING.



1 ZONING SITE PLAN

1 : 500

1	TC	ISSUED FOR CP RE-ZONING	2018/04/27
NO.	BY	REVISIONS/ISSUE/REASONS	DATE

ALGONQUIN LAKESHORE CDSB

□□□DGR □□ □□□ (□□□9)□□

COLBOURNE & KEMBEL ARCHITECTS INC.

fni Fielding Nair International

ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)

405 BRIDGE ST E
BELLEVILLE, ON

SITE PLAN

As Indicated

	CG	05.2018
	TC	05/01/18
	TC	
	15075	101

D FUTURE TRAFFIC ANALYSIS (SYNCHRO)

TIA - St. Joseph School Expansion 2022 Background AM
3: Herchimer Avenue & Bridge Street E 05/17/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	175	70	50	155	70	45	110	40	85	100	25
Future Volume (vph)	40	175	70	50	155	70	45	110	40	85	100	25
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.99	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.95		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1634		1660	1653		1696	1648		1708	1669	
Flt Permitted	0.60	1.00		0.59	1.00		0.67	1.00		0.65	1.00	
Satd. Flow (perm)	974	1634		1034	1653		1193	1648		1173	1669	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	44	194	78	56	172	78	50	122	44	94	111	28
RTOR Reduction (vph)	0	15	0	0	17	0	0	14	0	0	10	0
Lane Group Flow (vph)	44	257	0	56	233	0	50	152	0	94	129	0
Confl. Peds. (#/hr)	6		12	12		6	8		1	1		8
Heavy Vehicles (%)	11%	5%	0%	2%	2%	5%	0%	4%	5%	0%	5%	0%
Bus Blockages (#/hr)	0	2	2	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		20.0	20.0		20.0	20.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		20.0	20.0		20.0	20.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	396	665		421	673		441	610		434	618	
v/s Ratio Prot		c0.16			0.14			c0.09			0.08	
v/s Ratio Perm	0.05			0.05			0.04			0.08		
v/c Ratio	0.11	0.39		0.13	0.35		0.11	0.25		0.22	0.21	
Uniform Delay, d1	9.9	11.2		10.0	11.0		11.2	11.8		11.6	11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.8		0.3	0.6		0.2	0.4		0.5	0.4	
Delay (s)	10.2	12.0		10.3	11.7		11.4	12.2		12.2	12.0	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		11.8			11.4			12.0			12.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 Background AM
6: Bridge Street E & MacDonald Avenue 05/17/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	200	85	15	185	15	45	70	20	15	90	10
Future Volume (vph)	10	200	85	15	185	15	45	70	20	15	90	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0			4.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.96			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		1657			1719			1620			1690	
Flt Permitted		0.99			0.97			0.88			0.95	
Satd. Flow (perm)		1641			1671			1444			1609	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	222	94	17	206	17	50	78	22	17	100	11
RTOR Reduction (vph)	0	12	0	0	2	0	0	8	0	0	4	0
Lane Group Flow (vph)	0	315	0	0	238	0	0	142	0	0	124	0
Confl. Peds. (#/hr)	4		7	7		4	1		12	12		1
Heavy Vehicles (%)	0%	3%	2%	8%	3%	0%	9%	4%	10%	0%	4%	13%
Bus Blockages (#/hr)	0	2	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		32.0			32.0			17.0			15.0	
Effective Green, g (s)		32.0			32.0			17.0			15.0	
Actuated g/C Ratio		0.54			0.54			0.29			0.25	
Clearance Time (s)		6.0			6.0			4.0			6.0	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		890			906			416			409	
v/s Ratio Prot												
v/s Ratio Perm		c0.19			0.14			c0.10			0.08	
v/c Ratio		0.35			0.26			0.34			0.30	
Uniform Delay, d1		7.6			7.2			16.6			17.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			0.3			1.0			0.9	
Delay (s)		8.2			7.5			17.6			18.6	
Level of Service		A			A			B			B	
Approach Delay (s)		8.2			7.5			17.6			18.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 Background PM
3: Herchimer Avenue & Bridge Street E 05/17/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	255	120	50	195	130	110	210	75	80	170	30
Future Volume (vph)	35	255	120	50	195	130	110	210	75	80	170	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1696	1662		1669	1653		1705	1714		1690	1739	
Flt Permitted	0.49	1.00		0.43	1.00		0.62	1.00		0.52	1.00	
Satd. Flow (perm)	877	1662		757	1653		1112	1714		933	1739	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	283	133	56	217	144	122	233	83	89	189	33
RTOR Reduction (vph)	0	17	0	0	25	0	0	14	0	0	7	0
Lane Group Flow (vph)	39	399	0	56	336	0	122	302	0	89	215	0
Confl. Peds. (#/hr)	11		7	7		11	3		2	2		3
Heavy Vehicles (%)	0%	2%	0%	2%	1%	1%	0%	0%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	2	2	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.0	24.0		24.0	24.0		21.5	21.5		21.5	21.5	
Effective Green, g (s)	24.0	24.0		24.0	24.0		21.5	21.5		21.5	21.5	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	366	693		315	689		415	640		348	650	
v/s Ratio Prot		c0.24			0.20			c0.18			0.12	
v/s Ratio Perm	0.04			0.07			0.11			0.10		
v/c Ratio	0.11	0.58		0.18	0.49		0.29	0.47		0.26	0.33	
Uniform Delay, d1	10.2	12.8		10.5	12.3		12.7	13.7		12.5	12.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.8		0.6	1.1		0.8	1.1		0.8	0.6	
Delay (s)	10.5	14.7		11.1	13.4		13.5	14.8		13.3	13.5	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		14.3			13.1			14.5			13.4	
Approach LOS		B			B			B			B	

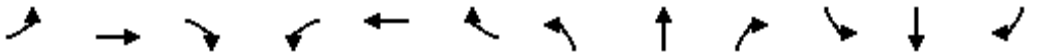
Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 Background PM
6: Bridge Street E & MacDonald Avenue 05/17/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	365	60	10	285	20	45	85	20	25	40	10
Future Volume (vph)	10	365	60	10	285	20	45	85	20	25	40	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0			4.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.98	
Satd. Flow (prot)		1729			1772			1724			1728	
Flt Permitted		0.99			0.98			0.90			0.87	
Satd. Flow (perm)		1714			1745			1574			1529	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	406	67	11	317	22	50	94	22	28	44	11
RTOR Reduction (vph)	0	5	0	0	2	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	479	0	0	348	0	0	159	0	0	76	0
Confl. Peds. (#/hr)	4		7	7		4	1		12	12		1
Heavy Vehicles (%)	0%	1%	0%	0%	0%	6%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	2	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		32.0			32.0			17.3			15.3	
Effective Green, g (s)		32.0			32.0			17.3			15.3	
Actuated g/C Ratio		0.54			0.54			0.29			0.26	
Clearance Time (s)		6.0			6.0			4.0			6.0	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		924			941			459			394	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.20			c0.10			0.05	
v/c Ratio		0.52			0.37			0.35			0.19	
Uniform Delay, d1		8.7			7.9			16.5			17.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.0			0.5			1.0			0.5	
Delay (s)		9.7			8.4			17.5			17.7	
Level of Service		A			A			B			B	
Approach Delay (s)		9.7			8.4			17.5			17.7	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 AM with Site Generated Trips
3: Herchimer Avenue & Bridge Street E 05/18/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	193	89	64	181	70	57	133	52	85	129	31
Future Volume (vph)	44	193	89	64	181	70	57	133	52	85	129	31
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		0.99	1.00		0.99	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.96		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1533	1627		1661	1664		1697	1643		1708	1671	
Flt Permitted	0.59	1.00		0.55	1.00		0.65	1.00		0.63	1.00	
Satd. Flow (perm)	949	1627		963	1664		1153	1643		1131	1671	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	49	214	99	71	201	78	63	148	58	94	143	34
RTOR Reduction (vph)	0	18	0	0	15	0	0	16	0	0	9	0
Lane Group Flow (vph)	49	295	0	71	264	0	63	190	0	94	168	0
Confl. Peds. (#/hr)	6		12	12		6	8		1	1		8
Heavy Vehicles (%)	11%	5%	0%	2%	2%	5%	0%	4%	5%	0%	5%	0%
Bus Blockages (#/hr)	0	2	2	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		22.0	22.0		20.0	20.0		20.0	20.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		20.0	20.0		20.0	20.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41		0.37	0.37		0.37	0.37	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	386	662		392	677		427	608		418	618	
v/s Ratio Prot		c0.18			0.16			c0.12			0.10	
v/s Ratio Perm	0.05			0.07			0.05			0.08		
v/c Ratio	0.13	0.45		0.18	0.39		0.15	0.31		0.22	0.27	
Uniform Delay, d1	10.0	11.6		10.2	11.3		11.3	12.1		11.7	11.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	1.0		0.5	0.8		0.3	0.6		0.6	0.5	
Delay (s)	10.3	12.6		10.7	12.1		11.7	12.7		12.2	12.4	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		12.3			11.8			12.5			12.3	
Approach LOS		B			B			B			B	

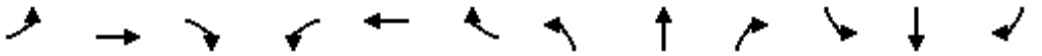
Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 AM with Site Generated Trips
6: Bridge Street E & MacDonald Avenue 05/18/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	246	85	15	220	16	45	70	22	17	90	10
Future Volume (vph)	10	246	85	15	220	16	45	70	22	17	90	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0			4.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		0.99			1.00			0.99			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.97			0.99			0.98			0.99	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		1667			1722			1617			1690	
Flt Permitted		0.99			0.97			0.88			0.94	
Satd. Flow (perm)		1652			1675			1442			1599	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	273	94	17	244	18	50	78	24	19	100	11
RTOR Reduction (vph)	0	10	0	0	2	0	0	9	0	0	4	0
Lane Group Flow (vph)	0	368	0	0	277	0	0	143	0	0	126	0
Confl. Peds. (#/hr)	4		7	7		4	1		12	12		1
Heavy Vehicles (%)	0%	3%	2%	8%	3%	0%	9%	4%	10%	0%	4%	13%
Bus Blockages (#/hr)	0	2	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		32.0			32.0			17.0			15.0	
Effective Green, g (s)		32.0			32.0			17.0			15.0	
Actuated g/C Ratio		0.54			0.54			0.29			0.25	
Clearance Time (s)		6.0			6.0			4.0			6.0	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		896			908			415			406	
v/s Ratio Prot												
v/s Ratio Perm		c0.22			0.17			c0.10			0.08	
v/c Ratio		0.41			0.31			0.35			0.31	
Uniform Delay, d1		8.0			7.4			16.6			17.8	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			0.4			1.1			0.9	
Delay (s)		8.6			7.8			17.7			18.7	
Level of Service		A			A			B			B	
Approach Delay (s)		8.6			7.8			17.7			18.7	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 PM with Site Generated Trips
3: Herchimer Avenue & Bridge Street E 05/18/2019



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	275	127	50	195	130	117	225	82	85	190	30
Future Volume (vph)	35	275	127	50	195	130	117	225	82	85	190	30
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	
Flpb, ped/bikes	0.99	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.94		1.00	0.96		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1696	1663		1669	1652		1705	1713		1690	1743	
Flt Permitted	0.49	1.00		0.40	1.00		0.61	1.00		0.49	1.00	
Satd. Flow (perm)	871	1663		696	1652		1090	1713		872	1743	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	39	306	141	56	217	144	130	250	91	94	211	33
RTOR Reduction (vph)	0	17	0	0	25	0	0	14	0	0	6	0
Lane Group Flow (vph)	39	430	0	56	336	0	130	327	0	94	238	0
Confl. Peds. (#/hr)	11		7	7		11	3		2	2		3
Heavy Vehicles (%)	0%	2%	0%	2%	1%	1%	0%	0%	1%	1%	1%	0%
Bus Blockages (#/hr)	0	2	2	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	25.0	25.0		25.0	25.0		22.4	22.4		22.4	22.4	
Effective Green, g (s)	25.0	25.0		25.0	25.0		22.4	22.4		22.4	22.4	
Actuated g/C Ratio	0.42	0.42		0.42	0.42		0.38	0.38		0.38	0.38	
Clearance Time (s)	6.0	6.0		6.0	6.0		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	366	699		292	695		411	645		328	657	
v/s Ratio Prot		c0.26			0.20			c0.19			0.14	
v/s Ratio Perm	0.04			0.08			0.12			0.11		
v/c Ratio	0.11	0.61		0.19	0.48		0.32	0.51		0.29	0.36	
Uniform Delay, d1	10.4	13.4		10.8	12.5		13.1	14.2		12.9	13.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	2.3		0.7	1.1		0.9	1.3		1.0	0.7	
Delay (s)	10.7	15.8		11.5	13.6		14.0	15.6		13.9	14.1	
Level of Service	B	B		B	B		B	B		B	B	
Approach Delay (s)		15.3			13.3			15.1			14.0	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

TIA - St. Joseph School Expansion 2022 PM with Site Generated Trips
6: Bridge Street E & MacDonald Avenue 05/18/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	390	60	10	305	20	45	85	20	25	40	10
Future Volume (vph)	10	390	60	10	305	20	45	85	20	25	40	10
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Total Lost time (s)		6.0			6.0			4.0			6.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frpb, ped/bikes		1.00			1.00			1.00			1.00	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		0.98			0.99			0.98			0.98	
Flt Protected		1.00			1.00			0.99			0.98	
Satd. Flow (prot)		1731			1774			1724			1728	
Flt Permitted		0.99			0.98			0.90			0.87	
Satd. Flow (perm)		1716			1747			1574			1529	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	11	433	67	11	339	22	50	94	22	28	44	11
RTOR Reduction (vph)	0	5	0	0	2	0	0	7	0	0	7	0
Lane Group Flow (vph)	0	506	0	0	370	0	0	159	0	0	76	0
Confl. Peds. (#/hr)	4		7	7		4	1		12	12		1
Heavy Vehicles (%)	0%	1%	0%	0%	0%	6%	0%	1%	0%	0%	0%	0%
Bus Blockages (#/hr)	0	2	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		32.0			32.0			17.3			15.3	
Effective Green, g (s)		32.0			32.0			17.3			15.3	
Actuated g/C Ratio		0.54			0.54			0.29			0.26	
Clearance Time (s)		6.0			6.0			4.0			6.0	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		926			942			459			394	
v/s Ratio Prot												
v/s Ratio Perm		c0.30			0.21			c0.10			0.05	
v/c Ratio		0.55			0.39			0.35			0.19	
Uniform Delay, d1		8.9			8.0			16.5			17.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		1.2			0.6			1.0			0.5	
Delay (s)		10.1			8.5			17.5			17.7	
Level of Service		B			A			B			B	
Approach Delay (s)		10.1			8.5			17.5			17.7	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Tree Report

Address / Lot #
St. Joseph Catholic School
Belleville, ON

Dogwoods
Charles Cavanagh NPD
Horticulturist
Consulting ISA Certified Arborist
ON-1033A

General Comments:

Inventory and general assessment of five street trees located at #405, 379, 375 Bridge St. E.

Recommendations: If these trees are to be retained through construction the entire area within the dripline should be protected by plywood hoarding prior to any construction activity and remain in place until the completion of the project. At no time should this area be encroached upon by equipment and or material storage. 3-4 inches of wood chip mulch should be evenly spread over the protected area and supplemental irrigation should be supplied during times of heat and drought. Post construction considerations should include regular tree inspections monitoring for the usual pest and disease problems and dead branches - these should be removed professionally and promptly to reduce damage and injury potential. For trees #1 - 3, the Cobra support system should be considered for the larger main branches to reduce the risk of damages and injuries in the event of structural failure.

On-site inventory 1-Nov-18

ID #	Botanical Name	Common Name	DBH (*cm*)	Condition *(Good, Moderate, Poor)*	Comments *(Conditions, TPZ, treatments…)*
1	*Acer platanoides*	Norway Maple	63.5	Moderate/Poor	Wide, exposed, irregular root flare with girdling and inarcing surface roots. First branch union at 2.4m branching into 3 stems with moderate to poor structure. Crown canopy to 7.6m on property side only. Canopy pruned along street for powerlines - 25% overall canopy removed. Open crown with little to no interior branching and foliage with minor deadwood observed.
2	*Acer platanoides*	Norway Maple	62.3	Moderate/Poor	Wide, exposed, irregular root flare with girdling and inarcing surface roots. First branch union at 1.8m branching into 4 stems with poor structure - included bark on two of them. Old pruning cuts with poor compartmentalization and with decay. Evidence of fungal fruiting bodies observed. Crown canopy to 7.6m on property side only. Canopy pruned along street for powerlines - 25% overall canopy removed. Open crown with little to no interior branching and foliage with minor deadwood observed.
3	*Acer platanoides*	Norway Maple	60.4	Moderate/Poor	Irregular root flare with girdling roots. First branch union at 2.1m branching into 4 stems with poor structure. Trunk crack originating at first union down .9m towards ground - weeping. Crown canopy to 7.6m on property side only. Canopy pruned along street for powerlines - 25% overall canopy removed. Open crown with little to no interior branching and foliage with minor deadwood observed.
4	*Acer platanoides*	Norway Maple	39.2	Moderate	Irregular root flare with girdling roots. Main scaffold branches with poor structure. Central stem stunted with pruning cuts. Crown canopy to 4.6m on property side only. Canopy pruned along street for powerlines - 25% overall canopy removed. Open crown with little to no interior branching and foliage with minor deadwood observed.
5	*Acer platanoides*	Norway Maple	49.1	Moderate	Irregular root flare with girdling roots. First branch union with poor structure branching into 3 stems. Included bark observed. Crown canopy to 4.6m on property side only. Canopy pruned along street for powerlines - 25% overall canopy removed. Open crown with little to no interior branching and foliage with minor deadwood observed.

Tree Report

Address / Lot #
St. Joseph Catholic School
Belleville, ON

Dogwoods
Charles Cavanagh NPD
Horticulturist
Consulting ISA Certified Arborist
ON-1033A

General Comments:

Assessment of Blue Spruce located at corner of Herchimer and Pinegrove Court

Recommendations: If this tree is to be retained through construction the entire area within the dripline should be protected by plywood hoarding prior to any construction activity and remain in place until the completion of the project. At no time should this area be encroached upon by equipment and or material storage. 3-4 inches of wood chip mulch should be evenly spread over the protected area and supplemental irrigation should be supplied during times of heat and drought. Post construction considerations should include regular tree inspections monitoring for pest and disease problems and dead branches - these should be dealt with professionally and promptly to reduce further damage and infection. Minimize environmental stress. Prune with disinfectant after each cut. No effective chemical control available.

On-site inventory 15-Jan-19

ID #	Botanical Name	Common Name	DBH (*cm*)	Condition *(Good, Moderate, Poor)*	Comments *(Conditions, TPZ, treatments…)*
1	*Picea pungens 'Glauca'*	Colorado Blue Spruce	58.5	Moderate	Good trunk and overall structure / form. A few lower dead branches may be infected with Cytospora canker (*Cytospora kunzei var. piceae*). Some lower limbs removed - good cuts, compartmentalizing well. Evidence of resin weeping from old cuts. This is often associated with Cytospora. This disease can significantly disfigure a tree over time but rarely kills.

COLBOURNE & KEMBEL , ARCHITECTS INC.
739D ARLINGTON PARK PLACE KINGSTON ONTARIO K7M 8M8 TEL 613-384-2240
E-MAIL info@ckai.ca FAX 613-384-1277

Nov 13, 2019

Att: Thomas Deming, CPT
Principal Planner, Policy Planning
Engineering and Development Services
Corporation of the City of Belleville

Re: OP & Rezoning Application For 405 Bridge St E, Belleville

Colbourne & Kembel Architects, on behalf of the Algonquin and Lakeshore Catholic District School Board would like to provide the City with our formal response and clarifications to the comments raised at the public meeting held on November 4, 2019 and subsequent follow-up. The information noted below will be incorporated into our Site Plan Control submission package, as applicable, for review and comment by City staff.

1) Fencing and Landscape Buffer
What type of fence is proposed, height of fence, other privacy mitigation (such as trees)?

