

**Attachments for
Finance and
Labour Relations
Sub-committee
December 16,
2014**



November 14, 2014

City of Stratford
Building and Planning Department
P.O. Box 818
Stratford, ON N5A 6W1

Attn: Mr. David Carroll, C.E.T., C.B.C.O.
Chief Building Official

Dear Mr. Carroll:

RE: Cooper Site Building
350 Downie Street, Stratford, ON
Roofing Components - Visual Review

RJC No.: TOR.103282.0008

1.0 Introduction

Read Jones Christoffersen Ltd. was authorized by Mr. David M. Carroll, Chief Building Official for the City of Stratford to undertake a visual review of the roofing components of the Cooper Site Building located at 350 Downie Street in Stratford, Ontario as per our proposal dated October 27, 2014 (RJC No. TOR.099521.0001).

The purpose of this review was to determine the present condition of the roofing components with respect to the age related deterioration and the hazards associated with potential falling debris throughout the structure. Immediate course of action and repair strategies, complete with our opinion of the probable construction costs are presented in our report.

As part of our review, the following work, briefly described below, was carried out:

- .1 Review of available drawings and documents describing the structure and the roofing components to re-familiarize ourselves with the construction of the building.
- .2 A comprehensive visual review of the roofing components from the ground to detect areas of apparent deterioration.
- .3 A visual review of the roofing components at the random locations from the boom lift in order to obtain better understanding of the degree of roofing component deterioration.

The review of structural components of the roofing system (i.e. steel bracing) for structural adequacy is beyond the scope of our work and as such was not performed as part of this evaluation.

The review of the structure for presence of hazardous materials is beyond the scope of our work and as such was not performed as part of this evaluation.

This report is exclusively for the use and benefit of City of Stratford and is not for the use or benefit of, nor may it be relied upon by, any other person or entity. The contents of this report may not be quoted in whole or in part or distributed to any person or entity other than the client.

2.0 Brief Building Description

2.1 Building Description

The main building located at 350 Downie Street is an abandoned industrial building constructed circa 1871 generally of riveted steel construction currently covering a footprint of approximately 160,000 square feet (*Refer to Photograph #1 in Appendix A*). The building has undergone various iterations of additions and demolition over its history prior to and following abandonment in 1989.

It is our understanding that the building located at 350 Downie Street was originally constructed in 1871 as a locomotive repair shop with expansions in 1889 and 1907, and an addition in 1940. Currently, only the 1907 expansion and 1940 addition exist on site, with the original building and 1889 expansion having been demolished in 2004. The property is bound by a community centre on Downie Street to the east, a municipal parking lot and a university campus building on St. Patrick Street to the north, the Festival Hydro yard on Wellington Street to the west, and the rail lines to the south.

The remaining building is generally arranged with four (4) bays, all of which are open from the ground to the roof structure with the exception of the north-most bay, which includes a mezzanine level (*refer to Figure #1 below*). From north to south, the north-most bay (herein referred to as the "mezzanine bay") is approximately 615-ft long by 40-ft wide and 50-ft high to its peak. The next bay south (herein referred to as the "low bay") is approximately 770-ft long by 65-ft wide at a similar height of 50-ft to its peak. The 3rd bay south (herein referred to as the "high bay") is approximately 780-ft long by 70-ft wide and 67-ft high to its peak. Finally, the south-most bay (herein referred to as the "addition bay") is approximately 580-ft long by 50-ft wide and 38-ft high to the roof surface.

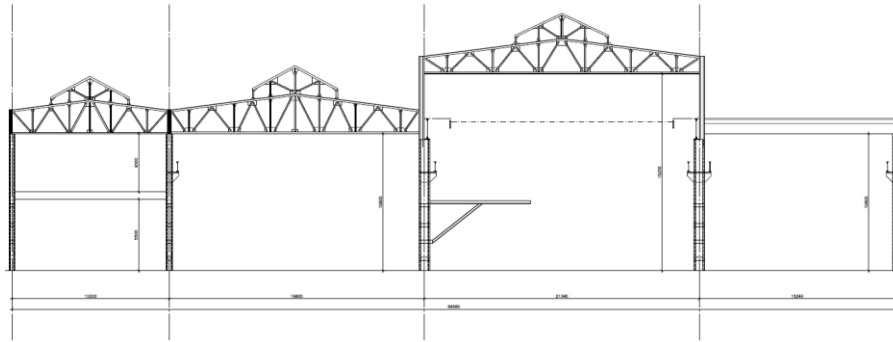


FIGURE #1: TYPICAL BUILDING SECTION

In plan, the main bays are denoted by lettered gridlines As, Cs, Ds, Es, and Fs, spaced in the north-south direction as per the bay width noted above. The transverse gridlines are numbered and identify the column spacing in the east-west direction, generally at 22' centres.

