

BELLEVILLE PLANNING ADVISORY COMMITTEE

A G E N D A

NOVEMBER 4, 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 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.**

Notice of Meeting and Map

1

4. **ADJOURNMENT**

BELLEVILLE PLANNING ADVISORY COMMITTEE

A G E N D A

NOVEMBER 4, 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 October 7, 2019

4. DEPUTATIONS

5. CORRESPONDENCE

6. REFERRALS FROM PUBLIC MEETING

- 6.1 **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
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-2019-79

3

RESOLUTION

"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."

7. REPORTS

- 7.1 **RECOMMENDATION REPORT FOR APPLICATION FOR PROPOSED AMENDMENT TO ZONING BY-LAW NUMBER 3014, AS AMENDED – 41 CASEY ROAD, FORMER TOWNSHIP OF THURLOW, NOW CITY OF BELLEVILLE, COUNTY OF HASTINGS
FILE NUMBER: B-77-1089
APPLICANT/OWNER: DAVID PUTMAN & BETH PUTMAN
AGENT: KEITH WATSON, WATSON LAND SURVEYORS LTD.**
-

Director of Engineering & Development Services' Report No. PP-2019-81

152

RESOLUTION

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

THAT Zoning By-law Number 3014, as amended, be amended by rezoning 41 Casey Road from Prime Agriculture (PA) Zone to Prime Agricultural (PA) Zone with special provision to recognize the reduced lot area for the retained parcel and from Prime Agricultural (PA) Zone to Rural Residential (RR) Zone for the severed parcels; and

THAT all future applications in the area referred to as the Cannifton Industrial Planning Area for the purpose of creating Rural Residential Lot(s) through the severance and rezoning process be deferred until the new updated Official Plan is approved by the Ministry of Municipal Affairs which will provide policies for the Industrial Lands in the Cannifton Area that meet the requirements of the Provincial Policy Statement.”

- 7.2 **RECOMMENDATION REPORT FOR PROPOSED AMENDMENT TO ZONING BY-LAW NUMBER 3014, AS AMENDED – 5027 OLD HIGHWAY 2, FORMER TOWNSHIP OF THURLOW, NOW CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1090
APPLICANT/OWNER: JANE ANN BOUMA
-

Principal Planner’s Report No. PP-2019-75

161

RESOLUTION

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

THAT Application B-77-1090 to amend Zoning By-law Number 3014, as amended, for land described as 5027 Old Highway 2, Belleville, County of Hastings, be APPROVED as follows:

THAT Zoning By-law Number 3014, as amended, be amended by rezoning the severed parcels from Rural (RU) Zone and Hazard (H) Zone to Rural Residential (RR) Zone to fulfil a condition of consent for applications B19/19 and B20/19.”

- 7.3 **RECOMMENDATION REPORT FOR PROPOSED AMENDMENT TO THE OFFICIAL PLAN AND ZONING BY-LAW NUMBER 10245: 656, 660, 664, & 670 SIDNEY STREET, CITY OF BELLEVILLE, COUNTY OF HASTINGS**
FILE NUMBER: B-77-1092
OWNER: BELLEVILLE COMMUNITY DEVELOPMENTS LTD.
APPLICANT: GCL DEVELOPMENTS LTD.
AGENT: RFA PLANNING CONSULTANT INC.

Director of Engineering & Development Services' Report No. PP-2019-78

177

RESOLUTION

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

THAT Application B-77-1092 to amend the City of Belleville Official Plan and Zoning By-law Number 10245, as amended, for 656, 660, 664, and 670 Sidney Street, City of Belleville, County of Hastings, be APPROVED as follows:

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

THAT Zoning By-law Number 10245, as amended, be amended by rezoning the subject lands from Restricted Industrial (M1) Zone and Highway Commercial (C3-h) Zone to Residential Seventh Density (R7) Zone with special provisions to permit four (4) apartment buildings with a total of 96 dwelling units."

- 7.4 **BACKYARD CHICKENS**

Principal Planner's Report No. PP-2019-80

188

RESOLUTION

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

THAT Report Number PP-2019-80 dated November 4, 2019 be received as information and that the matter of Backyard Chickens be referred to the City's Consultants who are currently undertaking the development of a new zoning by-law for the City."

8. INFORMATION MATTERS

**8.1 OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT
MONITORING REPORT**

Report to November 4, 2019

196

9. GENERAL BUSINESS AND INQUIRIES

10. ADJOURNMENT



City of Belleville

Engineering & Development Services Department

Policy Planning Section

Telephone: 613-967-3288

Fax: 613-967-3262

File No.: B-77-1093

**NOTICE OF PUBLIC MEETING
OFFICIAL PLAN AND ZONING BY-LAW AMENDMENT APPLICATION
375 to 405 Bridge Street East and 172 to 184 Herchimer Avenue**

**CITY COUNCIL PLANNING COMMITTEE
CITY HALL - COUNCIL CHAMBER
169 FRONT STREET
Monday, November 4, 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, November 4, 2019 at 5:30 P.M. to consider an amendment to the Official Plan and Zoning By-Law Number 10245, as amended. 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.

In the Official Plan, the subject lands are designated as "Community Facility" and "Residential". The Applicant requests a re-designation of all the subject lands to "Community Facility".

The Applicant requests a rezoning of the subject lands from Residential Second Density (R2 & R2-3) Zone, Residential Fifth Density (R5-12) Zone, and Community Facility (CF) Zone to Community Facility (CF-14) Zone with special provisions to permit a reduction in the front yard setback, side yard setback, and parking requirements relating to the proposed expansion of the existing school.

A Location Plan is shown on APPENDIX 1 which is attached.

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.

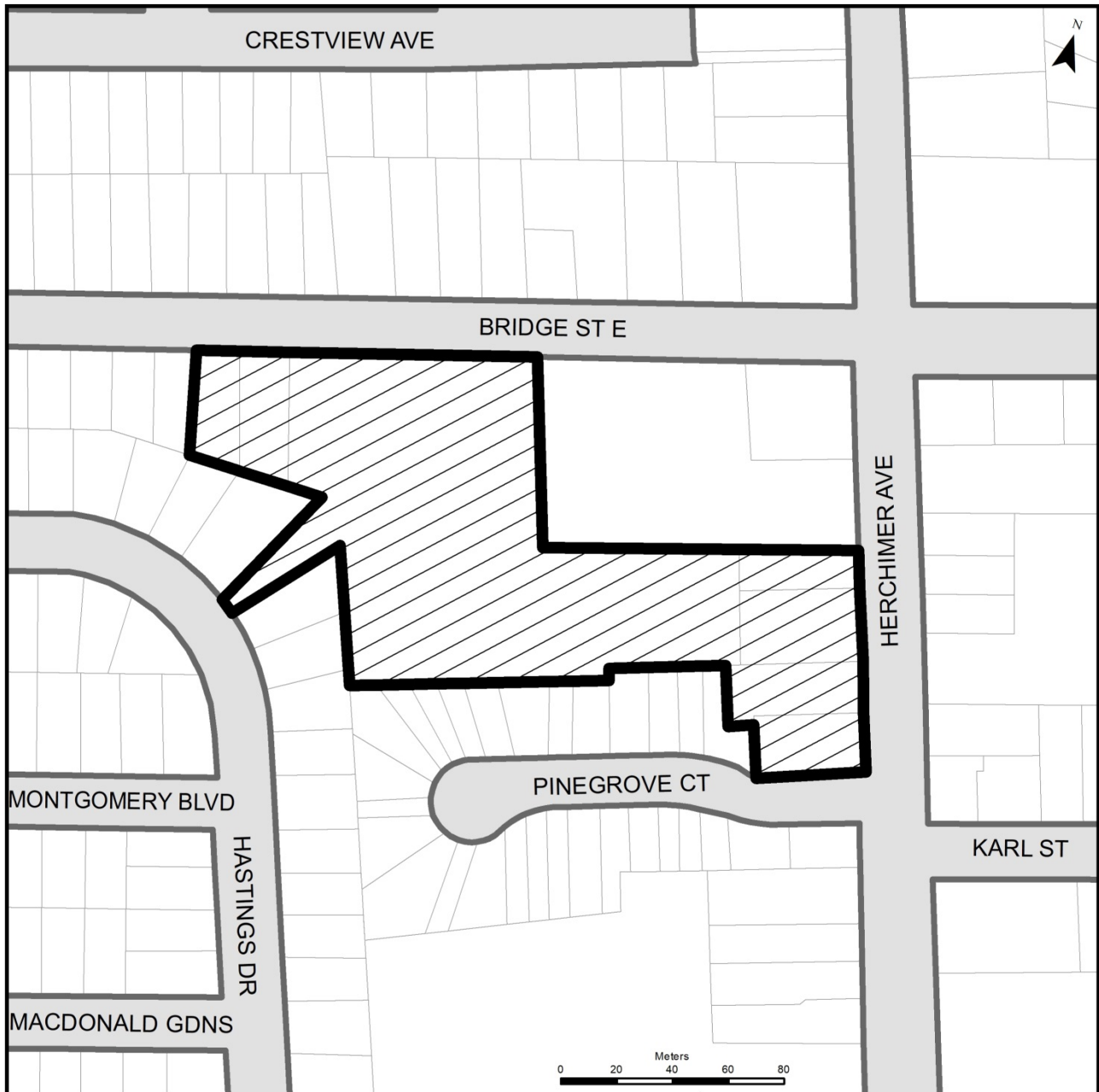
If a person or public body would otherwise have an ability to appeal the decision of the City of Belleville to the Local Planning Appeal Tribunal but the person or public body does not make oral submissions at a public meeting or make written submissions to the City of Belleville before the by-law is 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 11th day of October, 2019.

APPENDIX 1

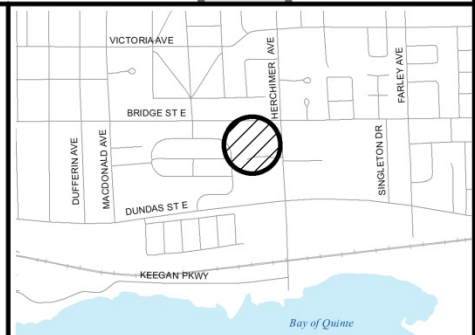


PROPOSED ZONING BY-LAW & OFFICIAL PLAN AMENDMENT

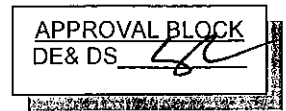
LOCATION: 375 TO 405 BRIDGE ST E &
172 TO 184 HERCHIMER AVE

 - SUBJECT LANDS

B-77-1093 - B-50-3-29



CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT
SERVICES DEPARTMENT



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 #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 m ² (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 m ² 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 m ² = 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
- Attachment #4 – Draft 21R- Plan
- Attachment #5 – Planning Justification Report
- Attachment #6 – Servicing Report
- Attachment #7 – Sanitary and Storm Sewer Relocation Plan
- Attachment #8 – Draft Site Plan
- Attachment #9 – Stormwater Management Plan
- Attachment #10 – Topographical Survey
- Attachment #11 – Traffic Report
- Attachment #12 – Tree Report
- Attachment #13 – Official Plan Designation Map

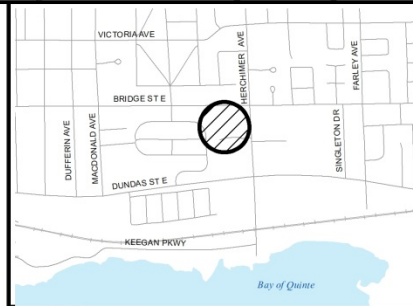


PROPOSED ZONING BY-LAW AMENDMENT

LOCATION: 375 TO 405 BRIDGE ST E & 172 TO 184 HERCHIMER AVE

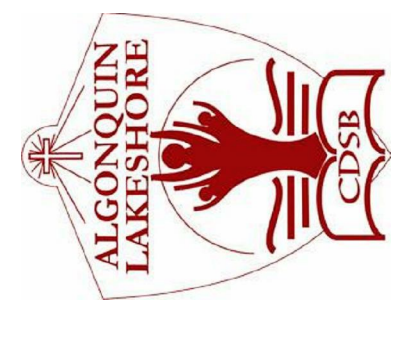
-  PROPOSED ZONING CHANGE FROM CF (COMMUNITY FACILITY) TO CF WITH SPECIAL PROVISIONS
-  PROPOSED ZONING CHANGE FROM R2 (RESIDENTIAL SECOND DENSITY) TO CF (COMMUNITY FACILITY) WITH SPECIAL PROVISIONS
-  PROPOSED ZONING CHANGE FROM R2-3 (RESIDENTIAL SECOND DENSITY WITH SPECIAL PROVISIONS) TO CF (COMMUNITY 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

NOTES
 THIS DRAWING AND DESIGN ARE THE COPYRIGHT PROPERTY OF COLBOURNE & KEVEBEL ARCHITECTS INC. NO PART OF THIS DRAWING OR DESIGN MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE WRITTEN PERMISSION OF THE ARCHITECT. ISSUED FOR RECORD.
 DRAWINGS MUST NOT BE SCALED. VERIFY DIMENSIONS ON SITE.



TENDER NO. : T-2019-??

1 TO ISSUED FOR RECORD 2019/09/21 DATE
 NO. BY REVISIONS/SUBMISSIONS

ARCHITECT OF RECORD
COLBOURNE & KEVEBEL ARCHITECTS INC.
 3000 UNIVERSITY AVENUE
 WINNIPEG, ONTARIO R7T 2A6
 TEL: 616-200-9159 FAX: 616-200-9177
 WWW.COLBOURNE-AND-KEVEBEL.COM

DESIGN ARCHITECT
fni Fielding Nair International
 300 UNIVERSITY AVENUE
 WINNIPEG, MANITOBA R7T 2A6
 TEL: 616-200-9159
 WWW.FIELDINGNAIR.COM

PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SUCES)

405 BRIDGE ST E
 BELLEVILLE, ON

DRAWING
BUILDING ELEVATION

SCALE
 1 : 150

PROFESSIONAL SEAL

DRAWN
 Author

DATE
 03/2019

CHECKED
 Checker

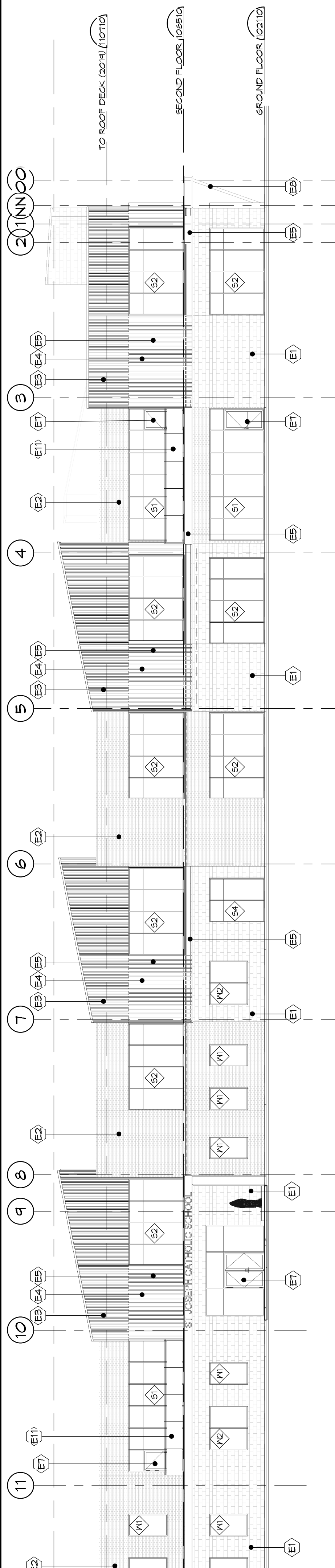
PRINTED
 06/11/19

REVIEWED
 Designer

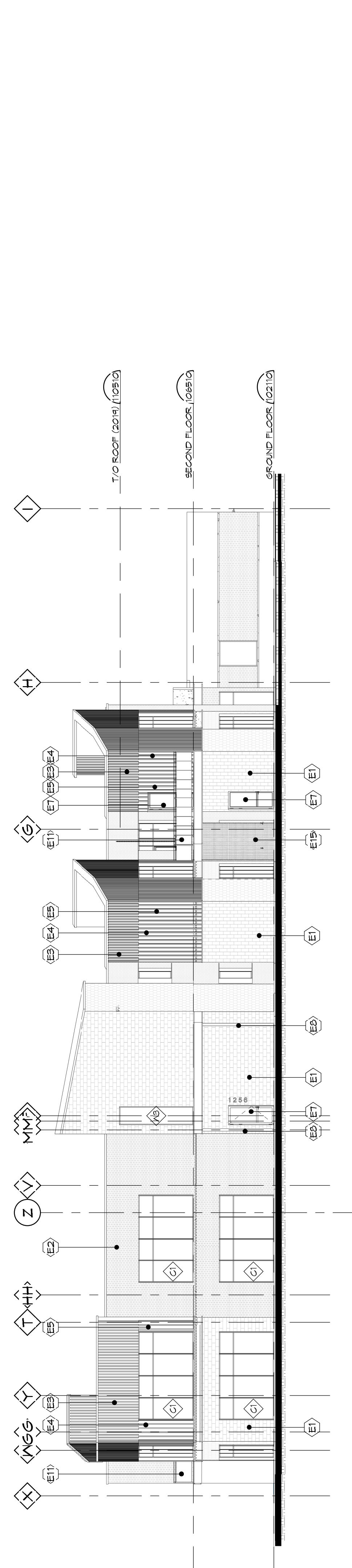
DRAWING NO.
 180715

PROJECT NO.
324

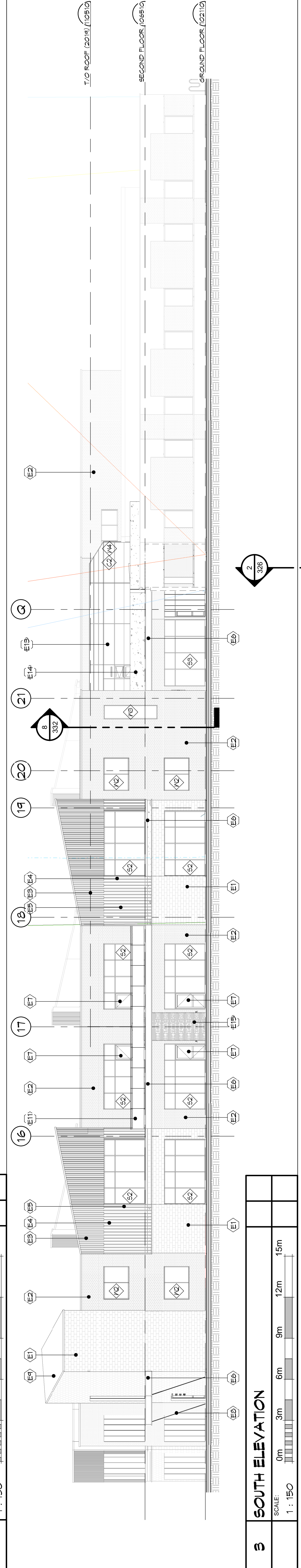
NOTES
 THIS DRAWING IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR CONSTRUCTION WITHOUT THE ARCHITECT'S WRITTEN PERMISSION.



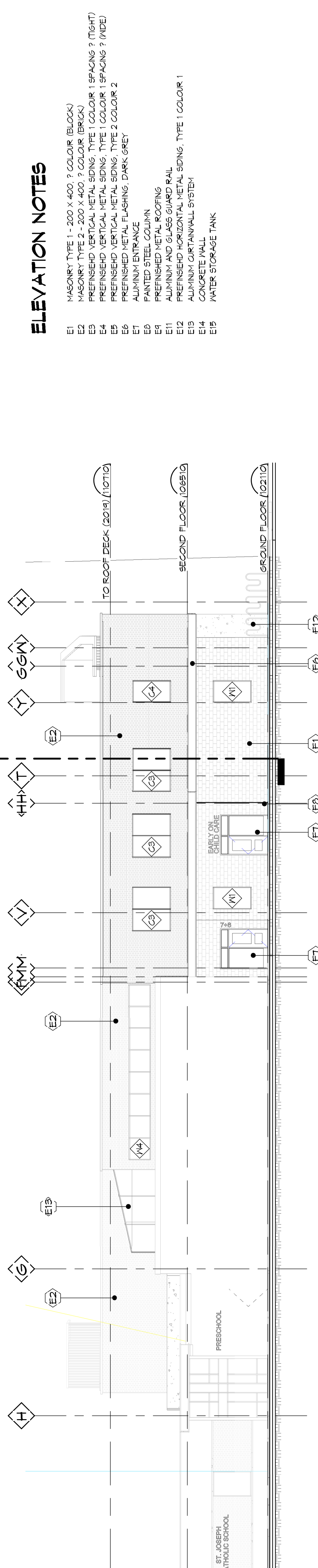
1 NORTH ELEVATION
 SCALE: 0m 3m 6m 9m 12m 15m
 1 : 150



2 WEST ELEVATION
 SCALE: 0m 3m 6m 9m 12m 15m
 1 : 150



3 SOUTH ELEVATION
 SCALE: 0m 3m 6m 9m 12m 15m
 1 : 150



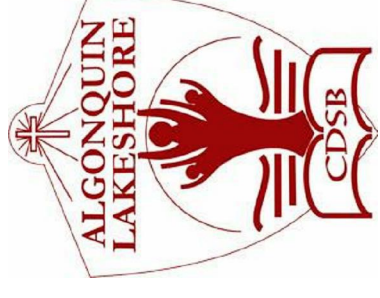
4 EAST ELEVATION
 SCALE: 0m 3m 6m 9m 12m 15m
 1 : 150

ELEVATION NOTES

- E1 MASONRY TYPE 1 - 200 X 400 ? COLOR (BLOCK)
- E2 MASONRY TYPE 2 - 200 X 400 ? COLOR (BLOCK)
- E3 PREFINISHED VERTICAL METAL SIDING TYPE 1 COLOR 1 SPACING 2 (AGE)
- E4 PREFINISHED VERTICAL METAL SIDING TYPE 1 COLOR 1 SPACING 1 (AGE)
- E5 PREFINISHED VERTICAL METAL SIDING TYPE 2 COLOR 2
- E6 PREFINISHED METAL FLASHING DARK GREY
- E7 ALUMINIUM ENTRANCE
- E8 PAINTED STEEL COLUMN
- E9 PREFINISHED METAL SIDING
- E10 PREFINISHED METAL SIDING
- E11 PREFINISHED HORIZONTAL METAL SIDING TYPE 1 COLOR 1
- E12 PREFINISHED HORIZONTAL METAL SIDING TYPE 2 COLOR 2
- E13 CONCRETE WALL
- E14 WATER STORAGE TANK
- E15

NOTES

THIS DRAWING AND DESIGN ARE THE COPYRIGHT PROPERTY OF COLBOURNE & KEVELL ARCHITECTS INC. ANY REPRODUCTION OR DISTRIBUTION OF THIS DRAWING WITHOUT THE EXPRESS WRITTEN CONSENT OF THE ARCHITECT ISSUED OR MADE IN CONNECTION WITH THIS PROJECT IS PROHIBITED. DRAWINGS MUST NOT BE SCALED. VERIFY DIMENSIONS ON SITE.



TENDER NO.: T-2019-??

NO. | BY | REVISIONS | SUBMISSIONS | DATE
 ARCHITECT OF RECORD
COLBOURNE & KEVELL ARCHITECTS INC.
 3500 HURON ST. SUITE 200
 WILLOWDALE, ONTARIO M2H 3K6
 TEL: 416-491-2222 FAX: 416-491-2771
 www.colbourneandkevell.com

DESIGN ARCHITECT



Fielding Nair International
 3500 HURON ST. SUITE 200
 WILLOWDALE, ONTARIO M2H 3K6
 TEL: 416-290-9159
 www.fieldingnair.com

PROJECT
ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SUCES)

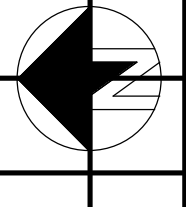
405 BRIDGE ST E
 BELLEVILLE, ON

DRAWING
GROUND FLOOR PLAN

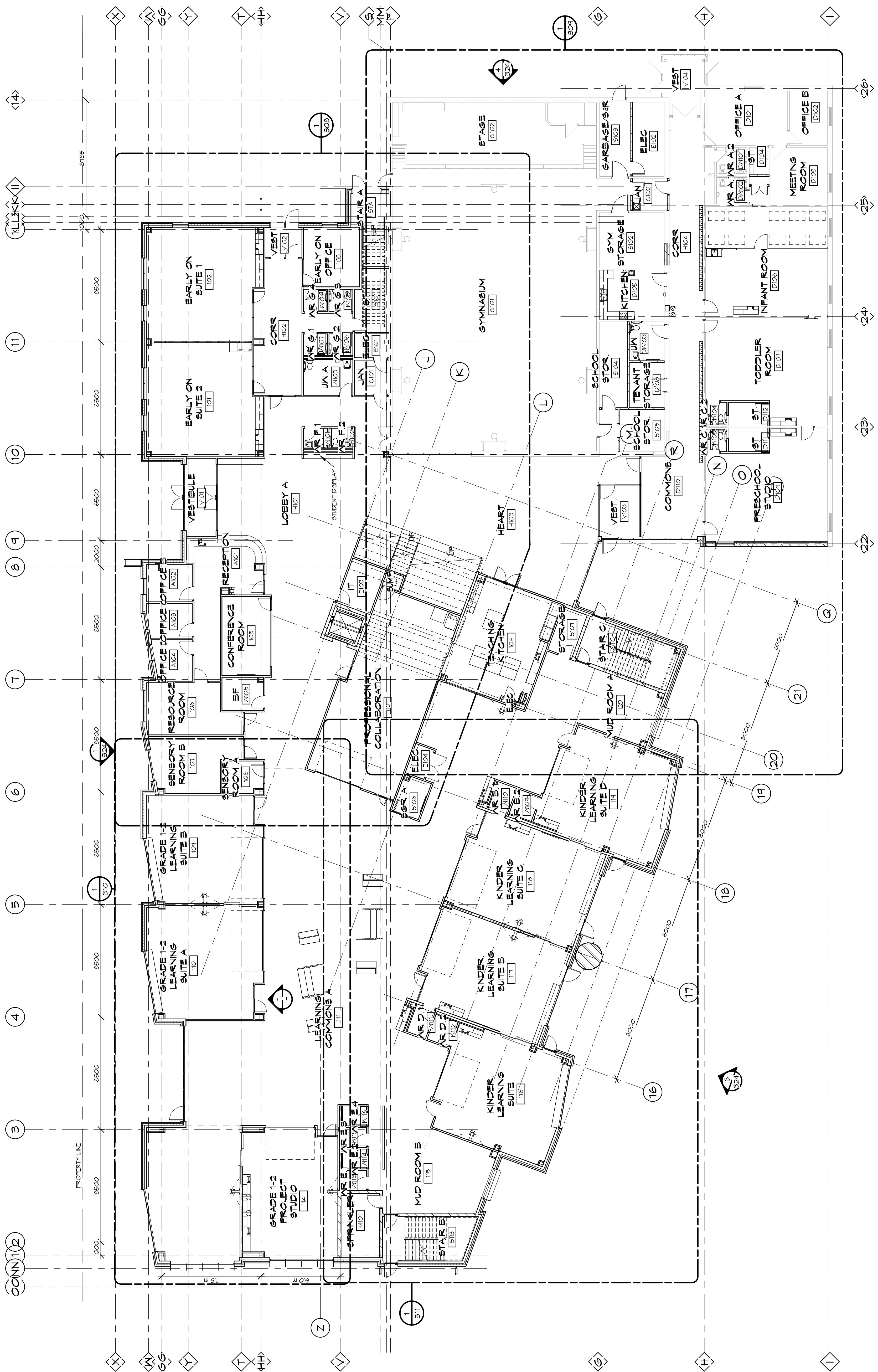
SCALE
 1 : 150

PROFESSIONAL SEAL

DRAWN	Author	DATE	03.2019
CHECKED	Checker	PRINTED	06/11/19
REVIEWED	Designer	DRAWING NO.	302
PROJECT NO.			18075

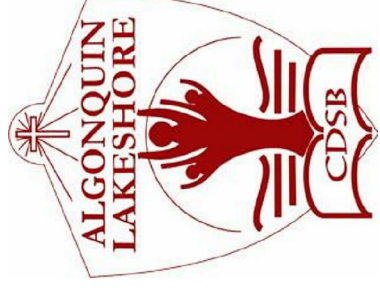


1	GROUND FLOOR PLAN
SCALE:	1 : 150
	0m 3m 6m 9m 12m 15m



NOTES

THIS DRAWING AND DESIGN ARE THE COPYRIGHT PROPERTY OF COLBOURNE & KEWEL, ARCHITECTS INC. NO PART OF THIS DRAWING OR DESIGN MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT THE EXPRESS WRITTEN CONSENT OF THE ARCHITECT. ISSUED FOR THE ARCHITECT'S RECORD. DRAWINGS MUST NOT BE SCALED. VERIFY DIMENSIONS ON SITE.