The current proposal, along the Board's western boundary with the adjacent property on Bridge Street East, is for the construction of a 2400 high wood privacy fence (1800 high vertical boards with a 600 high lattice above). We, on behalf of the Board, have already had some discussions with the neighbour and the Board is more than willing to revise the fence design to match the recently built fence on their southern property line. We propose to use 150 x 150 posts set in concrete for better durability, as per the neighbour's concern with the new wood fence along their southern property line.

Regarding landscaping, our Landscape Architect has specified planting along the fence which is comprised of Cedars and Serbian Spruce, both of which are coniferous trees, to provide screening all year round. The selected plantings have a shallow, fine root system which will address noted issue.

2) Stormwater
Specifically concerning the west parking lot and its impact on the neighbouring residential dwelling.

The current proposed grading plan is to maintain the existing grade along the western property line and create a drainage swale which slopes to the south on the school property and drains into a catch basin and the onsite underground stormwater drainage system. Following an earlier discussion with the neighbour on Bridge Street, our civil engineer has reviewed the current design and confirmed that there is sufficient fall that we can lower the grade of the proposed site works on the Board property further to create a more defined swale with a steeper grade. This work, with the prior neighbours agreement, may also include revising a small portion of their easterly lawn along the side of the house to increase the grade away from the house even further.

.../2

As noted during the planning meeting, the neighbour confirmed that they have, under the existing site conditions, experienced flooding of their residential building on a couple of occasions and the Board is willing to undertake all reasonable steps to try to help address this issue for the neighbour by improving the grade fall away from the neighbour's house. This work is being proposed based upon the neighbour's understanding and acknowledgement that the Board will not be held liable for any future issues with flooding. The Board is willing to work with both the City and the neighbour to try to address this issue and achieve a satisfactory resolution to the matter.

3) <u>West parking lot</u>
Who will be parking here (teachers, day care workers, visitors)?

The southeast parking lot, located along Herchimer Avenue, is intended to be utilized for staff parking and parent pick-up and drop-off. The small parking lot, located on the northeast side of the new school building is intended to provide for barrier-free parking near the main entry along with a few short-term parking spots intended for deliveries and short-term stays during the school day. The northwest parking lot (adjacent to the Bridge Street neighbour) has not, at this time, been designated for any particular use, but is anticipated to be utilized primarily by visitors to the school or parents dropping off students once the school day has started.

4) <u>Walkway from Hastings Drive;</u>
   a. Will the school provide access to the public through to Bridge Street East? Or
   b. Will the pathway be gated/closed to the public?
   c. Will parents be permitted to drop off students on Hastings Drive to access the school through the walkway?
   d. Does the School Board have any concerns with permitted public access through their property (possibly through an easement)?
   e. Would the School Board be interested in approaching the City to purchase the walkway? – direct question from a member of the public I received yesterday.

The current proposal calls for there to be no public access across the site and that a gate be installed at the end of the public walkway from Hastings Drive along the school's property line that would permit students to access the school during certain periods of the day (i.e. at the start and end of day) and be closed, and locked, at other times. It is the Board's practice to fence the entire school play yard and that the site is secured during the school day in order to maintain student safety.

We would also like to note that at the time this school site was originally developed it was standard practice across the province that school yards were not fenced off and secured from public spaces and that the facilities were open for use by the general public. However, this practice has since been discontinued across the province due to a number of factors including, but not limited to, Ministry and Board policy implications, societal changes, historic incident occurrences, etc. As such, the Board strongly believes that they must be able to secure the school site in order to keep their students and staff safe and provide a distinct separation.

…/3

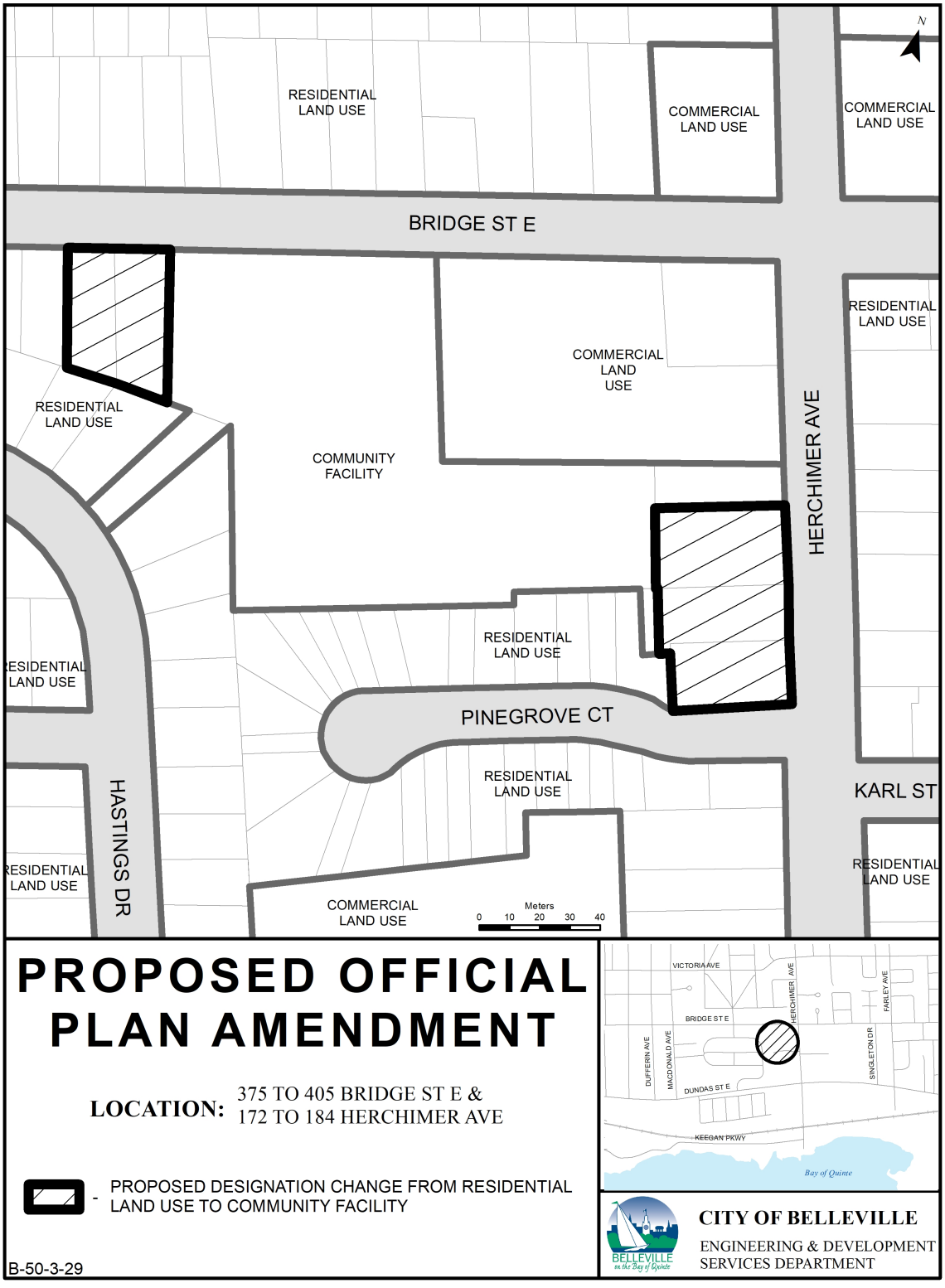
Furthermore, it should be noted that were a walkway to be continued through the school property, with the revised school building plan it would result in the creation of a significant blind spot from any public space. The Board would be unable to provide any level of supervision for this hidden space at night or on the weekends and, unfortunately, our experience across our jurisdiction has regularly shown this to result in significant issues with after hours activities.

We thank you for providing us with this opportunity to respond to the public comments brought forward at the public meeting, and Colbourne & Kembel and the Algonquin and Lakeshore Catholic District School Board look forward to working with the City as we continue to move this exciting school renewal project forward. Should you have any questions, please do not hesitate to contact the undersigned.

Sincerely,

Todd Colbourne

Todd Colbourne, OAA, MRAIC


N
RESIDENTIAL LAND USE
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COMMUNITY FACILITY
HERCHIMER AVE
RESIDENTIAL LAND USE
RESIDENTIAL LAND USE
PINEGROVE CT
RESIDENTIAL LAND USE
HASTINGS DR
KARL ST
RESIDENTIAL LAND USE
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COMMERCIAL LAND USE
Meters
0 10 20 30 40
PROPOSED OFFICIAL PLAN AMENDMENT
LOCATION: 375 TO 405 BRIDGE ST E & 172 TO 184 HERCHIMER AVE
PROPOSED DESIGNATION CHANGE FROM RESIDENTIAL LAND USE TO COMMUNITY FACILITY
B-50-3-29
VICTORIA AVE
HERCHIMER AVE
FARLEY AVE
BRIDGE ST E
DUFFERIN AVE
MACDONALD AVE
SINGLETON DR
DUNDAS ST E
KEEGAN PKWY
Bay of Quinte
CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT

From: Todd Colbourne
To: Deming, Thomas
Cc: Bryan Davies P. Eng.
Subject: ST. Joseph Catholic Elementary School, 405 Bridge Ste E, Belleville
Date: Monday, October 28, 2019 1:01:53 PM

External Email, use caution!

I received a call from Xxxx and Xxx Xxxxxx, owners of 373 Bridge St E. They don't' live there, their son does.
They had 4 comments/questions:

1. West Parking Lot
   Is this required (seems like a lot of parking for an elementary school) or could it be green space instead? I noted that the parking we have provided is already at the minimum level recommended by the traffic engineering report. Once I explained that there are new classrooms (extra staff and parents), a daycare, and an Early-On, they recognized that the parking amount made sense.
2. West setback to parking
   I noted that the min by zoning is 1.5 m with a shrub row. We are proposing 3.0 m with a solid wood privacy fence and a row of trees. They liked that answer, and that seemed OK with them.
3. Fence Type:
   They wondered if we can make the fence the same appearance as what was recently built along their back property? I asked for photos of it and said that as long as it is durable and provides acoustic and visual privacy and is a reasonable design, I imagine the owner would be happy to do so.
4. Drainage:
   They have a drainage issue on their east side, and their basement has flooded. The existing driveway of 375 slopes towards the west and although it has a low asphalt berm at the property line that wouldn't suffice during heavy rain or spring thaw. I noted that we are changing that to slope to the east and have catch basins, so the school site will NOT drain to their property.

Sincerely,

Todd Colbourne, *Architect, OAA, MRAIC - Principal*
CKA - Colbourne & Kembel, Architects Inc.

From: MacDonald, Matthew
To: Ashton, Stephen; Deming, Thomas; Pinchin, Greg
Cc: Pallo, Cheryl; Lloyd, Hollie; Forestell, Angela; Keays, Christina; Baldwin, Erin
Subject: FW: Official Plan and Zoning By-Law Amendment Application Meeting of November 4,2019
Date: Friday, November 08, 2019 8:02:37 AM
Attachments:

FYI

Matt MacDonald
Director of Corporate Services/Clerk
Corporate Services Department
Corporation of the City of Belleville
ph. (613) 967-3256
fax (613) 967-3206

From: Xxxxx Xxxxxx [mailto:xxxxxxxxxxx@gmail.com]
Sent: Thursday, November 07, 2019 8:42 PM
To: MacDonald, Matthew
Subject: Official Plan and Zoning By-Law Amendment Application Meeting of November 4,2019

External Email, use caution!

On October 16,2019, after receiving a notice of a zoning by-law application I contacted both a City Employee and the Designer in Kingston and advised them that the notice issued to the public incorrectly depicted the public walkway from Hastings Drive to Bridge St as being owned by the Separate School Board. The walkway from Hastings Drive to the school property has always been owned by the City of Belleville. A corrected notice was not mailed out to the neighbouring residents.

If the walkway from Hastings Drive through to Bridge Street is no longer available to the public then I do not believe that the taxpayers of Belleville should be held responsible for maintenance or be liable for any injury occurring on the walkway. The future access is not "all inclusive" but "restricted" to only to students,parents and staff of the school. It is a dead end walkway.

Residents of Hastings Drive already suffer the extra drop off and pick up traffic which sometimes includes blocked driveways. This problem will be compounded by the extra students/parents anticipated.

Suggestions:

1. Approach neighbouring homeowners about each purchasing part of or one purchasing all of the walkway.
2. Approach Separate School Board about purchasing the property so maintenance and liability for injury is their responsibity.

Either of the above will relieve the Belleville taxpayers.

Respectfully submitted.

Xxxxx Xxxxxx
23 Pinegrove Court
Belleville,Ontario K8P 5X9
(xxx)xxx-xxxx

From: Deming, Thomas
To: Baldwin, Erin
Subject: FW: Official Plan and Zoning By-Law Amendment Application 375 to 405 Bridge Street East and 172 to 184 Herchimer Ave
Date: Thursday, November 07, 2019 2:05:09 PM
Attachments:

Comments from public for school file

Thomas Deming, CPT
Principal Planner, Policy Planning
Engineering and Development Services
Corporation of the City of Belleville
City Hall, 169 Front Street
Belleville, ON K8N 2Y8
613-967-3234
tdeming@belleville.ca
belleville.ca

From: Marie D [mailto:xxxxxxx@live.ca]
Sent: Thursday, 7 November 2019 12:47 PM
To: Deming, Thomas
Cc: MacDonald, Matthew; Marie D
Subject: Official Plan and Zoning By-Law Amendment Application 375 to 405 Bridge Street East and 172 to 184 Herchimer Ave

External Email, use caution!

Good Afternoon Thomas,

This email is a brief follow-up to the City Planning Committee and staff meeting (Nov 4) and our phone discussion (Nov 5).

My husband and I reside on Hastings Drive/Montgomery Blvd, in close proximity to the City's public pathway that is currently situated at the backside of St. Joseph's Elementary School property. The proposed changes presented by the Algonquin Lakeshore Catholic District School Board and its hired architectural design team to the City Planning Committee have raised four major concerns for us.

The #1 concern is the safety of both student "walkers" on Hastings Drive and those students who get dropped off and picked up by the pathway on this street. When the "No Stopping" signs were positioned on Bridge Street

East, this particular change had (and continues to have) a negative impact on Hastings Drive, even though parking spaces for parents/caregivers are available on school property.

At that time of the revised sign placement on Bridge St E, neighbours adjacent and opposite to the public pathway on Hastings Drive had requested that the City impose a **"Restricted Area for Stopping" designation** so that students - walkers and others - would have enough visibility to cross the street safely.

The City did comply with the request, but unfortunately the no-stopping regulation has not been consistently enforced by law enforcement.

As a result, for those of us who live near this twice-daily traffic jam that occurs during the school year, **it is often difficult and stressful to enter or exit our driveways**. We must contend with visibility restrictions and potential safety issues due to children walking on the sidewalks and/or the street when being dropped off or picked up, waiting cars being parked on both sides of the street, the curve in the street near the pathway, on-coming traffic, the height of winter snow banks, etc.

The expanding student population of St. Joseph's School will more than likely increase these traffic and safety issues**.**

Action Step: *Discuss and advocate for consistent City Police monitoring and ticketing of those drivers who ignore the designated restricted area for stopping on Hastings Drive*.

Concern #2 is the result of the City Planning Committee's erroneous diagram that was distributed to residents of our area as part of the public consultation process. The diagram indicated that the pathway belonged to the School Board and as such it would be subject to their usage (for example, a locked gate could be placed at the Hastings Drive entrance is so desired). Of course, that interpretation by neighbouring residents would be false. The pathway and surrounding green space is city-owned.

Action Step: *Distribute a revised diagram so as to eliminate any misconceptions and to allow for properly informed feedback from impacted residents.*

Concern #3 relates to the closure of a well-used pathway without any public consultation and/or the discussion of potential measures that might keep it open.

As for the latter point, the Planning Committee could request that the **historical collaboration between the City and the School Board regarding a**

pedestrian easement that connects Hastings Drive to Bridge St East be maintained.

The current location of the easement might need to be moved due to the proposed school renovations but now is the time for discussion before the final design is approved by City Council.

Action Step: *Continue the "good neighbour" collaboration with the School Board regarding the easement. It would keep students safe on school property and also allow the historical access for residents to be maintained.*

Note: Many cities, including Belleville, try to be "greener" in their planning and implementation of policies and bylaws. The number of walking pathways should be increased rather than closed.

Concern #4 arises if no measure is taken to keep the public pathway open. This unlit and dead-end area could become a hangout of sorts, which in turn creates another type of safety issue for our neighbourhood.

Action Step: Be proactive. A discussion about this potential outcome should be part of the current planning discussions.

Thank you in advance for taking the time to carefully consider our concerns regarding the Official Plan and Zoning By-Law Amendment Application 375 to 405 Bridge St East and 172 to 184 Herchimer Avenue.

Regards,

Xxxxxxx and Xxxxx Xxxxxx
66 Montgomery Blvd
Belleville, Ontario K8N 1H9

November 4, 2019

City Council Planning Committee,

169 Front Street, Belleville

K8N2Y8

To whom it may concern:

I am writing this letter to make my objection to the official plan and zoning by law amendment application concerning 375 to 405 Bridge Street East and 172-174 Herchimer Avenue which, if approved, would rezone the subject lands from Residential Second Density (R2&R2-3) Zone, Residential Fifth Density (R5-12), and Community Facility(CF) to Community Facility (CF 14) Zone with special provisions to permit a reduction in the front yard setback, side yard setback and parking requirements related to the proposed expansion of the existing school..

Members of the Woods family have lived at 80 Hastings Drive, behind the houses that will be affected by the zoning change, for sixty-seven years. We plan to be in this house for the next thirty years, at least. When Alex Woods (deceased 2008) built the house at 80 Hastings Drive, the houses on Bridge Street provided a noise and visual barrier to one of the major streets in Belleville. These houses have continued to do so. If they are pulled down, our house will lose this barrier. The street noise and traffic that a parking lot will create with an expanded school, will be intolerable.

The Hastings Drive houses have backyards that are open to the back yards of the houses on Bridge Street. This gives the homes on both sides of the "back fence" green space, trees and a quietness that can be enjoyed in all seasons. Snowplows in winter clearing the school property, and moving up and down Bridge Street will destroy this. We would probably have to build solid fences or a sound buffer between our backyards and Bridge Street, and tall fences do not make for good neighbours. They destroy the sense of community that exists here.

Hastings Drive, Montgomery Blvd, Macdonald Gardens and Edward Street was one of the first subdivisions in Belleville to open in the early 1950s. As such, it was designed to be a completely integrated unit with controlled access points, its own character, and sense of community with Queen Elizabeth School and St Joseph's Catholic School educating the children in the area. People lived in these homes for decades. They had access to Kelly's Drug Store and its post office, and to Bridge Street through the path on Hastings Drive up to St. Josephs Catholic School, and to the hospital on Dundas Street via MacDonald Blvd. This is a walkable community and in view of our concerns about climate change, we need to preserve the walkable areas, and shortcuts, and pay attention to safety for pedestrians. This community will be challenged by the

rezoning proposal and by the two years of construction which will create additional noise, pollution and safety concerns for the residents.

We have lived near St. Joseph's Catholic School for years and the sound of the bells, the joyful voices of the children, the decorations on the fence, and the changes that have taken place have not been much of an issue for us. The parking on Hastings Drive as more and more parents drop off and pick up their children has become an issue though. In spite of the posted signs on the street which ban parking during designated hours, the practice of parking there has not stopped. An expanded school will only exacerbate this situation. Parents do not seem willing to use the parking lot on Herchimer Ave. Instead, they use Kelly's Drugstore, in spite of posted notices, and Hastings Drive as their parking lots. This will not change by building more mixed parking spots for staff, and for pick up and drop offs as nothing seems to make a difference to where parents decide to park.

Safety will be a major concern as more cars entering and existing Bridge Street will raise potential for accidents involving vehicles and young children. In addition, even with minimal use of the new parking lot for none months of the year, noise and pollution will, literally, be in our backyard.

St Josephs Catholic School has significant property at present. Would it not be possible to build the expansion on the existing property? This has already been done on three occasions. Could the school expand up when the old two-story structure is demolished, in order to maintain a reduced footprint instead of expanding it? Could the expansion be set further back from the street behind the existing building, so that the children would not have to be looking through chain link fence surrounding their school and separating them from the street?

Typically, increased emolhnents are cyclical and it would be a shame to pull down houses and expand the building only to have to face declining emolhnents in the future. Portable classrooms create flexibility to accommodate the fluctuation in emollments. This might be a viable option that would not have a permanent impact on the houses on Bridge Street and Hastings Drive.