Access to the building is achieved from a municipal surface parking lot at the north side of the building, where the main entrance can be accessed near the centre of the north side of the building.

2.2 Structure Description

The building structure ranges from approximately 38-ft to 67-ft tall with the main portion of the building constructed of riveted built-up steel construction and the addition constructed of rolled structural steel sections. The building, in general, is constructed above grade with several pits of unknown depths present throughout the footprint of the building.

The steel structure utilizes cross-bracing in the vertical plane along gridlines As, Cs, and Ds and horizontal plane at the roof levels to provide lateral stability. The main building area constructed in 1907 consists of riveted steel with main roof trusses spanning in the north-south direction across each bay (varying from 40' to 70') supported by built-up steel column sections. The columns are spaced approximately 22' apart along the length of the facility. Rolled steel 'C' and 'I' section purlins span between trusses to support the roof deck. Large plate girders are also present within the structure, formerly utilized to support mobile crane loads carrying locomotives.

2.3 Roof Components

Having undergone various phases of expansions, additions, modifications, repairs, and demolition, the building utilizes several forms of roofing systems.

In general, the main building is constructed similarly for each of its three bays, with a higher, sloped roof with a central peak at the central half of each bay (herein referred to as the "apex") elevated by short walls from the low sloped roof on either side. The apex roof areas are generally constructed of sheet metal supported by wood strapping and metal U-channel grid. The walls at the edges of the apexes were generally constructed with wood studs sheathed with plywood, and in some cases cement board, and coated with asphalt felt, similar to the low-slope roof areas below. The assembly of the low-slope roof areas at the outer bands of each bay was typically constructed with mopped multi-ply asphalt roof membrane on solid 2" thick tongue-and-groove wooden roof deck spanning over the steel purlins (*Refer to Photograph #2 in Appendix A*).

The roof of the 1949 addition is a flat roof (with mild slope towards the exterior south parapet wall) constructed with a multi-ply roofing system with pea gravel and copper flashing. The membrane was applied to the underlying solid 2" thick tongue-and-groove wooden roof deck.

2.4 History & Background

The building was constructed by Grand Trunk Railway (GTR) as a locomotive shop to accommodate their growing steam locomotive market, with the site in Stratford being selected as it was located at the crossroads of the main line from Quebec to Chicago and the east-west line from Buffalo to Goderich on Lake Huron. The original shops were completed in 1871. After acquiring Great Western Railway (Hamilton to Detroit), GTR expanded the Stratford facility in 1889 to accommodate the influx of staff and equipment relocated from Hamilton. Another major expansion was constructed in 1907 to provide more space to the increasing size of the locomotive, and a final addition was constructed in 1949 to accommodate even larger locomotives. During that time, GTR was absorbed by Canadian National Railway (CNR) in 1923. Due to the takeover by diesel engines, CNR no longer required the locomotive repair shops and sought offers for the fully equipped facility in 1953. In 1959, the U.S.-based Cooper-Bessemer Corporation (later named Cooper Energy Services) leased the facility from CNR for its manufacturing purposes. By 1989, due to the turnaround in fortunes for Cooper Energy Services, the building became, and remains, vacant.

Since becoming vacant, the property has seen a few changes in ownership with several proposals and plans put forth for redevelopment of the facility, none of which ever came to fruition. In 2002, a major fire occurred in the west end of the building causing extensive damage. Another smaller fire occurred in 2008, with only minor damages noted. In 2004 and 2010, respective demolition of the 1871 and 1889 portions of the building were completed, leaving the 1907 expansion and 1949 addition as the building currently existing on the site.

3.0 Description and Results of Field Work

The field work associated with the visual review of the roofing components was performed on October 29, 2014. The following summarizes the fieldwork and results obtained as part of this evaluation:

3.1 Visual Review of the Roofing Components

The condition of the roofing components (i.e. wooden and metal decking, roofing membrane etc.) was visually reviewed from ground and from the boom lift to identify the extents of deterioration and damage to the building. In general, given the exposed and abandoned condition of the building, the roofing components are experiencing varying degrees of deterioration.