TENDER NO.: T-2019-??

NO. | BY | REVISIONS | SUBMISSIONS | DATE

COLBOURNE & KEWEL, ARCHITECTS INC. 300 UNIVERSITY AVENUE, SUITE 200, WILLOWDALE, ONTARIO M2H 3K4 TEL: 416-491-2222 FAX: 416-491-2271

DESIGN ARCHITECT



Fielding Nair International 300 UNIVERSITY AVENUE, SUITE 200, WILLOWDALE, ONTARIO M2H 3K4 TEL: 612-200-9159 WWW.FIELDINGNAIR.COM

PROJECT ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SUCES)

405 BRIDGE ST E BELLEVILLE, ON

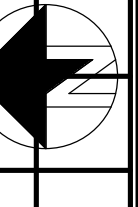
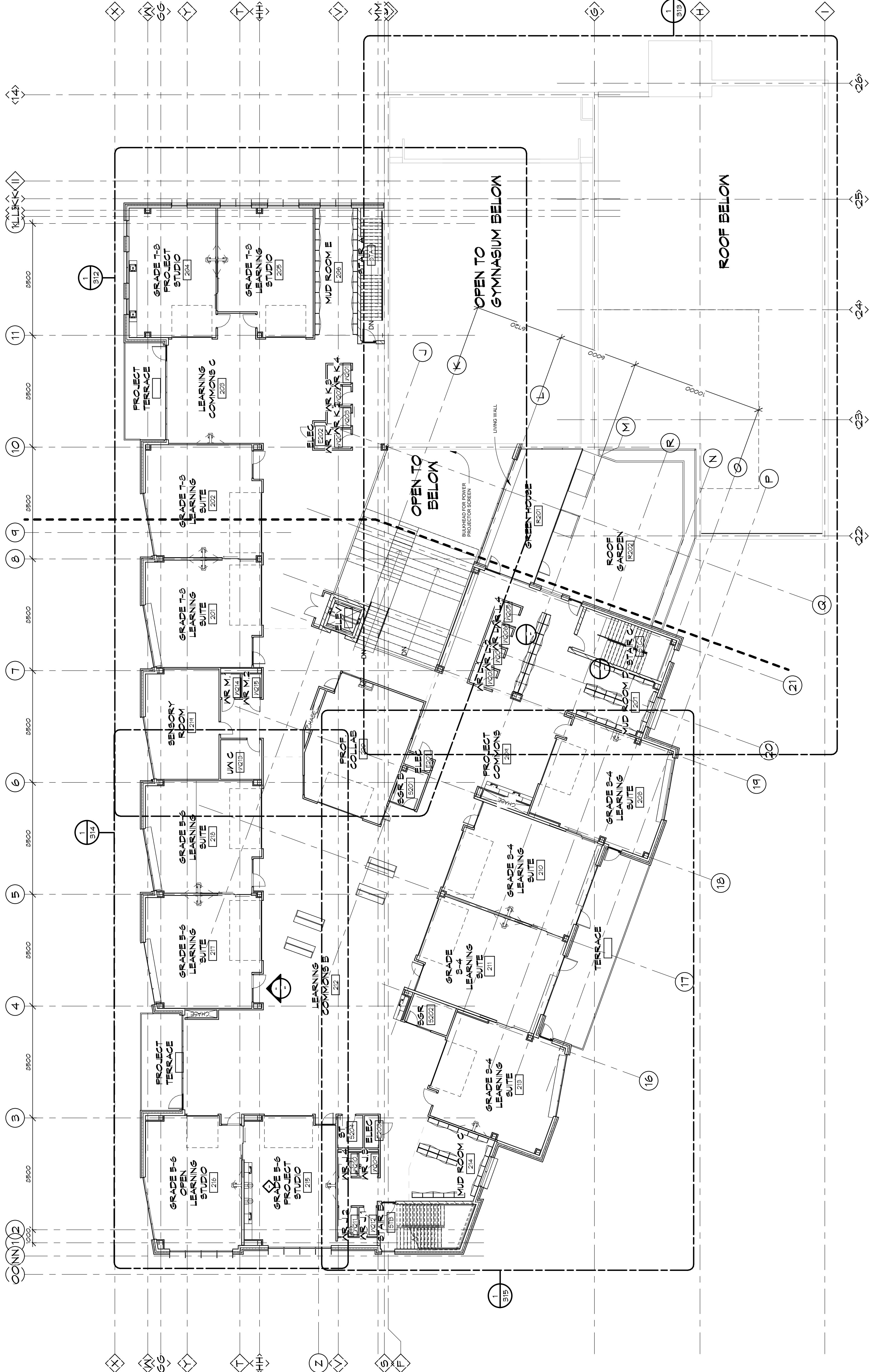
DRAWING SECOND FLOOR PLAN

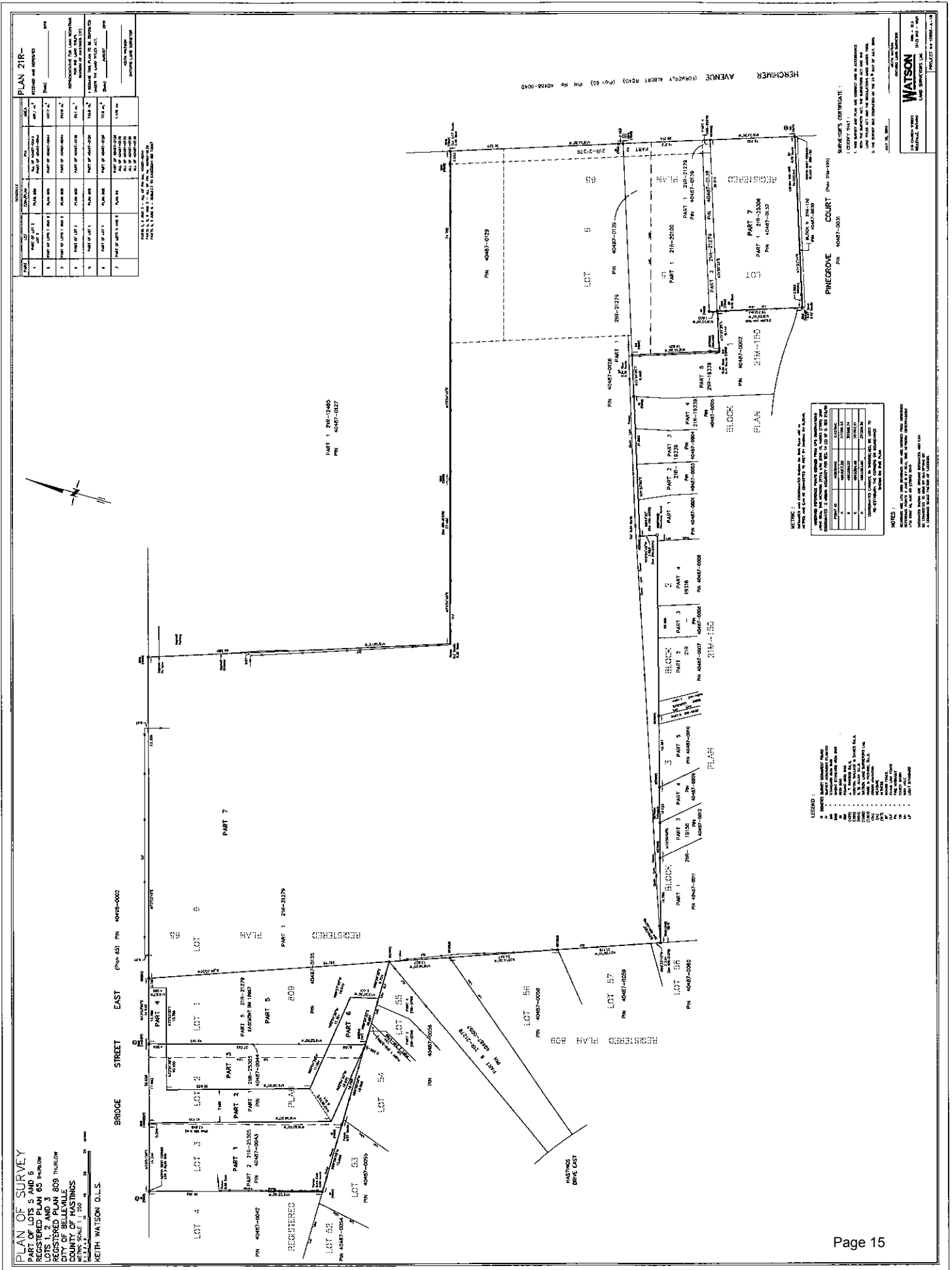
SCALE 1 : 150

PROFESSIONAL SEAL

DRAWN	DATE	03.2019
AUTHOR	PRINTED	06/11/19
CHECKED	CHECKER	DESIGNER
REVIEWED	DESIGNER	PROJECT NO.
		18075
NOT FOR CONSTRUCTION WITHOUT FINAL AND SIGNED NOTE		

1	SECOND FLOOR PLAN
SCALE: 1 : 150	
0m 3m 6m 9m 12m 15m	





PLAN 21R-

LOT	AREA	AREA	AREA	AREA	AREA	AREA	AREA
1	AREA OF LOT 1	AREA OF LOT 1	AREA OF LOT 1	AREA OF LOT 1	AREA OF LOT 1	AREA OF LOT 1	AREA OF LOT 1
2	AREA OF LOT 2	AREA OF LOT 2	AREA OF LOT 2	AREA OF LOT 2	AREA OF LOT 2	AREA OF LOT 2	AREA OF LOT 2
3	AREA OF LOT 3	AREA OF LOT 3	AREA OF LOT 3	AREA OF LOT 3	AREA OF LOT 3	AREA OF LOT 3	AREA OF LOT 3
4	AREA OF LOT 4	AREA OF LOT 4	AREA OF LOT 4	AREA OF LOT 4	AREA OF LOT 4	AREA OF LOT 4	AREA OF LOT 4
5	AREA OF LOT 5	AREA OF LOT 5	AREA OF LOT 5	AREA OF LOT 5	AREA OF LOT 5	AREA OF LOT 5	AREA OF LOT 5
6	AREA OF LOT 6	AREA OF LOT 6	AREA OF LOT 6	AREA OF LOT 6	AREA OF LOT 6	AREA OF LOT 6	AREA OF LOT 6
7	AREA OF LOT 7	AREA OF LOT 7	AREA OF LOT 7	AREA OF LOT 7	AREA OF LOT 7	AREA OF LOT 7	AREA OF LOT 7

ACCEPTED AND APPROVED

NOTES:

1. ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
2. ALL CORNERS ARE TO BE MARKED WITH IRON PIPES OR CONCRETE MONUMENTS.
3. ALL DISTANCES ARE TO BE MEASURED ALONG THE CENTERLINE OF THE ROAD.
4. ALL DISTANCES ARE TO BE MEASURED ALONG THE CENTERLINE OF THE ROAD.
5. ALL DISTANCES ARE TO BE MEASURED ALONG THE CENTERLINE OF THE ROAD.
6. ALL DISTANCES ARE TO BE MEASURED ALONG THE CENTERLINE OF THE ROAD.
7. ALL DISTANCES ARE TO BE MEASURED ALONG THE CENTERLINE OF THE ROAD.

LEGEND:

- 1. BOUNDARY LINE
- 2. CENTERLINE OF ROAD
- 3. CENTERLINE OF ROAD
- 4. CENTERLINE OF ROAD
- 5. CENTERLINE OF ROAD
- 6. CENTERLINE OF ROAD
- 7. CENTERLINE OF ROAD
- 8. CENTERLINE OF ROAD
- 9. CENTERLINE OF ROAD
- 10. CENTERLINE OF ROAD

REGISTERED PLAN 809

REGISTERED PLAN 808

REGISTERED PLAN 807

REGISTERED PLAN 806

REGISTERED PLAN 805

REGISTERED PLAN 804

REGISTERED PLAN 803

REGISTERED PLAN 802

REGISTERED PLAN 801

WATSON

28 CHERRY STREET
 BELLEVILLE, MISSOURI 63401
 PHONE: (636) 338-1111
 FAX: (636) 338-1112
 WWW.WATSONSURVEYING.COM

FOTENN

405 Bridge Street

Planning Justification Report



Prepared for:

**Algonquin and Lakeshore Catholic
District School Board
151 Dairy Avenue
Napanee, ON K7R 4B2**

Prepared by:

FOTENN Planning
+ Design

**Fotenn Planning + Design
The Woolen Mill
6 Catarqui Street, Suite 108
Kingston, ON K7K 1Z7
T 613.541.5454
fotenn.com**

September 06, 2019

CONTENTS

1.0 Introduction	2
1.1 Executive Summary	2
1.2 Introduction	2
1.3 Development Application	2
2.0 Development Proposal.....	4
2.1 Subject Site and Surrounding Context.....	4
2.2 Development Proposal	7
3.0 Supporting Studies	8
3.1 Stormwater Management Report.....	8
3.2 Tree Report.....	8
3.3 Transportation Impact Assessment	8
3.4 Servicing Report	10
4.0 Policy & Regulatory Review	12
4.1 Provincial Policy Statement.....	12
4.2 City of Belleville Official Plan	14
5.0 Current & Proposed Zoning	26
6.0 Conclusion	29
7.0 Proposed Official plan Amendment.....	30
8.0 Zoning By-law Amendment	31

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.

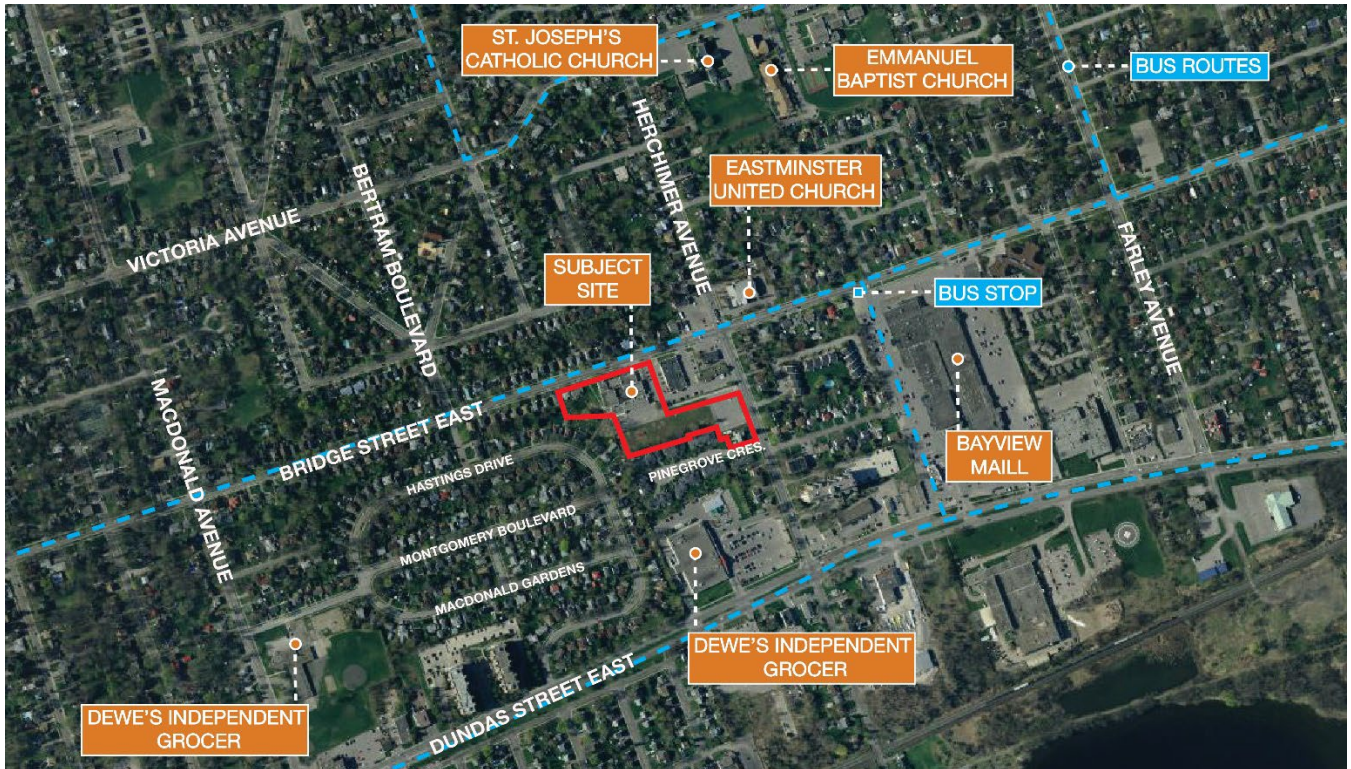


Figure 2: Site Context (source: Ontario AgMaps).

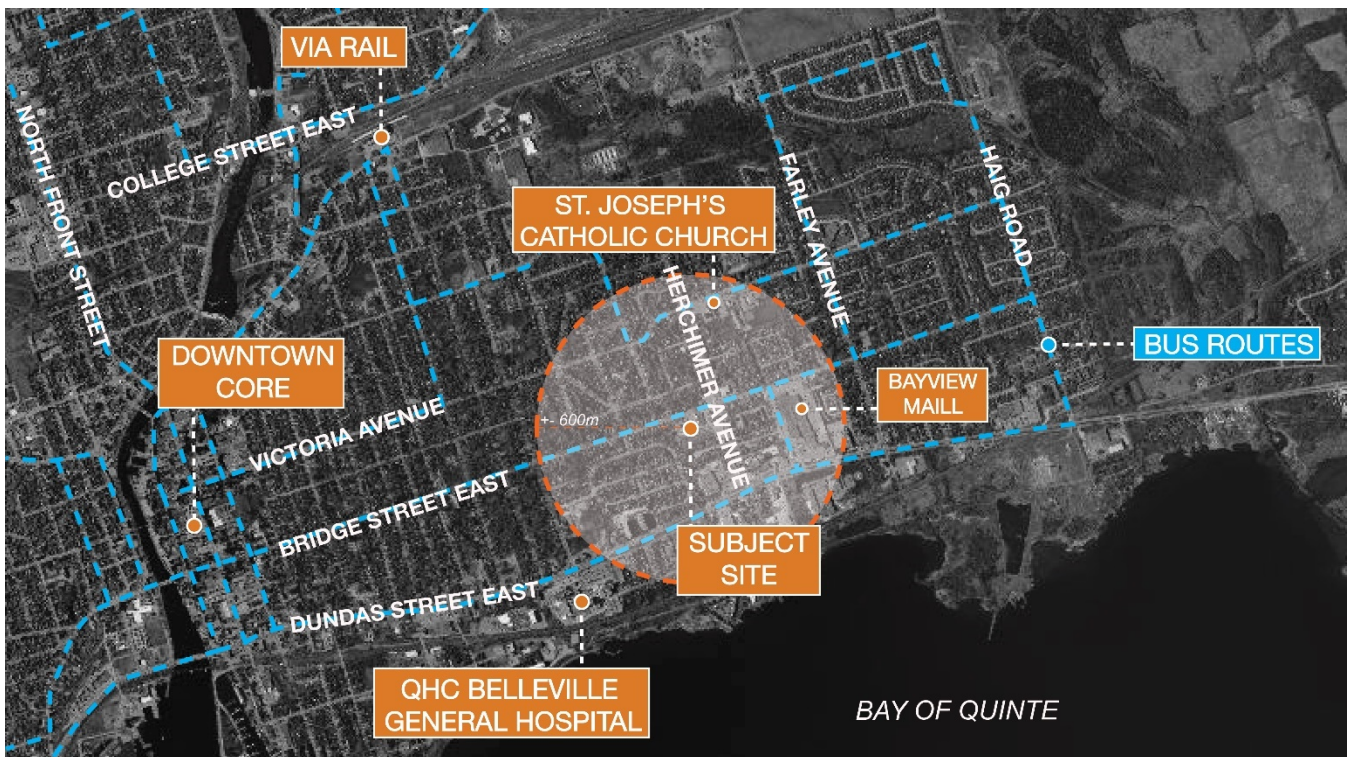


Figure 3: Area Context (source: Ontario AgMaps).

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 conducted 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 exited 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.

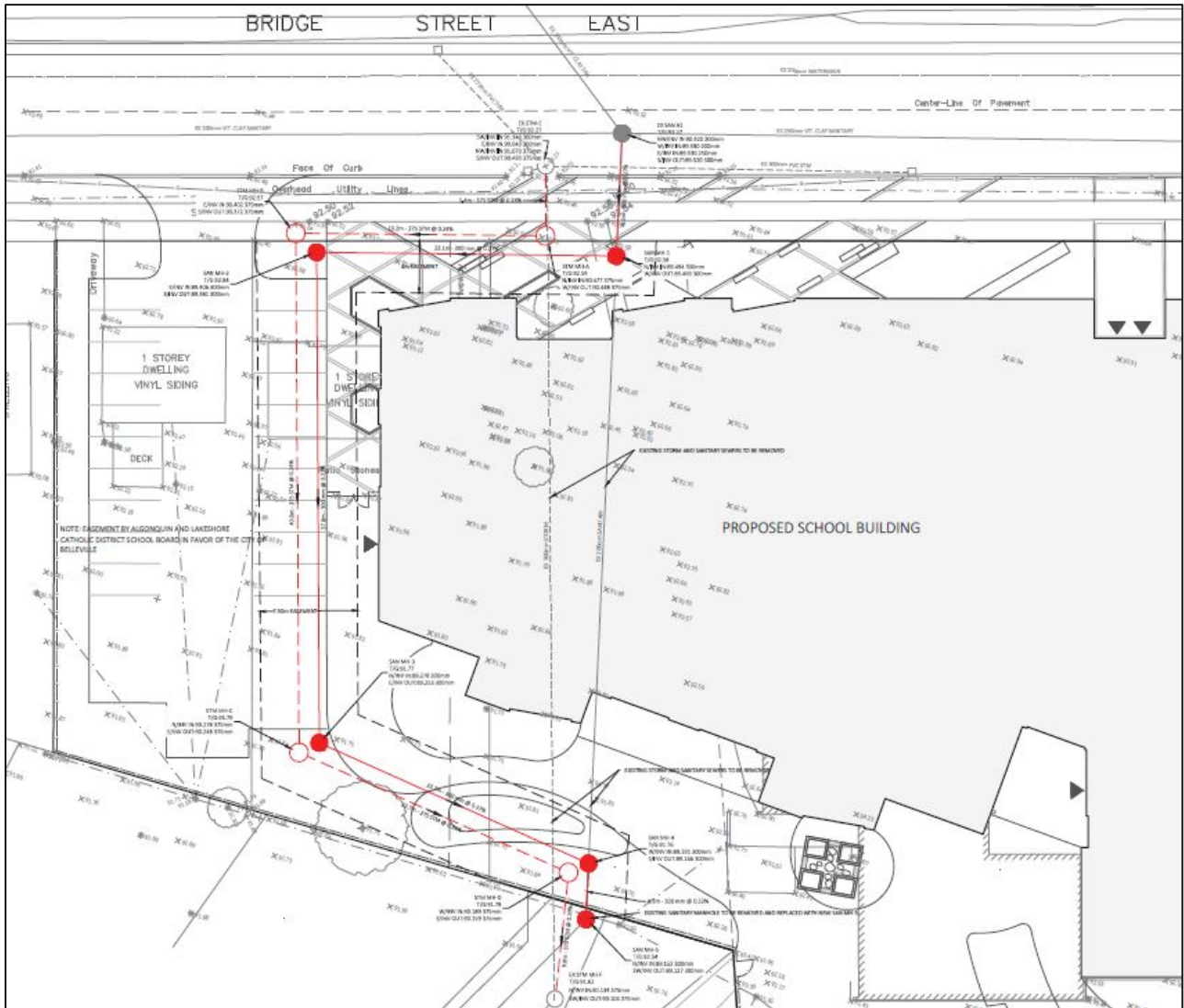


Figure 4: Sanitary & Storm Sewer Relocation (source: Josselyn Engineering Inc.).

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.

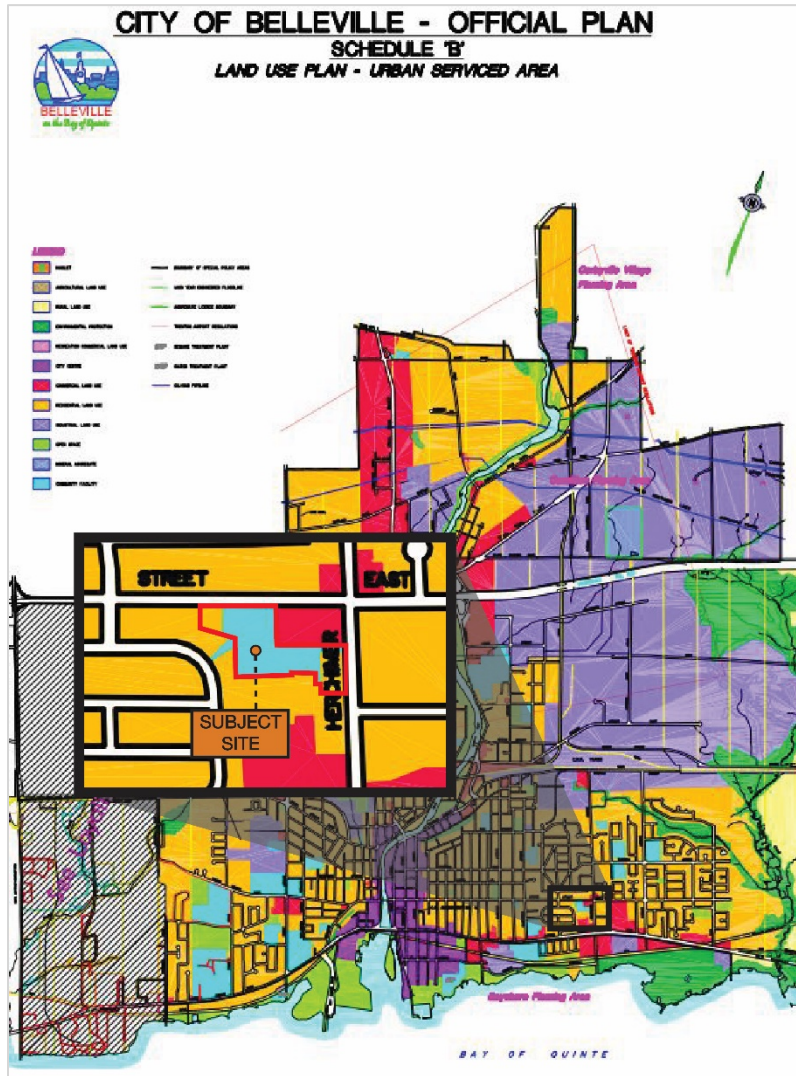


Figure 5: Schedule B – Land Use Plan (source: City of Belleville Official Plan).