Belleville is faced with the challenge of providing affordable housing for its residents. The homes on Bridge Street that are designated to be pulled down by the rezoning by-law are affordable for an average middle-class family. These homes are practical, energy efficient, and attractive. There is no plan, as far as we know, to build replacement homes in the area that are at a similar price point to replace this housing stock that will be depleted. This change will also affect the market value of the homes on Bridge Street adjacent to the homes that will be pulled down, and will also affect the market value of the homes on Hastings Drive that will back onto the parking lot and extension. When people have bought homes on Hastings Drive and Bridge Street adjacent to the school, they knew that they were buying homes in a school zone. However, the existing residents on Bridge Street and Hastings Drive did not bargain for an expanded school and a parking lot directly and indirectly impacting them.

Although we usually think of heritage homes as being designated because of their age, an argument can be made for the fact that heritage homes are homes of a certain period that tell a story of Belleville's history and culture. The homes on Bridge Street that would be pulled down if the zoning by-law amendment is approved, belong to a time when our veterans had returned from WWII and needed homes for their families. These were not "war time houses" as such but were built at the beginning of the optimistic decade when young families were building their futures. These houses have been home to growing children, and seniors, to a city counsellor, and to a well-known Belleville developer and philanthropist. Once these homes are tom down, they are gone.

Many towns regret pulling down homes and buildings that are part of their colourful history. Let Belleville no longer be one of these.

Do not approve this rezoning when a vertical building design is an alternative to pulling down homes to build a parking lot.

Sincerely,

APPROVAL BLOCK
DE&DS

CITY OF BELLEVILLE

Greg Pinchin
Manager of Approvals
Engineering & Development Services Department
Report No. APS-2019-42
December 2, 2019

To: Belleville Planning Advisory Committee

Subject: Recommendation Report for a Proposed Draft Plan of Subdivision
Sand Cherry Court, Part of Lot 37, Concession 1
Former Township of Sidney, now City of Belleville
OWNER: Sand Cherry Court G.P. Inc c/o Syfeddin Hosseini
Agent: McIntosh Perry Consulting – Marko Cekic

File: 12T-19001

Recommendation:

"That the Belleville Planning Advisory Committee recommends the following to Belleville City Council:

"THAT approval of a Draft Plan of Subdivision, prepared by McIntosh Perry Consulting Engineers Ltd., dated July 29, 2015, as shown on **ATTACHMENT #2** to Manager of Approvals' Report No. APS-2019-42, be granted for the lands identified as Part of Lots 3 & 4, Registrar's Compiled Plan 1819, City of Belleville, County of Hastings (File: 12T-190001) subject to the draft plan conditions outlined in **ATTACHMENT #3** to Manager of Approvals' Report No. APS-2019-42."

Background:

An initial public meeting was held in accordance with the requirements of the Planning Act on September 3, 2019. The purpose of this meeting was for Committee Members to formally hear and receive public comments. At that time, the Planning Advisory Committee reviewed Report No. APS-2019-28, the bulk of which has been included in this recommendation report, along with input from the public, commenting agencies, and municipal departments that has been received, assessed, and addressed to the satisfaction of the Engineering & Development Services Department.

The subject property is located on the east side of Palmer Road just south of Moira Street West as shown on the location map **ATTACHMENT #1**. The lands subject to this current subdivision application have an area of approximately 1.32 hectares, a frontage of 15 metres at the west end of Pepper Avenue and a total frontage of 36.1 metres along Palmer Road as shown by the proposed plan of subdivision prepared by the Owner's agent - **ATTACHMENT #2**.

The subject lands consist primarily of undeveloped open space with a range of shrubs and bushes and a scattering of trees. This property is relatively flat in the northwest corner but slopes significantly from the south and the southeast.

There currently is a watermain located along Palmer Road with a lead to the subject lands. There is also a water main on Pepper Avenue. A sanitary sewer main is located on Pepper Avenue while a stormwater lead has also been installed to the subject property from Palmer Road as part of the City's reconstruction of the street several years ago.

Transit services are provided along Moira Street West.

Surrounding uses include:

1) to the east: existing single detached and semi-detached dwellings;
2) to the north: existing single detached and semi-detached dwellings some with large undeveloped rear yards;
3) to the south: industrially designated land subject to re-development;
4) to the west: scattered existing single-family detached dwellings.

In 2006 Belleville City Council granted draft plan of subdivision approval for the subject lands. That approved plan was identical to the current plan. Unfortunately the draft plan approval lapsed in 2009 and is no longer valid. The owner applied again in 2015 and received draft plan of subdivision approval, which then lapsed in 2018. The proposal is essentially a re-submission of what has been previously draft approved.

It is also noted that the subject lands were rezoned in 2006 to allow the proposed development. Consequently the required zoning for the proposed use of these lands is already in place.

Proposal:

The proposed Plan of Subdivision would include ten (10) blocks containing thirty-nine (39) townhouse units all of which are to be accessed by a new cul-de-sac extending eastward from Palmer Road.

This roadway will have to be constructed to a local road standard (ie: 20 metre wide right-of-way). It is proposed that full municipal services would be extended to all of the proposed blocks.

Land has been set aside for an emergency entrance and walkway to Pepper Avenue along with a servicing connection (Block 11), and a stormwater management block (Block 12).

No land has been set aside for parkland purposes within this proposed subdivision and it is intended that a cash in-lieu payment will be made to the City.

In support of the application, the following information was submitted:

- Plan of Subdivision (Draft 21M Plan), Watson Land Surveyors, May 2, 2019
- Planning Rationale dated July 18, 2019
- Watermain Design Brief KP-15-7033 – Sand Cherry Court Subdivision, McIntosh Perry, Revised June 20, 2019
- Servicing and Stormwater Management Report, Sand Cherry Court Subdivision, McIntosh Perry, Revised June 20, 2019
- Sand Cherry Court Subdivision Engineering Drawings, McIntosh Perry, issued June 20, 2019
- Environmental Compliance Approval 6643-APVRY2 dated September 26, 2017

These documents have been available for public review at the Approvals Section of the Engineering & Development Services Department.

The Watermain Design Brief concludes that a new 200 mm watermain on Sand Cherry Court is capable of handling capacity and pressure demands with no adverse effects to the existing water supply.

The Servicing and Stormwater Management Report concludes that:

- the new watermain would connect to Palmer Road and Butler Lane/Pepper Avenue to service the proposed subdivision;
- a new sanitary sewer will connect to existing infrastructure within Butler Lane/Pepper Avenue to service the proposed subdivision;
- rainfall will be conveyed by overland sheet flow towards new catchbasins where it would outlet to the dry retention area (stormwater management facility);
- there would be an increase in net peak flows, so a quantity control restriction will be provided in the dry retention area (stormwater management facility);
- Best Management Practices would be implemented, along with a proposed Stormceptor to control the quality of the stormwater.

Provincial Policy Statement:

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement.

Planning Staff considered the following policies in the PPS:

1.1.1 Healthy, liveable and safe communities are sustained by:

a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
b) accommodating an appropriate range and mix of residential (including second units, affordable housing and housing for older persons) [...] to meet long-term needs;
c) avoiding development and land use patters which may cause environmental or public health and safety concerns; and
e) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

1.1.3.2 Land use patterns within settlement areas shall be based on:

a) densities and a mix of land uses which:
   1. efficiently use land and resources;
   2. are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;
   3. minimize negative impacts to air quality and climate change, and promote energy efficiency;
   4. support active transportation;
   5. are transit-supportive, where transit is planned, exists or may be developed; and
   6. are freight-supportive; and

b) a range of uses and opportunities for intensification and redevelopment in accordance with the criteria in policy 1.1.3.3, where this can be accommodated.

1.1.3.3 Planning authorities shall identify appropriate locations and promote opportunities for intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.

Official Plan:

Planning Staff considered the policies within the Official Plan. The land is designated "Residential" in the City's Official Plan. Residential development of the form and density proposed is permitted in the 'Residential Land Use' designation subject to location criteria. No Official Plan amendment is required for this development.

Section 3.10.2 i) of the Plan states that:

i) This Plan supports the development of all forms of housing in all forms of tenure, being freehold, rental, cooperative, and condominium.

Zoning By-law:

This property is currently zoned is "R5-33 – Residential Fifth Density Exception No. 33 Zone" which permits the proposed townhouse units. There are no changes proposed to the zoning.

Public Circulation and Comments:

Notice of the subject application was mailed to all registered owners of land within 120 metres (400 feet) of the subject property on August 9, 2019. Notice was also provided by posting a sign on the property August 9, 2019, in accordance with the notice provisions set out in the *Planning Act*.

Inquiries have been received about the proposal from nearby property owners. No formal comments or concerns have been received regarding this application to date.

At the formal Public Meeting, neighbours along Palmer Road inquired about the possibility of connecting to municipal sanitary sewer through the development. Staff requested that the applicant examine feasibility and options to connect abutting lands. A neighbour along Palmer Road at the northeast corner of the proposed Sand Cherry Court intersection provided comments requesting the erection of a 3.0 m high privacy fence along the south and east boundaries of their property. These matters will be addressed through draft conditions of approval as identified under public considerations.

Agency & Departmental Circulation:

1) Internal Departments

The subject application was circulated for comment to the Development Engineer, the Manager of Transportation & Operations, the Chief Building Official, the Director of Recreation, Culture & Community Services, the Fire Chief, the Police Chief, and the Manager of Policy Planning on August 9, 2019.

The Engineering Section advises that comments from the previous approval remain unchanged, and the owner shall reimburse the City for the cost of servicing stubs (water main and storm sewer) installed as part of the Palmer Road reconstruction as a condition of final approval.

Environmental Services advises that technical watermain design details will be reviewed later on through the appropriate process.

Recreation, Culture & Community Services requests cash in lieu of a parkland dedication for the proposed subdivision.

Fire & Rescue advise that they have no comment regarding the application.

2) External Agencies

The subject application was circulated for comment to the Algonquin & Lakeshore Catholic School Board, the Hastings & Prince Edward District School Board, Quinte Conservation, Bell Canada, Cogeco, Canada Post, Elexicon/Veridian, Enbridge/Union Gas, C.N. Rail, and the Hastings Prince Edward Public Health on August 9, 2019.

Quinte Conservation advises that the proposal outlined in the revised stormwater management report may require provisions for dry pond maintenance and access by the City. These details will be addressed through draft conditions and engineering review.

C.N. Rail advises that the proposed development is approximately 150 m from the Kingston West Principal Main Line, and requests an environmental easement for operational noise and vibration emissions to be registered against the subject property for all lots within 300 m of the C.N. right-of-way. Further they request a warning clause to be inserted in all development agreements, offers to purchase, and agreements of purchase and sale or lease for each dwelling within 300 m of the C.N. right-of-way.

Considerations:

- **Public**

  Public notice and circulation complies with the requirements of the *Planning Act, R.S.O. 1990.*

  Public comments received expressed desire for existing residents to be able to connect to municipal sanitary sewer through the proposed development, and desire to see tall privacy fencing constructed abutting existing residential to the north-west of the proposed development.

  A draft condition has been included to request more detailed servicing study into connecting adjacent properties at the detailed design stage, and that such connection be made if deemed feasible by the City.

  Another condition has been included requiring appropriate privacy fencing. Municipal standard privacy fencing is 1.8 m high, but this may be looked at more closely in detailed design.

- **Bill 108**

  As of September 3, 2019, changes to the Planning Act under Bill 108 make it such that subdivision approvals and conditions may **only** be appealed by:

  1. the applicant; or
  2. by a public body or agencies listed in the Act, where they have also made submissions to the City prior to Council's decision.

- **Financial**

  The fees payable for processing the application have been received by the City. Any planning, engineering, surveying and legal costs to facilitate the plan of subdivision for the subject lands would be at the owner's expense.

- **Impact on and input from other Departments/Sources**

Circulation of this application to other departments/agencies has occurred.

- **Strategic Plan Alignment**

  The City of Belleville's Strategic Plan identifies nine strategic themes including Residential Development. A key strategic objective of the Residential Development theme is to:

  - Plan for residential growth to meet our needs for 20 years and designate sufficient land in our planning documents to accommodate residential growth for 10 years.

Analysis:

The subject lands are designated for residential development in the City's Official Plan. Therefore a subdivision on this land would be consistent with the City's plan for this part of the municipality.

Furthermore, residential development on this site, especially in the form of townhouses, would be in keeping with the Provincial Policy Statement (PPS) as noted earlier.

Proposed Draft Plan Conditions of Subdivision Approval:

The proposed conditions of draft plan approval for this subdivision are outlined on ATTACHMENT #3. These conditions follow the normal city format and consist of conditions commonly utilized in other draft plans approved by the City in recent years.

As typical, the major issues in approving this subdivision arise from servicing the subject lands and all of the engineering works required to develop this site. Conditions include:

The developer will be responsible for designing and constructing an emergency access road and walkway from Sand Cherry Court to Pepper Avenue. (ATTACHMENT #3 – Condition 6)

The developer will be required to pay $9,602.06 to the City for the construction of the watermain stub and storm sewer connections installed for this subdivision as part of the Palmer Road Reconstruction project. (ATTACHMENT #3 – Condition 13)

The developer will be responsible for all of the required street lighting to the satisfaction of the City. (ATTACHMENT #3 – Condition 16)

A hydrogeological study will have to be undertaken because of the possibility of conflicts with nearby wells and/or septic systems (ATTACHMENT #3 – Condition 17)

The developer will be responsible for stormwater management to the satisfaction of the City and Quinte Conservation (ATTACHMENT #3 – Conditions 18 and 19)

The developer will be responsible for installing appropriate fencing between the blocks in the proposed subdivision and existing residential properties (ATTACHMENT #3 – Condition 20).

The developer will have to make a 5% cash in lieu of parkland payment to the City (ATTACHMENT #3 – Condition 22).

This subdivision will be serviced by one or more community mail boxes and future owners are to be made aware of this level of service (ATTACHMENT #3 – Conditions 23, 24 and 25).

The Owner and all encumbrancers (mortgagees) will have to enter into a subdivision agreement with the City of Belleville. In doing so, the Owner will have to agree in writing to satisfy all the requirements, financial and otherwise, of the City of Belleville, including the provision of roads, sidewalks, boulevards, installation of services, stormwater management and drainage (ATTACHMENT #3 – Condition 27).

The Owner will need to grant C.N. Rail an environmental easement over the property for operational noise and vibration emissions, as the proposed development is within 300m of their Kingston West Principal Main Line, and all future owners are to be made aware of this (ATTACHMENT #3 – Conditions 29 and 30).

The Owner will need to investigate the feasibility of providing private service connection(s) for properties to the west at the detailed design stage, and if deemed feasible by the City, the Owner agrees to install such private service connection(s) to the property line for the property(s) deemed feasible to connect (ATTACHMENT #3 – Condition 31).

The draft plan approval expires on December 9, 2022 if all the conditions are not satisfied by that date.

Financial:

All of the planning, engineering, survey and legal costs to facilitate the construction of this subdivision will be at the Owner's expense. The applicant paid a fee for the application for draft plan approval and will reimburse the City for the cost of installing service leads to the property as part of the Palmer Road reconstruction project.

Conclusion:

The Approvals Section of the Engineering and Development Services Department supports the approval of the draft plan of subdivision, prepared by McIntosh Perry Consulting Engineers Ltd. on behalf of Sand Cherry Court G.P. Inc. for the lands identified as Part of Lots 3 & 4, Registrar's Compiled Plan 1819, City of Belleville, County of Hastings (File: 12T-19001), and recommends to the Belleville Planning Advisory Committee that Belleville City Council be requested to formally issue draft plan of subdivision approval for this subdivision, as shown on ATTACHMENT #2, subject to

the list of conditions outlined in ATTACHMENT #3.

Respectfully submitted,

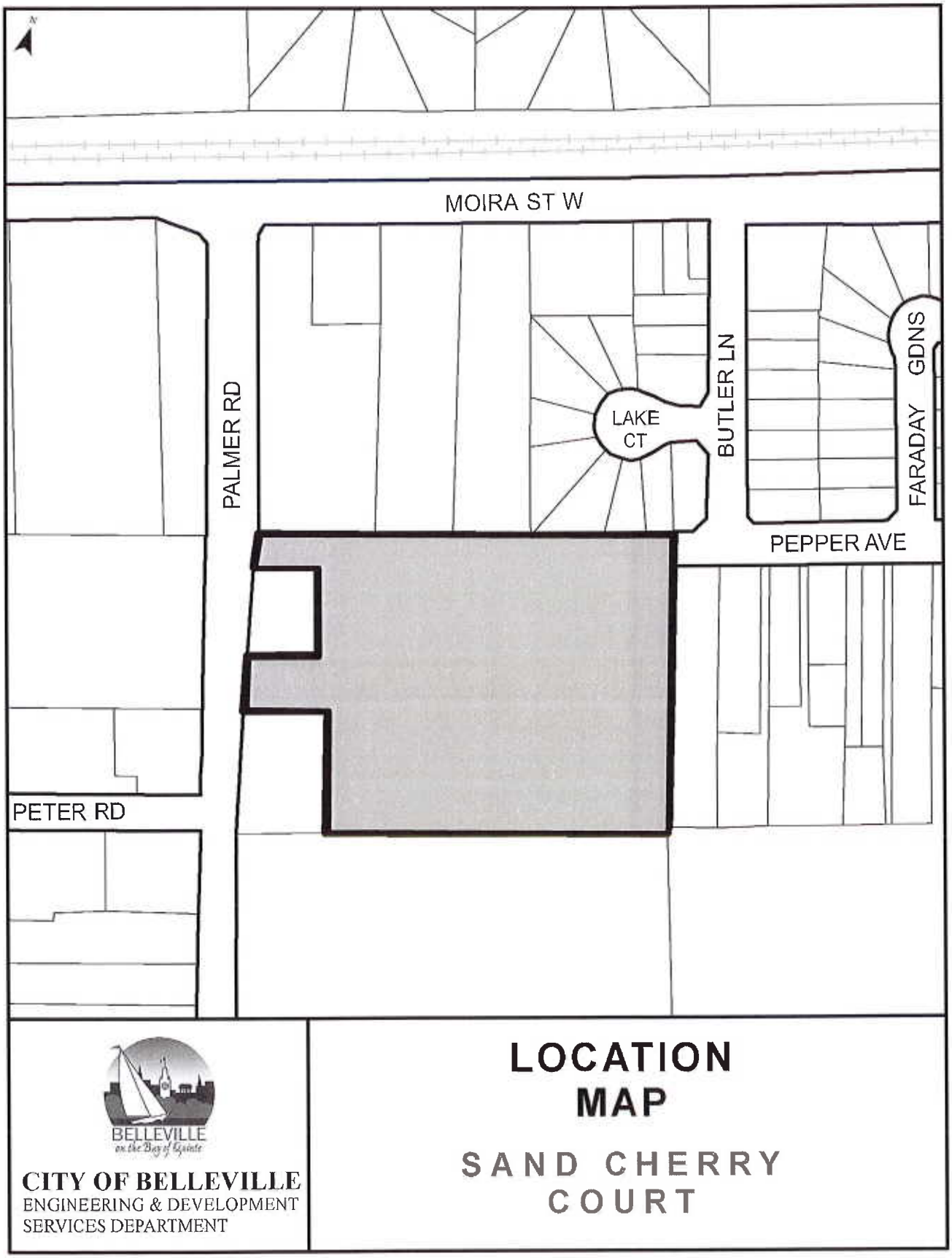
Greg Pinchin

Attachments

Attachment #1 – Location Map
Attachment #2 – Plan of Subdivision (Draft 21M Plan), Watson Land Surveyors, May 2, 2019
Attachment #3 – Draft Plan Conditions