In general, the roofing was observed to be in poor condition, which was particularly evident upon observing the varying degrees of deterioration at the underside of the roof deck in all areas of the building. Flaking paint, damp and rotting wood, and corroded sheet metal were observed throughout the building in both the main building and the addition (*Refer to Photographs #3 to #7 in Appendix A*). Extensive roofing and roof deck deterioration was predominantly noted within the west section of the structure between gridlines 1 - 10 and Cs - Es adjacent to the area of the building burnt down during the major fire in 2002 as noted previously in this report. Sections of the roofing material and the roof decking were noted to be deteriorated to the point where they either have been blown off or are in danger of being blown off the building's roof. Generally speaking, at this time, the observed deterioration of the roofing assembly appears to be predominately related to the deterioration of the wooden roof decking and roofing membrane.

Since the condition and stability of the roof deck material was questionable, only a cursory review of the roof surfaces could be performed through the skylights and the burnout sections of the roof from a boom lift. From the cursory review of the roof surface performed, it was obvious that the roofing materials had well exceeded their useful service life, were in a state of complete disrepair, and were no longer functioning as intended. Fallen roofing debris was noted throughout the interior of the building and around the perimeter of the exterior of the building (*Refer to Photograph #8 in Appendix A*).

4.0 Conclusions/Discussions

In general, the findings of this review suggest that the primary concern with respect to the condition of the roof (i.e. wood roof decking and roofing membrane) relates to the observed age related deterioration and the potential safety hazards arising as a result of falling roofing debris from high levels. As previously noted in this report, the wooden roof decking and roofing membrane are in poor condition and are in an obvious state of disrepair as the moisture penetrating through the membrane has caused some significant levels of deterioration and failure of the decking materials, particularly along the west section of the building. Although evaluation of the structural components of the roof structure (i.e. steel framing systems) was not included in the scope of our review, based on our cursory review and the findings of structural evaluation undertaken by RJC in the past, it appears that the structural integrity of the framing system is not a concern at this time.

The observed deterioration of the roofing membrane and decking can be attributed to several factors, including but not limited to prolonged exposure to the elements as a result of a lack of repair and maintenance over an extended period of time (due to the derelict nature of the building). In our opinion the deterioration is expected to increase at an accelerated rate if left unattended resulting in increased frequency of the failure of the wooden roof decking and increased potential for the safety hazards associated with falling roofing debris.

Further, corrosion related deterioration of the structural framing system (i.e. trusses, beams, etc.) is an increasing concern given their exposure to the elements. The corrosion related deterioration of the structural framing system can be expected to occur at an accelerated rate if left unattended for the extended period of time resulting in potential risks associated with the reduction of the load carrying capacity and potential structural integrity concerns for the remaining building structure.

5.0 Possible Courses of Action

The action plan provided below is based on the findings of our review with respect to the present condition of the roofing components and our observations during the walkthrough of the structure's exterior perimeter. Our analysis of this information has allowed us to extrapolate and predict future expenditures that may be needed on this structure based on its present condition.

Given the uncertainty with the future redevelopment plans of the structure, the rehabilitation of the roofing for the building was not considered as an option.

Based on the findings of the evaluation, the following courses of action are available to address the potential safety hazards as they related to the deterioration observed at the time of our review.

5.1 Option #1 - Removal of the Loose Roofing Components and Annual Monitoring

The purpose of this strategy is to address the current potential safety hazards observed at the time of our review associated with the falling roofing components (i.e. roofing membrane and wooden decking). This work involves retaining the services of contractor to remove all the areas of deteriorated roofing components that are in danger of falling and/or being blow off the roof. Direction would be provided by RJC at the Owner's request.

It should be noted that the observed deterioration of the roofing components is likely to continue at an accelerated rate and additional engineering assessments as well as removal of the loose roofing components is recommended on an annual basis until full scale restoration is implemented or demolition is required to mitigate a large scale collapse due to advancing levels of deterioration. Based on the expected accelerated rate of deterioration, it is anticipated that the observed deterioration may progress to a point where complete demolition of the roofing components may be required within 3 to 5 year period unless measures are taken to rehabilitate the observed deterioration and protect the structure from future moisture degradation.

This option recognizes that the proximity of adjacent properties and buildings cannot be adequately protected against falling roofing debris, which could otherwise be contained by the perimeter fencing.

It should be noted that the removal of the roofing components will further expose the buildings structural framing components (i.e. steel frame, perimeter concrete and masonry walls, etc.) to the elements which in turn will accelerate the rate of corrosion related deterioration resulting in potential risks associated with the reduction of the load carrying capacity and potential structural integrity concerns.

5.2 Option #2 - Complete Demolition of the Roofing Components

This strategy is relatively self-explanatory, essentially involving the complete demolition of all roofing components of the building (i.e. roofing membrane, wooden and metal decking, etc.). The purpose of this strategy is to mitigate from potential costs associated with annual evaluation and need for additional removals of the roofing components as the structure continues to deteriorate. It should be noted that exposing the structural components to the elements will accelerate the rate of corrosion related deterioration of these components resulting in potential risks associated with the reduction of the load carrying capacity and potential structural integrity concerns.