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 walking 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 or 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 walking 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 m ² /17,154 m ²)	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 m ² = 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-__.

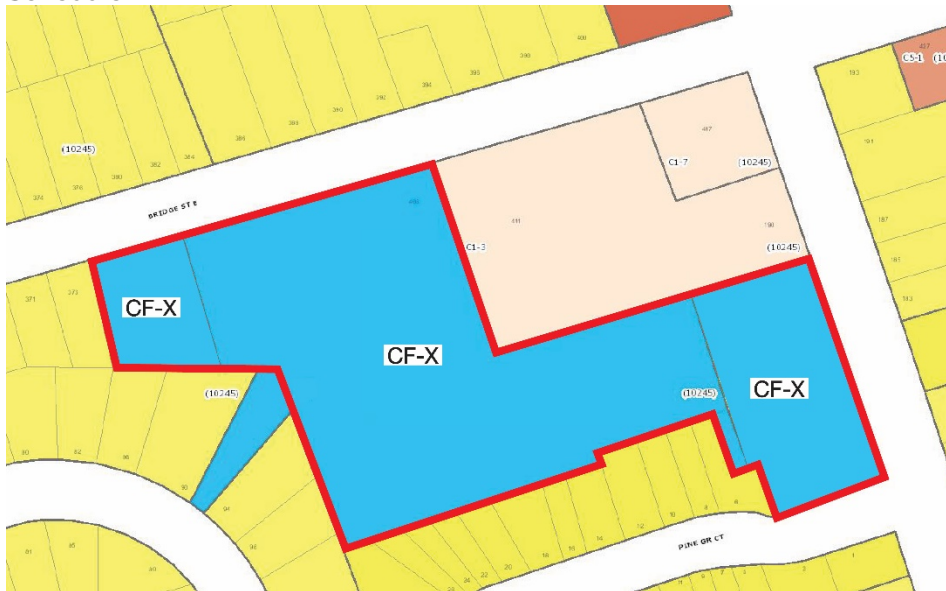
1.2 By adding a new subsection thereto, as follows:

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



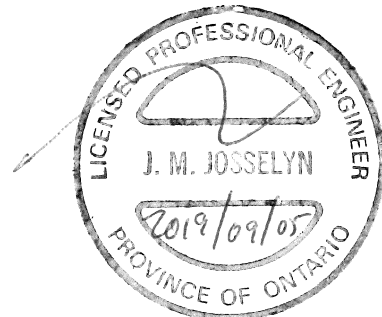
ST. JOSEPHS CATHOLIC ELEMENTARY SCHOOL
405 BRIDGE STREET EAST, BELLEVILLE, ONTARIO
for Algonquin and Lakeshore Catholic District School Board

SERVICING REPORT

JOSELYN ENGINEERING INCORPORATED
1225 Gardiners Road, Suite #105
Kingston, Ontario, K7P 0G3
(613) 634-9278

September 5, 2019

JEI Project 1447



**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

Table of Contents

1.	Introduction.....	2
2.	Existing Conditions	2
3.	Proposed Renovations and Addition to Existing School.....	2
4.	Sanitary Sewer	3
4.1.	Sanitary Sewer Mains.....	3
4.2.	Sanitary Sewer Service.....	4
5.	Storm Sewer Relocation	4
6.	Water Service.....	5
6.1.	Water Demand.....	5
6.2.	Water Supply.....	6
7.	Utilities	6
7.1.	Electrical Distribution	6
7.2.	Telephone.....	7
7.3.	Natural Gas.....	7
8.	Conclusions and Recommendations	7

Appendix A – Aerial view of Existing School Property and Adjacent Properties Purchased by the Board

Appendix B – Site Plan

Appendix C – Hydrant Flow Data

Appendix D – Fire Flow Calculations

Appendix E – Sanitary Sewers, Storm Sewers & Watermain location sketches

Appendix F – Preliminary Servicing Sketch & Design Charts

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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.

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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.

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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

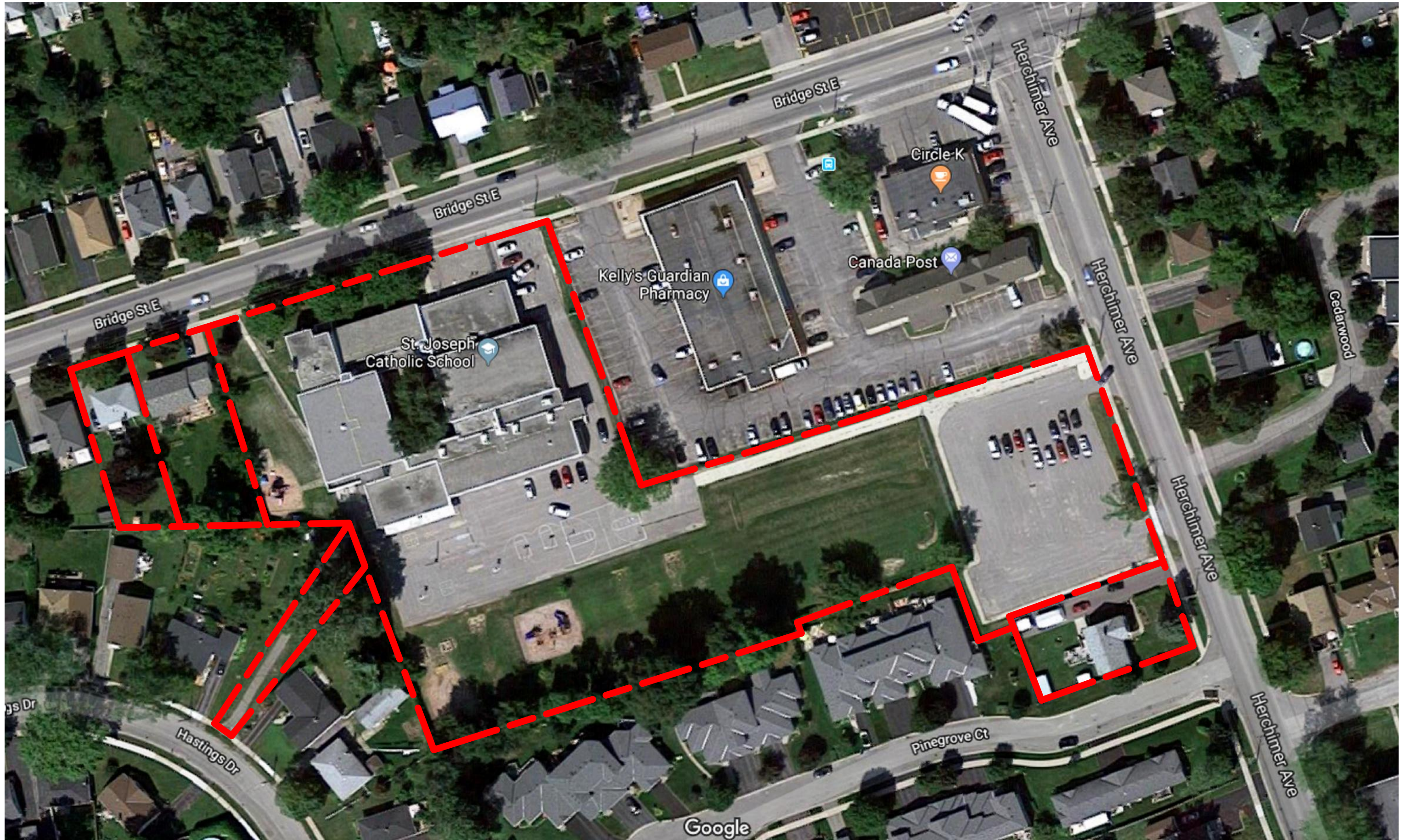
Based on the above, the following conclusions are made, and recommendations presented.

- 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.

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

Appendix A

Aerial view of Existing School Property and Adjacent Properties Purchased by the Board

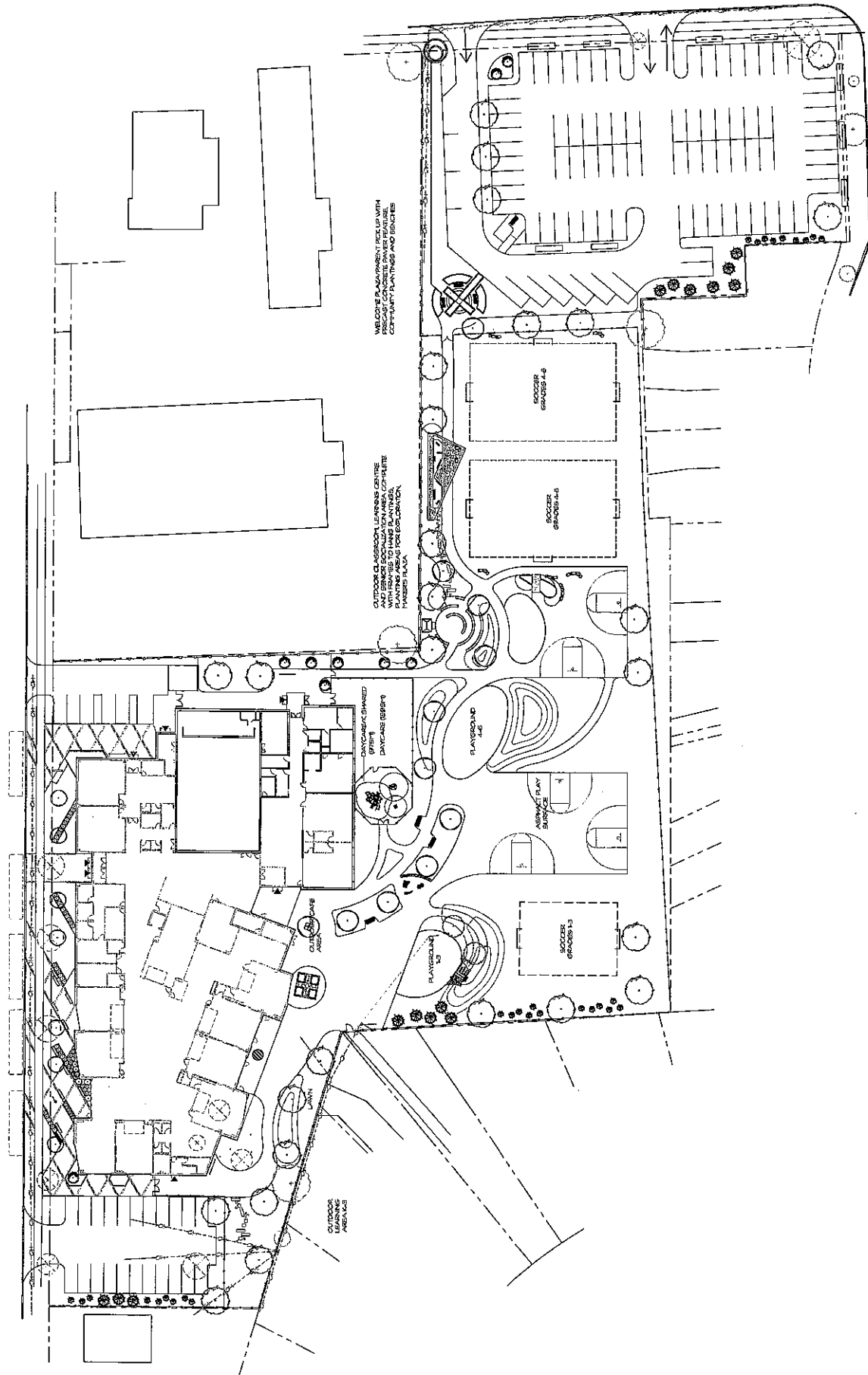


ST. JOSEPH- AERIAL VIEW

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

Appendix B

Site Plan



**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

Appendix C

Hydrant Flow Test Results

BLUE

Routing

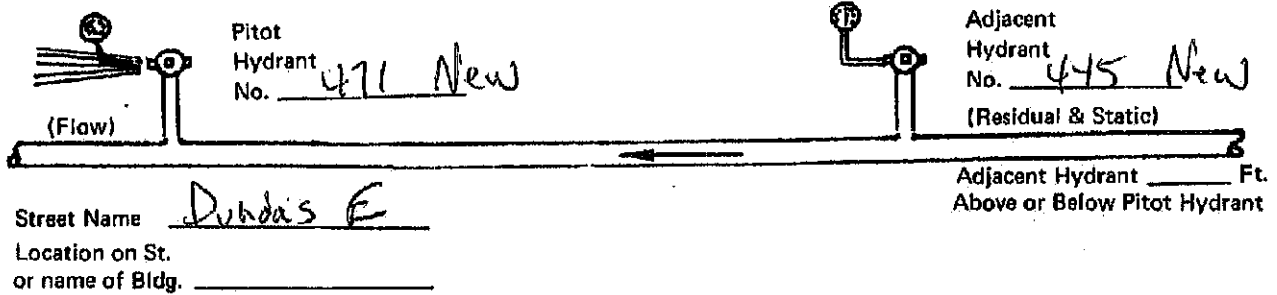
White - 1. Op. Mgr. 2. Draft. 3. FF bk.
 Pink - File 842
 Canary - Originator



Belleville Utilities Commission
 459 SIDNEY STREET
 P.O. BOX 939
 BELLEVILLE, ONT., K8N 8B6
 (613) 266-3651

Date: July 7 2016
 Time: 10:30 a.m
 Performed by: R. C. M
 File: 842

FIRE HYDRANT FLOW TEST



Provide Four Pressure Readings:

Select outlets to give 10 psi drop at adjacent hydrant if possible

OUTLETS

	one - 1"	one - 1 1/8"	one - 1 1/2"	one - 2"	two - 2 1/2"	
Step One - Adjacent Hydrant	_____	_____	_____	<u>62</u>	_____	psi (static)
Step Two - Pitot Hydrant	_____	_____	_____	<u>55</u>	<u>40</u>	psi (flow)
Step Three - Adjacent Hydrant	_____	_____	_____	<u>60</u>	<u>58</u>	psi (residual)
Step Four - Adjacent Hydrant	_____	_____	_____	<u>62</u>	_____	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

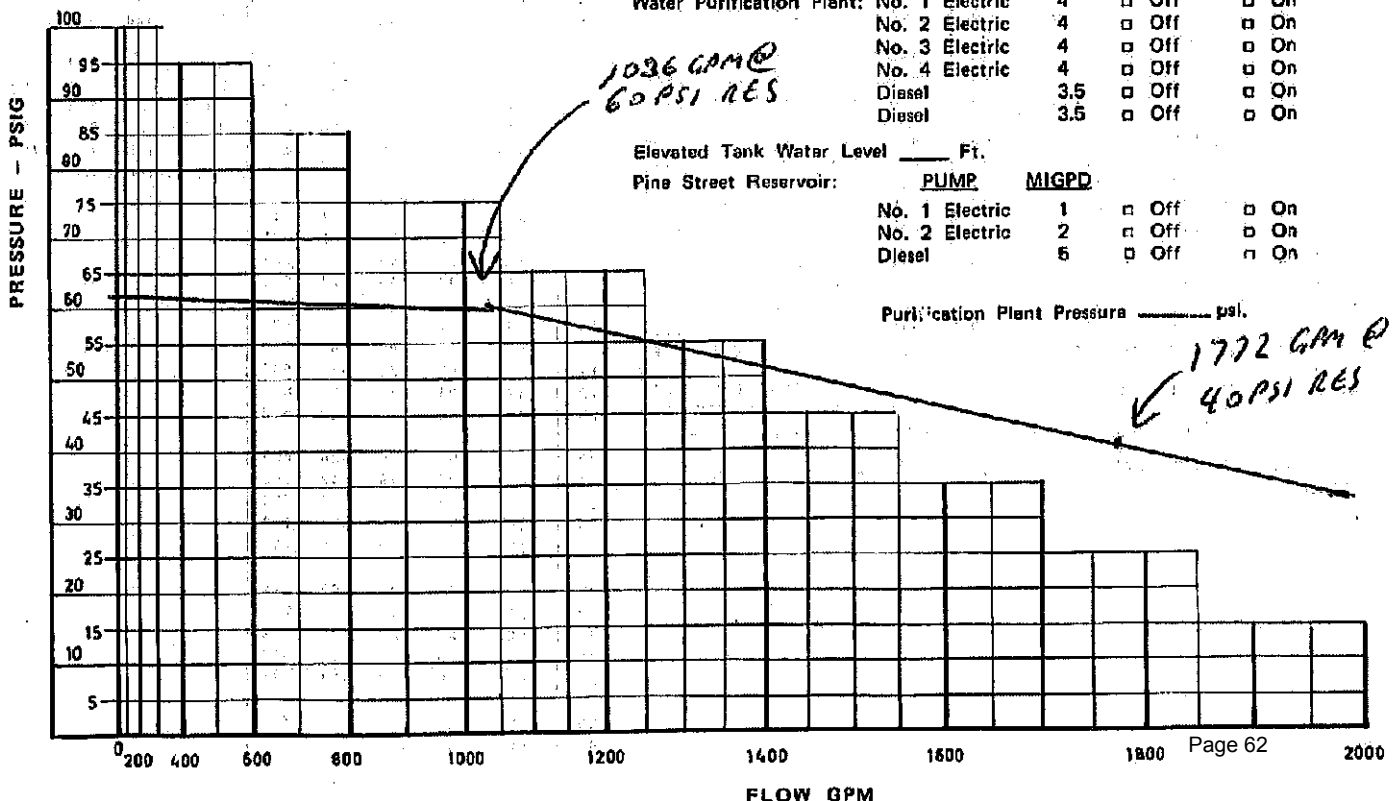
Information below can be obtained at a later date from records at Water Purification Plant.

	PUMP	MIGPD		
Water Purification Plant:	No. 1 Electric	4	<input type="checkbox"/> Off	<input type="checkbox"/> On
	No. 2 Electric	4	<input type="checkbox"/> Off	<input type="checkbox"/> On
	No. 3 Electric	4	<input type="checkbox"/> Off	<input type="checkbox"/> On
	No. 4 Electric	4	<input type="checkbox"/> Off	<input type="checkbox"/> On
	Diesel	3.5	<input type="checkbox"/> Off	<input type="checkbox"/> On
	Diesel	3.5	<input type="checkbox"/> Off	<input type="checkbox"/> On

Elevated Tank Water Level _____ Ft.

	PUMP	MIGPD		
Pine Street Reservoir:	No. 1 Electric	1	<input type="checkbox"/> Off	<input type="checkbox"/> On
	No. 2 Electric	2	<input type="checkbox"/> Off	<input type="checkbox"/> On
	Diesel	6	<input type="checkbox"/> Off	<input type="checkbox"/> On

Purification Plant Pressure _____ psi.



**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

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 m ²			
Second floor – 2189 m ²			
total floor area (m ²)			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.

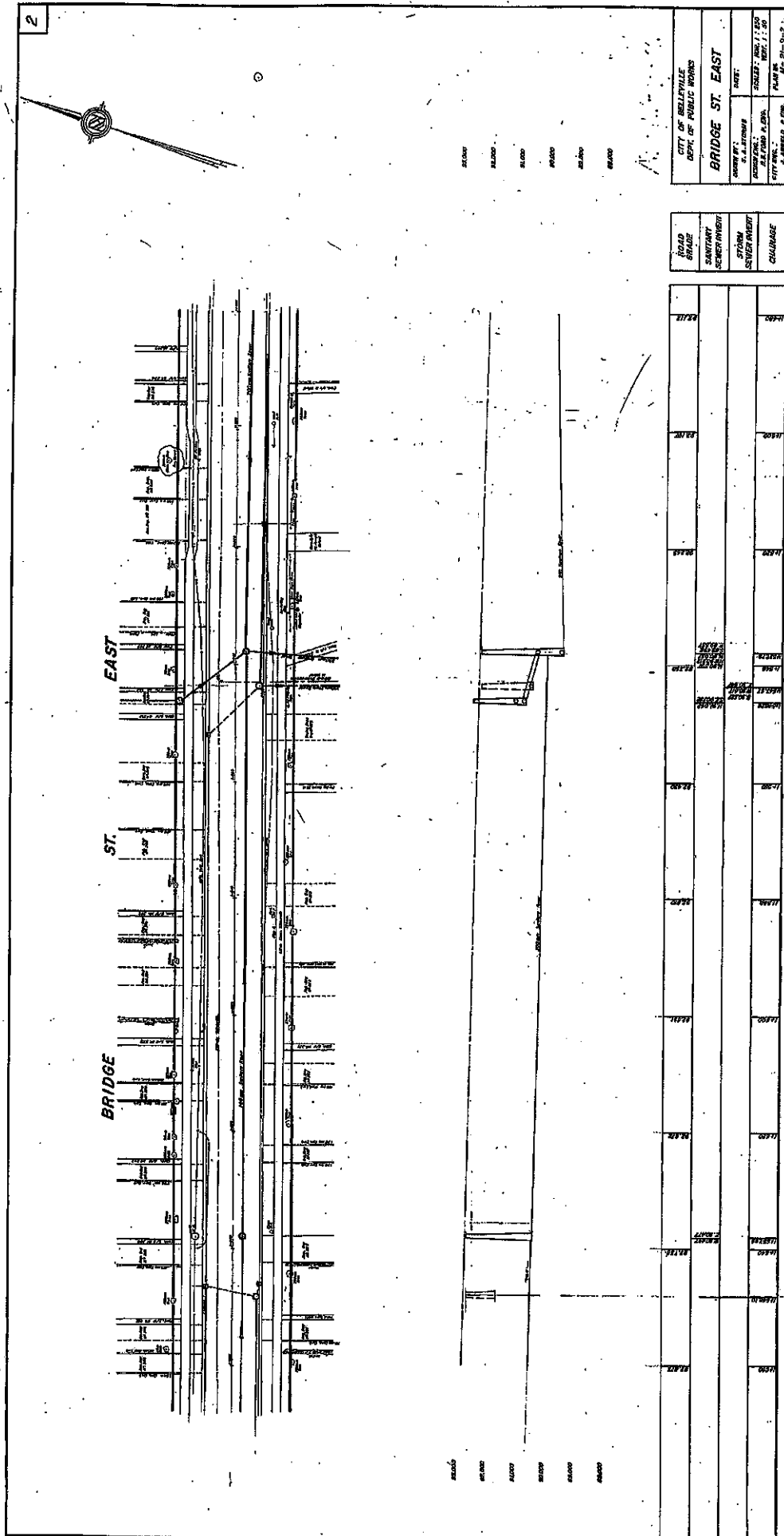
Non-combustible Construction – Any structures having all structural members including walls, columns, piers, beams, girders, trusses, floors, and roofs of non-combustible material and not qualifying as fire-resistive construction. For example, unprotected metal buildings.

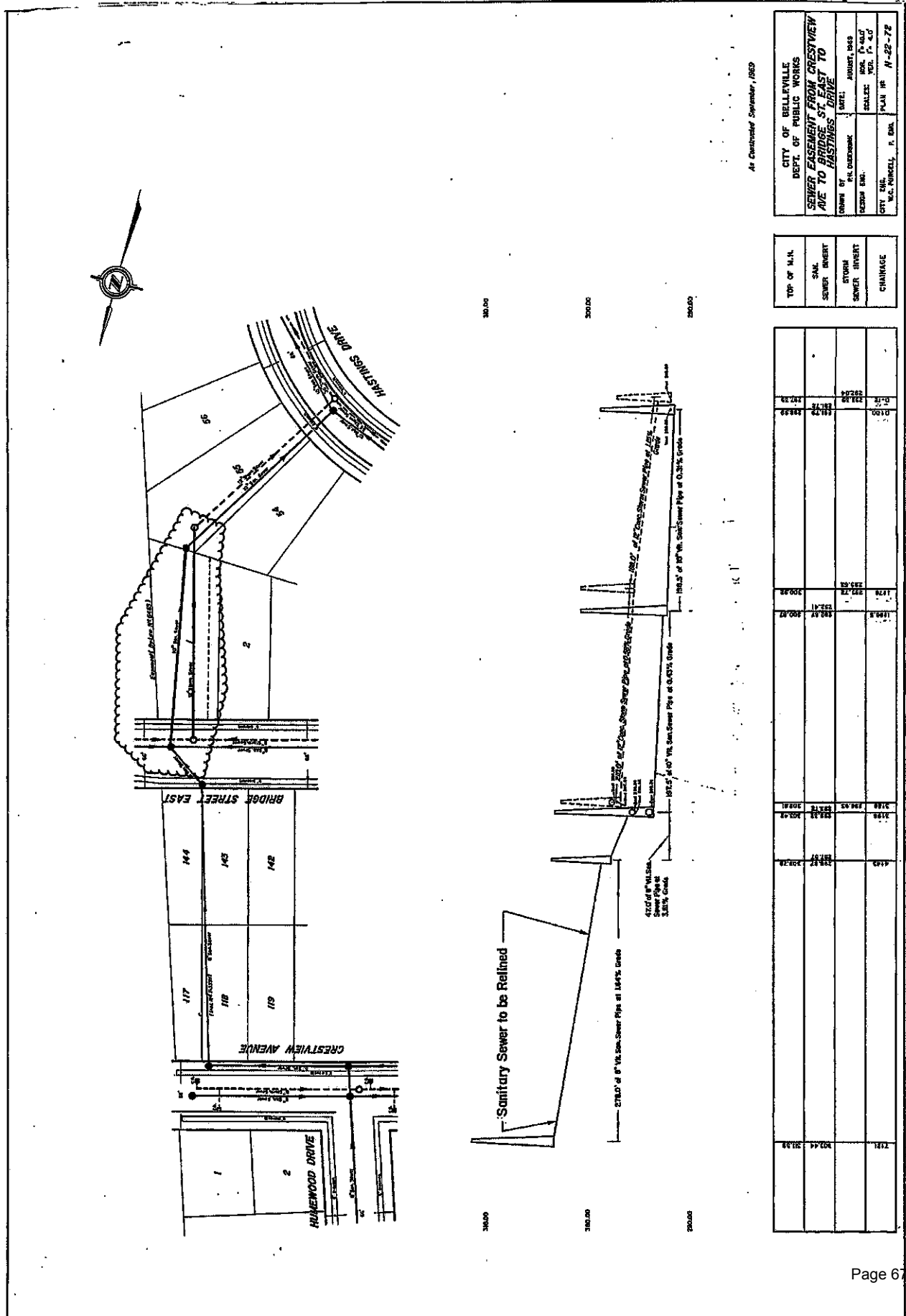
Separation	Charge	Separation	Charge
0 to 3m	25%	20.1m to 30m	10%
3.1 to 10m	20%	30.1 to 45m	5%
10.1 to 20m	15%		
The total percentage shall not exceed 75%.			