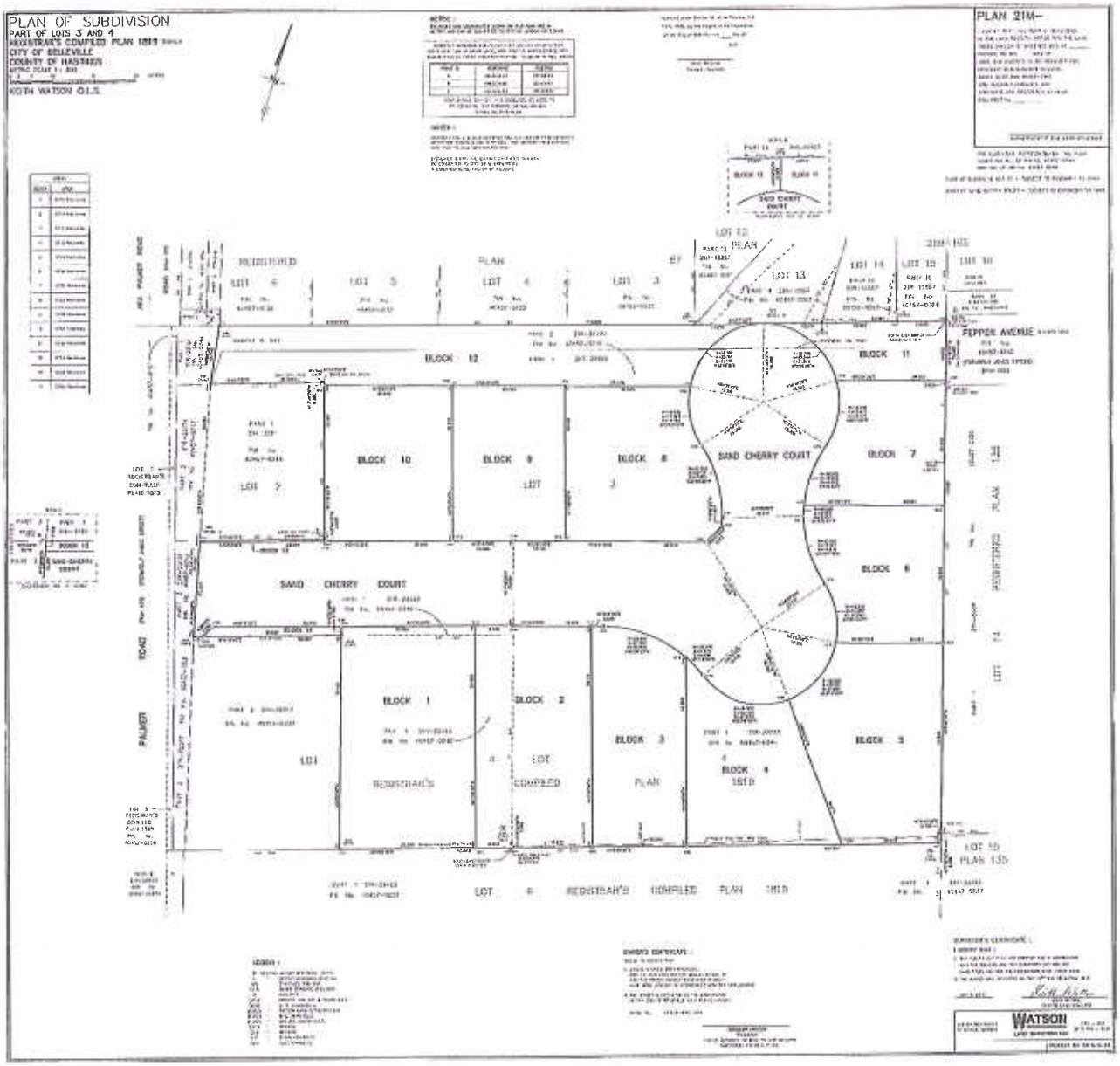
ATTACHMENT #1

Location of Subject Property



ATTACHMENT #2

Draft Plan of Subdivision – Sand Cherry Court



ATTACHMENT #3

Draft Plan Conditions
(Sand Cherry Subdivision)

The City of Belleville's conditions and amendments to final plan approval for registration of this Subdivision are as follows

No.	Conditions

1. That this approval applies to the draft plan of subdivision, Drawing: Draft Plan of Subdivision 12T-15001, prepared by McIntosh Perry Consulting Engineers Ltd., dated May 2, 2019, attached hereto as APPENDIX 1, to show a total of:

    - ten (10) blocks for street townhouses [Blocks 1 to 10 inclusive];
    - one (1) stormwater management block [Block 12];
    - one (1) block for an emergency access/walkway [Block 11];
    - two (2) reserve blocks [Blocks 13 and 14].

2. That any dead ends and open sides of road allowance created by this draft plan be terminated in 0.3 m reserves to be conveyed to, and held in trust by, the City of Belleville.

3. That the road allowance included in this draft plan, including any required daylighting triangles, shall be shown and dedicated as a public highway.

4. That such easements as may be required for utility, telecommunication services, drainage or servicing purposes shall be conveyed to the appropriate authority.

5. That the street within this plan shall be named to the satisfaction of the City of Belleville.

6. That prior to final approval, the Owner agrees in writing in the subdivision agreement that prior to any building permit being issued for any of Blocks 1 to 10 inclusive, the Owner shall design and construct, to the satisfaction of the City, an emergency access route from the north end of Sand Cherry Court to Pepper Avenue across Block 11.

7. That prior to final approval, the Owner agrees in writing in the subdivision agreement to design and construct a walkway across Block 11 from the north end of Sand Cherry Court to Pepper Avenue, to the satisfaction of the City of Belleville.

8. That prior to the final approval of the plan, the Owner shall provide a Geotechnical Report, to the satisfaction of the City that addresses the required pavement designs for the roads within the subdivision.

9. That prior to the final approval of the plan, the Owner shall retain a professional engineer to design, to the satisfaction of the City of Belleville, the street within this subdivision which shall be constructed with a local road cross-section.

   In doing so, driveways are to be constructed in accordance with the Zoning By-Law and the Driveway Control By-Law and Blocks 4 and 5 are to be divided into units in such a way that none of the driveways will cross in front of the property of any of the other units.

10. That prior to final approval, the Owner agrees in writing in the subdivision agreement to design and construct a 1.5 metre wide concrete sidewalk along one side of Sand Cherry Court, to the satisfaction of the City of Belleville.

11. That prior to final approval of the plan, the Owner shall agree in writing in the subdivision agreement to plant "street trees" on either side of Sand Cherry Court, either within the road allowance of Sand Cherry Court or on the private Blocks, to the satisfaction of the City of Belleville.

12. A sanitary sewer and watermain servicing report must be prepared, to the satisfaction of the City, outlining the upgrades required to the existing sanitary sewer system and water system to support this subdivision and to confirm that there will be adequate supply and pressure throughout the proposed subdivision. This will include modelling the new water system.

13. That prior to final approval of the plan, the Owner shall agree in writing in the subdivision agreement to pay $9,602.06 to the City for the construction of the watermain stub and storm sewer connections installed for this subdivision as part of the Palmer Road Reconstruction project.

14. That prior to final approval, the Owner shall agree in writing in the subdivision agreement to design and construct all servicing requirements (roads, sidewalks, water, sanitary, storm, electrical, etc.) for this plan of subdivision, including any work required outside the limits of the subdivision, to the specifications of the approving authorities (the City of Belleville, Elexicon/Veridian Connections, etc.) and the cost thereof shall be paid by the Owner.

15. That prior to final approval, the Owner shall agree in writing in the subdivision agreement that the Owner is responsible to provide all services, including road maintenance, unless and until assumed in writing by the City of Belleville.

16. That all street lighting required for the street to be located within this plan of subdivision be designed and installed, to the satisfaction of the City of Belleville.

17. That prior to final approval, the Owner will be required to complete a hydrogeological evaluation of the impact of the proposed subdivision on the groundwater resources of the surrounding area including existing wells. This evaluation will also review the impact the excavation of trenches and basements will have on groundwater and provide a baseline survey of existing well conditions. The Owner shall agree that where the well or private water supply of any person is

interfered with as a result of construction or the development of the subdivision, the Owner shall at his expense, either connect the affected party to municipal water supply system or provide a new well or private water system so that water supplied to the affected party shall be of a quality and quantity at least equal to the quality and quantity of water enjoyed by the affected party prior to the interference.

18. That prior to the commencement of any grading or construction on site, or final registration of the plan, the Owner shall submit and obtain approval of the City of Belleville and Quinte Conservation for reports describing the following:

    a. a detailed Stormwater Management Plan which outlines the intended means of controlling stormwater runoff in terms of quantity, frequency and duration of events up to and including the regional storm;

    b. the intended means of conveying stormwater flows from the site and external areas that drain through the subdivision, including the location and design of water quality and quantity controls and facilities using stormwater management techniques outlined in provincial guidelines;

    c. that Block 12 is sufficient in size for the proposed stormwater management facility, but if it is not sufficient in size, then the Owner agrees to provide any additional land needed to construct the facility, which shall be from subdivision land adjacent to Block 12. (Note: anything over the 5-year storm must be stored on-site.)

    d. an assessment of the major and minor flow systems, identifying pre- and post-construction volumes, depths, velocities, points of discharge, and proposed methods for outlet treatment;

    e. An Erosion and Sediment Control Plan detailing the means by which erosion and sedimentation and their effects will be minimized on the site during and after construction in accordance with provincial guidelines. The report must outline all actions to be taken to prevent an increase in the concentration of solids in any water body as a result of on-site, or other related works;

    f. site grading plan, including pre-development and final scenarios;

    g. Requirements for the long-term maintenance of all proposed erosion and stormwater facilities and construction details relating to these conditions.

19. That the Owner agrees in the subdivision agreement, in wording acceptable to the City of Belleville:

    a. to cause to be carried out the works referred to in Condition 18;

    b. to design and implement on-site erosion and sediment control, in order to meet the requirements of the City of Belleville and Quinte Conservation;

c. to maintain all stormwater management and erosion and sedimentation control structures operating and in good repair, in a manner satisfactory to the City of Belleville and Quinte Conservation.

20. That the subdivision agreement between the Owner and the City of Belleville contain a provision wherein the Owner agrees to construct:

a. a continuous 1.5 metre high chain link fencing along the northern boundary of Blocks 8 to 10 inclusive, and as required surrounding the stormwater management facility Block 12 to the satisfaction of the City;

b. appropriate privacy fencing, to the satisfaction of the City, along the western boundaries of Blocks 1 and 10, and along the northern and southern boundaries of Sand Cherry Court where it abuts existing residential uses;

c. appropriate fencing, to the satisfaction of the City, along the southern boundaries of Blocks 1 to 5 inclusive, where these blocks abut existing vacant lands to the south;

d. appropriate fencing, to the satisfaction of the City, along the eastern boundary of Blocks 5 to 7 inclusive, where they abut existing residential uses;

e. appropriate fencing, to the satisfaction of the City, along the southern and northern boundary of Block 11 and the Sand Cherry Court road allowance where it abuts existing residential uses.

21. That the subdivision agreement between the Owner and the City of Belleville, and all agreements of purchase and sale and lease, to provide notice to the property owners of all Lots impacted by Condition No. 18 that the fencing referred to in Condition 20 is not to be removed or altered and further that each individual property owner shall have the sole responsibility for, and shall maintain this fence to the satisfaction of the City of Belleville.

22. That at the time of the final registration of this plan, the Owner shall make a cash-in-lieu payment to the Municipality equal to 5% of the value of the land within this plan for park purposes.

23. That the location of community mailboxes for mail delivery, to service this subdivision, shall be located to the satisfaction of Canada Post and the City of Belleville.

24. That the Owner shall comply with the requirements of Canada Post with respect to the provision of mail delivery to the subdivision, including warning clauses on all Offers of Purchase and Sale on all those lots identified as adjacent to a potential Community Mailbox site.

25. That the subdivision agreement between the Owner and the City of Belleville shall contain the following warning clause:

NOTE: Purchasers are advised that it is unlikely that there will be door-to-door mail delivery within this subdivision. Canada Post intends to service this property through the use of community mailboxes which may be located in several locations within this subdivision.

26. That prior to the final approval of the plan, Bell Canada, Enbridge/Union Gas, Cogeco Cable and Elexicon/Veridian Connections shall confirm that satisfactory arrangements, financial and otherwise, have been made for any communications and utility facilities servicing this plan of subdivision, which facilities are required by the City of Belleville to be installed underground.

27. That the Owner and all encumbrancers (mortgagees) shall enter into a subdivision agreement with the City of Belleville. Without limiting the generality of the foregoing, the Owner shall agree in writing to satisfy all the requirements, financial and otherwise, of the City of Belleville, including the provision of roads, sidewalks, boulevards, installation of services, stormwater management and drainage.

28. That the subdivision agreement between the Owner and the City of Belleville shall be registered against the lands to which it applies once the plan of subdivision has been registered.

29. The Owner shall be required to grant C.N. an environmental easement for operational noise and vibration emissions, registered against the subject property in favour of C.N., for all lots within 300 meters of the C.N. right-of-way. This agreement is to be registered as a condition of final subdivision approval.

30. The Owner agrees that the following clause is to be inserted in all development agreements, offers to purchase, and agreements of Purchase and Sale or Lease of each dwelling unit within 300m of the railway right-of-way:

    WARNING: Purchasers are advised that Canadian National Railway Company or its assigns or successors in interest has or have a rights-of-way within 300 metres from the land the subject hereof. There may be alterations to or expansions of the railway facilities on such rights-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). C.N. Rail will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid rights-of-way.

31. The Owner's engineer shall be required to investigate the feasibility of providing private service connection(s) for properties to the west of the subdivision at the detailed design stage, and if deemed feasible by the City, the Owner agrees to install such private service connection(s) to the property line for the property(s) deemed feasible to connect.

32. That prior to final approval of any phase of this plan, the Owner shall demonstrate to the municipality that there is an adequate supply of potable water to service each phase of this subdivision as it is developed.

33. That the Owner shall agree in the subdivision agreement that no building permits will be applied for or issued until the City of Belleville is satisfied that adequate road access, municipal water supply, hydro service, sanitary sewers, and storm drainage facilities are available to service the proposed development.

34. That prior to final approval, the City of Belleville is advised by a letter on behalf of Quinte Conservation how Conditions No. 18 and 19 have been satisfied

35. That prior to final approval, the City of Belleville is advised by letter by Canada Post how Conditions 24 and 25 have been satisfied.

36. That prior to final approval, the City of Belleville is advised by letter by Bell Canada, Enbridge/Union Gas, Cogeco Cable and Elexicon/Veridian Connections how Condition 26 has been satisfied.

NOTES TO DRAFT APPROVAL

1. It is the Owner's responsibility to satisfy all conditions of draft approval in an expeditious manner. The conditions of draft approval may be reviewed periodically and may be amended by the City of Belleville at any time prior to final approval. The *Planning Act*, R.S.O. 1990, c. P.13, as amended, provides that draft approval may be withdrawn at any time prior to final approval.

2. We suggest that you make yourself aware of:

   Section 143(1) of the Land Titles Act, which requires all new plans be registered in a land titles system;

   Section 143(2) allows certain exceptions.

3. Clearance is required from the following agencies:

   Quinte Conservation
   2061 Old Highway #2
   R.R. #2
   Belleville, Ontario
   K8N 4Z2

   Mr. John La Chapelle
   Planner & Manager
   Bell Canada
   Right of Way Control Centre
   Floor 5 - Blue, 100 Borough Drive
   Scarborough, Ontario

M1P 4W2

Mr. Stephen McGraw,
Delivery Services Officer | Delivery Planning
PO BOX 8037 Ottawa T CSC
Ottawa, Ontario K1G 3H6

4. Further red-line revisions to the draft plan may be required to incorporate changes required through the review and approval of studies and plans yet to be finalized and approved by the City of Belleville, and Quinte Conservation.

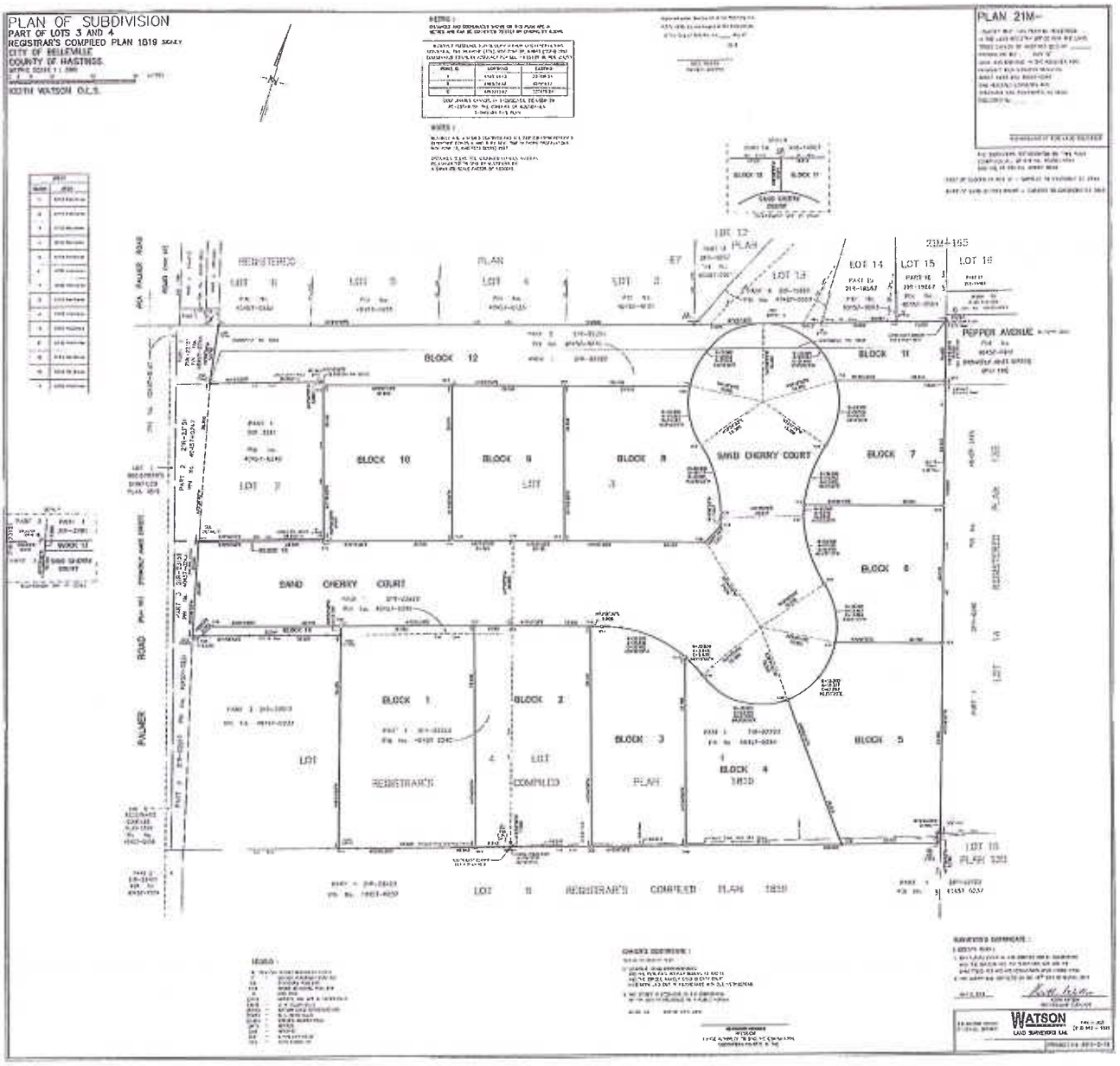
5. All measurements in subdivision final plans must be presented in metric units.

6. Registration:
The final plan approved by the City of Belleville must be registered within 30 days of approval or the City of Belleville may withdraw its approval under Section 51(59) of the *Planning Act*, R.S.O. 1990, c. P.13, as amended.

7. That the payment of development charges will be required prior to the issuance of any building permits for any lots in the subdivision, in accordance with the City of Belleville's Development Charges By-law.

8. This draft plan approval expires on December 9, 2022 if all the conditions contained herein are not satisfied by that date. The Owner shall apply for any extension at least 60 days prior to the lapsing date and such request for an extension shall not be unreasonably withheld.

APPENDIX 1


PLAN OF SUBDIVISION
PART OF LOTS 3 AND 4
REGISTRAR'S COMPILED PLAN 1819
CITY OF BELLEVILLE
COUNTY OF HASTINGS
KEITH WATSON O.L.S.
PLAN 21M-
PEPPER AVENUE
SAND CHERRY COURT
BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4
BLOCK 5
BLOCK 6
BLOCK 7
BLOCK 8
BLOCK 9
BLOCK 10
BLOCK 11
BLOCK 12
LOT 14
LOT 15
LOT 16
PALMER ROAD
REGISTRAR'S COMPILED PLAN 1819
WATSON
LAND SURVEYORS LTD.