The following scope of work is the minimum recommended work required to demolish the west end wall:

1. Protection of the site for the duration of the demolition work to restrict access only to contractor and consultants as well as maintain site safety.
2. Demolition of the roofing components (i.e. roofing membrane, wooden and metal decking, etc.).

5.3 Perimeter Fencing and Site Protection

Provided the potential risk associated with the falling debris along the exterior of the building resulting from the ongoing deterioration of the roofing components, barrier fencing should be installed around the perimeter of the building. Two possible options should be considered and are presented below:

.1 Option #1 - Permanent Perimeter Fencing

1. Installation of an 8'-0" high security fencing around the perimeter of the building with permanent post footings buried below the frost line in accordance with the Ontario Building Code.
2. Installation of access gates to provide vehicular and pedestrian access to the municipal maintenance staff.
3. Installation of signage on the barrier fencing advising general public of potential risks associated with trespassing and entering the property.

.2 Option #2 - Temporary Perimeter Fencing (i.e. fast fencing)

- .1 Installation of an 8'-0" high fast fencing around the perimeter of the building.
- .2 Installation of signage on the barrier fencing advising general public of potential risks associated with trespassing and entering the property.

Using concrete post footings for the perimeter fencing (as oppose to temporary "fast fencing") is recommended given the need to mitigate security breaches in the fence and the unknown duration that the fencing will need to be in place.

6.0 Opinion of Probable Construction Costs

The following cost estimates represents our opinion of the probable construction costs and are based on the information obtained during this condition survey. The following cost estimates should be treated as "ball park" figures only and cannot be guaranteed accurate.

Based on the construction review experience we have in the repair and rehabilitation of existing structures and buildings, we advise that it is reasonable to assume that the repair quantities - as compared to those deteriorated quantities observed during the condition survey - will be larger. Different items for repair characteristically have exhibited different increases in size during the repair program. Our summary to follow, which outlines the estimated construction costs, has considered this increase from the observed deteriorated quantities.

6.1 Option #1 - Removal of the Loose Roofing Components and Annual Monitoring

The construction cost estimate for the removal and disposal of the loose roofing components, as described in Section 5.1 of this report assuming all work is performed in one year in 2014 dollars, is approximately \$105,000.00 plus and H.S.T. and breaks down as follows:

Table 6.1 - Option #1 Opinion of Cost Breakdown

Item	Description	Report Value
1	Mobilization, General Accounts, Overheads	\$ 35,000.00
2	Removal and Disposal of Loose Roofing Components	\$ 55,000.00
3	Engineering Fees *	\$ 15,000.00
	Total ("Class D" - Cost Estimate)**	\$ 105,000.00

*Engineering Fees include preparation of technical documentation, tendering of the project, site review and contract administration.

** The cost associated with the abatement of hazardous materials (if present) was not included in our cost estimates.

6.2 Option #2 -Complete Demolition of the Roofing Components

The construction cost estimate for complete demolition of the roofing components, as described in Section 5.2 of this report assuming all work is performed in one year in 2014 dollars, is approximately \$315,000.00 plus H.S.T. and breaks down as follows:

Table 6.2 - Option #2 Opinion of Cost Breakdown

Item	Description	Report Value
1	Site Protection	\$ 35,000.00
2	Bonding, Mobilization, General Accounts, Overheads	\$ 75,000.00
3	Demolition and Disposal/Recycling of Roofing Components	\$ 150,000.00
4	Contingency Allowance	\$ 20,000.00
5	Soft Costs *	\$ 35,000.00
	Total ("Class D" - Cost Estimate) **	\$ 315,000.00

*Soft Costs include engineering fees, cost of building permit and material testing fees and are estimated to be approximately 15% of the total construction budget.

** The cost associated with the abatement of hazardous materials (if present) was not included in our cost estimates.

6.3 Perimeter Fencing and Site Protection

.1 Option #1 - Permanent Perimeter Fencing (i.e. security fencing)

The construction cost estimate for the installation of perimeter fencing and site protection, as described in Section 5.3.1 of this report assuming all work is performed in one year in 2014 dollars, is approximately \$250,000.00 plus H.S.T. and breaks down as follows:

Table 6.3.1 - Option #1: Permanent Fencing

Item	Description	Report Value
1	Mobilization, General Accounts, Overheads	\$ 25,000.00
2	Supply and Installation of New Fencing	\$ 210,000.00
3	Engineering Fees *	\$ 15,000.00
	Total ("Class D" - Cost Estimate)	\$ 250,000.00

*Engineering Fees include preparation of technical documentation, tendering of the project, site review and contract administration.