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

Appendix E

Sanitary Sewers, Storm Sewers & Watermain location sketches





As Constructed September, 1969

CITY OF BELLEVILLE DEPT. OF PUBLIC WORKS	
SEWER EASEMENT FROM CRESTVIEW AVE TO BRIDGE ST. EAST TO HASTINGS DRIVE	
OWNER OF SECTION 844	OWNER SECTION 844
CITY ENG. W.C. HANCOCK, P. ENGR.	SCALE: 1" = 40' PLAN IR N-32-72

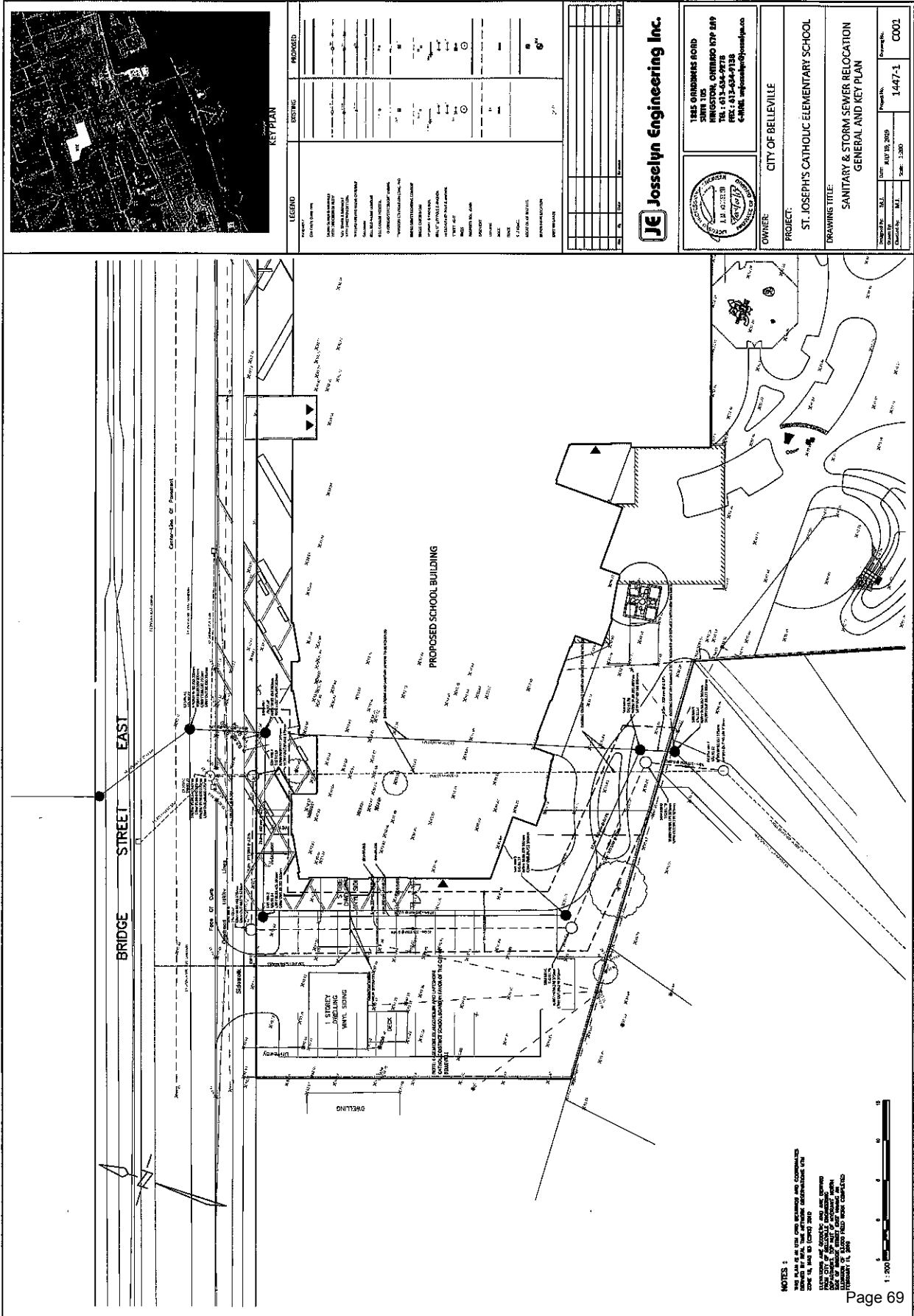
TOP OF H.A.	
SAN. SEWER INVERT	
STORM SEWER INVERT	
CHAINAGE	

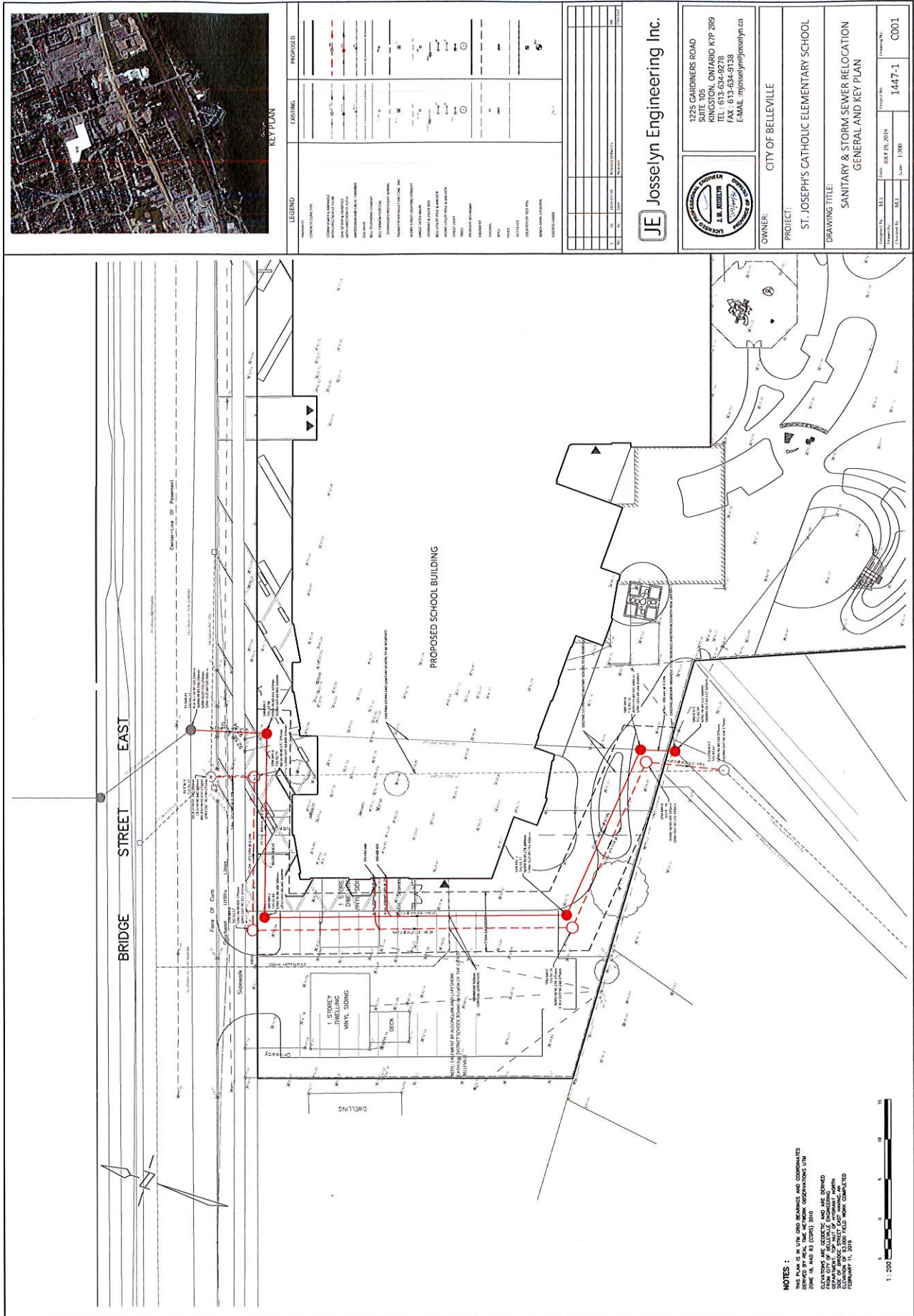
117	118	119	144	143	142
100.44	100.44	100.44	100.44	100.44	100.44
100.44	100.44	100.44	100.44	100.44	100.44
100.44	100.44	100.44	100.44	100.44	100.44
100.44	100.44	100.44	100.44	100.44	100.44
100.44	100.44	100.44	100.44	100.44	100.44

**Algonquin and Lakeshore Catholic District School Board
St. Joseph's Catholic Elementary School - Belleville**

Appendix F

Servicing Plan & Design Charts





ALGONQUIN AND LAKESHORE CATHOLIC SCHOOL BOARD

ST. JOSEPH'S SCHOOL

405 Bridge Street, Belleville, Ontario

STORMWATER MANAGEMENT REPORT

JOSELYN ENGINEERING INCORPORATED

1225 Gardiners Road, Suite #105

Kingston, Ontario, K7P 0G3

(613) 634-9278

August 22, 2019.

JEI Project 1447



City of Belleville

405 Bridge Street

Table of Contents

1. Introduction.....3

2. Existing Site Conditions and Drainage.....3

3. Proposed Site Drainage.....6

4. Quality Control9

5. Erosion and Sediment Control During Construction.....10

6. Conclusions.....10

Appendix A – Site Plan

Appendix B – Stormwater Calculations

Appendix C – Typical StormTech Details

Appendix D – Isolator Row Testing Summary

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.

*City of Belleville**405 Bridge Street*

$$Q = 0.00278CIA$$

where: Q = release rate (m³/s)

C = runoff coefficient

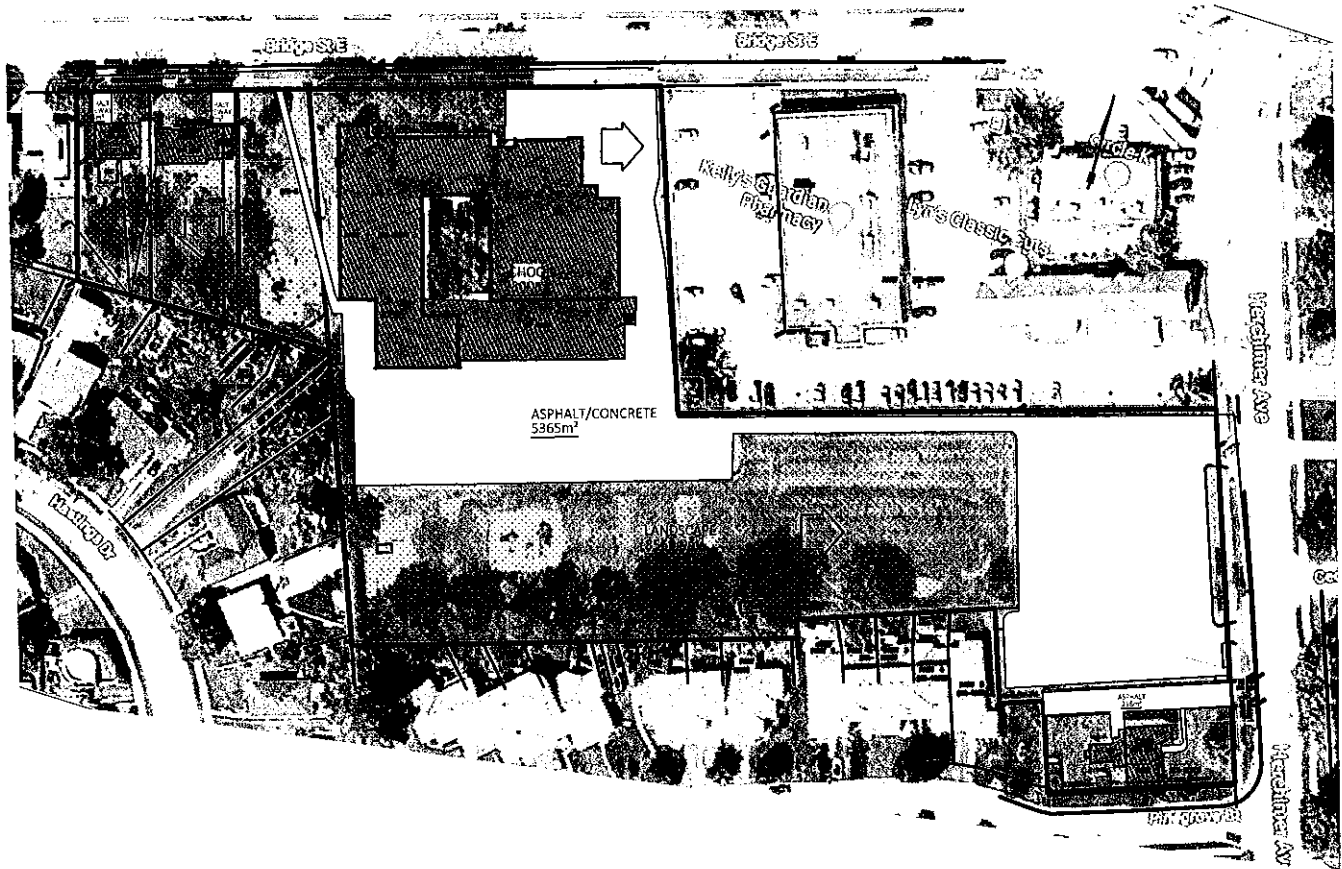
I = Rainfall Intensity (mm/hr)

A = Drainage Area (m²)

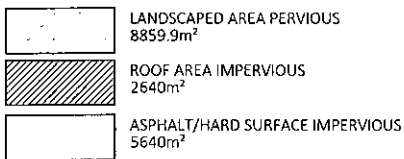
The pre development release rates are calculated Appendix B, and are summarized in Table 1.

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 0.03m³/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



Owner:

CITY OF BELLEVILLE
ST. JOSEPH'S CATHOLIC ELEMENTARY SCHOOL

JE 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

Page 76

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.

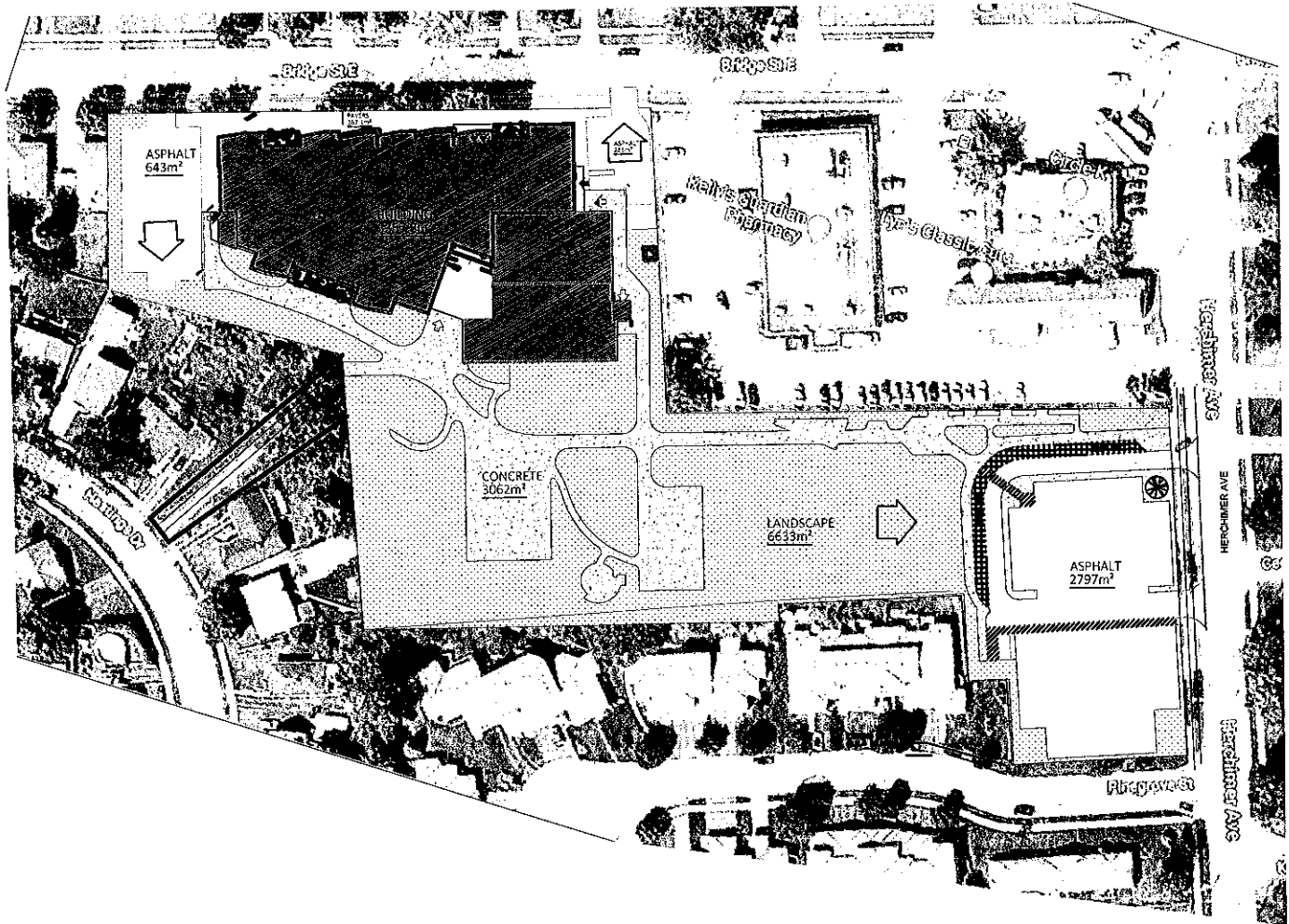
An onsite storm sewer shall be provided on site to convey drainage from the majority of the site to an underground stormwater system located in the eastly parking area. The underground system shall discharge to the existing 750mm storm sewer on Herchimer Drive. Controlled release from the underground 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.

2 year	5 year	100 year
0.160 m ³ /s	0.209 m ³ /s	0.498m ³ /s



SITE AREA 17139.9m²

	LANDSCAPED AREA PERVIOUS 6633m ²
	ROOF AREA IMPERVIOUS 3357.8m ²
	ASPHALT/HARD SURFACE IMPERVIOUS 4087.1m ²
	CONCRETE HARD SURFACE IMPERVIOUS 3062m ²

Owner:

CITY OF BELLEVILLE
ST. JOSEPH'S CATHOLIC ELEMENTARY SCHOOL

JE 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

City of Belleville

405 Bridge Street

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.

$$D = \left[\frac{0.5 Q}{h^{1/2}} \right]^{1/2}$$

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.

Storm Event	Pre-Development Rate	Controlled Release Rate
2 year	0.139m ³ /s	0.135 m ³ /s
5 year	0.181m ³ /s	0.184m ³ /s
100 year	0.325m ³ /s	0.322 m ³ /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 (m³/s)	Storage Required (m³)
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 177m³ 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 the 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.

*City of Belleville**405 Bridge Street*

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 through 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.

City of Belleville

405 Bridge Street

APPENDIX A

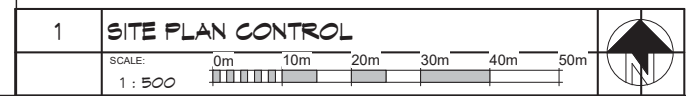
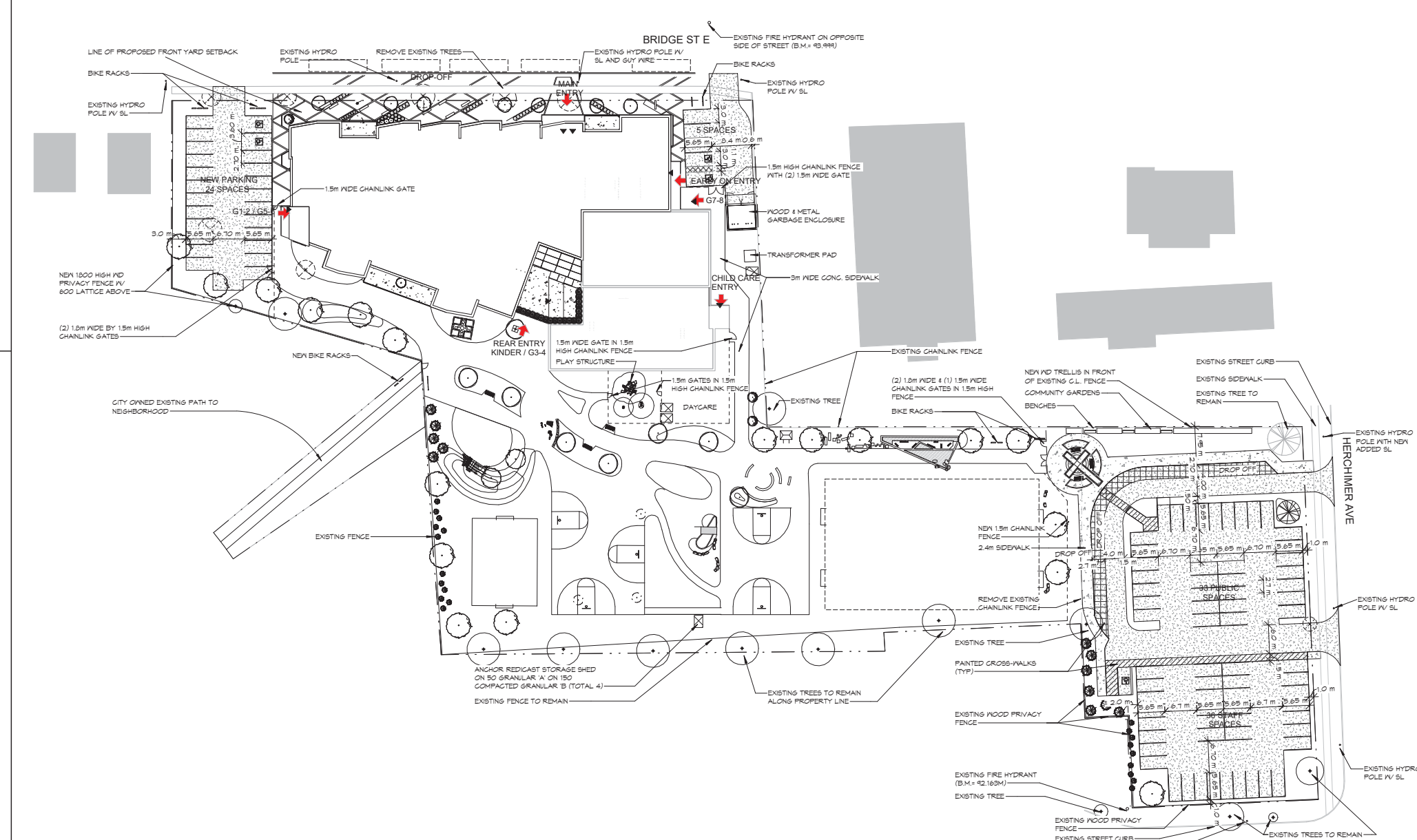
Site Plan

Josselyn Engineering

Page 12

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 m ²	3,430 m ²	
LOT AREA (MIN)	N/A	14,915 m ²	11,154 m ²	
FRONT YARD (MIN)	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT			
INTERIOR SIDE YARD (MIN)	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT		1.5m	
REAR YARD (MIN)	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT		5.9m	
LOT COVERAGE (MAX)	33%	2,303 m ² (15%)	3,430 m ² (20%)	LOT IS BEING ENLARGED
HEIGHT OF BUILDING (MAX)			12.0m	
NUMBER OF STOREYS				
FRONTAGE			10.5m (HERCHIMER) / 121.0m (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 M ²) - 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/V 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)	
ASILE 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 CURB & LANDSCAPING	3.1m (EAST)	1.0m WITH CURB & LANDSCAPING	PLUS ADDITIONAL 5.5m TO ACTUAL STREET CURB
SEPARATION FROM RESIDENTIAL ZONE	1.5m WITH ROW OF SHRUBS 1.5m HIGH		1.5m WITH 1.0m HIGH FENCE	
PARKING SPACES	1 SPACE/23M ² = 122 SPACES	55 (EAST)	112, INCLUDING 4 B/V	
B/V PARKING SPACES	3 SPACES FOR 1 ST 100 SPACES, +1 FOR EACH 100 MORE, OR PORTION THEREOF + 4 SPACES		4 B/V 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
	SIGN TYPE A: BARRIER FREE REGULATORY SIGN 'VAN ACCESSIBLE'
	SIGN TYPE B: BARRIER FREE REGULATORY SIGN
	SIGNAGE REQUIREMENTS IN SECTION 11 OF REGULATION 551 OF THE HIGHWAY TRAFFIC ACT
	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



NOTES:
 COPYRIGHT
 THIS DRAWING AND DESIGN ARE THE COPYRIGHT PROPERTY OF COLBOURNE & KEMBEL ARCHITECTS INC. AND MUST NOT BE COPIED, REPRODUCED OR DISTRIBUTED IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN CONSENT OF THE ARCHITECT. ISSUED COPIES MUST BE RETURNED TO THE ARCHITECT UPON COMPLETION.
 DRAWINGS MUST NOT BE SCALED. VERIFY DIMENSIONS ON SITE.



TENDER NO.: T-2019-??