APPROVAL BLOCK
DE&DS

CITY OF BELLEVILLE

Greg Pinchin
Manager of Approvals
Engineering & Development Services Department

Report No. APS-2019-43
December 2, 2019

To: Belleville Planning Advisory Committee

Subject: Recommendation Report for a Proposed Draft Plan of Subdivision
Bell Boulevard Subdivision, Part of Lot 32, Concession 2
Former Township of Sidney, now City of Belleville
OWNER: 2555111 Ontario Inc., c/o Bhupinder Paul Sharma
Agent: RFA Planning Consultant Inc., Shawn Legere

File: 12T-19002

Recommendation:

"That the Belleville Planning Advisory Committee recommends the following to City Council:

THAT approval of a Draft Plan of Subdivision, prepared by RFA Planning Consultant Inc., revised to November 14, 2019, as shown on **ATTACHMENT #2** to Manager of Approvals' Report No. APS-2019-43, be granted for the lands located north of Bell Boulevard and east of Hannafin Road, more particularly described as Part of Lot 32, Concession 2, Township of Sidney now City of Belleville, County of Hastings (File: 12T-19002) subject to the draft plan conditions outlined in **ATTACHMENT #4** to Manager of Approvals' Report No. APS-2019-43."

Background:

An initial public meeting was held in accordance with the requirements of the Planning Act on September 3, 2019. The purpose of this meeting was for Committee Members to formally hear and receive public comments. At that time, the Planning Advisory Committee reviewed Report No. APS-2019-29, the bulk of which has been included in this recommendation report, along with input from the public, commenting agencies, and municipal departments that has been received, assessed, and addressed to the satisfaction of the Engineering & Development Services Department.

The subject property is located on the north side of Bell Boulevard, immediately east of Hannafin Road, and south of Enterprise Drive as shown on the location map **ATTACHMENT #1**.

The lands subject to this application have an area of approximately 6.80 hectares, a frontage of at least 250 m on Hannafin Road, and approximately 230 m on both

Enterprise Drive and Bell Boulevard as shown by the proposed plan of subdivision prepared by the Owner's agent - **ATTACHMENT #2**.

The subject lands consist of an undeveloped field. The property is relatively flat and slightly sloped to the southeast with a drainage channel running along the east side, and into the southeast corner. There are existing swales and ditches around the periphery.

There currently is a water main located along Bell Boulevard and up Hannafin Road, the owner's consultant recommends extending the 400mm diameter watermain east along Enterprise Drive to provide service to the proposed northern three lots, and that appropriately sized service connections be installed depending on the end use of the lots. The report proposes to connect and loop water between the north end of Hannafin Road, and the east end of Enterprise Drive as requested through comments from Belleville Water. There is also sanitary sewer available on Bell Boulevard and Hannafin Road. Current zoning permits a range of commercial and industrial uses. They note that a hotel development could only be serviced from Bell Boulevard, and confirmation of available capacity would be required, as the sewer on Hannafin would exceed capacity with a hotel development. The owner's consultant also recommends extending the sanitary sewer eastward on Enterprise Drive to service the proposed lots on the north side of the property.

Surrounding uses include:

1) to the east: vacant treed lot;
2) to the north: Enterprise Drive;
3) to the south: Bell Boulevard;
4) to the west: Hannafin Road.

It is noted that the zoning on the subject lands permits a range of commercial and industrial uses.

Proposal:

The proposed Plan of Subdivision would include nine (9) lots for commercial or industrial development – lots fronting on Bell Boulevard would range in size from 0.96 ha to 1.13 ha, while lots fronting on Hannafin and Enterprise would range in size from 0.44 ha to 0.79 ha.

Block 10 is proposed as a daylight triangle to be deeded to the municipality as part of Hannafin Road at the northeast corner of the intersection with Bell Boulevard.

Four blocks of land (Blocks 11 to 14 inclusive) have been designated for access easements to the front and rear of the three parcels fronting on Bell Boulevard, as the Owners have been advised that access to Bell would be limited to a single right-in, right-out driveway shared by the three lots.

No land has been set aside for parkland purposes within in this proposed subdivision and it is proposed instead that a cash in-lieu payment will be made to the City.

In support of the application, the following information was submitted:

- Planning Rationale from RFA Planning Consultant Inc. dated July 18, 2019
- Draft Plan of Subdivision from RFA Planning Consultant Inc. revised to November 14, 2019
- Relevant surveys, parcel register and PIN mapping from the Land Registry Office
- Engineering Servicing Report – Bell Boulevard Subdivision from Jewell Engineering revised October 17, 2019
- Stormwater Management Report – Bell Boulevard Subdivision from Jewell Engineering dated July 17, 2019
- Geotechnical Investigation Report, Bell Boulevard Development from Cambium Inc. dated May 1, 2019

These documents have been available for public review at the Approvals Section of the Engineering & Development Services Department.

Provincial Policy Statement:

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement.

Planning Staff considered the following policies in the PPS:

1.1.1 Healthy, liveable and safe communities are sustained by:
a) promoting efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
b) avoiding development and land use patters which may cause environmental or public health and safety concerns; and
e) promoting cost-effective development patterns and standards to minimize land consumption and servicing costs;

1.1.3.2 Land use patterns within settlement areas shall be based on:

a) densities and a mix of land uses which:
1. efficiently use land and resources;
2. are appropriate for, and efficiently use, the infrastructure and public service facilities which are planned or available, and avoid the need for their unjustified and/or uneconomical expansion;
3. minimize negative impacts to air quality and climate change, and promote energy efficiency;
4. support active transportation;
5. are transit-supportive, where transit is planned, exists or may be developed; and
6. are freight-supportive; and

b) a range of uses and opportunities for intensification and redevelopment in accordance with the criteria in policy 1.1.3.3, where this can be accommodated.

1.1.3.3 Planning authorities shall identify appropriate locations and promote opportunities for intensification and redevelopment where this can be accommodated taking into account existing building stock or areas, including brownfield sites, and the availability of suitable existing or planned infrastructure and public service facilities required to accommodate projected needs.

1.3.2.1 Planning authorities shall plan for, protect and preserve employment areas for current and future uses and ensure that the necessary infrastructure is provided to support current and projected needs.

1.3.2.3 Planning authorities shall protect employment areas in proximity to major goods movement facilities and corridors for employment uses that require those locations.

1.6.3 Before consideration is given to developing new infrastructure and public service facilities:
a) the use of existing infrastructure and public service facilities should be optimized;

Official Plan/Loyalist Secondary Plan:

The land is designated "Employment" in the City's Loyalist Secondary Plan, which is a subset of the Official Plan. Commercial and Industrial development is permitted in the 'Employment Area' designation. No Official Plan or Loyalist Secondary Plan amendment is required for this subdivision as proposed.

Section 3.2 of the Loyalist Secondary Plan sets out policies for Employment Areas. The applicant summarizes the policies for commercial and industrial uses as related to this application in their attached Planning Rationale on Pages 7 to 14 inclusive (**ATTACHMENT #3**).

Zoning By-law:

This property is currently zoned "CH-29/MS-H – Highway Commercial Exception No. 29 and Special Industrial - Holding Zone" which permits a range of commercial and industrial uses. There are no changes proposed to the zoning.

Public Circulation and Comments:

Notice of the subject application was mailed to all registered owners of land within 120 metres (400 feet) of the subject property on August 14, 2019. Notice was also provided by posting a sign on the property August 12, 2019, in accordance with the notice provisions set out in the *Planning Act*.

Inquiries have been received about the proposal from a nearby property owner. No formal comments or concerns have been received regarding this application to date.

Agency & Departmental Circulation:

1) Internal Departments

The subject application was circulated for comment to the Development Engineer (Engineer in Training), the Manager of Transportation & Operations, the Chief Building Official, the Economic Development Officer, the Fire Chief, the Police Chief, and the Manager of Policy Planning on August 6, 2019.

The Fire Chief advises that Fire & Rescue has no comment.

The Development Engineer (Engineer in Training) in conjunction with the City's Engineering Division have provided comments which are implemented through the Proposed Draft Plan Conditions Of Subdivision Approval identified through Attachment #4 of this report.

2) External Agencies

The subject application was circulated for comment to Quinte Conservation, Bell Canada, Cogeco, Canada Post, Elexicon/Veridian, Hydro One Inc., Ontario Power Generation, Enbridge/Union Gas, the City of Quinte West, and the Ministry of Transportation on August 6, 2019.

Bell Canada advises that they have no conditions or objections at this time, but that the developer will need to contact Bell during detailed design. Staff has included standard conditions to confirm sufficient communication and telecommunication infrastructure as will be required by Bell.

Elexicon/Veridian has confirmed that they are not the local area distribution supplier for that area, they are unable to make an offer to connect for this development, and that they have no comment on the application.

Hydro One advises that the owner/applicant is to contact the Hydro One subdivision group after confirming that Hydro One is their local area distribution supplier.

Quinte Conservation advises that the watercourse on the east side of the property is regulated by virtue of Ontario Regulation 319/09, and that a permit will be required for development, along with a 6 metre setback from the top of the bank of the watercourse. Additional draft subdivision conditions are included based on their comments advising best management practices for stormwater quality on site prior to the construction of Stormwater Management Facility 7, and maintaining groundwater recharge per the Bell Boulevard Hydrogeological Assessment report.

Considerations:

- **Public**

  Public notice and circulation complies with the requirements of the *Planning Act, R.S.O. 1990.*

- **Bill 108**

  As of September 3, 2019, changes to the Planning Act under Bill 108 make it such that subdivision approvals and conditions may **only** be appealed by:
  a. the applicant; or
  b. by a public body or agencies listed in the Act, where they have also made submissions to the City prior to Council's decision.

- **Financial**

  The fees payable for processing the application have been received by the City. Any planning, engineering, surveying and legal costs to facilitate the subdivision of the subject lands would be at the Owner's expense.

- **Impact on and input from other Departments/Sources**

  Circulation of this application to other departments/agencies has occurred.

- **Strategic Plan Alignment**

  The City of Belleville's Strategic Plan identifies nine strategic themes including Industrial and Commercial Development. A key strategic objective of the Industrial and Commercial Development theme is to:
  - Ensure suitable serviced employment lands are available to meet the needs of all potential industrial and commercial investments.

- **Infrastructure Capacity and Planning**

  Staff notes that the area in which this development is located is provided with full municipal services (water and sanitary sewer). These services were installed in 2004 to provide for limited development, and servicing capacity constraints will arise as build-out of the area proceeds. Staff is undertaking a process to initiate the development of an Infrastructure Master Plan that will improve the coordination of infrastructure planning and urban growth within the City, with a view to assessing and prioritizing areas for investment in capital projects.

Analysis:

The subject lands are designated as employment lands for development in the City's Official Plan/Loyalist Secondary Plan. Therefore a commercial/industrial subdivision on this land would be consistent with the City's plan for this part of the municipality.

Furthermore, development on this site would be in keeping with the Provincial Policy Statement (PPS) as noted earlier.

Proposed Draft Plan Conditions of Subdivision Approval:

The proposed conditions of draft plan approval for this subdivision are outlined on **ATTACHMENT #4**. These conditions follow the normal city format and consist of conditions commonly utilized in other draft plans approved by the City in recent years.

As typical, the major issues in approving this subdivision arise from servicing the subject lands and all of the engineering works required to develop this site. Conditions include:

The developer will be responsible to design and include appropriate shared access easements to the lots so as to minimize entrances onto Bell Boulevard. (ATTACHMENT #4 – Conditions 4 and 5)

A traffic impact study will have to be undertaken to look at the proposed development in the context of surrounding uses and studies along the Bell Boulevard corridor, and the developer will need to share in the cost of any proposed improvements related to the development. (ATTACHMENT #4 – Conditions 6 and 7)

The developer will need to demonstrate a proper means of accessing Lot 4, which has a ditch watercourse across the north frontage and along the east side. (ATTACHMENT #4 – Condition 8)

The developer will need to design and agree to construct all servicing requirements for the proposed development, including extending sanitary sewer across the Enterprise Drive frontage of the lots, and extending the watermain from Hannafin Road to connect to the existing watermain on Enterprise Drive. (ATTACHMENT #4 – Conditions 13, 15 and 16)

A hydrogeological study will have to be undertaken to ensure that the development will not adversely affect groundwater and impact on neighbouring properties. (ATTACHMENT #4 – Condition 17)

The developer will be responsible for stormwater management to the satisfaction of the City and Quinte Conservation. (ATTACHMENT #4 – Conditions 18 and 19)

The developer will have to make a 2% cash in lieu of parkland payment to the City. (ATTACHMENT #4 – Condition 20)

If Canada Post determines that the development is to be serviced by community mailboxes, then the developer will have to make arrangements to comply with the requirements of Canada Post. (ATTACHMENT #4 – Conditions 21 and 22)

If the Ministry of Transportation identifies the development as requiring any permitting or approval through their regulatory processes (due to the close proximity to Highway

401 and the interchange at Wallbridge Loyalist Road), then the developer will have to make arrangements to comply with the requirements of the Ministry of Transportation. (ATTACHMENT #4 – Condition 23)

The owner and all encumbrancers (mortgagees) will have to enter into a subdivision agreement with the City of Belleville. In doing so, the owner will have to agree in writing to satisfy all the requirements, financial and otherwise, of the City of Belleville including the provision of roads, sidewalks, boulevards, installation of services, stormwater management and drainage. (ATTACHMENT #4 – Condition 25)

The draft plan approval expires on December 9, 2022 if all the conditions are not satisfied by that date.

Conclusion:

The Approvals Section of the Engineering and Development Services Department supports the approval of the draft plan of subdivision, prepared by RFA Planning Consultant Inc., revised to November 14, 2019, for the lands located north of Bell Boulevard and east of Hannafin Road, more particularly described as Part of Lot 32, Concession 2, Township of Sidney now City of Belleville, County of Hastings (File: 12T-19002), and recommends to the Belleville Planning Advisory Committee that Belleville City Council be requested to formally issue draft plan of subdivision approval for this subdivision, as shown on ATTACHMENT #2, subject to the list of conditions outlined in ATTACHMENT #4.

Respectfully submitted.

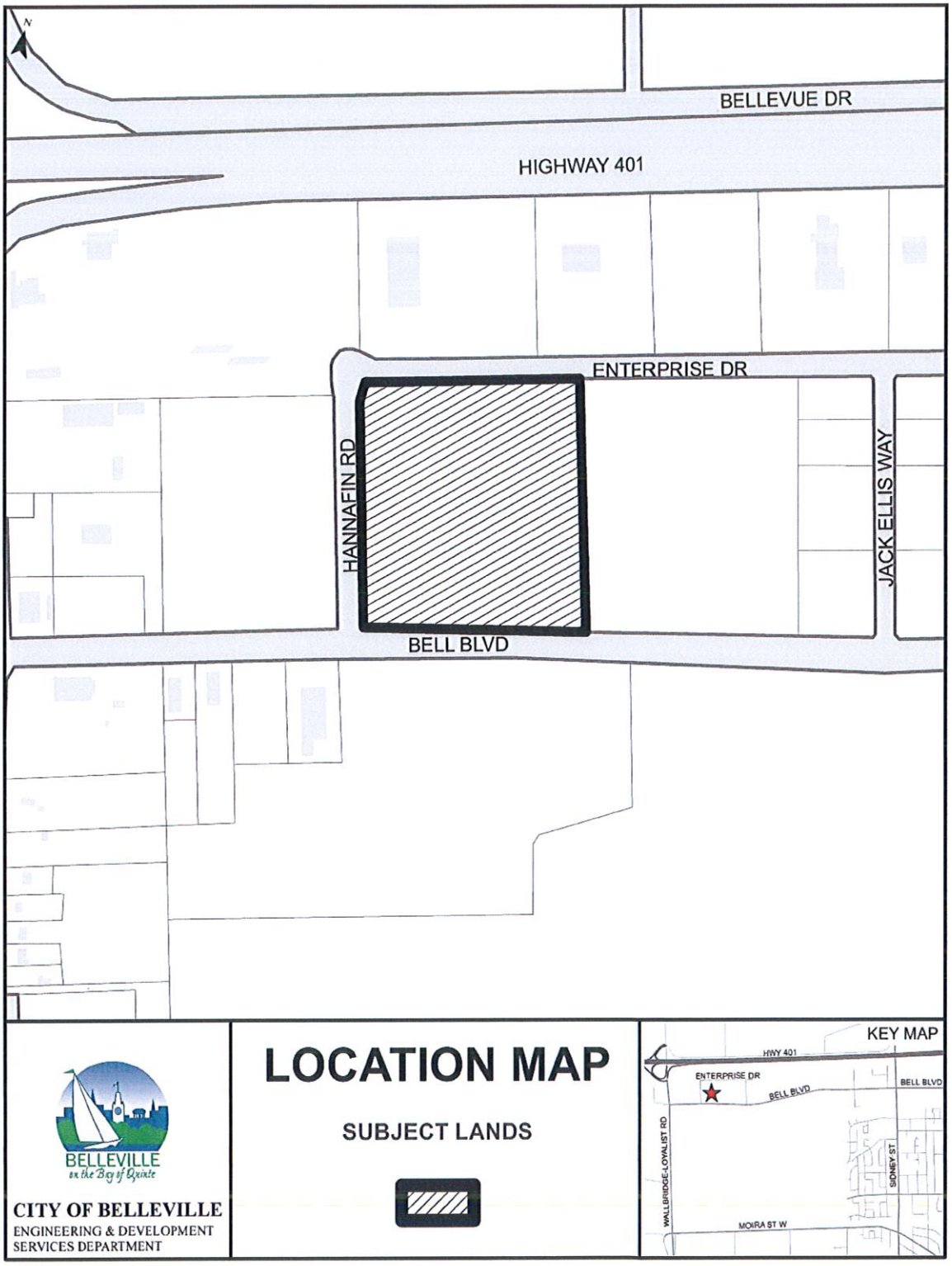
Greg Pinchin

Attachments

Attachment #1 – Location Map
Attachment #2 – Draft Plan of Subdivision from RFA Planning Consultant Inc. revised to November 14, 2019
Attachment #3 – Planning Rationale from RFA Planning Consultant Inc. dated July 18, 2019
Attachment #4 – Draft Plan Conditions

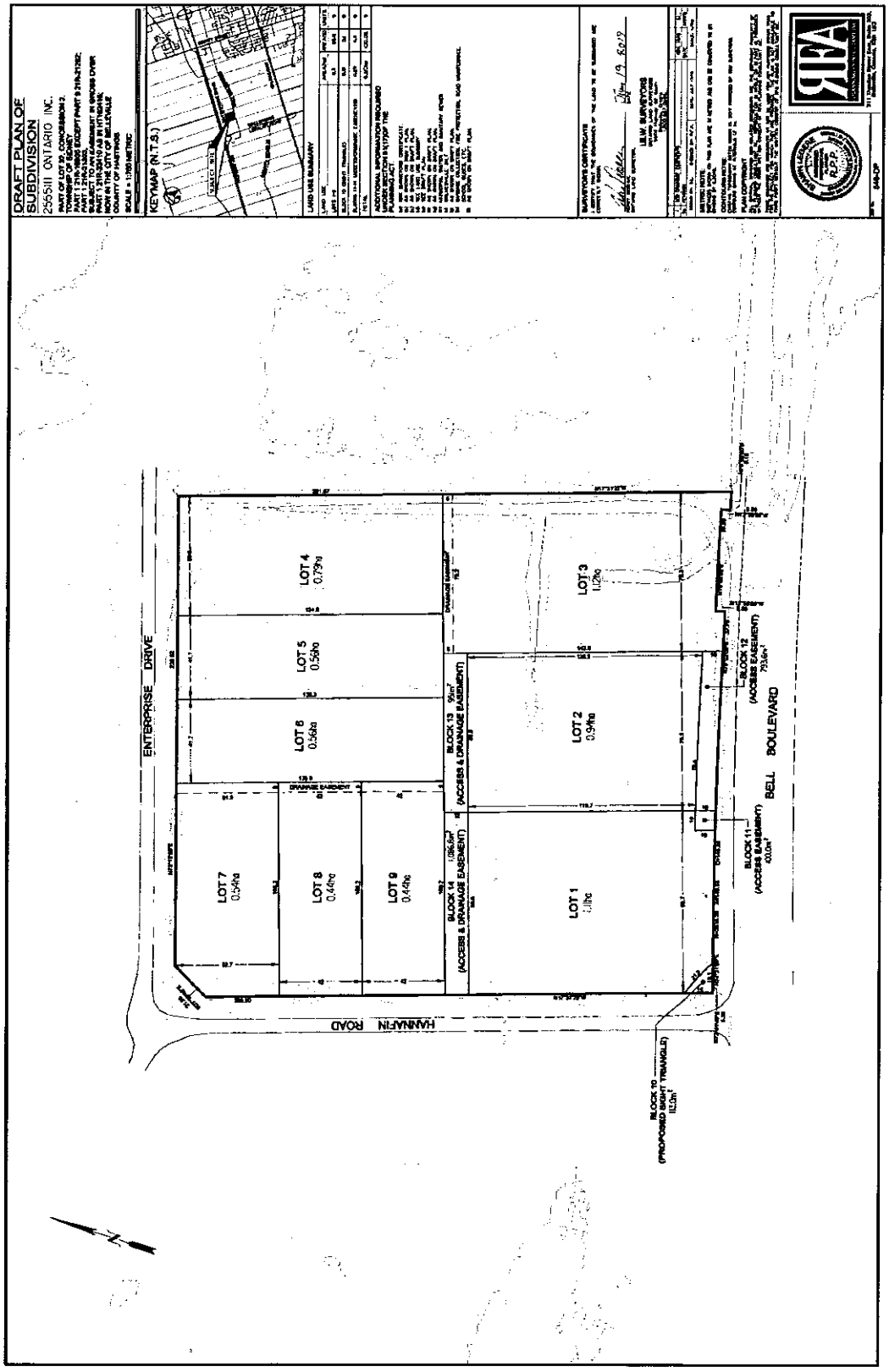
ATTACHMENT #1

Location of Subject Property – Bell Boulevard Subdivision



ATTACHMENT #2

Draft Plan of Subdivision



Planning Rationale

To: **Greg Pinchin, B.E.S, MCIP, RPP, Manager, Approvals Section**

From: **RFA Planning Consultant Inc.**

Cc: **2555111 Ontario Inc., Owner**

Date: **July 18, 2019**

Re: **Application to Approve a Plan of Subdivision – Bell Boulevard Subdivision (2555111 Ontario Inc.)**

The purpose of this planning rationale is to outline the planning framework of the proposed Bell Boulevard Subdivision in Belleville, Ontario. We have reviewed the Provincial Policy Statement and the Loyalist Secondary Plan and have evaluated the proposed plan of subdivision. Below is a summary of our analysis.

BACKGROUND

The subject lands have 249.43 meters of frontage on the north side of Bell Boulevard, 280.53 meters of frontage on the east side of Hannafin Road and 233.52 meters of frontage on the south side of Enterprise Drive. The site has a total lot area of 6.8 hectares (16.80 acres) and is comprised of two Property Identification Numbers – 40426-0270 and 40429-0462. Currently, the subject lands are vacant and is located approximately 200 meters south of the Macdonald-Cartier Freeway, also known as the 401 Highway. Municipal services are available to the site along Bell Boulevard and Hannafin Road; however, Enterprise Drive is currently not serviced by municipal water or municipal sewage. A ditch watercourse course runs adjacent to the subject land's eastern property line and includes man-made sections that bisect the lower third of the site.

The subject lands are designated "Employment Area" in the Loyalist Secondary Plan, which forms part of the Belleville Official Plan. The land is within the "Special Highway Commercial/ Special Industrial (CH-29/MS-H) Holding Zone" of the Township of Sidney Zoning By-law 2076-80. Surrounding land uses are generally

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employment. Approximately half of the adjacent lands are vacant; however, the remainder of the lands to the immediately north-west, north, north-east and south-west of the site are commercial-industrial.

A summary of the subject lands is provided in Table 1, below:

TABLE 1: BACKGROUND SUMMARY

	PINs 40429-0270 & 40429-0462
Legal Description	Part of Lot 32, Concession 2, Township of Sidney Part 1 Plan 21R-18805, Except Part 9 Plan 21R-21282 Part 1 Plan 21R 21303, Subject to an Easement in Gross Over Part 1 Plan 21R-23410 as in HT 102416, Now in the City of Belleville, County of Hastings
Civic Address	None (vacant land)
Lot Area	6.8 hectares (16.80 acres)
Lot Frontage	249.43 meters (Bell Boulevard); 280.53 metres (Hannafin Road); 233.52 metres (Enterprise Drive)
Lot Depth	273 meters
Access	Bell Boulevard; Hannafin Road; Enterprise Drive
Official Plan	Employment Area (Schedule A – Land Use, Loyalist Secondary Plan)
Zoning	Special Highway Commercial/ Special Industrial (CH-29/MS-H) Holding Zone (Schedule B-1, Map #1, Zoning By-law 2076-80)

APPLICATION FOR PLAN OF SUBDIVISION

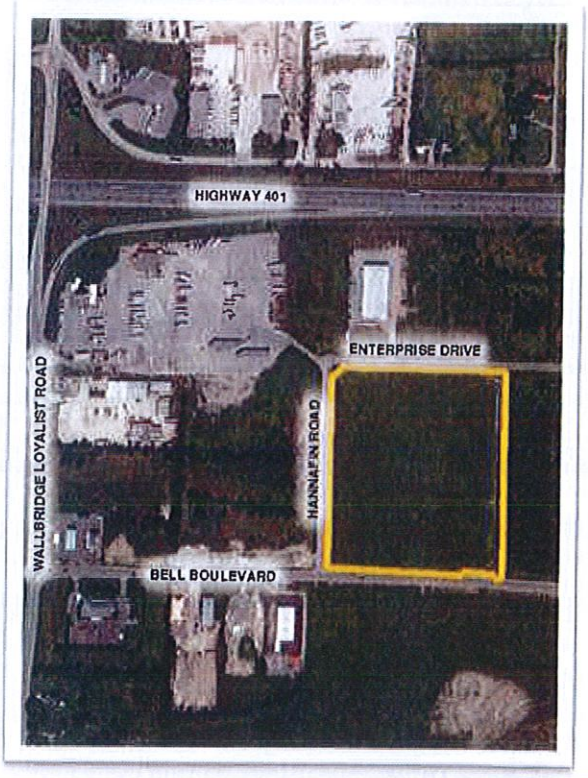
The proposed Draft Plan of Subdivision will allow for the subject lands to be divided into nine (9) separately conveyable lots, which will provide the owner with flexibility in divesture of the property. Lots 1, 2 and 3 are the largest proposed lots with frontages of 90.7 metres and 79.3 metres, respectively, along Bell Boulevard and are 1.13 hectares, 0.96 hectares and 1.12 hectares in size, respectively. Lots 4, 5 and 6 have frontages of 59.5 metres and 41.7 metres, respectively, on Enterprise Drive and are 0.79 hectares and 0.56 hectares in size, respectively. Lot 7, Lot 8 and Lot 9 are the smallest proposed lots with frontages of 52.7 metre and 42.0 metres, respectively, along Hannafin Road and are 0.54 hectare and 0.44 hectares in size, respectively. All of the proposed lots exceed the applicable frontage and area requirements of the CH-29/MS-H Zone, including for motor vehicle service stations and gas bars. It is understood that extending services to the Lots 4, 5 and 6 fronting onto Enterprise Drive is required before they can be developed.

In consultation with City staff, a 10-metre wide access easement (Blocks 11 and 12) adjacent to Bell Boulevard is proposed to provide shared right-in-right-out access for Lots 1, 2 and 3 as required by the Bell Boulevard access policies. A second 10-metre wide access easement (Blocks 13 and 14) off Hannafin Road is proposed, which will provide shared primary access to Lot 1, 2 and 3. A sight triangle (Block 10) is provided to facilitate adequate sight lines as required to meet the City's intersection standards. See Table 2 below for detail.

TABLE 2: LAND USE SCHEDULE

Land Use	Area (ha)	Area (%)	Units
Lots 1-9	6.54	96.2	9
Block 10 (Sight Triangle)	0.01	0.1	
Blocks 11-14 (Access Easements)	0.25	3.7	
Total	6.80 ha	100.0 %	9

No changes are proposed as part of the subject application to the uses currently permitted as-of-right. On this basis, amendments to the Official Plan and Zoning By-law 2076-80 are not required at this time as part of the draft plan approval process.



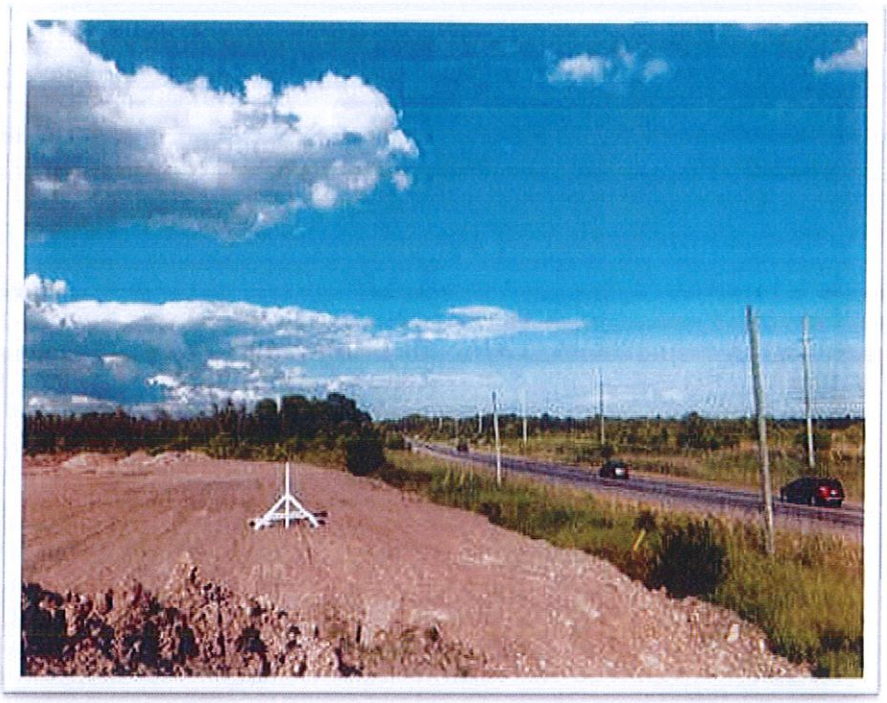
Subject Lands – Yellow outline.

Lot 4 – view from Enterprise Drive looking south, culvert buttom-centre.

Hannafin Road + Enterprise Drive – view of streetscape looking north-east from intersection.

Lot 1 – view looking north, commercial-industrial uses centre.

Lot 1 – view looking north-east.



Lot 1 – view looking east along Bell Boulevard streetscape (right to centre).

Lot 1 – View looking south-west, commercial-industrial uses on Bell Boulevard (centre).

CONFORMITY TO PROVINCIAL POLICY STATEMENT

The Provincial Policy Statement (PPS) has applied to all planning applications since April 30, 2014. It provides policy direction on matters of provincial interest related to land use planning and development. All decisions related to land use planning matters "shall be consistent with" the PPS. The Plan of Subdivision application for 2555111 Ontario Inc. is consistent with the 2014 PPS.

The subject property is within a designated settlement area of the municipality, which shall be the focus of growth (1.1.3.1). Within settlement areas, land use patterns shall be based on densities that efficiently use land and resources, and are appropriate for and efficiently use the infrastructure that is available (1.1.3.2). As the subject property has municipal water and municipal sewage infrastructure available along Bell Boulevard and Hannafin Road, the Plan of Subdivision avoids the unjustified need or uneconomical expansion of such services. The plan only requires the logical extension of approximately 280 +/- metres of services to the proposed lots with frontage on Enterprise Drive. No municipal services capacity issues were expressed during pre-consultation discussions with City staff. The availability of existing infrastructure to the subject property supports that the site is an appropriate location for intensification (1.1.3.3).

The subject property is within an employment area, where a diversified economic base and providing for an appropriate mix and range of employment uses shall be promoted (1.3.1). Employment lands are to be protected and preserved for current and future employment uses (1.3.2.1). It is the intent that the nine lots proposed by the Bell Boulevard Subdivision will consist of industrial/commercial uses of varying sizes and intensities. The subject property is a part of a protected employment area, which is leveraged by its close proximity to Highway 401 (720+/- metres by road), a major goods movement corridor (1.3.2.3).

The proposal optimizes the use of existing infrastructure as both municipal water and municipal sewage servicing are available along Bell Boulevard and Hannafin Road (1.6.3). Intensification and redevelopment within settlement areas on existing municipal sewage and water services should be promoted (1.6.6.2). The proposed plan of subdivision is considered appropriate lot creation.

CONFORMITY TO LOYALIST SECONDARY PLAN

The subject lands are situated within the Loyalist Secondary Plan, which forms part of the Belleville Official Plan. As indicated on Schedule A – Land Use of the Loyalist Secondary Plan, the lands are designated as "Employment Area." The following is a brief summary of the applicable Loyalist Secondary Plan policies.

Commercial Employment Use Policies

Section 3.2 of the Loyalist Secondary Plan outlines the land use policies for employment areas. Specifically, Section 3.2.1 outlines the development policies for commercial employment uses. The relevant policies are provided below:

a) *Commercial employment uses permitted within areas designated Employment Area should be appropriate for the market area the commercial area is best suited or designed to service. Commercial uses that are intended to service the community or regional markets should be directed to areas that are readily accessible from the arterial road network. Commercial employment uses that are not along major thoroughfares should be limited to uses which cater to neighbourhood needs, or specialty markets. Further, regardless of the area's function or market orientation, care should be exercised to ensure only uses which address issues of land use compatibility, access, servicing, and related matters are permitted on specific sites.*

- The Bell Boulevard Subdivision is readily accessible from the arterial road network as it is located at the intersection of Hannafin Road and Bell Boulevard. On this basis, commercial uses that are intended to service community or regional markets are appropriate for the development. Other neighbourhood or specialty markets may choose to locate on the proposed lots with less arterial road visibility, such as Enterprise Drive.

b) *In general, commercial employment uses to be permitted within areas designated Employment Area would include business and professional offices, retail establishments, places of entertainment, assembly halls, restaurants, hotels and motels, personal service uses, automotive uses, community facilities and recreational uses. In some instances, particularly in the vicinity of residential areas, residential uses either as main uses or in concert with commercial development may be appropriate.*

- The current CH-29/MS-H Zone permits a number of the prescribed uses in this polices; however, if the developer of particular lot(s) wishes to establish a place of entertainment or personal service, an amendment to the Zoning By-law will be required. There is no proposal for place of entertainment or personal service uses at the time of this application.

c) *However, not every property designated Employment Area is suitable for all forms of commercial employment activity. The range of commercial uses permitted within each area should be established taking into account:*

- *the nature and extent of the market area that is to be served by the property and the commercial development;*
- *the nature of abutting land uses and the potential impact of commercial development upon such uses, and the effectiveness of mitigative measures;*

- *the ease of access to the lands in question from the City's road system and the impact of commercial development upon traffic circulation;*
- *the potential and suitability of the location to achieve the market penetration needed to enable the commercial development to be successful;*
- *servicing implications; and*
- *urban design issues.*
- The western extent of Bell Boulevard is a developing urban serviced area in transition from vacant land. Uses in the vicinity of the Bell Boulevard Subdivision appear to vary and include: Fireplace Specialists; Pioneer convenience store, car wash and gas bar; hotel; Quinte Truck & Trailer Parts, Ontario Provincial Police station; Belleville Integrative Health Centre, CRS Contractors Rental Supply; Bonneville Homes, Benson Tire & Truck Repair garage and Hydro One facility. It is anticipated due to the current CH-29/MS-H Zone that the Bell Boulevard Subdivision will develop to mimic the surrounding quasi commercial-industrial character of the area immediately surrounding the site, which is considered appropriate. This is also supported by the location of the site from the City's road system and availability of servicing. The proposed lots are considered sufficiently large to address urban design issues such as adequate landscaping along the streetscape to create positive image for the City, and there are no immediate urban design concerns.

d) *Commercial development is dependent upon vehicular access. Points of ingress and egress should be established to ensure safe movement of:*
   - *vehicular traffic on the public street;*
   - *vehicular traffic on the subject and adjoining lands; and*
   - *pedestrian and cyclist traffic along the street.*

   Further, commercial development should have sufficient parking on-site to meet the needs of customers and staff.

   - There has been careful consideration of vehicular access requirements in preparing the draft plan. Due to restrictive access policies for Bell Boulevard, Lots 1, 2 and 3 will be developed subject to and together with easements, which will facilitate one shared right-in-right-out entrance from Bell Boulevard and a shared primary entrance from Hannafin Road. Lot 1 may accommodate at least one additional entrance from Hannafin Road independent from the shared access with Lots 2 and 3. This will effectively address the City's access policies for Bell Boulevard and facilitate the safe movement of vehicular, pedestrian and cyclist traffic. It is understood that each lot within the Bell Boulevard Subdivision will be subject to Site Plan Approval, where matters of site-specific design will be addressed to the satisfaction of the City.

e) The following design policies should be applied to all commercial employment development:

i) Outdoor storage areas for garbage should be fenced or screened from adjacent uses and preferably located away from the public street.

ii) The appearance of parking lots, loading facilities and service areas should be enhanced through appropriate landscaping, with appropriate lighting of such areas to ensure public safety, which should be oriented away from nearby residential properties and not interfere with visibility on public streets.

iii) Loading facilities, parking lots and service areas should be located so as to minimize the effects of noise and fumes on any adjacent residential properties, and where possible, such facilities should be located in a yard that does not immediately abut a residential property, and where they do, measures to mitigate the impact of such a location by fencing or plantings, berming and buffer strips, or increased setbacks should be employed as required.

iv) Facilities for safe pedestrian access and circulation on-site should be provided.

- The design policies outlined in Section 3.2.1e) are matters of Site Plan Approval. It is understood that each lot within the Bell Boulevard Subdivision will be subject to Site Plan Approval, where matters of site-specific design will be addressed to the satisfaction of the City.

f) Developments adjacent to Highway 401 should ensure that the portion of the property facing the Highway is developed with a high standard of urban design. Open storage areas and parking and loading areas shall be prohibited from areas facing the Highway unless it can be demonstrated that appropriate landscaping and screening to shield the open storage area will not detract from the intended character. All commercial activities shall be encouraged to locate within enclosed buildings unless it is essential for an activity to locate outdoors, in which case the commercial use will be suitably screened and buffered from the Highway.

- Due to the separation distance (approximately 200 metres) and existing development and mature hedgerow vegetation, the Bell Boulevard Subdivision is not visible from Highway 401. It is intended however that each lot within the Plan will develop utilizing urban design best practices so as to reflect a positive image for the City, to its satisfaction.