NO. BY REVISIONS/SUBMISSIONS DATE

ARCHITECT OF RECORD
COLBOURNE & KEMBEL ARCHITECTS INC.
 7510 ARLINGTON PARK PLACE
 KINGSTON, ONTARIO K7M 5B8
 TEL: 613-336-2240 FAX: 613-336-1271
 INFO@CAR.CA WWW.CAR.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
SITE PLAN

SCALE
 As Indicated

PROFESSIONAL SEAL	DRAWN CG	DATE 03.2019
	CHECKED TC	PRINTED 03/01/19
	REVIEWED TC	DRAWING No.
	PROJECT No.	15075

City of Belleville

405 Bridge Street

APPENDIX B

Stormwater Calculations

Josselyn Engineering

Page 13

Pre-Development Release Rate

Surface Type	area (A)m ²	Coverage %	coefficient (C)	C x A	tc (minutes)	2 year		5 year		100 year	
						intensity (mm/hr)	Pre Development Release Rate (m ³ /s)	intensity (mm/hr)	Pre Development Release Rate (m ³ /s)	intensity (mm/hr)	Pre Development Release Rate (m ³ /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)m ²	Coverage %	coefficient (C)	C x A	tc (minutes)	2 year		5 year	100 year		
						intensity (mm/hr)	Post Development Release Rate (m ³ /s)	intensity (mm/hr)	Post Development Release Rate (m ³ /s)	intensity (mm/hr)	Post Development Release Rate (m ³ /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 (m³)	Total Volume (1000m³)	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 (m³/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	

City of Belleville

405 Bridge Street

APPENDIX C

Typical StormTech Details

Josselyn Engineering

Page 14

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 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*

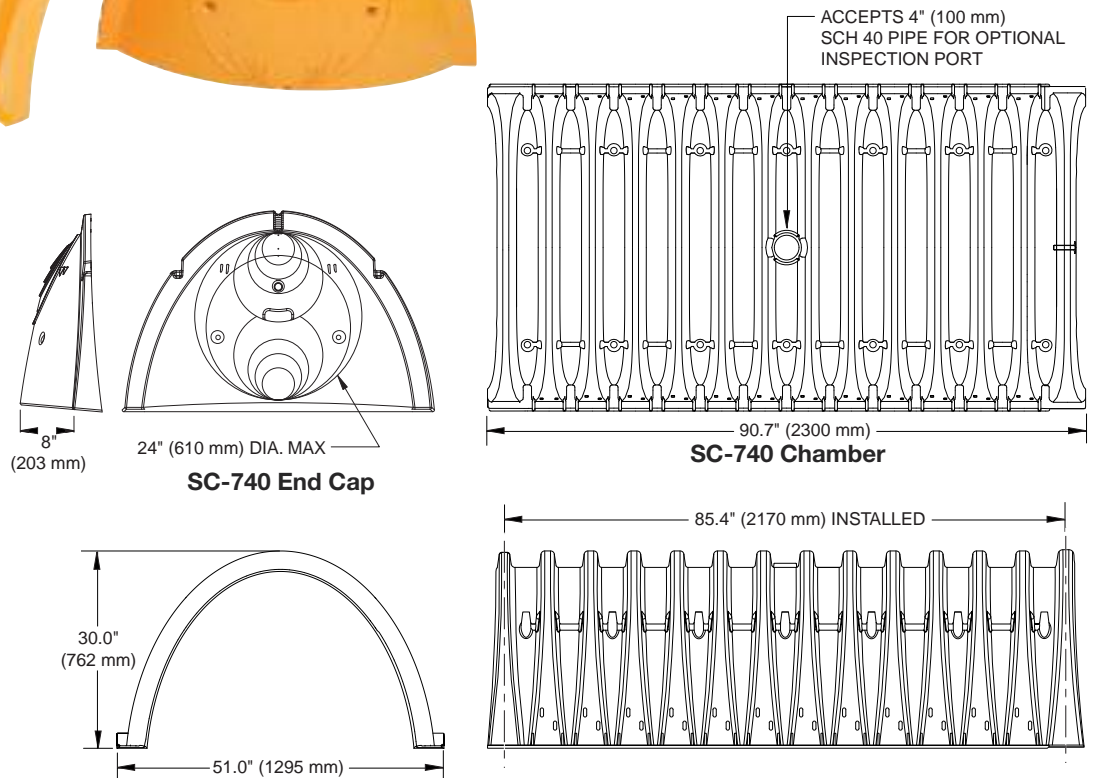
74.9 ft³ (2.12 m³)

Weight

74.0 lbs (33.6 kg)

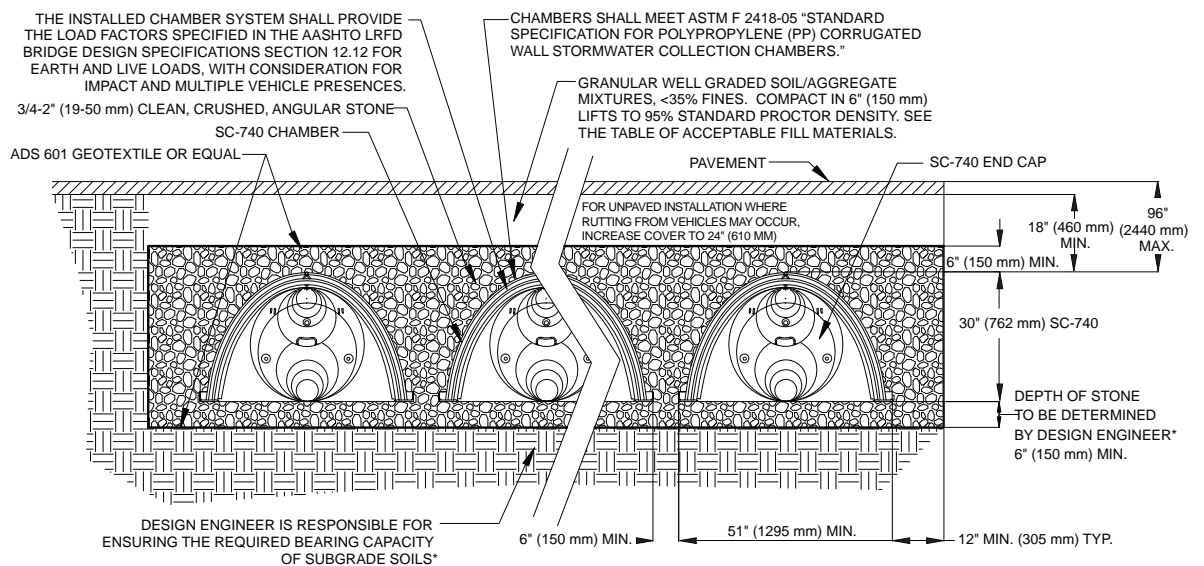
Shipping

30 chambers/pallet
60 end caps/pallet
12 pallets/truck



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



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 Ft ³ (m ³)	Total System Cumulative Storage Ft ³ (m ³)
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 ft ³ (m ³)	Chamber and 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

ENGLISH TONS (CUBIC YARDS)	Stone Foundation Depth		
	6"	12"	18"
StormTech SC-740	3.8 (2.8 yd ³)	4.6 (3.3 yd ³)	5.5 (3.9 yd ³)
METRIC KILOGRAMS (METER ³)	150 mm	305 mm	460 mm
StormTech SC-740	3450 (2.1 m ³)	4170 (2.5 m ³)	4490 (3.0 m ³)

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 MERCHANTABILITY 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 NEGLIGENCE; THE PRODUCTS BEING SUBJECT 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.**

City of Belleville

405 Bridge Street

APPENDIX D

Isolator Row Testing Summary

Josselyn Engineering

Page 15

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.



 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).

New Environmental Technology Evaluation Program

Promoting the development and application of new environmental technologies



100% Recycled Chlorine Free. Made in Canada

-
- √ 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

New Environmental Technology Evaluation Program

Promoting the development and application of new environmental technologies



100% Recycled Chlorine Free. Made in Canada

- 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.

New Environmental Technology Evaluation Program

Promoting the development and application of new environmental technologies



100% Recycled Chlorine Free. Made in Canada

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.

New Environmental Technology Evaluation Program

Promoting the development and application of new environmental technologies



100% Recycled Chlorine Free. Made in Canada



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/ft² 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/ft² 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/ft² 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

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

WSP

SUITE 300
2611 QUEENSVIEW DRIVE
OTTAWA, ON, CANADA K2B 8K2

T: +1 613 829-2800

F: +1 613 829-8299

WSP.COM



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,

A handwritten signature in black ink, appearing to read 'Sarah McDonald'.

Sarah McDonald, P. Eng.
Project Manager, Transportation Planning

WSP ref.: 181-10514-01

SUITE 300
2611 QUEENSVIEW DRIVE
OTTAWA, ON, CANADA K2B 8K2

T: +1 613 829-2800
F: +1 613 829-8299
wsp.com

SIGNATURES

PREPARED BY

Carly MacEacheron

Carly MacEacheron, P. Eng
Engineer, Transportation Planning

August 24, 2019
Date



APPROVED¹ BY

S. McDonald

Sarah McDonald, P. Eng.
Project Manager, Transportation Planning

August 28, 2019
Date



WSP Canada Group Ltd. prepared this report solely for the use of the intended recipient, ALGONQUIN AND LAKESHORE CATHOLIC SCHOOL BOARD, in accordance with the professional services agreement. The intended recipient is solely responsible for the disclosure of any information contained in this report. The content and opinions contained in the present report are based on the observations and/or information available to WSP Canada Group Ltd. at the time of preparation. If a third party makes use of, relies on, or makes decisions in accordance with this report, said third party is solely responsible for such use, reliance or decisions. WSP Canada Group Ltd. does not accept responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken by said third party based on this report. This limitations statement is considered an integral part of this report.

The original of this digital file will be conserved by WSP Canada Group Ltd. for a period of not less than 10 years. As the digital file transmitted to the intended recipient is no longer under the control of WSP Canada Group Ltd., its integrity cannot be assured. As such, WSP Canada Group Ltd. does not guarantee any modifications made to this digital file subsequent to its transmission to the intended recipient.

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.



TABLE OF CONTENTS

1	PROJECT DESCRIPTION.....	1
2	EXISTING CONDITIONS.....	1
3	SITE VISIT.....	5
4	PROPOSED DEVELOPMENT.....	7
5	TRAFFIC OPERATIONS.....	10
6	PARKING REVIEW.....	15
7	SITE PLAN REVIEW.....	16
8	CONCLUSIONS.....	21



TABLES

TABLE 1. EXISTING, PROPOSED, AND TOTAL SCHOOL SIZE.....	7
TABLE 2. EXISTING AND PROPOSED PARKING AREAS.....	8
TABLE 3. HIGHWAY CAPACITY MANUAL 2010, LOS CRITERIA FOR SIGNALIZED INTERSECTIONS.....	10
TABLE 4: SUMMARY OF TRAFFIC OPERATIONS ANALYSIS – EXISTING CONDITIONS (2019).....	11
TABLE 5: TRIP GENERATION FOR SCHOOL EXPANSION.....	11
TABLE 6. TRIP ASSIGNMENT.....	12
TABLE 7: SUMMARY OF TRAFFIC OPERATIONS ANALYSIS – FUTURE BACKGROUND (2022).....	13
TABLE 8: SUMMARY OF TRAFFIC OPERATIONS ANALYSIS – 2022 TOTAL TRAFFIC	14
TABLE 10. BY-LAW PARKING REQUIREMENT REVIEW.....	15
TABLE 9: PEAK PARKING DEMAND ESTIMATES FOR PROPOSED EXPANDED SCHOOL	16
TABLE 11. PARKING AND ACCESS DESIGN COMPLIANCE.....	17

FIGURES

FIGURE 1: STUDY AREA.....	1
FIGURE 2: CITY OF BELLEVILLE PUBLIC TRANSIT MAP.....	3
FIGURE 3. EXISTING ACCESS, PARKING, AND VEHICLE CIRCULATION.....	4
FIGURE 4: PROPOSED ADDITIONS AND RENOVATIONS TO ST. JOSEPH CATHOLIC SCHOOL.....	7
FIGURE 5. BUS LOADING AREA.....	8
FIGURE 6. NEW HERCHIMER PARKING AREA.....	9
FIGURE 7: EXISTING (2019) WEEKDAY PEAK HOUR TRAFFIC VOLUMES.....	10
FIGURE 8: 2022 BACKGROUND TRAFFIC VOLUMES.....	13
FIGURE 9: TOTAL PROJECTED 2022 TOTAL TRAFFIC VOLUMES.....	14
FIGURE 10. PROPOSED SITE CIRCULATION.....	19



FIGURE 11. PAVEMENT MARKINGS FOR LADDER
CROSSWALK.....20

APPENDICES

- A TRAFFIC COUNTS
- B EXISTING TRAFFIC ANALYSIS (SYNCHRO)
- C PROPOSED SITE PLANS
- D FUTURE TRAFFIC ANALYSIS (SYNCHRO)

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 ft² (2,900 m²). 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**.

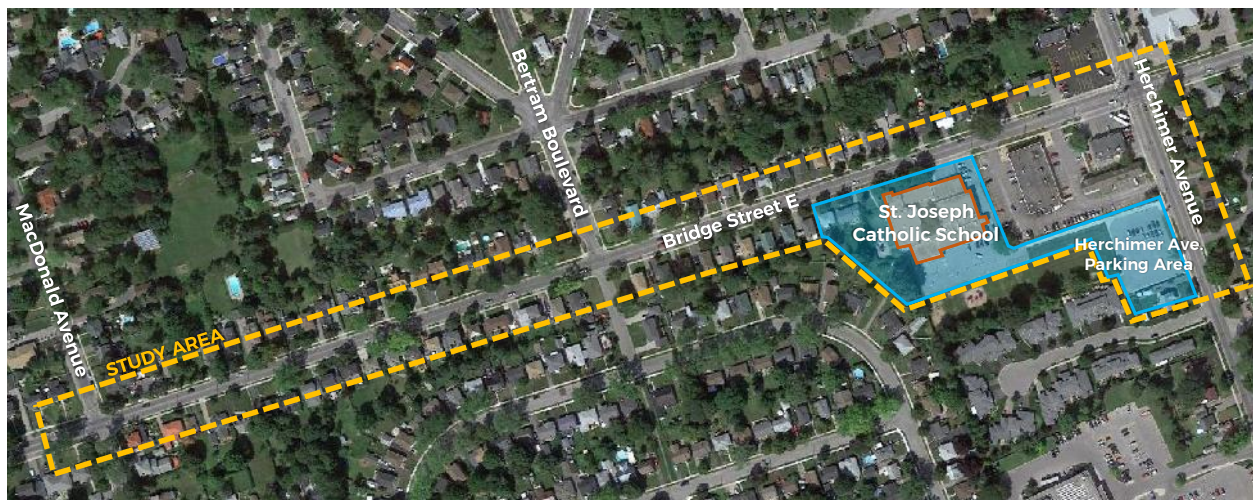


Figure 1: Study Area

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.

There 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-minute 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.

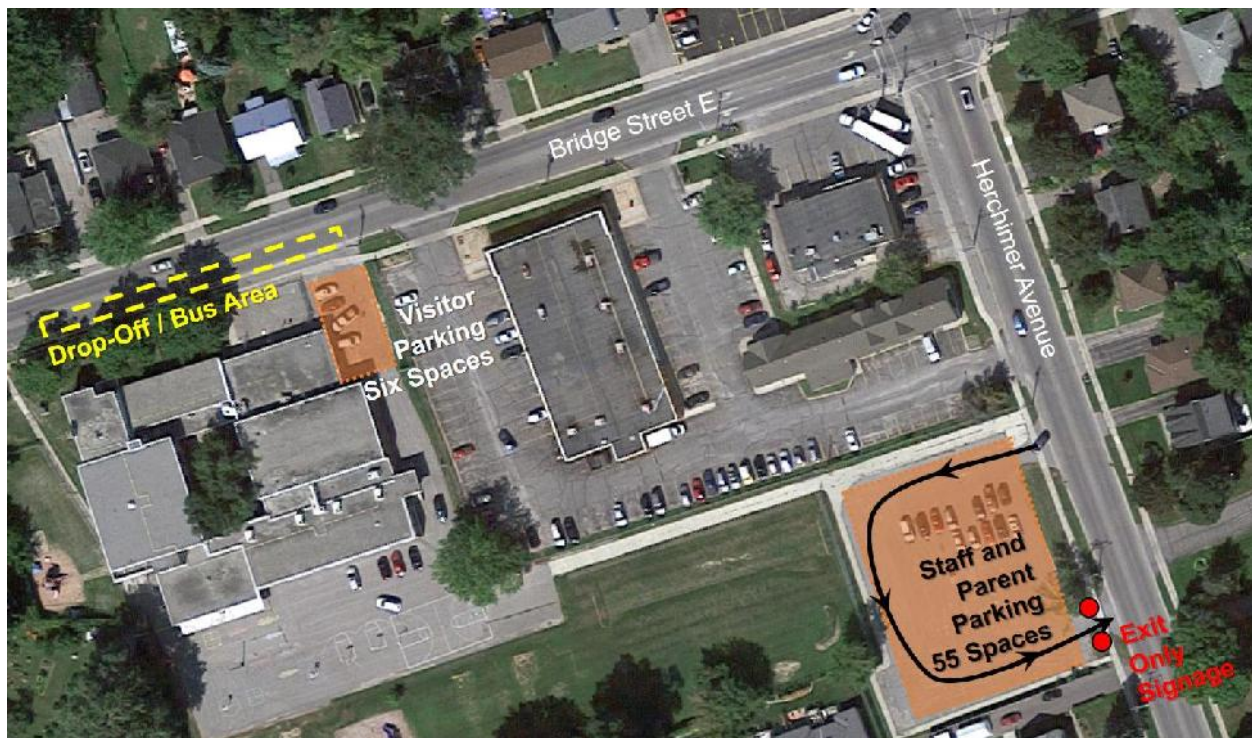


Figure 3. Existing Access, Parking, and Vehicle Circulation

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 60,956ft² (5,663m²). 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**.

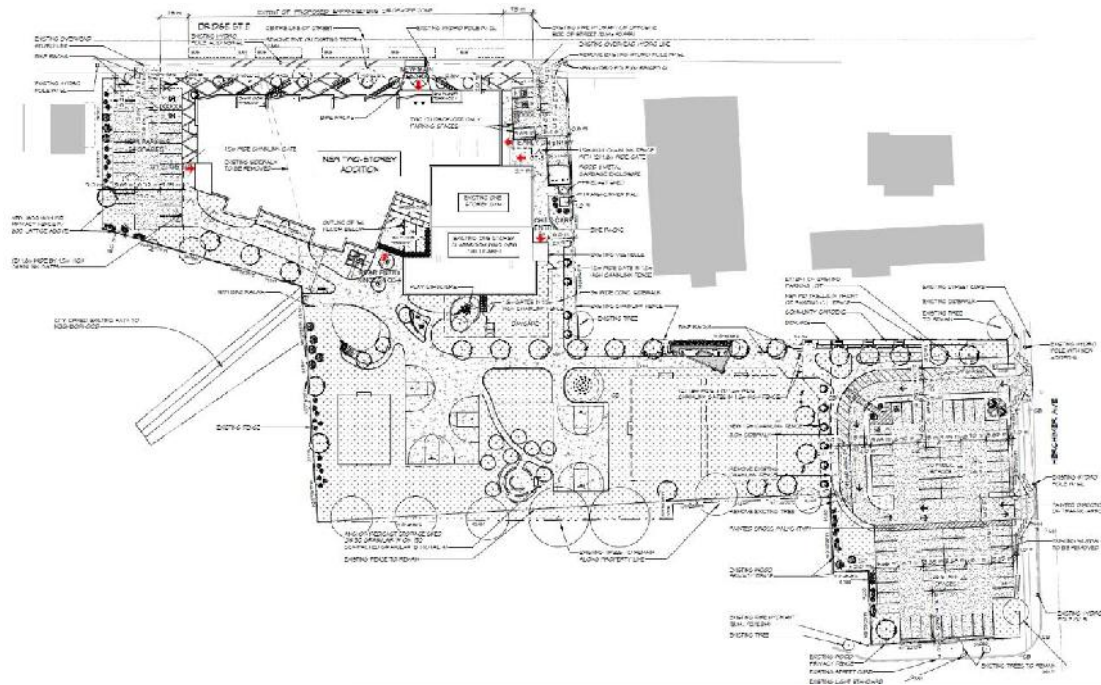


Figure 4: Proposed additions and renovations to St. Joseph Catholic School

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 Avenue 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).

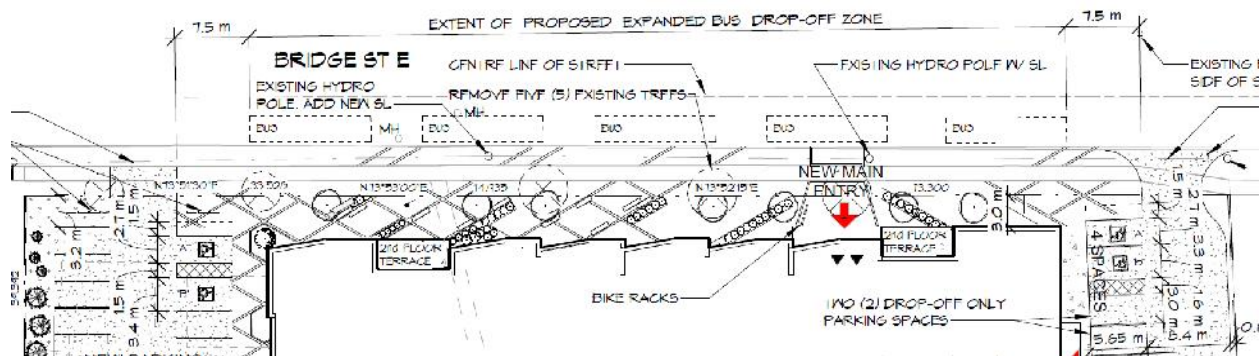


Figure 5. Bus Loading Area

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.

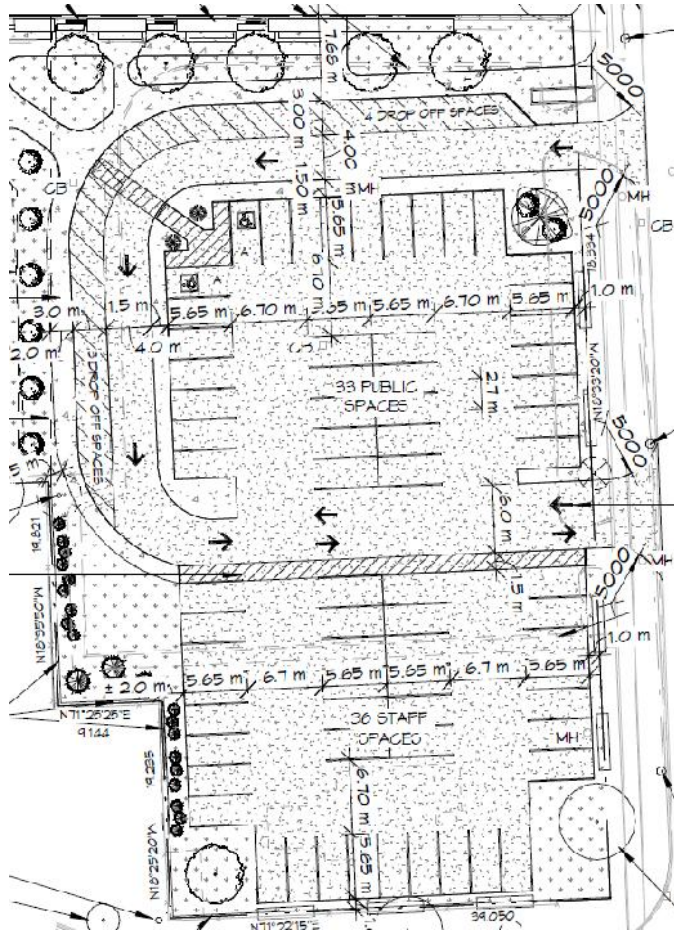


Figure 6. New Herchimer Parking Area

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**.

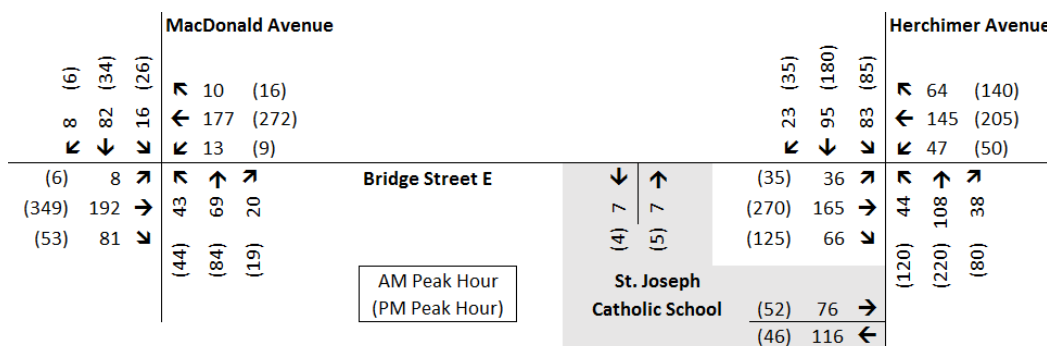


Figure 7: Existing (2019) Weekday Peak Hour Traffic Volumes

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 be 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

PARKING AREA	AM		PM	
	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**.

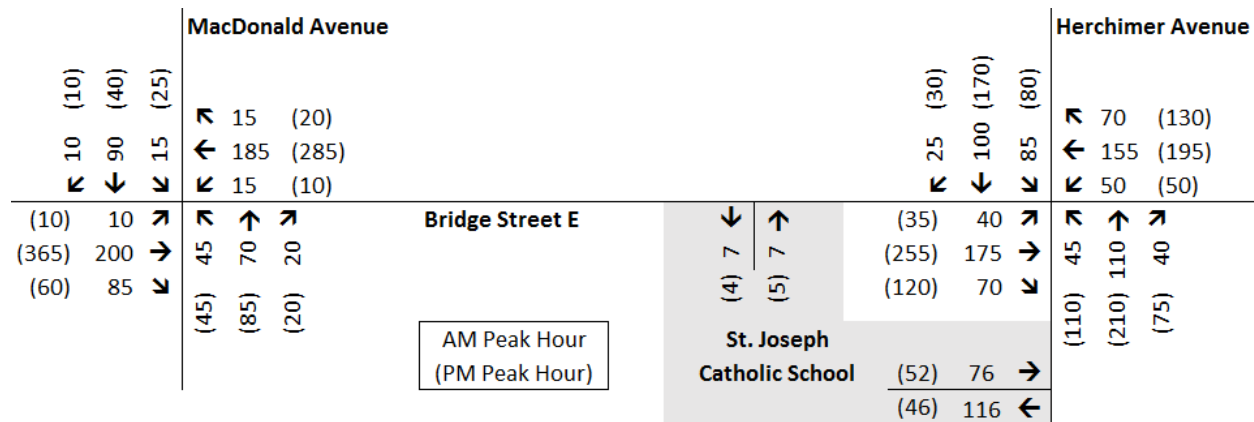


Figure 8: 2022 Background Traffic Volumes

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
MacDonal 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**.

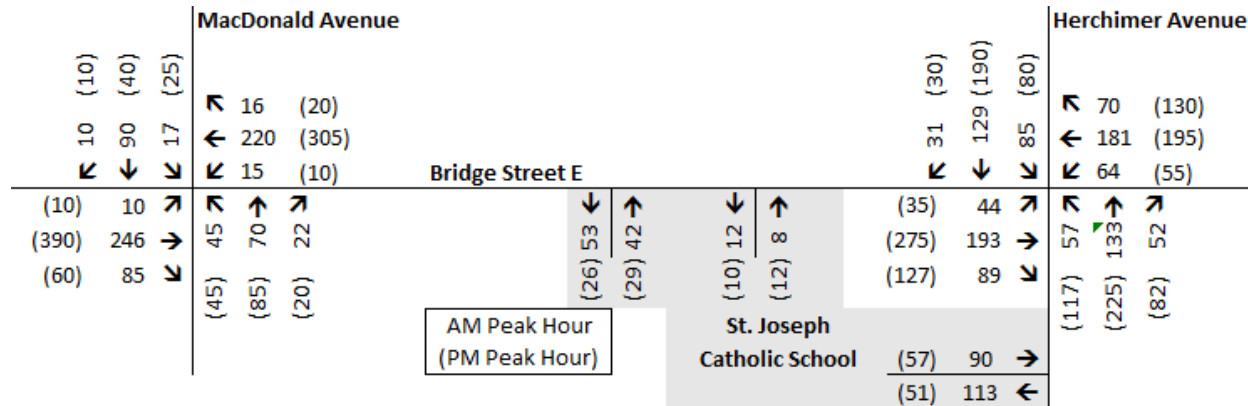


Figure 9: Total projected 2022 total traffic volumes

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 m² 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

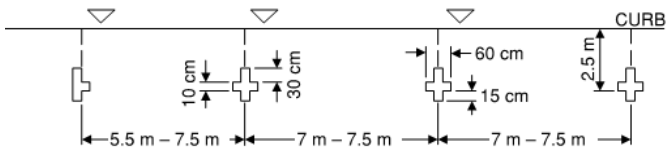
7 SITE PLAN REVIEW

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	<p>The By-Law requirement is met.</p> <p>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.</p> <p>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.</p>  <p style="text-align: center;"><i>Ontario Traffic Manual Book 11 – Pavement Markings</i></p>
Perpendicular Parking Space	2.4m width 6.0m depth	2.7m width 5.65m depth	<p>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:</p> <ul style="list-style-type: none"> – 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 <p>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.</p> <p>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.</p>
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)	<p>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:</p> <ul style="list-style-type: none"> – 97 spaces → 4% = 2 Type A and 2 Type B spaces <p>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.</p> <p>The AODA standard is met.</p>

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

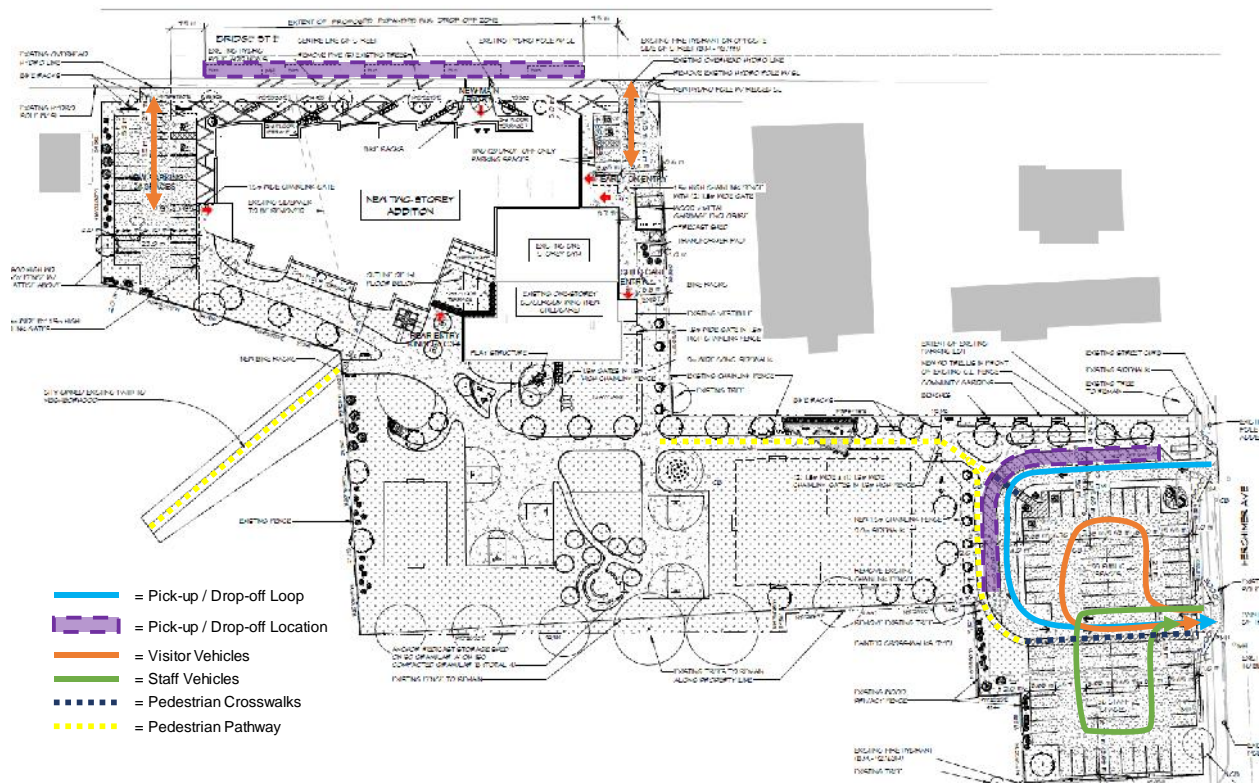


Figure 10. Proposed Site Circulation

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**.