Industrial Employment Use Policies

Section 3.2 of the Loyalist Secondary Plan outlines the land use policies for employment areas. Specifically, Section 3.2.2 outlines the development policies for industrial employment uses. The relevant policies are provided below:

a) Industrial employment uses on land designated Employment Area are intended to serve as the major concentrations of industrial activity in the western portion of the City. Industrial employment uses are considered to be one of the City's major enterprise zones, and the policies of this Plan are intended to provide flexibility to enable firms to respond quickly to changing economic conditions. General industrial employment uses may be large or small scale and may

or may not be in enclosed buildings, and are usually incompatible with non-industrial uses. Service industrial uses are generally located within enclosed buildings with limited outdoor storage and do not produce levels of noise, dust or odours characteristic of general industrial uses which can be detected off-site.

b) *Industrial employment uses permitted on lands designated Employment Area include activities associated with the manufacturing, assembling, fabricating, packaging or processing of goods and services, including transportation/truck terminals, warehouses, railway uses, and other similar uses.*

- Due to the existing hybrid special commercial-industrial CH-29/MS-H Holding Zone and existing surrounding land uses, a mix of commercial and industrial uses are anticipated for the Bell Boulevard Subdivision. Manufacturing, processing and fabrication or good and materials, along with warehousing and storage of goods and transportation terminals are permitted as-of-right and are typically Class II industrial uses due to 24-hour shift operations. Due to the size of the proposed lots however, more of a focus on Class I industrial uses are anticipated, which generally occur within enclosed buildings and have daytime operations only and do not produce levels of noise, dust or odours characteristic of general industrial uses. On this basis, and that there are no residential uses in the vicinity that could reasonably be impacted by industrial uses, there are no apparent compatibility concerns.

c) *This Plan encourages diversification of the types and sizes of industrial activities in the Loyalist Planning area. Industrial uses should be permitted on lots of all sizes; for each lot, there should be sufficient area provided to accommodate buildings, parking and loading areas, and landscaping. Uses may be permitted either as a single use on a lot or in concert with other uses on the same lot, such as industrial malls or plazas.*

- Ensuring sufficient parking and loading areas and landscaping are matters of Site Plan Approval. It is understood that each lot within the Bell Boulevard Subdivision will be subject to Site Plan Approval, where matters of site-specific design will be addressed to the satisfaction of the City. It is understood that the proposed lots are of a suitable size to develop for both single-use or in concert with other uses on the same lot.

d) *Certain lands designated Employment Area use are located immediately adjacent to residential areas or land uses that can be sensitive to the impacts of industrial activity. In such areas, the range of uses should be limited to service industrial uses, which are less likely to cause significant off-site impacts. Industrial employment uses considered obnoxious may be prohibited from being established adjacent to residential uses, or alternatively may be directed to areas that are secluded and located a considerable distance from areas that may be impacted by such uses.*

e) *Where industrial development is proposed adjacent to lands designated or used for sensitive*

land uses such as residential development, the Municipality should determine, using the Ministry of Environment's guideline on compatibility between industrial facilities and sensitive land uses, the separation distances or mitigative measures that should be employed to reduce the potential of land use conflict. Separation distances may vary depending upon the nature of the proposed industrial use and the sensitive land use.

f) Where an existing industrial land use is located in close proximity to sensitive land uses, the Municipality should encourage the establishment of mitigative measures to reduce the impact of the industrial use on adjoining land uses (i.e. fencing, landscaping, berming, limited building fenestrations oriented towards the sensitive land uses). The Municipality should attempt also to protect such industrial uses from further development of incompatible land uses in close proximity to the industrial use that would increase the degree of incompatibility, and employ appropriate mitigative measures (i.e. setbacks, berming, screening and landscaping, fencing).

g) All industrial uses should meet the guidelines and requirements of the Ministry of Environment with respect to solid and liquid waste disposal and all emissions to the environment.

- The nearest (sensitive) residential land uses are located near the intersection of Bell Boulevard and Wallbridge Loyalist Road and along Bellevue Drive on the north side of Highway 401. Industrial uses are already established between the residential uses and the subject lands, and there are no apparent compatibility concerns as the impact already exists. As indicated above, due to the size of the proposed lots, more of a focus on Class I industrial uses are anticipated. As each lot will be proceeding through Site Plan Control, there will be further opportunity to ensure the prospective land uses also satisfy the Ministry of Environment guidelines on compatibility between industrial facilities and sensitive land uses.

h) Adequate off-street parking should be provided to accommodate employee parking requirements. Adequate off-street loading facilities should also be provided. Outdoor storage areas should be appropriately buffered from adjacent roads and properties that may be impacted by such areas through use of landscaped strips, plantings of trees, and berming.

- The off-street parking and outdoor storage policies outlined in Section 3.2.2h) are matters of Site Plan Approval. It is understood that each lot within the Bell Boulevard Subdivision will be subject to Site Plan Approval where matters of site-specific design will be addressed to the satisfaction of the City.

i) Within areas designated Employment Area that have not yet been developed, natural drainage courses, wetlands and natural areas exist. When development of these areas is proposed, this Plan encourages the retention of such areas in their natural state. However, where site modification is necessary, steps to mitigate environmental impacts of developing

such areas should be incorporated in development plans; new planting areas, engineered wetlands, and naturalized drainage courses are among the options that should be considered.

- A Preliminary Stormwater Management Report has been prepared in support of the Bell Boulevard Subdivision. The Report concludes that the principal north-south ditch watercourse along the east property line is not protected as a natural watercourse, but is subject to a 6-metre building setback from the top of bank, as illustrated in Appendix A. It is confirmed that the natural watercourse begins immediately downstream of the proposed Potter Creek Stormwater Management Facility #7. The Report is silent regarding the ditches on Lots 2 and 3 that lead to the easterly watercourse. On this basis, it is understood they do not require a setback and may be engineered to facilitate development. The Report also indicates that a minor re-alignment of the ditch watercourse would be acceptable to accommodate the entrance for Lot 4 from Enterprise Drive. It is further concluded that quality and quantity storm water control is to be provided by a downstream central facility to the highest level of treatment (enhanced). The Report indicates that grassed swales may be used to accommodate run off conveyance where storm pipes are not the preferred option and that no negative impacts to downstream drainage are excepted. Lastly, traditional soakaway facilities and potential underground storage chambers may be utilized so as to not exceed water balance objectives between pre and post development.

General Development Policies

Section 6 of the Loyalist Secondary Plan outlines the general development policies. Specifically, Section 6.2 outlines the general criteria policies regarding the subdivision of land. The relevant policies are provided below:

6.2.1 a) ii) The approval authority should be satisfied all development parcels would be appropriate (i.e. sufficient frontage and area, configuration, alignment) for their intended uses;

- There has been careful consideration of sufficient lot frontage and area in preparing the draft plan. All nine (9) lots will have sufficient frontage and area based on the current CH-29/MS-H Zone. The lot configuration has been maximized based on the total subdivision area and existing surrounding road network.

iii) No subdivision of land should be granted which would result in any landlocked parcel being created;

- None of the proposed parcels are landlocked. Every lot has frontage on either Bell Boulevard, Hannafin Road and/or Enterprise Drive – all of which are existing municipal roads.

iv) Development parcels should have direct access to an open road (excluding individual units within condominium developments);

- All of the proposed lots have direct access to an open road. Lots 1, 2, and 3 have access to Bell Boulevard and Hannafin Road through two separate access easements. Lots 4 and 5 have direct access to Enterprise Drive. Lots 6, 7, 8 and 9 have direct access to Hannafin Road. All of the aforementioned roads are open and travelled municipal roads. Lots 1, 2 and 3 have access to a municipal road through shared access easements, as referenced on the Draft Plan of Subdivision.

v) New development parcels should not be created without access to services adequate to meet the needs of the use anticipated for the lot, including access to fire and police services, hydro, telephone and other utilities;

- There are no apparent concerns through pre-consultation with City staff about the provision of and access to fire police, hydro, telephone services and other utilities.

vi) No development parcel should be created such that buildings or structures would have to be located in very close proximity to or within areas of natural heritage or hazard; where any lot includes lands designated Environmental Protection, there should be sufficient area outside such areas to accommodate buildings and accessory uses with appropriate setbacks.

- The subject property is not located within or in close proximity to areas of natural heritage or hazard. No portion of the subject lands is designated Environmental Protection.

PLANNINING OPINION AND CONCLUSION

The proposed Bell Boulevard Subdivision will allow for the subject property to be divided into nine (9) conveyable parcels and will afford the owner flexibility in divesture of the property. The draft plan exceeds all CH-29/MS-H Zone provisions and no amendments to Zoning By-law or Official Plan are required.

Upon reviewing the applicable policies from the Loyalist Secondary Plan, it is our planning opinion that the Application for Approval of a Plan of Subdivision conforms to the intent of the applicable planning policy framework. The Bell Boulevard vehicular access requirements have been carefully considered in preparing the draft plan. The subject lands are located within the settlement area of the City of Belleville along Bell Boulevard – an arterial road that is fully serviced. The subdivision is an appropriate form of lot creation for future commercial/industrial uses. The proposed lot sizes and lot shapes respond appropriately to the surrounding area and will have direct access to a municipal road. The Plan also provides an efficient lot configuration based on the total subdivision area and existing surrounding road network and will facilitate optimization of available municipal services.

The Application to Approve a Plan of Subdivision for the subject lands is consistent with the policies of the Provincial Policy Statement and the Loyalist Secondary Plan; it will comply with the provisions of the Special Highway Commercial/ Special Industrial (CH-29/MS-H) Holding Zone in Zoning By-law 2076-80, and represents good planning.

If you have any questions about this information, please do not hesitate to contact me.

Yours truly,

S. Legere

Shawn Legere, MCIP, RPP
RFA Planning Consultant Inc.

SL/DB

ATTACHMENT #4

Draft Plan Conditions
(Bell Boulevard Subdivision)

The City of Belleville's conditions and amendments to final plan approval for registration of this Subdivision are as follows

No.	Conditions

1. That this approval applies to the draft plan of subdivision, Drawing 548-DP; Draft Plan of Subdivision Part of Lot 21, Concession 2, Township of Sidney, Part 1 21R18805 except Part 9 21R-21282; Part 1 21R21303, Subject to an Easement in Gross over Part 1 21R-23410 as in HT102416; Now in the City of Belleville, County of Hastings, prepared by RFA Planning Consultant Inc., revised to November 14, 2019, attached hereto as APPENDIX 1, to show a total of:

    - nine (9) lots for commercial/industrial uses [Lots 1 to 9 inclusive];
    - one (1) block for a proposed sight triangle at the corner of Bell Boulevard and Hannafin Road [Block 10];
    - four (4) blocks for shared access easements [Blocks 11 to 14 inclusive];

2. That any road allowance or daylighting sight triangle included in this draft plan shall be shown and dedicated as a public highway.

3. That such easements as may be required for utility, telecommunication services, drainage or servicing purposes shall be conveyed to the appropriate authority.

4. That appropriate easements shall be provided to accommodate shared access from Bell Boulevard for Lots 1, 2 and 3.

5. That appropriate easements shall be provided for internal shared secondary access to all parcels, and that any such road(s) include appropriate sidewalks for pedestrian connectivity.

6. That prior to final approval, the Owner prepares a Traffic Impact Study to the satisfaction of the City of Belleville. The Study shall analyze the impacts of the proposed developments and recommend any mitigating measures. The Study shall include an assessment of the proposed shared entrances as well as the Bell Boulevard/Hannafin Road and Bell Boulevard/Jack Ellis Way intersections. The Study will need to incorporate previous traffic studies completed for Bell Boulevard.

7. That the Owner agrees in writing in the subdivision agreement to cost sharing for any proposed improvements identified by the Traffic Impact Study set out in Condition 6.

8. That prior to final approval, a plan for access to Lot 4 shall be prepared to the satisfaction of the City of Belleville in consultation with Quinte Conservation. If access to lot 4 is proposed off Enterprise Drive, the access plan shall include analysis and design of the required ditch watercourse crossing and/or identification of necessary easements. If access to Lot 4 is proposed off Hannafin Road, the access plan shall include identification of necessary easements.

9. That prior to final approval, the plan show spacing and configuration of entrances on Bell Boulevard, Hannafin Road, and Enterprise Drive all to the satisfaction of the City.

10. That the final dimensions of the proposed sight triangle [Block 10] be determined dependent on turning lane requirements/intersection improvements as recommended by the Traffic Impact Study set out in Condition #7.

11. That prior to final approval, the Owner shall agree in writing in the subdivision agreement that any private access roads shall be designed to meet the requirements of the Provisions for Fire Fighting of the Ontario Building Code, as certified by a Professional Engineer.

12. A sanitary sewer and watermain servicing report must be prepared, to the satisfaction of the City, outlining the upgrades required to the existing sanitary sewer system and water system to support this subdivision and to confirm that there will be adequate supply, pressure and capacity throughout. This will include modelling the new water system.

13. That prior to final approval, the Owner shall agree in writing in the subdivision agreement to design and construct all servicing requirements (roads, sidewalks, water, sanitary, storm, electrical, etc.) for this plan of subdivision, including any work required outside the limits of the subdivision, to the specifications of the approving authorities (the City of Belleville, Hydro One, etc.) and the cost thereof shall be paid by the Owner.

14. That prior to final approval, the Owner shall agree in writing in the subdivision agreement to provide all services, including road maintenance for any and all internal roads, unless and until assumed in writing by the City of Belleville.

15. That prior to final approval, the Owner shall agree in writing in the subdivision agreement to extend the watermain on Enterprise Drive across the full frontage of the subdivision and connect to the existing watermain at the end of Enterprise Drive.

16. That prior to final approval, the Owner shall agree in writing in the subdivision agreement to extend the sanitary sewer on Enterprise Drive across the full frontage of the subdivision. The sanitary sewer design shall include provision for accommodating unserviced properties on the north side of Enterprise Drive (sanitary drainage area 1b(ii)).

17. That prior to final approval, the Owner will be required to complete a hydrogeological evaluation of the impact of the proposed subdivision on the groundwater resources of the surrounding area including any existing wells. This evaluation will also review the impact of excavation on groundwater and groundwater recharge, and provide a baseline survey of existing conditions. The Owner shall agree that where the well or private water supply of any person is interfered with as a result of construction or the development of the subdivision, the Owner shall at his expense, either connect the affected party to municipal water supply system or provide a new well or private water system so that water supplied to the affected party shall be of a quality and quantity at least equal to the quality and quantity of water enjoyed by the affected party prior to the interference.

18. That prior to the commencement of any grading or construction on site, or final registration of the plan, the Owner shall submit and obtain approval of the City of Belleville and Quinte Conservation for reports describing the following:

    a. a detailed Stormwater Management Plan which outlines the intended means of controlling stormwater runoff in terms of quantity, frequency and duration of events up to and including the regional storm, along with analysis of conveyance capacity and depth of ponding over Bell Boulevard at the existing cross culvert using current IDF curves as requested by Quinte Conservation;

    b. the intended means of conveying stormwater flows from the site and external areas that drain through the subdivision, including the location and design of water quality and quantity controls and facilities using stormwater management techniques outlined in provincial guidelines;

    c. an assessment of the major and minor flow systems, identifying pre- and post-construction volumes, depths, velocities, points of discharge, and proposed methods for outlet treatment;

    d. an Erosion and Sediment Control Plan detailing the means by which erosion and sedimentation and their effects will be minimized on the site during and after construction in accordance with provincial guidelines. The report must outline all actions to be taken to prevent an increase in the concentration of solids in any water body as a result of on-site, or other related works;

    e. site grading plan, including pre-development and final scenarios;

    f. Requirements for the long-term maintenance of all proposed erosion and stormwater facilities and construction details relating to these conditions.

19. That the Owner agrees in the subdivision agreement, in wording acceptable to the City of Belleville:

    a. to cause to be carried out the works referred to in Condition 18;

    b. to design and prepare a lot grading and drainage plan for the subdivision to the satisfaction of the City, noting that the proposed storm sewer network shall

include identification of necessary easements for storm sewers conveying stormwater across multiple lots to the proposed outlet(s);

c. to design and prepare an overall drainage plan identifying how stormwater from this subdivision will be conveyed to the future downstream Facility 7;

d. to design and implement on-site erosion and sediment control, in order to meet the requirements of the City of Belleville and Quinte Conservation;

e. to maintain all stormwater management and erosion and sedimentation control structures operating and in good repair, in a manner satisfactory to the City of Belleville and Quinte Conservation.

20. That at the time of the final registration of this plan, the Owner shall make a cash-in-lieu payment to the Municipality equal to 2% of the value of the land within this plan for park purposes.

21. That the location of any community mailboxes for mail delivery to service this subdivision, shall be located to the satisfaction of Canada Post and the City of Belleville.

22. That the Owner shall comply with the requirements of Canada Post with respect to the provision of mail delivery to the subdivision.

23. That the Owner shall comply with the requirements of the Ministry of Transportation due to the proximity of the subdivision to Highway 401.

24. That prior to the final approval of the plan, Bell Canada, Enbridge/Union Gas, Cogeco Cable and Hydro One shall confirm that satisfactory arrangements, financial and otherwise, have been made for any communications and utility facilities servicing this plan of subdivision, which facilities are required by the City of Belleville to be installed underground.

25. That the Owner and all encumbrancers (mortgagees) shall enter into a subdivision agreement with the City of Belleville. Without limiting the generality of the foregoing, the Owner shall agree in writing to satisfy all the requirements, financial and otherwise, of the City of Belleville, including the provision of roads, sidewalks, boulevards, installation of services, stormwater management and drainage.

26. That the subdivision agreement between the Owner and the City of Belleville shall be registered against the lands to which it applies once the plan of subdivision has been registered.

27. That prior to final approval, the Owner shall demonstrate to the municipality that there is an adequate supply of potable water to service this subdivision as it is developed.

28. That the Owner shall agree in the subdivision agreement that no building permits will be applied for or issued until the City of Belleville is satisfied that adequate road

access, municipal water supply, hydro service, sanitary sewers, and storm drainage facilities are available to service the proposed development.

29. That prior to final approval, the City of Belleville is advised by a letter on behalf of Quinte Conservation how Conditions No. 18 and 19 have been satisfied

30. That prior to final approval, the City of Belleville is advised by letter by Canada Post how Conditions 21 and 22 have been satisfied.

31. That prior to final approval, the City of Belleville is advised by letter by the Ministry of Transportation how Condition 23 has been satisfied.

32. That prior to final approval, the City of Belleville is advised by letter by Bell Canada, Enbridge/Union Gas, Cogeco Cable and Hydro One how Condition 24 has been satisfied.

NOTES TO DRAFT APPROVAL

1. It is the Owner's responsibility to satisfy all conditions of draft approval in an expeditious manner. The conditions of draft approval may be reviewed periodically and may be amended by the City of Belleville at any time prior to final approval. The *Planning Act*, R.S.O. 1990, c. P.13, as amended, provides that draft approval may be withdrawn at any time prior to final approval.

2. We suggest that you make yourself aware of:

   Section 143(1) of the Land Titles Act, which requires all new plans be registered in a land titles system;

   Section 143(2) allows certain exceptions.

3. Clearance is required from the following agencies:

   Quinte Conservation
   2061 Old Highway #2
   R.R. #2
   Belleville, Ontario
   K8N 4Z2

   Mr. John La Chapelle
   Planner & Manager
   Bell Canada
   Right of Way Control Centre
   Floor 5 - Blue, 100 Borough Drive
   Scarborough, Ontario
   M1P 4W2

   Mr. Stephen McGraw,

Delivery Services Officer | Delivery Planning
PO BOX 8037 Ottawa T CSC
Ottawa, Ontario
K1G 3H6

Mr. Lloyd Pacheco | Corridor Management Planner
Ministry of Transportation, Highway Corridor Management Section
1355 John Counter Blvd., Postal Bag 4000
Kingston, Ontario
K7L 5A3

4. Further red-line revisions to the draft plan may be required to incorporate changes required through the review and approval of studies and plans yet to be finalized and approved by the City of Belleville, and Quinte Conservation.

5. All measurements in subdivision final plans must be presented in metric units.

6. Registration:
The final plan approved by the City of Belleville must be registered within 30 days of approval or the City of Belleville may withdraw its approval under Section 51(59) of the *Planning Act*, R.S.O. 1990, c. P.13, as amended.

7. That the payment of development charges will be required prior to the issuance of any building permits for any lots in the subdivision, in accordance with the City of Belleville's Development Charges By-law.