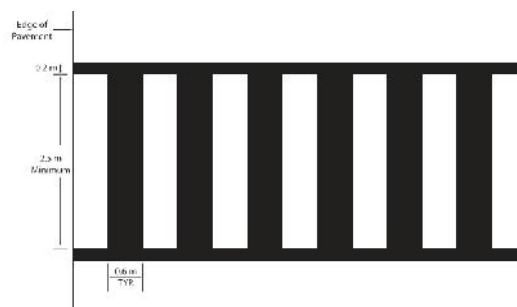


Figure 11. Pavement Markings for Ladder Crosswalk

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.

APPENDIX

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

Start Time	Herchimer Avenue Southbound				Bridge Street E Westbound				Herchimer Avenue Northbound				Bridge Street E Eastbound			
	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

Start Time	MacDonald Avenue Southbound				Bridge Street E Westbound				MacDonald Avenue Northbound				Bridge Street E Eastbound			
	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

APPENDIX

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	
Frbp, 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	
Frbp, 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	
Frbp, 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	
Frbp, 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												

APPENDIX

C

PROPOSED SITE PLANS

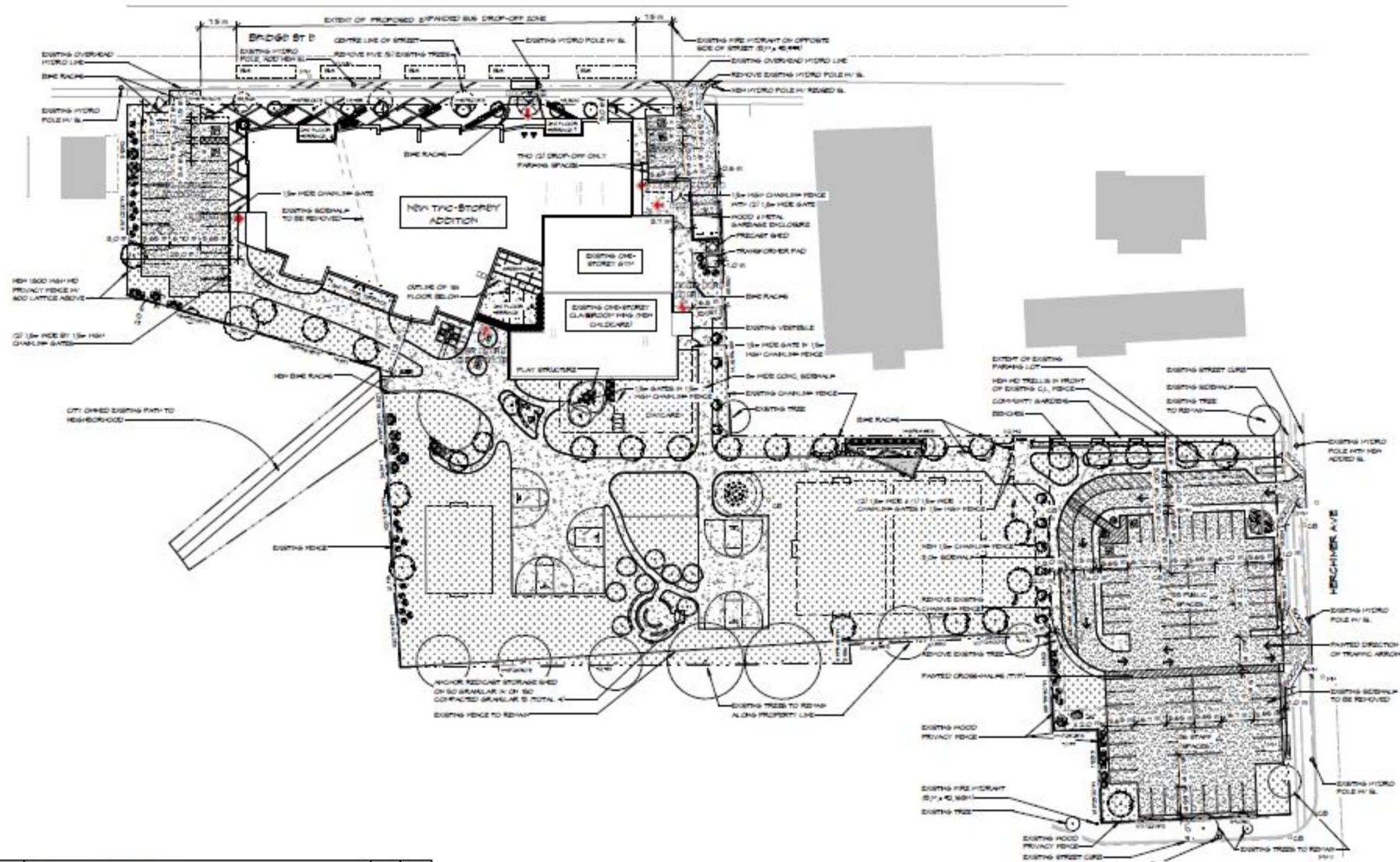
SITE STATISTICS CITY OF BELLEVILLE BY-LAW 10245

DESCRIPTION	REQUIRED/PERMITTED	PROPOSED	REMARKS
TOTAL GROSS FLOOR AREA	N/A	3,752 m ²	
LOT AREA (m ²)	N/A	11,514 m ²	
FRONT YARD (m)	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT	5.0m	RE-ZONING REQUIRED
REAR YARD (m)	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT	8.5m	EXISTING HIGH-CORPORATION
REAR SIDE YARD (m) - EAST	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT	25.0m	COMPLIES
REAR SIDE YARD (m) - WEST	GREATER OF 1.5m OR 1/2 BUILDING HEIGHT	11.0m	COMPLIES
LOT COVERAGE (PAVING BUILDING AREA)	35%	3,450m ² (30%)	COMPLIES
HEIGHT OF BUILDING (m)	N/A	12.0m	
NUMBER OF STOREYS	N/A	2 STOREYS	
FRONTAGE	N/A	75.0m (FRONT YARD) / 12.0m (REAR SIDE Y)	
PAVED DRIVEWAY AREA (AREA / PERCENT)	N/A	3000m ² / 26%	
LANDSCAPED AREA (AREA / PERCENT)	N/A	8,514m ² / 74%	
LOADING SPACES	2 SPACES FOR 6000 LBS (2) + 2m	ONE LOADING OF BROKE STREET (EXISTING + PROPOSED)	RE-ZONING REQUIRED
PARKING REQUIREMENTS			
PARKING SPACE DIMENSIONS	2.4m x 5.0m	2.7m x 5.5m	RE-ZONING REQUIRED
SEPARATION FROM STREET LINE	1.5m WITH CURB & LANDSCAPING	1.5m OR BROKE ST. 1.0m OF HERCHNER AVE.	RE-ZONING REQUIRED
SEPARATION FROM RESIDENTIAL ZONE	1.5m WITH ROW OF TREES (1.5m HIGH)	1.5m WITH 1.5m HIGH FENCE	COMPLIES
PARKING SPACES	18 SPACES (12M x 5.0M SPACES)	101 INCLUDING 8.5M AND 9 DROPOFF	RE-ZONING REQUIRED
8.5M PARKING SPACES INCLUDED IN TOTAL	0 SPACES FOR 7' 100 SPACES (1 FOR EACH 100 VEHICLES OR PORTION THEREOF) + 8 SPACES	8.5M SPACES	COMPLIES

SITE LEGEND

	TOPSOIL AND SOD
	HIGH ASPHALT PAVING REFER TO A00 SERIES DRAWINGS FOR DETAILS
	HIGH CONCRETE REFER TO A00 SERIES DRAWINGS FOR DETAILS
	HIGH CONCRETE WITH PAVERS REFER TO A00 SERIES DRAWINGS FOR DETAILS
	HIGH ANGULAR PAVING REFER TO A00 SERIES DRAWINGS FOR DETAILS
	HIGH RUBBERIZED SAFETY SURFACE REFER TO A00 SERIES DRAWINGS FOR DETAILS
	HIGH HOOD FRIDGE BARRIERS REFER TO A00 SERIES DRAWINGS FOR DETAILS
	CHAIN LINK FENCE AS NOTED
	ORNAMENTAL FENCE AS NOTED
	HIGH TREES REFER TO LANDSCAPE DRAWINGS FOR DETAILS
	EXISTING TREE TO BE RETAINED
	EXISTING TREE TO BE REMOVED

	A 800 TYPE A BARRIER FREE REGULATORY 800 "1.5M ACCESSIBLE"
	B 800 TYPE B BARRIER FREE REGULATORY 800
	C BARRIER REQUIRED BY SECTION 11 OF REGULATION SET OF THE HIGHWAY TRAFFIC ACT
	D HIGH LIGHT (STANDARD) POLE INDICATED REFER TO ELECTRICAL DRAWING
	E FIRE HYDRANT
	F FIRE HYDRANT
	G FIRE HYDRANT
	H FIRE HYDRANT
	I FIRE HYDRANT
	J FIRE HYDRANT
	K FIRE HYDRANT
	L FIRE HYDRANT
	M FIRE HYDRANT
	N FIRE HYDRANT
	O FIRE HYDRANT
	P FIRE HYDRANT
	Q FIRE HYDRANT
	R FIRE HYDRANT
	S FIRE HYDRANT
	T FIRE HYDRANT
	U FIRE HYDRANT
	V FIRE HYDRANT
	W FIRE HYDRANT
	X FIRE HYDRANT
	Y FIRE HYDRANT
	Z FIRE HYDRANT



1 ZONING SITE PLAN
 1:500

THIS PLAN IS THE PROPERTY OF COLSOURNE & KEMBEL ARCHITECTS INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF COLSOURNE & KEMBEL ARCHITECTS INC.



0000R 000000000000

1	TC	ISSUED FOR PERMITTING	20/04/21
NO.	BY	REVISED/ISSUANCE	DATE

COLSOURNE & KEMBEL ARCHITECTS INC.
 100 ARCADIA PARK PLACE
 BELLEVILLE, ONTARIO L8N 4R8
 TEL: 613-961-2247 FAX: 613-961-2247
 WWW.C&KARCHITECTS.COM

fni Fielding Nair International
 1000 SHEPPARD AVENUE EAST
 SUITE 1000 SCARBOROUGH, ONTARIO M1S 1T6
 TEL: 416-291-1111 FAX: 416-291-1112
 WWW.FNI-INT.COM

ST. JOSEPH CATHOLIC ELEMENTARY SCHOOL (SJCES)

405 BRIDGE ST E
 BELLEVILLE, ON

DATE: **SITE PLAN**

NO.	BY	DATE
05	TC	05/2014
06	TC	05/01/14
07	TC	05/01/14
08	TC	05/01/14
09	TC	05/01/14
10	TC	05/01/14
11	TC	05/01/14
12	TC	05/01/14
13	TC	05/01/14
14	TC	05/01/14
15	TC	05/01/14
16	TC	05/01/14
17	TC	05/01/14
18	TC	05/01/14
19	TC	05/01/14
20	TC	05/01/14
21	TC	05/01/14
22	TC	05/01/14
23	TC	05/01/14
24	TC	05/01/14
25	TC	05/01/14
26	TC	05/01/14
27	TC	05/01/14
28	TC	05/01/14
29	TC	05/01/14
30	TC	05/01/14
31	TC	05/01/14
32	TC	05/01/14
33	TC	05/01/14
34	TC	05/01/14
35	TC	05/01/14
36	TC	05/01/14
37	TC	05/01/14
38	TC	05/01/14
39	TC	05/01/14
40	TC	05/01/14
41	TC	05/01/14
42	TC	05/01/14
43	TC	05/01/14
44	TC	05/01/14
45	TC	05/01/14
46	TC	05/01/14
47	TC	05/01/14
48	TC	05/01/14
49	TC	05/01/14
50	TC	05/01/14
51	TC	05/01/14
52	TC	05/01/14
53	TC	05/01/14
54	TC	05/01/14
55	TC	05/01/14
56	TC	05/01/14
57	TC	05/01/14
58	TC	05/01/14
59	TC	05/01/14
60	TC	05/01/14
61	TC	05/01/14
62	TC	05/01/14
63	TC	05/01/14
64	TC	05/01/14
65	TC	05/01/14
66	TC	05/01/14
67	TC	05/01/14
68	TC	05/01/14
69	TC	05/01/14
70	TC	05/01/14
71	TC	05/01/14
72	TC	05/01/14
73	TC	05/01/14
74	TC	05/01/14
75	TC	05/01/14
76	TC	05/01/14
77	TC	05/01/14
78	TC	05/01/14
79	TC	05/01/14
80	TC	05/01/14
81	TC	05/01/14
82	TC	05/01/14
83	TC	05/01/14
84	TC	05/01/14
85	TC	05/01/14
86	TC	05/01/14
87	TC	05/01/14
88	TC	05/01/14
89	TC	05/01/14
90	TC	05/01/14
91	TC	05/01/14
92	TC	05/01/14
93	TC	05/01/14
94	TC	05/01/14
95	TC	05/01/14
96	TC	05/01/14
97	TC	05/01/14
98	TC	05/01/14
99	TC	05/01/14
100	TC	05/01/14

APPENDIX

D

FUTURE TRAFFIC ANALYSIS (SYNCHRO)

TIA - St. Joseph School Expansion
3: Herchimer Avenue & Bridge Street E

2022 Background AM
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	
Frbp, 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
6: Bridge Street E & MacDonald Avenue

2022 Background AM
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	
Frbp, 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
3: Herchimer Avenue & Bridge Street E

2022 Background PM
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	
Frbp, 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
6: Bridge Street E & MacDonald Avenue

2022 Background PM
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	
Frbp, 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
3: Herchimer Avenue & Bridge Street E

















2022 AM with Site Generated Trips

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	
Frbp, 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
6: Bridge Street E & MacDonald Avenue





















2022 AM with Site Generated Trips
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	
Frbp, 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
3: Herchimer Avenue & Bridge Street E

















2022 PM with Site Generated Trips

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	
Frbp, 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
6: Bridge Street E & MacDonald Avenue

2022 PM with Site Generated Trips
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	
Frbp, 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



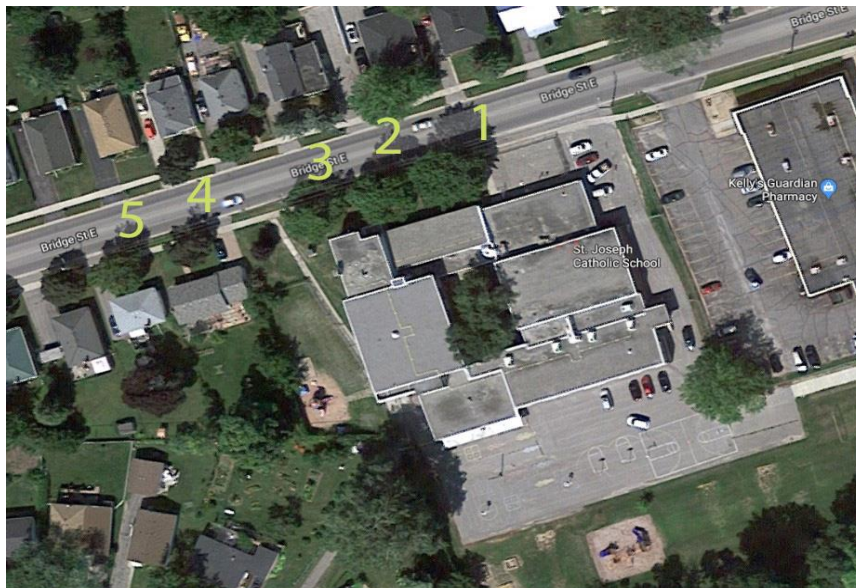
Dogwoods
 Charles Cavanagh NPD
 Horticulturist
 Consulting ISA Certified Arborist


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 ON-1033A

ID #	Botanical Name	Common Name	DBH (cm)	Condition (Good, Moderate, Poor)	Comments (Conditions, TPZ, treatments...)
1	<i>Acer platanoides</i>	Norway Maple	63.5	Moderate/Poor	Wide, exposed, irregular root flare with girdling and inarching 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	<i>Acer platanoides</i>	Norway Maple	62.3	Moderate/Poor	Wide, exposed, irregular root flare with girdling and inarching 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	<i>Acer platanoides</i>	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	<i>Acer platanoides</i>	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	<i>Acer platanoides</i>	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.



<p>Tree Report</p>	<p>Address / Lot # St. Joseph Catholic School Belleville, ON</p>	 <p>Dogwoods Charles Cavanagh NPD Horticulturist Consulting ISA Certified Arborist</p>
<p>General Comments: Assessment of Blue Spruce located at corner of Herchimer and Pinegrove Court</p> <p>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.</p>		<p>On-site inventory 15-Jan-19 ON-1033A</p>

ID #	Botanical Name	Common Name	DBH (cm)	Condition <i>(Good, Moderate, Poor)</i>	Comments <i>(Conditions, TPZ, treatments...)</i>
1	<i>Picea pungens 'Glauca'</i>	Colorado Blue Spruce	58.5	Moderate	Good trunk and overall structure / form. A few lower dead branches may be infected with Cytospora canker (<i>Cytospora kunzei</i> var. <i>piceae</i>). 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.

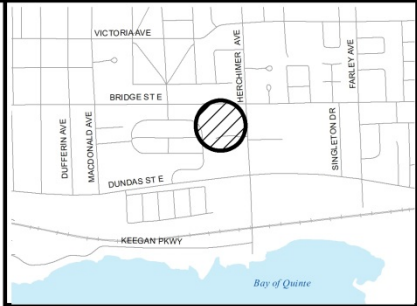


PROPOSED OFFICIAL PLAN AMENDMENT

LOCATION: 375 TO 405 BRIDGE ST E &
172 TO 184 HERCHIMER AVE

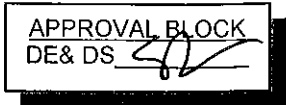


PROPOSED DESIGNATION CHANGE FROM RESIDENTIAL LAND USE TO COMMUNITY FACILITY



CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT
SERVICES DEPARTMENT

B-50-3-29



CITY OF BELLEVILLE

Stephen Ashton, Director of Engineering and Development Services
Engineering and Development Services Department
Report No. PP-2019-81
November 4, 2019

To: Belleville Planning Advisory Committee

Subject: RECOMMENDATION REPORT
Application for Proposed Amendment to Zoning By-Law Number 3014, As Amended – 41 Casey Road, former Township of Thurlow, now City of Belleville, County of Hastings
OWNER/APPLICANT: David Putman & Beth Putman
AGENT: Keith Watson, Watson Land Surveyors Ltd.

File: B-77-1089

Recommendation:

That the Planning Advisory Committee recommends the following to City Council:

“THAT Zoning By-Law Number 3014, as amended, be amended by rezoning 41 Casey Road from Prime Agricultural (PA) Zone to Prime Agricultural (PA) Zone with special provisions to recognize the reduced lot area for the retained parcel and from Prime Agriculture (PA) Zone to Rural Residential (RR) Zone for the severed parcels; AND

THAT all future applications in the area referred to as the Cannifton Industrial Planning Area for the purpose of creating Rural Residential Lot(s) through the severance and rezoning process be deferred until the new updated Official Plan is approved by the Ministry of Municipal Affairs which will provide policies for the Industrial Lands in the Cannifton Area that meet the requirements of the Provincial Policy Statement.

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.

Background:

The application for the proposed amendment to Zoning By-Law Number 3014 was received by the City of Belleville on August 28, 2019.

An initial public meeting was held in accordance with the requirements of the Planning Act on October 7, 2019 to formally hear and receive public comments.

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

Site details for the subject land:

Site Review	Description
Site Location	41 Casey Road; located on the north side of Casey Road, east of Highway 37, and west of Forsythe Road
Site Size	Retained Parcel: ~18.69 hectares Severed Parcels: 0.42 hectares each
Present Use(s)	Agriculture with dwelling
Proposed Use	Retained Parcel: Agriculture & dwelling Severed Parcels: Single detached dwellings
Belleville Official Plan Designation	Industrial
Present Zone Category	Prime Agriculture (PA) Zone
Proposed Zone Category	Retained Parcel: Prime Agriculture (PA) Severed Parcels: Rural Residential (RR) Zone
Land uses to the north	Agriculture
Land uses to the east	Agriculture
Land uses to the south	Agriculture & single detached dwellings
Land uses to the west	Agriculture & single detached dwelling

In support of the application, the following was submitted:

- Site Sketch

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

Proposal

The Applicant proposes to rezone a portion of the subject lands from Prime Agriculture (PA) Zone to Rural Residential (RR) Zone as a condition of

consent for applications B13/19 and B14/19.

Staff has also identified the requirement to rezone the retained portion from Prime Agriculture (PA) Zone to a Prime Agriculture (PA) Zone with special provisions to recognize its reduced lot area.

Review of Application in Alignment with the Provincial Policy Statement and the City's Official Plan Policies

The current application contemplates the rezoning of land for residential purposes that are located within an area identified in the Official Plan as Industrial. Rezoning of lands for residential purposes within an Industrial Area is not good practice and is not supported by the Provincial Policy Statement. However, this practice was established because the Official Plan for the City that was approved by the Province in 2002 contains the following provision in Section 4.5.3 f) which discusses Commercial and Industrial Land Use Policies in this area where the subject lands are located:

“Until such time as lands designated Industrial land use located east of the Moira River are needed for industrial purposes, development and use of such lands in accordance with the policies of the Rural land use designation may be permitted.”

The City has permitted residential severances and subsequent rezoning of lands within the area known as the Cannifton Industrial Area although the City's Official Plan Policies are no longer consistent with the Provincial Policy Statement.

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 property is designated Industrial (see Attachment #3) in the Cannifton Planning Area. Through the industrial land policies of the Cannifton Planning Area in the City's Official Plan, the ability of property to be severed and rural residential lots created was through the interpretation of Section 4.5.3 f) which states “Until such time as lands designated Industrial land use located east of the Moira River are needed for industrial purposes, development and

use of such lands in accordance with the policies of the Rural land use designation may be permitted.”

In addition to Section 4.5.3 f), the interpretation that development could occur in accordance with Rural land use policies was supported through Section 3.3.3 a) that states “While the majority of residential development will be directed to the urban serviced area and Hamlets, lands designated Rural land use may be used for limited low density residential development.”

Through these Official Plan policies, the City has permitted residential severances and subsequent rezoning of lands up to this point in time although this is no longer consistent with the Provincial Policy Statement.

As part of the Official Plan Update, the policies will have to be aligned with the PPS. This means that the Official Plan will be updated with clear provisions that will not permit residential severances to occur with the new Official Plan. Until this occurs, Staff is recommending that any new applications for rural residential severances be deferred until after the new Official Plan is approved by the Ministry of Municipal Affairs.

Zoning By-law

The subject lands are currently zoned Prime Agriculture (PA) Zone under Zoning By-Law 3014. The Applicant is proposing to rezone the severed parcels to Rural Residential (RR) Zone.

The minimum lot area and frontage required under the RR Zone is 0.4047 hectares and 45 metres, respectfully. The proposed lot area of each lot is 0.42 hectares and the proposed frontage is 61 metres.

The minimum lot area for lots zoned under the PA Zone is 25 hectares. The application proposes to leave 18.69 hectares of land for the retained lot. Rezoning of the retained lot to a PA Zone with special provisions to recognize the reduced lot area is required.

Both the severed and retained lots require rezoning.

Public Meeting and Comments

A public meeting was held on October 7, 2019.

At the meeting, the applicant’s agent spoke in support of the application. No member of the public spoke for or against the application.

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.

Quinte Conservation provided correspondence that they had no objections and provided general requirements that the applicant should be aware of.

MTO provided comments they are not concerned and provided direction to the applicant that Ministry approvals and permits are required prior to construction and/or demolition.

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.

The Manager of Approvals has indicated that this application is a condition of consent for applications B13/19 and B14/19 but otherwise had no comments.

Recreation, Culture and Community Services, Parks and Open Spaces, Belleville Fire Department, and Transportation and Operations indicated they have no objections, comments or issues.

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.

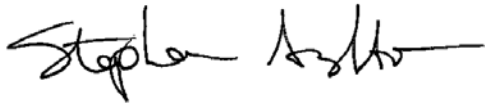
Impact on and input from other Departments/Sources

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

Conclusion:

The application for rezoning of the retained and severed parcels for the purpose of creating two rural residential lots conforms to the City's Official Plan policies approved in 2002. However, they are not consistent with the current Provincial Policy Statement. The Official Plan is currently being updated and Staff recommends that Council pass a formal resolution that any future applications in the area referred to as the Cannifton Industrial area be deferred until after the new updated Official Plan is approved by the Ministry of Municipal Affairs.