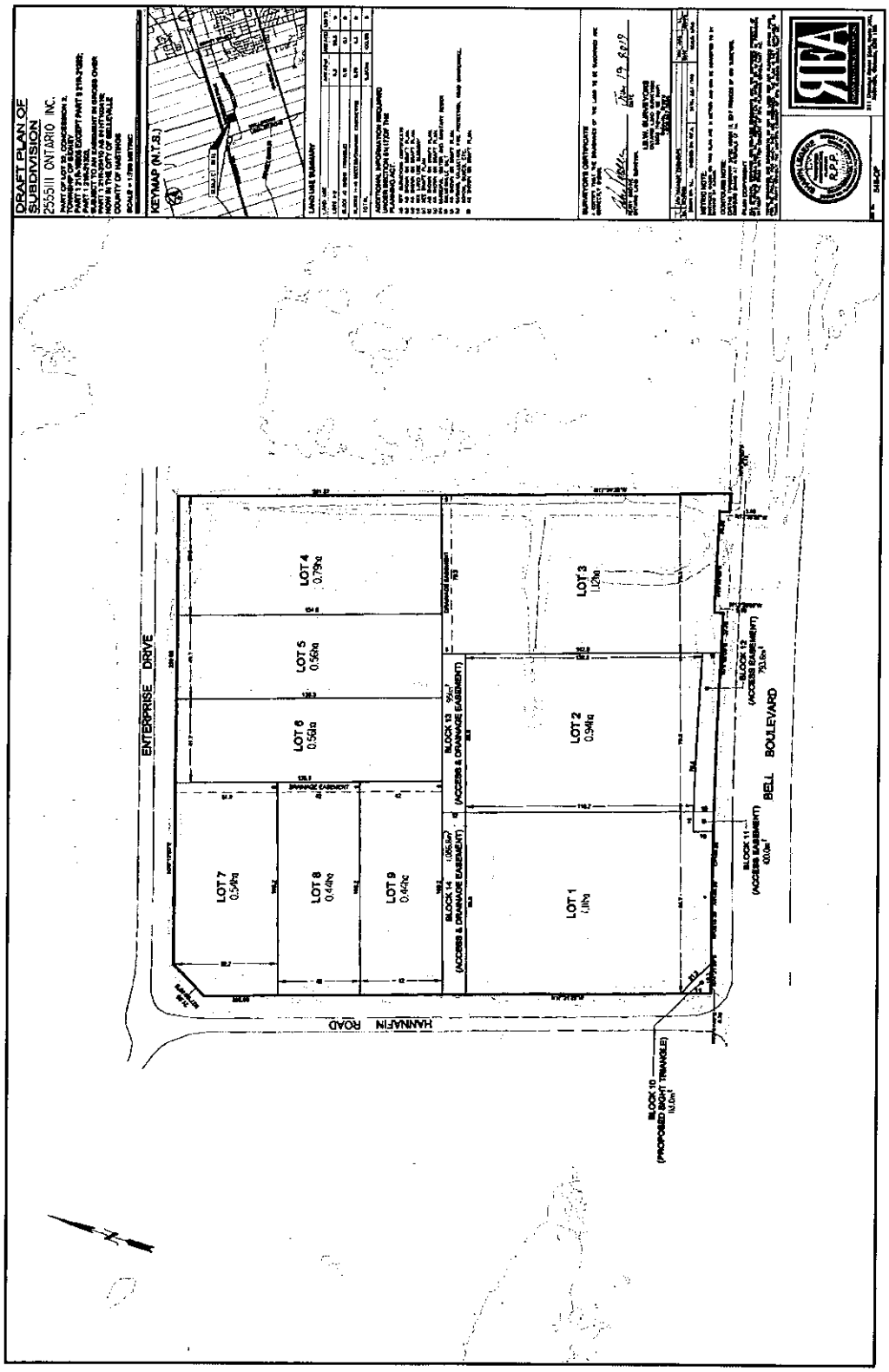
8. Access on Bell Boulevard will be restricted to one central shared entrance for Lots 1, 2 and 3.

9. The City is completing a preliminary design for future Bell Boulevard Widening in this area. The future reconstruction of Bell Boulevard would include traffic signals at Hannafin Road and Jack Ellis Way as warranted by development driven traffic growth. Future roadways south of Bell Boulevard at Hannafin Road and Jack Ellis Way are anticipated. A centre two way left turn lane along Bell Boulevard and sidewalks on Bell Boulevard are also proposed. A cash in lieu payment for sidewalk construction may be required at site plan stage as individual lots are developed.

10. Water distribution and design shall be in accordance with the City of Belleville Environmental and Operational Services Manual of Standard Specifications. Design documentation shall demonstrated adequate flow and pressure and identify impacts of the new works on the existing system and its users.

11. This draft plan approval expires on December 9, 2022 if all the conditions contained herein are not satisfied by that date. The Owner shall apply for any extension at least 60 days prior to the lapsing date and such request for an extension shall not be unreasonably withheld.

APPENDIX 1


DRAFT PLAN OF
SUBDIVISION
2555111 ONTARIO INC.
KEYMAP (N.T.S.)
ENTERPRISE DRIVE
HANNAFIN ROAD
BELL BOULEVARD
LOT 1
1.1Ha
LOT 2
0.94Ha
LOT 3
1.2Ha
LOT 4
0.79Ha
LOT 5
0.58Ha
LOT 6
0.56Ha
LOT 7
0.54Ha
LOT 8
0.44Ha
LOT 9
0.42Ha
BLOCK 10
(PROPOSED RIGHT TRIANGLE)
BLOCK 11
(ACCESS EASEMENT)
BLOCK 12
(ACCESS EASEMENT)
BLOCK 13
(ACCESS & DRAINAGE EASEMENT)
BLOCK 14
(ACCESS & DRAINAGE EASEMENT)

Engineering and Development Services Department (Policy Planning Section)
Official Plan and Zoning By-Law Amendment Monitoring Report
(Shaded Area Indicates that Application is Complete)

FILE NO.	APPLICANT/OWNER/AGENT	PROPOSAL	REPORT NO.	BY-LAW NO.	DATE REC'D	CIRCULATION	PAC DATE	APPROVAL (Y/N)	COUNCIL DATE	APPROVAL (Y/N)	# of DAYS	NOTICE ISSUED	LAST DAY OF APPEAL	CLERK CERT.
B-77-1021	Reginald & Janette Barkema/ G.D. Jewell Engineering Inc. c/o Steve Harvey	*Trinity Court - Part Lot 2, Concession 3, Formerly Township of Thurlow* Zoning By-Law amendment to permit a range of single detached residential lots and townhomes	PP 17-26 APS 18-07		Mar 21/17	Apr 11/17	May 1/17 Mar 5/18	Deferred at PAC, Draft Plan of Subdivision approved - Zoning By-law to be addressed later						
B-77-1040	Rosebush Properties Inc./ Bel-Con Design-Builders Ltd.	*330 College Street East* Zoning By-Law amendment to permit a convenience store and associated gas bar in addition to the permitted uses of the zone	PP 18-02		Jan 10/18	Feb 13/18	Mar 15/18	Deferred at PAC, awaiting revised Site Plan based on CN comments						
B-77-1058	Paramathas Joseph Agent: Chris Nava	*55 South Church Street* Zoning By-law amendment to rezone from (R2-1) to (R3) to permit a semi-detached dwelling	PP-2018-36		Aug 21/18	Sept 6/18	Oct 1/18	N	Oct 9/18	DENIED		Oct 12/18	Nov 9/18	APPEALED
B-77-1059	Panagiotis Karaglaus Agent: Chris Nava	*59 South Church Street* Zoning By-law amendment to rezone from (R2-1) to (R3) to permit a semi-detached dwelling	PP-2018-37		Aug 21/18	Sep 6/18	Oct 1/18	N	Oct 9/18	DENIED		Oct 12/18	Nov 9/18	APPEALED
B-77-1069	Agent/Applicant/Owner: City of Belleville "CANNABIS"	*Belleville, Thurlow, Sidney* Zoning By-law amendment to 10245, 3014 & 2076-80 to update definitions relating to cannabis	PP-2019-07 PP-2019-22	2019-56 2019-57 2019-58	Jan 22/19	Feb 13/19	Mar 4/19 Apr 1/19	y	Apr 8/19	Y	76 Days	Apr 10/19	Apr 30/19	May 1/19
B-77-1072	Owner/Applicant: Jenland Properties Agent: Fortenn Consultants Inc.	*Lots 35 & 36, Concession 2 (Bell Blvd)* Zoning By-law amendment to rezone lands to allow additional uses including retail	PP-2019-11 PP-2019-26	2019-59	Jan 22/19	Feb 13/19	Mar 4/19 Apr 1/19	Y	Apr 8/19	Y	76 Days	Apr 10/19	Apr 30/19	May 1/19
B-77-1073	Agent/Applicant: Alexander Wilson Architect Owner: Integrated Real Estate Investment Platform Inc.	*2 Dundas Street* Zoning By-law amendment to rezone lands to permit mixed use commercial & Residential development with reduced parking requirements	PP-2019-10 PP-2019-23	2019-60	Jan 25/19	Feb 13/19	Mar 4/10 Apr 1/19	Y	Apr 8/19	Y	73 Days	Apr 10/19	Apr 30/19	May 1/19
B-77-1074	Owner/Applicant: Covington Crescent J/V Agent: Ainley Group	*Part of Lots 1 & 2, Concession 3 (Covington Crescent)* Zoning By-law amendment to rezone lands to permit 40 townhouse units and remove walk path to merge two adjacent residential lots	PP-2019-16 PP-2019-25 PP-2019-31	2019-92	Jan 29/19	Feb 13/19	Mar 4/19 Apr 1/19	N	Apr 8/19 Apr 30/19	**TABLED** Y By-law Approved May 13 Council	104 Days	May 15/19	Jun 4/19	APPEAL WITHDRAWN Jul 8/19
B-77-1075	Owner/Applicant: Staikos Homes Agent: vanMEER limited	*20 to 80 Wims Way* Zoning By-law amendment to rezone lands to permit single detached dwellings and to permit townhouse units with reduced setback requirements and increased lot coverage	PP-2019-17 PP-2019-24	2019-61	Jan 30/19	Feb 13/19	Mar 4/19 Apr 1/19	Y	Apr 8/19	Y	68 Days	Apr 10/19	Apr 30/19	May 1/19

Engineering and Development Services Department (Policy Planning Section)
Official Plan and Zoning By-Law Amendment Monitoring Report
(Shaded Area Indicates that Application is Complete)

FILE NO.	APPLICANT/OWNER/AGENT	PROPOSAL	REPORT NO.	BY-LAW NO.	DATE REC'D	CIRCULATION	PAC DATE	APPROVAL (Y/N)	COUNCIL DATE	APPROVAL (Y/N)	# of DAYS	NOTICE ISSUED	LAST DAY OF APPEAL	CLERK CERT.
B-77-1076	Owner/Applicant: 2589989 Ont. Inc. Agent: RFA Planning Consultants	*250 Sidney Street* Zoning By-law amendment to Zoning By-law 10245 to add Cannabis Processing Facility as a permitted use to the Restricted Industrial Zone	PP-2019-15 PP-2019-49	2019-134	Jan 30/19	Feb 13/19	Mar 4/19 Jul 2/19	Applicants to submit additional information Y	Jul 8/19	Y	159 Days	Jul 10/19	Jul 30/19	Jul 31/19
B-77-1077	Agent/Applicant/Owner: City of Belleville "PUBLIC USES"	*Belleville, Thurlow, Sidney* Zoning By-law amendment to 10245, 3014 & 2076-80 to define public uses and to add general provisions in relation to those uses	PP-2019-08 PP-2019-23	2019-62 2019-63 2019-64	Jan 22/19	Feb 13/19	Mar 4/19 Apr 1/19	Y	Apr 8/19	Y	76 Days	Apr 10/19	Apr 30/19	May 1/19
B-77-1078	Owner/Applicant: Schnell Investment Agent: Siegbert Schnell	*150 St. Paul Street* Zoning By-law amendment to Zoning By-law 10245 to permit mixed use (commercial/ residential) in an existing building	PP-2019-27 PP-2019-37	2019-93	Feb 7/19	Mar 6/19	Apr 1/19 May 6/19	Y	May 13/19	Y	95 Days	May 15/19	Jun 4/19	Jun 5/19
B-77-1079	Agent/Applicant: RFA Planning Owner: Heritage Park J/V	*427 Farnham Road* Zoning By-law amendment to Zoning By-law 3014 to permit 13 townhouse units with reduced setbacks and increased lot coverage	PP-2019-28 PP-2019-45 PP-2019-46	2019-135	Feb 27/19	Mar 6/19 May 10/19	Apr 1/19 Jun 3/19 Jul 2/19	Applicant to review public concerns and re-submit Public Meeting for Revised Application Y	Jul 8/19	N		Jul 12/19	Aug 1/19	APPEALED
B-77-1080	Agent/Applicant/Owner: Ray & Jean O/Neill	*4807 Old Highway 2* Zoning By-law amendment to Zoning By-law 3014 to rezone lands from Prime Agriculture to Rural Residential and Rural as a condition of a consent	PP-2019-33 PP-2019-40	2019-112	Mar 27/19	Apr 17/19	May 6/19 Jun 3/19	Y	Jun 10/19	Y	98 Days	Jun 12/19	Jul 2/19	Jul 3/19
B-77-1081	Agent/Applicant/Owner: City of Belleville "AGRI-TOURISM"	*Belleville, Thurlow, Sidney* Zoning By-law amendment to 10245, 3014 & 2076-80 to define agri-tourism	PP-2019-34		Mar 27/19	Apr 17/19	May 6/19 Jun3/19	Gathering more Information						
B-77-1082	Applicant: Tom Reid Owner: Tom Reid & Eleanor McEvoy Agent: Eleanor McEvoy	*288 Pine Hill Crescent* Zoning By-law amendment to Zoning By-law 3014 to rezone lands from Prime Agriculture to Rural Residential as a condition of consent	PP-2019-35 PP-2019-41	2019-113	Apr 1/19	Apr 17/19	May 6/19 Jun 3/19	Y	Jun 10/19	Y	93 Days	Jun 12/19	Jul 2/19	Jul 3/19
B-77-1083	Owner/Applicant: Meyers Creek Meyers Creek Development Group Agent: Joe Shunock	*125 South Church Street* Zoning By-law amendment to Zoning By-law 10245 to rezone lands to permit a methadone dispensary	PP-2019-36 PP-2019-38	2019-114	Apr 2/19	Apr 17/19	May 6/19 Jun 3/19	Y	Jun 10/19	Y	92 Days	Jun 12/19	Jul 2/19	Jul 3/19
B-77-1084	Owner/Applicant: Mark Glassford	*9 & 13 Wilkie Street* Zoning By-law amendment to Zoning By-law 10245 to rezone lands to recognize the existing dwelling units on the property	PP-2019-42		May 1/19	May 15/19	Jun 3/19	Staff Still Reviewing Comments						

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B-77-1085	Applicant/Agent: Clint Hamilton Owner: Robert Rollins	*1437 & 1455 Mudcat Road* Zoning By-law amendment to Zoning By-law 3014 to rezone lands from Prime Agriculture (PA) and Rural (RU) to Rural Residential (RR) and Prime Agriculture with special provisions to prohibit future severences as a condition of Consent	PP-2019-43 PP-2019-47	2019-136	May 10/19	May 13/19	Jun 3/19 Jul 2/19	Y	Jul 8/19	Y	59 Days	Jul 10/19	Jul 30/19	Jul 31/19
B-77-1086	Applicant/Owner: James Mcmahon Dentistry Agent: Taskforce Engineering Inc.	*260 & 262 Dundas Street East* Zoning By-law amendment to Zoning By-law 10245 to rezone lands from Residential Second Density (R2-3) and Highway Commercial (C3-1) to Highway Commercial (C3-59) with special provisions to reduce the front yard setback to 7.5 metres and lso permit uses listed under the Non-Retail Commercial (C5) Zone.	PP-2019-51 PP-2019-58	2019-163	Jul 3/19	Jul 12/19	Aug 6/19 Sept 3/19	Y	Sep 9/19	Y	68 Days	Sep 11/19	Oct 1/19	Oct 2/19
B-77-1087	Applicant/Owner: John Royle Agent: Keith Watson, OLS	*18 St. Paul Street* Zoning By-law amendment to Zoning By-law 10245 to rezone lands from Residential Second Density (R2-1) to Residential Third Density (R3-2) to permit a semi-detached dwelling with reduced yard setbacks.	PP-2019-55		Jul 5/19	Aug 9/19	Sept 3/19	Staff waiting for Health & Safety By-law before making a recommendation						
B-77-1088	Applicant/Owner: Pentecostals of Quinte Agent: RBJ Concepts Inc.	*490 Dundas Street West* Zoning By-law amendment to Zoning By-law 2076-80 to rezone lands to add dwelling units as a permitted accessory use to the Highway Commercial (CH-11) Zone.	PP-2019-56 PP-2019-64	2019-175	Jul 30/19	Aug 9/19	Sept 3/19 Oct 7/19	Y	Oct 15/19	Y	77 Days	Oct 16/19	Nov 5/19	Nov 6/19
B-77-1089	Applicant/Owner: David Putman and Beth Putman Agent: Keith Watson, OLS	*41 Casey Road* Zoning By-law amendment to Zoning By-law 3014 to rezone a portion of lands from Prime Agricultural (PA) Zone to Rural Residential (RR) Zone as a condition of Consent Applications B13/19 and B14/19	PP-2019-65 PP-2019-81	2019-200	Aug 28/19	Sep 13/19	Oct 7/19 Nov 4/19	Y	Nov 12/19	Y	76 Days	Nov 14/19	Dec 4/19	
B-77-1090	Applicant/Owner: Jane Ann Bouma Agent: N/A	*5027 Old Highway #2* Zoning By-law amendment to Zoning By-law 3014 to rezone subject lands from Prime Agricultural (PA) Zone and Hazard (H) Zone to Rural Residential (RR) Zone as a condition of Consent Application B19/19 and B20/19	PP-2019-66 PP-2019-75	2019-201	Sep 3/19	Sep 13/19	Oct 7/19 Nov 4/19	Y	Nov 12/19	Y	70 Days	Nov 14/19	Dec 4/19	

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B-77-1091	Applicant: Adam Holgate Owner: Holgate Tire & Battery (John Holgate)	*209 Cannifton Road North* Zoning By-law amendment to Zoning By-law 3014 to extend a temporary use by-law to permit the two existing storage containers for a period of two years	PP-2019-67		Sep 4/19	Sept 13/19	Oct 7/19	Staff still reviewing						
B-77-1092 and B-50-3-28	Applicant: GCL Developments Ltd. Owner: Belleville Community Developments Ltd.. Agent: RFA Planning Consultant	*656, 660, 664 & 670 Sidney Street* Requesting the subject lands be re-designated from "Commercial" to "Residential" in the Official Plan and to amend Zoning By-law 10245 to rezone subject lands from Restricted Industrial Zone (M1) and Highway Commercial Zone (C3-h) to Residential Seventh Density Zone (R7) with special provisions to permit four apartment buildings with a total of 96 dwelling units	PP-2019-68 PP-2019-78	2019-202 2019-203	Sept 4/19	Sept 13/19	Oct 7/19 Nov 4/19	Y	Nov 12/19	Y	69 Days	Nov 14/19	Dec 4/19	
B-77-1093 and B-50-3-29	Applicant: Algonquin and Lakeshore Catholic District School Board Owner: Algonquin and Lakeshore Catholic District School Board Agent: Todd Colbourne - Colebourne & Kembel, Achitects Inc.	*375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue* Requesting a portion of the subject lands be re-designated from "Residential" to "Community Facility" in the Official Plan and to amend Zoning By-law 10245 to rezone the lands from Residential Zones R2, R2-3, and R5-12 and Community Facility (CF) Zone to site-specific Community Facility (CF) Zone with special provisions	PP-2019-79 PP-2019-88		Sep 13/19	Oct 11/19	Nov 4/19 Dec 2/19							
B-77-1094	Applicant: Joseph Chacko Owner: MHSA Properties Ltd. Agent: N/A	*199 Dundas Street East* Zoning By-law amendment to Zoning By-law 10245 to rezone subject lands from Highway Commercial (C3) Zone to Highway Commercial (C3) Zone with special provisions to permit a medical clinic	PP-2019-83		Oct 30/19	Nov 8/19	Dec 2/19							
B-77-1095	Applicant/Owner: UCB Canada Agent: Investment Management Syndicate LTD (IMS)	*8 and 12 King Street* Zoning By-law amendment to Zoning By-law 10245 to rezone subject lands from Highway Commercial (C3) Zone to General Commercial (C2) Zone with special provisions to permit a parking lot associated with the property located at 2 Dundas Street West	PP-2019-84		Oct 30/19	Nov 8/19	Dec 2/19							
B-77-1096 and B-50-3-30	Applicant/Owner: GCL Developments Agent: Lorelei Jones of Macauley Shiomi Howson Ltd.	*Part of Park Lots 8 & 9, Registered Plan 124, and Part of Lot 8, Concession 3* Requesting to adjust the boundaries of the "Residential" and "Open Space" designations in the Official Plan and to amend zoning By-law 3014 to rezone subject lands to permit a range of housing types and parkland area	PP-2019-85		Oct 30/19	Nov 8/19	Dec 2/19							

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NOTE: In the event that an application/file remains open a minimum of two years after the original submission, but has been inactive for a period of one year, the applicant and/or agent will be notified that the application/file has become inactive and will be given a six week timeline to respond with a plan to re-active the application/file to satisfaction of the Director of Engineering and Development Services or the application/file will be closed.