Respectfully submitted



Stephen Ashton, MCIP, RPP, CAHP
Director, Engineering and Development Services
Engineering and Development Services Department

Attachments


Attachment #1 – Location Map
Attachment #2 – Site Sketch
Attachment #3 - Official Plan Designation Map

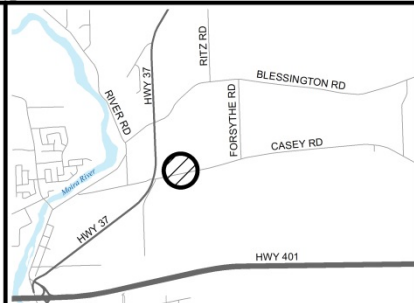
Attachment #1 – Location Map



PROPOSED ZONING BY-LAW AMENDMENT

LOCATION: 41 CASEY RD

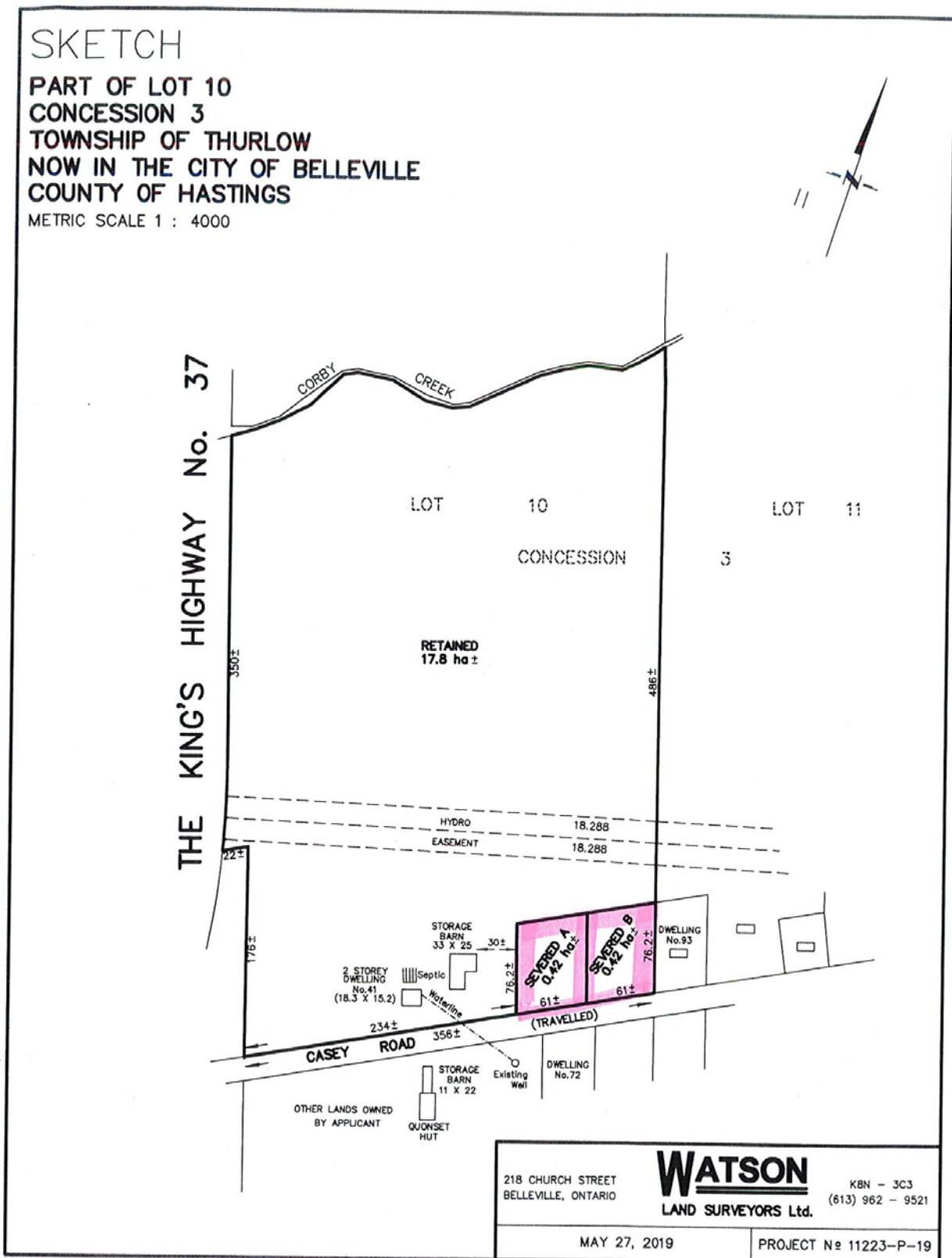
 PROPOSED ZONING CHANGE FROM PA (PRIME AGRICULTURE) TO RR (RURAL RESIDENTIAL)



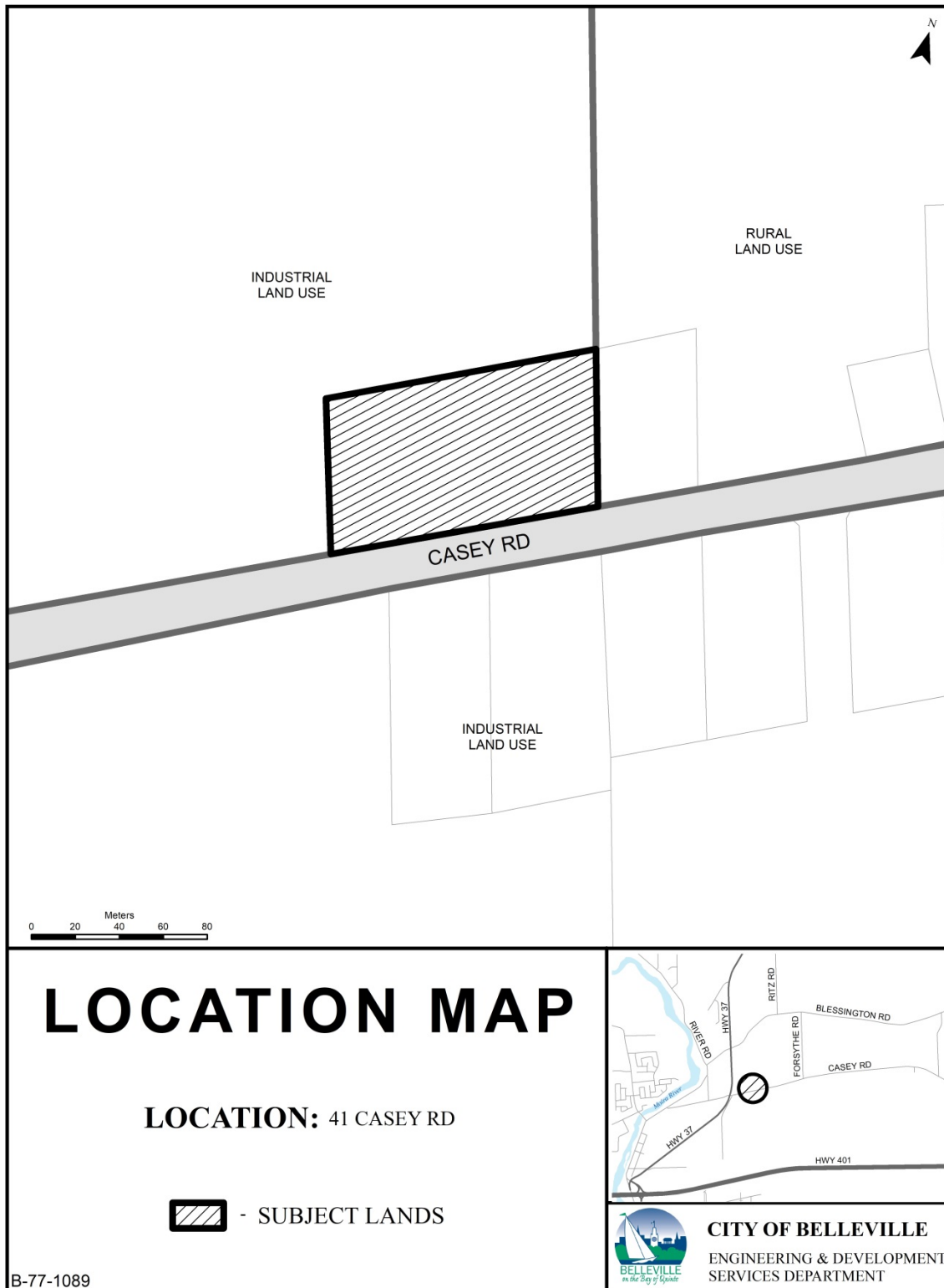
CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT
SERVICES DEPARTMENT

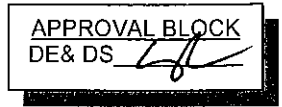
B-77-1089

Attachment #2 – Site Sketch



Attachment #3 – Official Plan Designation





CITY OF BELLEVILLE

Thomas Deming, Principal Planner
Engineering and Development Services Department
Report No. PP-2019-75
November 4, 2019

To: Belleville Planning Advisory Committee

Subject: Staff Recommendation Report
For Proposed Zoning By-law Amendment (By-Law 3014)
5027 Old Highway 2
City of Belleville
OWNER/APPLICANT: Jane Ann Bouma

File: B-77-1090

Recommendation:

That the Planning Advisory Committee recommends the following to City Council:

"THAT Application B-77-1090 to amend Zoning By-Law Number 3014, as amended, for land described as 5027 Old Highway 2, Belleville, County of Hastings, be APPROVED as follows:

That Zoning By-Law Number 3014, as amended, be amended by rezoning the severed parcels from Rural (RU) Zone and Hazard (H) Zone to Rural Residential (RR) Zone to fulfil a condition of consent for applications B19/19 and B20/19."

Strategic Plan Alignment

The City of Belleville's Strategic Plan identifies nine strategic themes including Residential Development. This proposal aligns with the City's Residential Development theme by accommodating for appropriate residential growth within the City.

Background:

On August 15, 2019, the City of Belleville's Committee of Adjustment reached a decision on Consent Application B19/19 and B20/19 to give consent to the separation and conveyance of part of the property municipally known as 5027 Old Highway 2 to sever two rural residential building lots from the southeast corner of the subject property, having lot frontages of 45

metres, and lot areas of 6,034 square metres, respectively. A condition of the consent applications is that both severed parcels are to be rezoned to an appropriate zone for the proposed residential development.

An initial public meeting was held in accordance with the requirements of the Planning Act on October 7, 2019. The purpose of this meeting was for Committee Members to formally hear and receive public comments.

The Planning Advisory Committee reviewed Report No. PP-2019-66 (Attachment #1) and accepted it as information. Now that input from the public, commenting agencies, and municipal departments had been received, assessed, and addressed to the satisfaction of the Engineering and Development Services Department, Staff has prepared a recommendation report.

The subject land is identified on Attachment #2 – Location Map.

Site Details for the subject land:

Site Review	Description
Site Location	5027 Old Highway 2; located on the north of Old Highway 2, east of Mitchell Road, and west the municipal boundary
Site Size	Retained Parcel: 35.6 hectares Severed Parcels: 0.6034 hectares each
Present Use	Vacant
Proposed Use	Severed Parcels: Single detached dwellings
Belleville Official Plan Designation	Rural
Present Zone Category	Rural (RU) Zone and Hazard (H) Zone
Proposed Zone Category	Severed Parcels: Rural Residential (RR) Zone
Land uses to the north	Agriculture
Land uses to the east	Agriculture
Land uses to the south	Agriculture
Land uses to the west	Single detached dwellings

In support of the application, the following was submitted:

- Site Aerial including outlines of proposed severances.

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

Proposal

The Applicant proposes to rezone a portion of the subject lands from Rural (RU) Zone and Hazard (H) Zone to Rural Residential (RR) Zone as a condition of consent for applications B19/19 and B20/19.

The Hazard (H) Zone is intended to protect hazardous or environmentally significant areas regulated by Quinte Conservation. Quinte Conservation have indicated through the consent application process that they have no concerns with this land being rezoned to Rural Residential (RR) Zone.

Provincial Policy Statement

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

It is Staff's opinion that the proposal is consistent with the Provincial Policy Statement as the proposal is for limited residential development on rural lands that can be sustained by rural services.

Official Plan

Planning Staff has reviewed the policies within the Official Plan. The land is designated "Rural" in the City's Official Plan (Attachment #4 – Official Plan Designation Map).

It is Staff's opinion that the proposal conforms with the Official Plan as the Plan states lands designated as Rural may be used for limited low density residential development.

Furthermore, the Official Plan states only residential development that has minimal impact on natural environmental features and the rural character should be permitted. Staff are of the opinion that this application will have minimal impact as the lots meet the required lot size of the Rural Residential (RR) Zone and that the character of the lots will be consistent with other surrounding rural residential lots.

Zoning By-law

The subject lands are currently zoned Rural (RU) Zone and Hazard (H) Zone under Zoning By-Law 3014. The applicant is proposing to rezone the severed parcels to Rural Residential (RR) Zone.

The retained parcel will have 203 metres of frontage remaining which is compliant with the required 70 metres of frontage of the RU Zone.

The proposed severed lots would meet the required lot frontage and exceed the minimum lot area required by the RR Zone.

Public Meeting and Comments

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 October 7, 2019.

Similarly, a sign was placed on the subject lands notifying the general public that a public meeting was scheduled for October 7, 2019.

At the public meeting, no one spoke regarding this application.

At the time of writing this report, 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 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, the Health Unit, Quinte Conservation, and the Ministry of Transportation.

Quinte Conservation 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 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.

The Approvals Section, Parks and Open Spaces, Recreation, Culture and Community Services, Belleville Fire Department, and 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 complied 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.

Planning Analysis:

This application is consistent with the Provincial Policy Statement, and the City of Belleville Official Plan.

The proposed severed lot has been approved by the Committee of Adjustment pending a rezoning of the retained parcels to Rural Residential (RR) Zone.

Quinte Conservation have indicated they have no concerns regarding the rezoning of the portion of the subject lands from Hazard (H) Zone to Rural Residential (RR) Zone.

It is Staff's opinion that this application represents good planning as it conforms to the character of the area and should have minimal impact on surrounding properties.

Conclusion:

Staff has considered all relative policy and comments provided to the Engineering and Development Services Department in analysis of the application received to amend the City of Belleville Zoning By-law 3014.

Staff recommends that the Planning Advisory Committee recommend to Council that the proposal be approved to rezone the subject lands from Rural (RU) Zone and Hazard (H) Zone to Rural Residential (RR) Zone as a condition of consent for applications B19/19 and B20/19.

Respectfully submitted



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

Attachments

- Attachment #1 – Report PP-2019-66
- Attachment #2 – Location Map
- Attachment #3 – Supplementary Information including a survey plan
- Attachment #4 – Official Plan Designation Map



APPROVAL BLOCK DE& DS _____ MPP _____
--

CITY OF BELLEVILLE

Thomas Deming, Principal Planner
Engineering and Development Services Department
Report No. PP-2019-66
October 7, 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 3014, As Amended – 5027 Old Highway 2, former Township of Thurlow, now City of Belleville, County of Hastings
OWNER/APPLICANT: Jane Ann Bouma

File: B-77-1090

Recommendation:

“That Report No. PP-2019-66 dated October 7, 2019 regarding Notice of Complete Application and Introductory Public Meeting, Application for Proposed Amendment to Zoning By-Law Number 3014, As Amended – 5027 Old Highway 2, former Township of Thurlow, now 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 3014 was received by the City of Belleville on September 3, 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 subject land is identified on the attached Location Map (Attachment #1). Site Details for the subject land:

Site Review	Description
Site Location	5027 Old Highway 2; located on the north of Old Highway 2, east of Mitchell Road, and west the municipal boundary
Site Size	Retained Parcel: 35.6 hectares Severed Parcels: 0.6034 hectares each
Present Use(s)	Vacant
Proposed Use	Severed Parcels: Single detached dwellings
Belleville Official Plan Designation	Rural
Present Zone Category	Rural (RU) Zone and Hazard (H) Zone
Proposed Zone Category	Severed Parcels: Rural Residential (RR) Zone
Land uses to the north	Agriculture
Land uses to the east	Agriculture
Land uses to the south	Agriculture
Land uses to the west	Single detached dwellings

In support of the application, the following was submitted:

- Site Aerial including outlines of proposed severances.

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

Proposal

The Applicant proposes to rezone a portion of the subject lands from Rural (RU) Zone and Hazard (H) Zone to Rural Residential (RR) Zone as a condition of consent for applications B19/19 and B20/19.

The Hazard (H) Zone is intended to protect hazardous or environmentally significant areas regulated by Quinte Conservation. Quinte Conservation have indicated through the consent application process that they have no concerns with this land being rezoned to Rural Residential (RR) Zone.

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;
 - promoting cost-effective development patterns and standards to

minimize land consumption and servicing costs;

1.1.5.2 On rural lands located in municipalities, permitted uses are:

- a) the management or use of resources;
- b) resource-based recreational uses (including recreational dwellings);
- c) limited residential development;
- d) home occupations and home industries;
- e) cemeteries; and
- f) other rural land uses.

1.1.5.4 Development that is compatible with the rural landscape and can be sustained by rural service levels should be promoted.

1.1.5.5 Development shall be appropriate to the infrastructure which is planned or available, and avoid the need for the unjustified and/or uneconomical expansion of this infrastructure.

1.1.5.7 Opportunities to support a diversified rural economy should be promoted by protecting agricultural and other resource-related uses and directing non-related development to areas where it will minimize constraints on these uses.

1.1.5.8 Agricultural uses, agriculture-related uses, on-farm diversified uses and normal farm practices should be promoted and protected in accordance with provincial standards.

1.1.5.9 New land uses, including the creation of lots, and new or expanding livestock facilities, shall comply with the minimum distance separation formulae.

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 "Rural" in the City's Official Plan (See Attachment #3 – Official Plan Designation Map).

The Official Plan states that lands within the Rural Land Use designation shall

PP-2019-66

4

October 7, 2019

be used predominantly for agricultural activity including the raising and/or growing of crops, animals and fish, poultry, nurseries, market gardens, livestock operations, uses that produce value added agricultural products from the farm operation on the property (i.e. maple syrup production, pick your own operations, and seasonal roadside produce stands); kennels and woodlots, as well as limited residential, commercial/industrial and conservation and small-scale outdoor recreation uses.

The Official Plan states that while the majority of residential development will be directed to the urban serviced area and Hamlets, lands designated Rural land use may be used for limited low density residential development.

Furthermore, the Official Plan states only residential development that has minimal impact on natural environmental features and the rural character should be permitted. To that end, residential uses in areas designated Rural land use should reflect the character of existing development in the area, and should be encouraged on lots a minimum of 0.4 hectares in size with at least 50 metres of frontage on a public street.

Such development may be approved provided that:

- there is sufficient capacity in the natural systems to adequately service the residential use;
- the development does not interfere unreasonably with the normal functioning and the quality of natural features such as drainage courses and wetlands;
- the development fully complies with the minimum distance separation formulae discussed in Section 3.2.2 a) of this Plan; and
- there is safe access to an open publicly maintained road that is designed to accommodate traffic generated by the residential development.

Zoning By-law

The subject lands are currently zoned Rural (RU) Zone and Hazard (H) Zone under Zoning By-Law 3014. The applicant is proposing to rezone the severed parcels to Rural Residential (RR) Zone.

The retained parcel will have 203 metres of frontage remaining which is compliant with the required 70 metres of frontage of the RU Zone.

The proposed severed lots would meet the required lot frontage and exceed the minimum lot area required by the RR Zone.

Public Comments

PP-2019-66

5

October 7, 2019

On September 13, 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 October 7, 2019.

Similarly, a sign was placed on the subject lands notifying the general public that a public meeting was scheduled for October 7, 2019.

Both the notice and sign 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 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.

Quinte Conservation commented on the severance application indicating that they had no concerns with the proposal.

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.

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

Considerations:

PP-2019-66

6

October 7, 2019

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 Residential Development and Environment.

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 Zoning By-law 3014. 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

PP-2019-66

7

October 7, 2019

Attachment #1 –

Location Map

Attachment #2 –

Site Aerial including outlines of proposed severances


Attachment #3 -


Official Plan Designation Map



PROPOSED ZONING BY-LAW AMENDMENT

LOCATION: 5027 OLD HWY 2

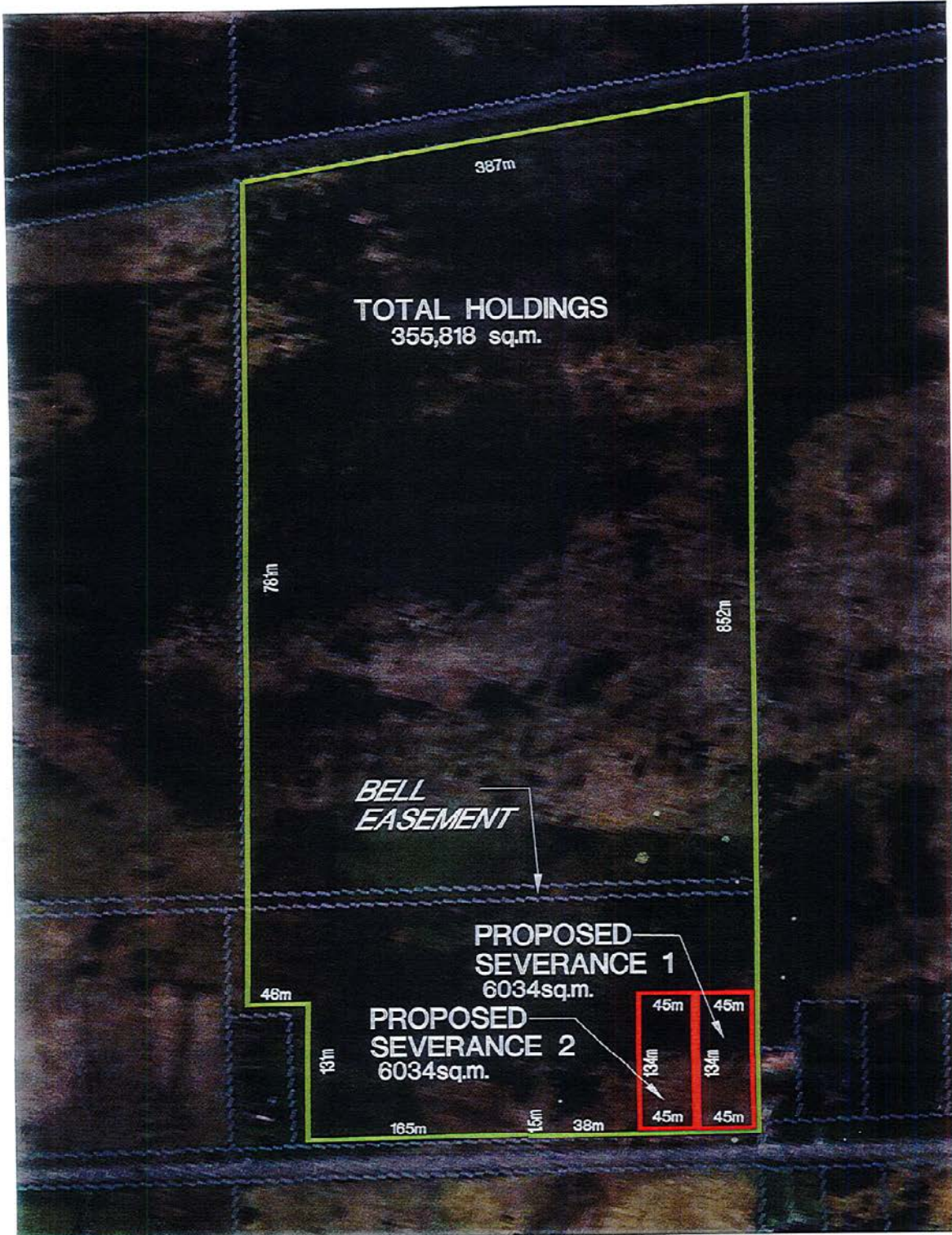
 PROPOSED ZONING CHANGE FROM RU (RURAL) TO RR (RURAL RESIDENTIAL)

 PROPOSED ZONING CHANGE FROM H (HAZARD) TO RR (RURAL RESIDENTIAL)



CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT
SERVICES DEPARTMENT

B-77-1090

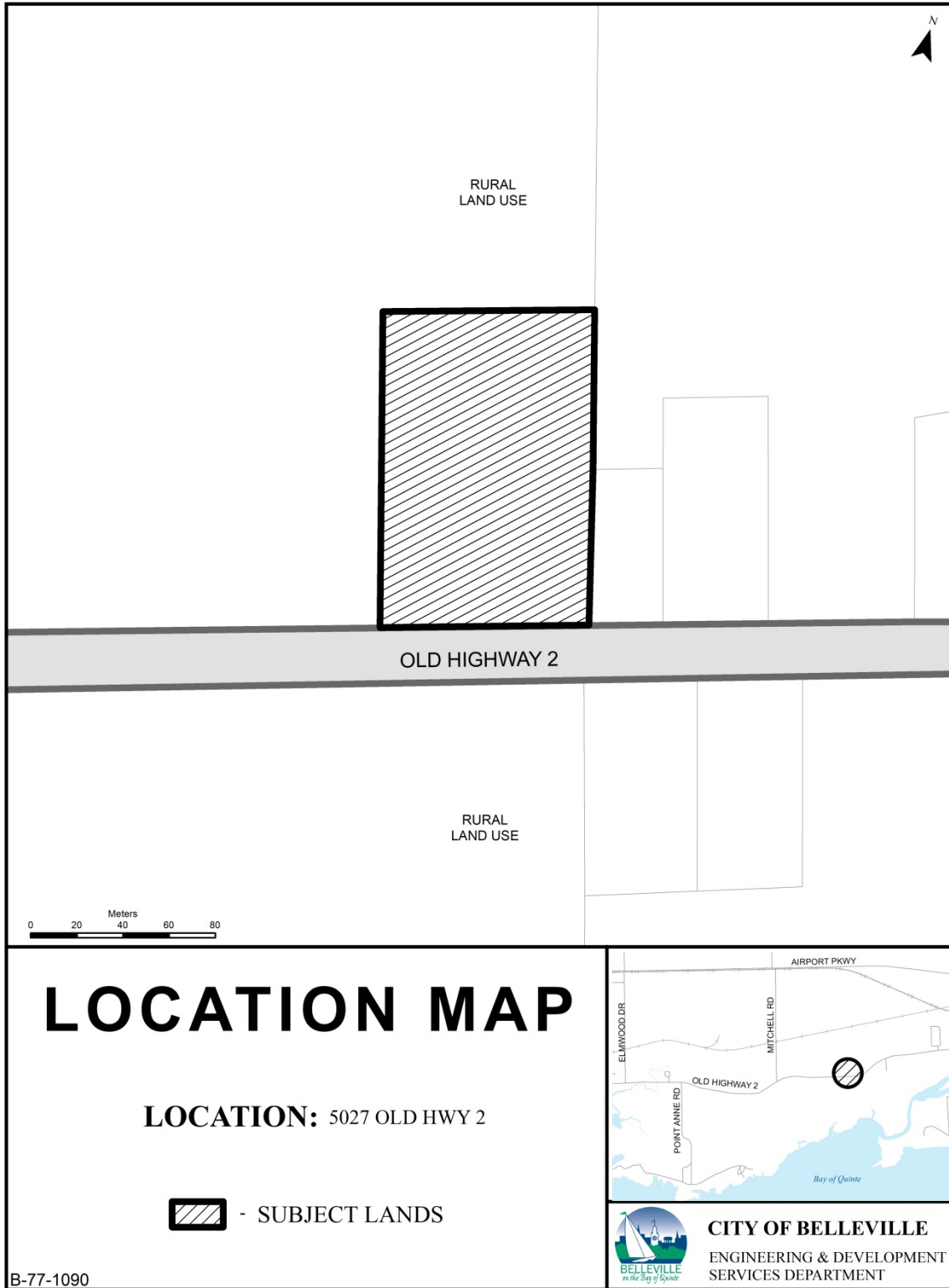


RECEIVED VAN MEER LIMITED

JUL 1 0 2019

LAND DEVELOPMENT • PROJECT MANAGEMENT • ENGINEERING
63 North Park Street, Belleville, Ont K8P 2Y6
Tel. 813-909-0771 Fax. 813-909-1781

BELLEVILLE COMMITTEE





APPROVAL BLOCK
DE& DS *[Signature]*

CITY OF BELLEVILLE

Stephen Ashton, Director of Engineering and Development Services
Engineering and Development Services Department
Report No. PP-2019-78
November 4, 2019

To: Belleville Planning Advisory Committee

Subject: RECOMMENDATION REPORT
Proposed Amendment to the Official Plan and Zoning By-Law
Number 10245; 656, 660, 664, & 670 Sidney Street, City of
Belleville, County of Hastings

OWNER: Belleville Community Developments Ltd.
APPLICANT: GCL Developments Ltd.
AGENT: RFA Planning Consultant Inc.

File: B-77-1092

Recommendation:

That the Planning Advisory Committee recommends the following to
City Council:

"THAT Application B-77-1092 to amend the City of Belleville Official
Plan and Zoning By-Law Number 10245, as amended for 656, 660,
664, & 670 Sidney Street, City of Belleville, County of Hastings, be
APPROVED as follows:

That Schedule 'B' Land Use Plan of the Official Plan be amended by
redesignating the subject lands from "Commercial Land Use" to
"Residential Land Use; AND

That Zoning By-Law Number 10245, as amended, be amended by
rezoning the subject lands from Restricted Industrial (M1) Zone and
Highway Commercial (C3-h) Zone to Residential Seventh Density (R7)
Zone with special provisions to permit four (4) apartment buildings
with a total of 96 dwelling units."

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.

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 4, 2019. The application proposes that the 4 individual properties be merged into one larger property and be developed with four (4) multi-residential buildings with a total of 96 dwelling units.

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 Planning Advisory Committee reviewed Report No. PP-2019-68 (see Attachment #1). 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	656 to 670 Sidney Street
Site Size	0.92 hectares
Present Use(s)	3 residential buildings on 4 lots, 4 th lot is vacant
Proposed Use	4 high-density residential buildings with total of 96 dwelling units
Belleville Official Plan Designation	Commercial
Present Zone Category	Restricted Industrial (M1) Zone and Highway Commercial (C3-h) Zone
Proposed Zone Category	High Density Residential (R7) Zone with special provisions
Land uses to the north	Commercial uses
Land uses to the east	Vacant lands
Land uses to the south	Hydro Corridor, followed by an 18 unit apartment building, followed by single-detached dwellings
Land uses to the west	Lands designated Commercial in the Official Plan and zoned Industrial

In support of the application, the following was submitted:

- A Proposed Site Plan (11 X 17), by Vandenberg & Wildeboer Architects Inc., dated August 23, 2018;
- A South Elevation, by Vandenberg & Wildeboer Architects Inc., dated August 20, 2018;
- A Ground Floor Plan (20 unit), by Vandenberg & Wildeboer Architects Inc., dated August 20, 2018;
- A Typical Floor Plan (20 unit), by Vandenberg & Wildeboer Architects Inc., dated August 20, 2018;
- A Parking Plan (20 unit), by Vandenberg & Wildeboer Architects Inc., dated August 20, 2018;
- A Typical Floor Plan (30 unit), by Vandenberg & Wildeboer Architects Inc., dated August 7, 2018;
- A Ground Floor Plan (30 unit), by Vandenberg & Wildeboer Architects Inc., dated August 20, 2018;
- A Parking Plan (30 unit), by Vandenberg & Wildeboer Architects Inc., dated August 7, 2018;
- A Conceptual Landscape Plan prepared by Wentworth Landscapes, dated September 3, 2019;
- A Servicing Brief - 656-670 Sidney Street, City of Belleville prepared by Ainley & Associates Limited, dated September 3, 2019;
- A Traffic Impact Study for Condominium Development - 656-670 Sidney Street, City of Belleville prepared by Ainley & Associates Limited, dated September 3, 2019;
- A Planning Rationale, by RFA Planning Consultant Inc., dated September 3, 2019;
- Stormwater Management Brief, prepared by Ainley & Associates Limited, August 2019;
- A proposed Official Plan Amendment;
- A proposed Zoning By-law Amendment;
- An air photo of subject lands; and,
- A Compiled Sketch, prepared by Watson Land Surveyors Ltd., dated April 25, 2019

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

Details of these reports include:

Planning Justification Report

A Planning Justification Report was prepared in support of the application which reviewed a number of matters including technical studies, surrounding land uses, site plan layout, Provincial Policy Statement, Official Plan policies, and an analysis of the Zoning By-law.

The report concludes with the planning opinion that “The application for Approval of a for an Official Plan Amendment and Zoning Bylaw Amendment by GCL Developments Inc. for 656 to 670 Sidney Street in Belleville is consistent with the policies of the Provincial Policy Statement and the Belleville Official Plan; it will comply with the intent of the R7 Zone requirements in Zoning By-law 10245, and represents good planning.”

Traffic Impact Study

Through a review of the proposed development, the study provided a number of conclusions and recommendations including:

- The need for a left or right turn lane was reviewed at the site access intersections. No left turn lane or right turn lane are warranted.
- Site access locations were reviewed. The corner clearance between the south site access and Tracey Park Drive (120 m) exceeds the 70 m minimum corner clearance requirement at a signalized intersection on an undivided road. The number of accesses and the distance between the two accesses are considered appropriate.
- Sightlines were reviewed on Sidney Street at the site accesses. Acceptable sightlines are provided at the locations.

Servicing Brief

The Brief considered the following services to determine the ability for the proposed development to be supported:

- Transportation System
- Grading
- Stormwater Management
- Water Distribution System
- Sanitary and Storm Sewer Collection Systems

Based upon this review, the consulting engineer concluded:

- Stormwater within the site will generally be conveyed to a proposed dry basin along the western property boundary. A portion of the site drainage will be conveyed to the existing Sidney Street storm sewer through catchbasins that currently collect drainage from the site.
- The development will be serviced by a proposed 150 mm diameter PVC watermain.
- The development will be serviced by a gravity sanitary collection system

directing effluent to the existing sanitary sewer along Sidney Street and ultimately the City's treatment facility.

- Natural gas, electrical, telephone and cable utilities will be designed in accordance with the distributor's specifications and incorporated into the subdivision detail design.

Stormwater Management Brief

The report provides the following conclusions:

- Stormwater will be conveyed through curb outlets and dry swales towards the dry basin for quantity control for most of the development site. A portion of the site drainage is proposed to be directed to the existing catchbasins and storm sewer along Sidney Street, with the proposed flows conveyed to the catchbasins meeting pre-development (existing) flows.
- As the proposed development site is under 1.0 ha in size, quality control can be provided through cash-in-lieu payment calculated with the City of Belleville's standard calculation or through an OGS unit.
- Detailed design will be completed as part of Site Plan application following approval of the Zoning By-Law Amendment and Official Plan Amendment applications.

Proposal Overview

In the Official Plan, the subject land is designated as "Commercial Land Use". The Applicant requests a re-designation to "Residential Land Use".

The Applicant requests a rezoning of the subject lands from Restricted Industrial (M1) Zone and Highway Commercial (C3-h) Zone to Residential Seventh Density (R7) Zone with special provisions to permit four (4) apartment buildings with a total of 96 dwelling units.

City Staff Overview of Project in Context of City Priorities

The City has prioritized the provision of not just affordable rental housing but attainable housing. The broad definition of Attainable Housing, as presented to City Council through the 2019 Belleville Housing Summit is as follows:

"The term attainable housing is used, without reference to the Canada Mortgage and Housing Corporation affordability metric, to describe the ability of households to enter, and graduate to successively higher levels of the local housing market. Implicit in this usage of

attainability is the idea that a range of housing options (type, size, tenure, cost) exists in the local market. Households at various income levels can find and secure (attain) suitable housing, and can ultimately advance to a different level."

Through the Municipal Comprehensive Review that was undertaken by Watson Economists Ltd., it was identified that the City has an oversupply of commercial lands. To address the oversupply of commercial lands in addition to the provision of affordable and attainable housing, the City has expanded the scope of the Official Plan to address this issue. Specifically, the Official Plan will look at providing opportunities for intensification along with introducing mixed use policies for specific commercial areas. An initial step in providing direction for this was the preparation of a Technical Brief for Emerging Issues regarding the Official Plan Update. The subject property is identified as a site where additional intensification could occur.

This development will occur on lands that are currently designated Commercial in the Official Plan but are located at the southern boundary of the Bell Boulevard Commercial Area and adjacent to Residentially designated lands to the south.

Therefore, the project represents an undertaking that proposes to address a number of considerations for the City which include: intensification to promote attainable housing, a logical and orderly conversion of commercial lands which are in oversupply, and providing a residential development with attributes including proximity to commercial areas and public transportation.

Provincial Policy Statement

Municipalities are required to ensure all decisions related to land use planning matters shall be consistent with the Provincial Policy Statement. Specific to this project in addressing the City's priorities, the application is consistent to the PPS because:

- It promotes efficient development and land use patterns which sustain the financial well-being of the Province and municipalities over the long term;
- It promotes cost-effective development patterns and standards to minimize land consumption and servicing costs;
- It is within a settlement area which is the focus of growth and development, and their vitality and regeneration shall be promoted.
- It represents a density resulting in a mix of land uses which efficiently use land and resources, 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, supports active transportation, is transit-supportive, where transit is planned, exists or may be developed, and represents a range of uses and opportunities for intensification and redevelopment.

- In addition, the City, through the current residential intensification policies along with identified future intensification policies have identified the subject lands as an appropriate location for intensification and redevelopment.

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 lands under consideration for an Official Plan Amendment are currently designated Commercial and are located on the west side of Sidney Street. They are at the southern boundary of the Bell Boulevard Commercial area where this area extends south along Sidney Street. These lands are directly adjacent to lands designated residential along Sidney Street. With the request to re-designate the lands to Residential – they would then become a continuous part of the residential area along Sidney Street.

In consideration of the City's over-supply of commercial lands and that the re-designation of lands is a logical expansion of the existing residential area along Sidney Street, the proposal represents good planning.

Intensification of Residential Land Uses on the site are supported through the existing Official Plan as it is consistent with the following policies:

- Residential development will be permitted at low, medium and high densities with forms ranging from single family detached dwellings to various types of attached and multiple dwellings, under various forms of tenure (freehold, rental, cooperative, condominium). (Section 3.10.1)
- 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. (Section 3.10.2 a)

- 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. While it is recognized that market forces will determine affordability rates, this Plan encourages Council to establish land use controls that do not preclude the development of a reasonable range of housing options within the community as a whole. (Section 3.10.2 c)
- Principles of determining preferred locations for high density residential development include a property having: direct frontage on arterial or major collector roads; main access routes to such developments should not be through areas of low density residential development; location along major arterial streets or at major intersections where access to two or more major transportation corridors is available; 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; preferred housing form to be established immediately abutting a non-residential land use in another land use category, or along very high traffic corridors.

Official Plan Update

The Official Plan is currently being updated. This includes a review of intensification policies. In advance of the new draft policies, the consultant prepared a document titled 'Emerging Policy Issues - Technical Brief to Support the Official Plan Update'. This document discusses intensification policies that could be considered along with recommendations. As part of this Brief, the consultants looked at areas where additional intensification could be located outside of the City Centre. The subject lands are identified through the Technical Brief as an Additional Intensification Area.

The Brief provides the following recommendations which will be included for consideration in the new updated policies of the Official Plan:

Recommendation 2: Update intensification targets based on the 2019 MCR, in particular noting geographies where there are optimal opportunities for the targets to be achieved.

Recommendation 3: Include a map of Additional Intensification Areas as a schedule in the updated OP. This will provide the City with the appropriate flexibility to guide the majority of intensification to the City Centre, but to consider it in additional areas where it can be appropriately accommodated.

Recommendation 4: Develop separate intensification policies to correspond

to the map of Additional Intensification Areas, which support context-appropriate intensification

It is Staff's opinion that this development proposal is consistent with the current Official Plan Update and the future directions to be established by the new Official Plan.

Zoning By-law

The Applicant requests a rezoning of the subject lands from Restricted Industrial (M1) Zone and Highway Commercial (C3-h) Zone to Residential Seventh Density (R7) Zone with special provisions to permit four (4) apartment buildings with a total of 96 dwelling units. Special provisions include:

- Reduced Front-yard depth from 10.6 m to 4.5m
- Reduced side yard setback from 11.0 m to 7.5 m
- Maximum lot coverage from 20% to 30%
- Reduction in distance between two or more dwellings on same lot – not applicable
- Reduced distance between driveway/parking and exterior wall where there are windows from 7.5 m to 6 m

It is Staff's opinion that the proposed R7 Zone with special provisions is appropriate for the development of the site and will result in a well-designed and properly-functioning site that addresses an identified community need of attainable housing.

Public Meeting and 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 October 7, 2019.

Similarly, signs were placed on the subject lands notifying the general public that a public meeting was scheduled for October 7, 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.

Public Meeting

At the public meeting, no member of the public spoke for or against the application. No member of the public signed the Interested Parties

Notification Sheet. No member of the public has submitted written comments for or against the 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, Veridian Connections, Hydro One, TransCanada Pipeline, Enbridge Pipelines, Trans-Northern Pipelines, MPAC, Quinte Conservation and the Health Unit.

At the time of writing this report, Elexicon Energy 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, and the Chief Building Official.

Transportation & Operations, Recreation, Culture & Community Services Department, Parks & Open Space, , and Belleville Fire and Rescue have provided correspondence and they have no comments and/or concerns.

The City's Approvals Section for site plans also provided comments on review of the application's supporting documentation. They have confirmed the submitted information demonstrates that the proposed land use can be supported. They have also indicated that the Applicant should be advised that the property will need to be developed in accordance with the Site Plan Process which will include the provision of additional information that will need to be submitted as part of the site plan process to assist the applicant in gaining quicker approvals.

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.

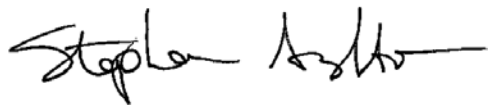
Analysis and Conclusion:

This application is consistent with both the Provincial Policy Statement and City's Official Plan. The application is also consistent with the updated policies being contemplated by the new Official Plan.

The next stage for the applicant will be to receive approval to develop this site through the City's Site Plan Process.

As this application is consistent with both the Provincial Policy Statement and City's Official Plan and represents a development that addresses a community priority of providing attainable housing with good urban design, active transportation linkages and landscaping, Staff recommends the application to amend the City's Official Plan and Zoning By-law Number 10245 be approved.

Respectfully submitted



Stephen Ashton, MCIP, RPP, CAHP
Director, Engineering and Development Services
Engineering and Development Services Department

Attachments

Attachment #1 - Report No. PP-2019-68 <https://belleville.ca/files/pacagenda071019.pdf>



APPROVAL BLOCK

DE&DS

CITY OF BELLEVILLE
ENGINEERING & DEVELOPMENT SERVICES DEPARTMENT
PLANNING SECTION
Thomas Deming, Principal Planner
Report No. PP-2019-80
November 4, 2019

To: Belleville Planning Advisory Committee

Subject: Backyard Chickens

Recommendation:

That the Planning Advisory Committee recommends the following to City Council:

“THAT Report Number PP-2019-80 dated November 4, 2019 be received as information and that the matter of Backyard Chickens be referred to the City’s Consultants who are currently undertaking the development of a new zoning by-law for the City.”

Background:

On July 8, 2019 Council received a deputation from Cindy Leonard regarding allowing backyard chickens in the City and made a motion to refer the matter back to Staff for review and report.

Currently, the City has entered into a contract with Dillon Consulting to update the City’s three existing comprehensive zoning by-laws. This project will create a single modern document that will implement the new Official Plan that is also being developed by Dillon Consulting. In addition to these two large projects, the City has prioritized a Housing CIP to be completed in a condensed timeframe.

As the City is undertaking three large projects simultaneously, Staff resources need to be managed wisely. Therefore, requests for general updates to the City’s zoning by-laws will be forwarded to Dillon Consulting as part of their contracted work for the review of the City’s Comprehensive Zoning By-Laws.

Today, more and more people are interested in raising chickens in their backyards. Some municipalities have responded by allowing the raising of backyard chickens and this brings its own set of challenges for a municipality.

Growing food in your own backyard can be very rewarding for many people. As people become increasingly concerned with food production practices, supply, and safety they have also become more interested in urban agriculture. Urban agriculture can include but is not limited to gardening, egg, meat, and milk production. This includes the keeping of backyard chickens.

In 2012, a report to the City's Green Task Force committee was provided by the Engineering and Development Services Department concerning keeping chickens in the urban area of Belleville. The report raised a number of concerns from staff, including property standards, neighbourhood disputes, noise, animal control, and public health. The full report is included with this report as Attachment #1.

The Planning Act provides municipalities the ability to control land use through a zoning by-law. This may include permitting or prohibiting backyard chickens in residential zones. The City is currently regulated by three Zoning By-Laws.

Terms

There are a variety of terms used to describe this use including backyard hens, urban chickens, keeping of chickens, urban agriculture, etc. For the purpose of this report Staff are using the term "backyard chickens".

It is important to note that the use of this term is not intended to limit the use to the backyard. Moreover, the term may change before this process is completed.

Current Zoning Regulations

There are three zoning by-laws currently in place in the City of Belleville. These three zoning by-laws affect different sections of the municipality and provide different regulations regarding land use. The three zoning by-laws are:

- Zoning By-Law 10245;
- Zoning By-Law 2076-80; and
- Zoning By-Law 3014.

Zoning By-Law 10245

This By-Law is better known as the "Belleville Zoning By-Law" as it was the existing by-law prior to the amalgamation of Thurlow and Sidney Townships. The majority of the City's urban serviced area is regulated under this zoning by-law.

By-Law 10245 was adopted in 1977 and provides no reference to backyard chickens or any similar use. Moreover, backyard chickens are not a permitted use anywhere under this by-law.

Zoning By-Law 2076-80

Adopted in 1980 by the former Township of Sidney, this by-law regulates the lands amalgamated by the City of Belleville.

This by-law permits chickens to be kept under the uses “farm” and “farm – livestock facility”. These uses are only permitted under the following zones:

- Agriculture (A1) Zone;
- Agriculture (A2) Zone;
- Environmental Protection (E) Zone; and
- Urban Holding (UH) Zone.

Zoning By-Law 3014

Better known as the “Thurlow Zoning By-Law”, By-Law 3014 regulates the lands of the former Thurlow Township.

This by-law permits chickens to be kept under the uses “Agriculture”, “Farm”, and “Farm Facilities and Practices Specialized”. These uses are only permitted under the following zones:

- Prime Agriculture (PA) Zone;
- Rural (RU) Zone;
- Extractive Industrial (M2) Zone; and
- Development (D) Zone.

Policy Review:

Staff have reviewed a number of other municipalities’ by-laws to provide a better understanding of how other municipalities are permitting backyard chickens. A summary of each is provided below.

Quinte West

The City of Quinte West zoning by-law permits “backyard hens” on properties that are zoned to permit a single family dwelling with a minimum lot area of 0.4 hectares (one acre). The Quinte West zoning by-law provides the following additional regulations for hen enclosures:

- Shall be located at least 3.0 metres from the side lot line and at least 1.2 metres from the rear lot line of the lot on which the hen coop is located;
- Shall be located at least 3.0 metres from abutting dwellings;
- Must be at least 7.5 metres from any church or school;
- Shall contain an enclosed roof structure and shall be no greater than 3.0 by 3.0 metres and no greater than 4.5 metres in height; and
- Shall only be located in the rear yard.

Kitchener

The City of Kitchener's Urban Chicken By-Law provides that a person may keep up to four hens on a property in a residential zone provided all the conditions and requirements of the by-law are met. Some of these additional conditions include:

- The owner of the hens has paid the applicable permit fee as set by Council from time to time, made application for, and obtained a permit from the City to allow the keeping of hens at the property;
- The owner of the hens resides at the property;
- The property on which the hens are kept has residential zoning under the Zoning By-law and contains a single detached, semi-detached, or townhouse dwelling;
- All owner(s) and all adult occupant(s) of the property have consented in writing to the satisfaction of the City to the keeping of hens at the property;
- The hens are kept in a fully enclosed coop or run in a manner that contains the hens on the property and prevents their escape from such coop or run;
- The coop and any run are within the rear yard, exterior side yard, or interior side yard of the property; and
- The coop and any run are set back at least 1.2 metres from the rear lot line and at least 2.5 metres from any interior side lot line or exterior side lot line of the property and at least 2.5 metres from any rear lot line abutting an exterior side yard or interior side yard of another property unless all owner(s) and all adult occupant(s) of any property from which the aforementioned setbacks are not in place have consented in writing to the satisfaction of the City to the placement of the coop or run.

Kingston

The City of Kingston permits up to six hens on a residential property provided a yearly licence fee is paid to the City. From June 2011 to November 2013, Kingston ran a pilot period for the regulations to test their impact. The following provisions were then approved regarding the keeping of backyard hens:

- The license fee for a hen coop is renewable each calendar year (on or before December 31) with the Building and Licensing Department and registered in the identification system;
- A maximum of 6 hens are permitted on any residential property;
- All hens must be at least 4 months old;
- The keeping of roosters is prohibited;
- A tenant must obtain permission from the property owner to keep hens on the owner's property;
- The owner of the hens must reside on the property where the hens are kept;
- Applicants must advise their neighbours of their intention to obtain a hen coop permit prior to submitting application;
- Hens must be kept in their coops from 9:00 p.m. to 6:00 a.m.;
- Hens must be kept in an enclosed hen run when not in their coop;

- Hen coops and runs shall be a distance of at least 1.2m from the rear lot line and at least 1.2m from any side lot line of the dwelling lot on which the hen coop is located;
- Hen coops and hen runs shall be located at least 15 m from any school;
- Hen coops and hen runs shall be located at least 7.5 metres from any church or business;
- Hen coops and hen runs shall be a minimum distance of 3 m from all windows and doors of dwellings that are located on an abutting property;
- Hen coops are not permitted in any front or side yard;
- Sales of eggs, manure and other products associated with the keeping of hens are prohibited;
- Hen coops and hen runs shall be maintained in a clean condition and the coop shall be kept free of obnoxious odours, substances and vermin;
- Stored manure shall be kept in an enclosed structure such as a compost bin in accordance with compost regulations, and no more than three cubic feet shall be stored at any one time;
- Manure shall be disposed of in accordance with Municipal by-laws. Hen waste must be solid and bagged; and
- Home slaughter of hens is prohibited and any deceased hens shall be disposed of at a livestock disposal facility or through the services of a veterinarian.

Other Municipalities

Examples of other municipalities that permit backyard chickens include:

- City of Guelph;
- Town of Minto; and
- City of Niagara Falls.

Other municipalities currently testing backyard chickens through a pilot program include:

- City of Newmarket; and
- City of Toronto.

The following municipalities prohibit chickens outside of agricultural zones:

- City of Waterloo;
- Township of Woolwich; and
- Town of Erin.

Policy Summary

A consistent trend begins to emerge after reviewing policy from other municipalities. While municipalities are expanding what is permitted in residential zones by allowing chickens to be kept, particular rules are consistent to ensure impact is minimal on adjacent residential properties.

The first is banning roosters and only permitted hens. Roosters are a constant noise nuisance and are not needed for egg production.

Another common policy theme is limiting the number of chickens that are permitted. Understandably, by restricting the number of chickens the impact would be less than that of a greater number.

While some municipalities do permit chickens to be kept in the side yards, the majority limit them to the rear yard and prohibit them in the front yard. This is again to minimize the impact on adjacent uses but it also helps maintain the character of residential neighbourhoods.

The majority of municipalities restrict owning chickens to properties developed with single detached, semi-detached, and townhouse dwelling units. These types of developments are typically single dwelling units per lot. This effectively reduces the density of chickens in the urban environment and reduces the impact on adjacent dwellings.

Other common regulations include:

- Ensuring chickens are fully contained within a coop or run at all times;
- Ensuring the owner lives on the same property; and
- Banning the sale of eggs or other related products.

Recommendation:

Many municipalities choosing to permit backyard chickens do so through a zoning bylaw amendment. A zoning by-law can be used to provide regulations on matters such as setbacks and the size of a hens coop, etc. Considering that the City of Belleville is currently undertaking the development of a new zoning by-law, Staff recommend referring the matter to the City's consultant who are undertaking the development of the new zoning by-law.

Respectfully submitted,



Thomas Deming,
Principal Planner

Attachments:

Attachment #1: 2012 Report to Green Task Force



CITY OF BELLEVILLE
Rod Bovay MCIP RPP
Director, Engineering & Development
Services

September 18, 2012

To: Green Task Force

Subject: Urban Agriculture - Henning

The Green Task Force has asked for information and comments on the issue of allowing the keeping of chickens in urban areas of Belleville. This issue has been intensely debated in many communities across Canada, although there does not appear to be any common approach to dealing with the issue. City Planning staff have followed the debate but have, at this point, not received any requests from residents to allow the keeping of chickens in urban Belleville.

There are numerous issues that are a concern to City staff, including property standards, neighbourhood disputes, noise, animal control, and public health. The Ontario Ministry of Agriculture, Food and Rural Affairs has advised that urban agriculture is a complicated issue and that, unlike backyard gardening, the municipality should take a very cautious approach to the idea of urban livestock. They suggest that the following points should be carefully considered:

Animal Health and Public Health:

Livestock and poultry can be sources of diseases that are passed to humans. These animals require health management and veterinary care, as well as bio-security measures to minimize the occurrence and spread of diseases.

Food Safety:

There are both provincial and federal regulations regarding food safety. For example, regulations under the Food Safety and Quality Act, 2001 govern the sale of ungraded eggs.

While people are allowed to keep a limited number of chickens for egg production for their own consumption, ungraded eggs can only be sold for a consumer's own use (i.e. not a commercial activity).

Animal Care:

Basic hygiene is essential when caring for animals, which also need proper shelter, food, water and adequate space to stay healthy. Manure must be disposed of in a safe and environmentally responsible manner. But even with the best care, some animals will die, which means there have to be plans in place for disposing of dead animals. There are

Provincial regulations dealing with the disposal of livestock, which can have a significant impact on the costs of keeping livestock.

Predators:

Livestock and poultry also attract predators such as coyotes, rats, skunks, raccoons, foxes and neighbourhood pets. Besides the issue of attracting predators to the urban area there is also a financial component to this issue as a municipality is obligated to compensate an owner for any livestock lost to predators. This could become a significant issue if a large number of individuals keep chickens in the city. Current rates of compensation range from \$30 to \$1200 dollars per chicken depending on the type of chicken and its purpose. The city continuously deals with coyote complaints within the urban area and those and other predators will become more of an issue if large numbers of chickens are kept in the urban area.

Respectfully submitted,

Rod Bovay MCIP RPP
Director, Engineering & Development Services

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	Y	Jul 8/19	Y	159 Days	Jul 10/19	Jul 30/19	Jul 31/19
Applicants to submit additional information														
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	Y	Jul 8/19	N		Jul 12/19	Aug 1/19	APPEALED
Applicant to review public concerns and re-submit Public Meeting for Revised Application														
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 Jun 3/19							
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														

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-77-1085	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 McMahan 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 Iso 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	
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		Aug 28/19	Sep 13/19	Oct 7/19 Nov 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		Sep 3/19	Sep 13/19	Oct 7/19 Nov 4/19							

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-77-1091	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		Sept 4/19	Sept 13/19	Oct 7/19 Nov 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		Sep 13/19	Oct 11/19	Nov 4/19							

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.