.2 Option #2 - Temporary Perimeter Fencing (i.e. fast fencing)

The construction cost estimate for the installation of perimeter fencing and site protection, as described in Section 5.3.2 of this report assuming all work is performed in one year in 2014 dollars, is approximately \$155,000.00 plus H.S.T. and breaks down as follows.

Table 6.3.2 - Option #2: Temporary Fencing

Item	Description	Report Value
1	Mobilization, General Accounts, Overheads	\$ 20,000.00
2	Supply and Installation of New Fencing	\$ 125,000.00
3	Engineering Fees *	\$ 10,000.00
	Total ("Class D" - Cost Estimate)	\$ 155,000.00

*Engineering Fees include preparation of technical documentation, tendering of the project, site review and contract administration.

7.0 Recommendations

Based on the findings of this evaluation, we recommend the following course of action to address the potential safety hazards as they related to the deterioration of the roofing components observed at the time of our review.

7.1 Roofing Components

With respect to the deterioration of the roofing components observed during our visual review, we are of the opinion that the observed deterioration has progressed to a point where integrity of the wooden roof decking and roofing membrane has been compromised and fallen roofing debris was noted throughout the site.

As a result, in the short term, we recommend implementing Option No. 1 as discussed in Section 6.1 of this report and retaining the services of contractor to remove all the areas of loose and deteriorated wooden roof decking and roofing membrane and implementing annual update reviews of the roof structure. Annual reviews will monitor the structure for future deterioration and identify the need for additional removals and/or site protection or structural shoring based on the increased level of deterioration. It should be noted that implementation of this option should not be delayed due to the safety concerns associated with the falling roofing debris and/or debris blown off the building noted at the time of our review.

Alternatively, if the redevelopment of the site is not planned to be completed within next 3-5 years it may be more cost effective to implement Option No. 2 as discussed in Section 6.2. This option becomes the more cost effective approach due to the accelerated rate of deterioration that is expected to occur as long as the roofing components remain unprotected in its current state. It should be noted that implementation of this option will result in exposing the main structural components of the building to the elements and may accelerated the corrosion related deterioration of the superstructure.

7.2 Perimeter Fencing and Site Protection

With respect to the perimeter fencing and site protection, we recommend implementing Option No.1 as discussed in Section 6.3.1 of this report given the need to mitigate security breaches in the fence and the unknown duration that the fencing will need to be in place.

8.0 Closing Remarks

Thank you for selecting Read Jones Christoffersen Ltd. for this project. We would be pleased to assist you with the implementation of our recommendations. Should you have any questions or concerns, please do not hesitate to contact this office.

Sincerely,

Read Jones Christoffersen Ltd.

Reviewed by:



Sohrab Baba Karkhel, P.Eng.
Project Engineer
Building Science and Restoration



Jeremy Horst, C.E.T., LEED AP
Principal
Building Science and Restoration

Appendix 'A'

Photos



Photo #1: General Overview of the Structure



Photo #2: General Overview of the Roof



Photo #3: Typical Roof Deterioration



Photo #4: Typical Roof Deterioration



Photo #5: Typical Roof Deterioration



Photo #6: Typical Roof Deterioration



Photo #7: Typical Roof Deterioration



Photo #8: Roofing Debris Scattered Throughout the Site



CITY OF STRATFORD: Dashboard Report for 2015

Department: CORPORATE

Strengthening our Community, Attracting People and Investment

Objective	Indicator	Target or End Date	Range Key		
			Celebrate	Monitor	Act Now
To develop a Succession Planning program (CLT).	Approve and implement a program to identify and develop future leaders for the City of Stratford.	December 31 st 2015			
To develop an Employee Engagement Initiative (CLT)	Approve and Implement a program to best enfranchise employees based on organizational strengths and weaknesses. Establish clear goals and objectives for employees and providing opportunities for them to develop professionally.	December 31 st 2015			
Implement service delivery review initiatives with available resources (CLT).	Examine feasibility for joint intake with Social Services; improve Fleet Management; improve customer service.	December 31 st 2015			

Objective	Indicator	Target or End Date	Range Key		
			Celebrate	Monitor	Act Now
Defining Corporate Administrative Values (CAO)	Identify corporate values that support the City's Strategic Priorities to promote corporate consistency in the management of the city and to guide principal actions and decisions.	September 30 th 2015			
To prepare a master plan for the future development of the Cooper Site.	Presentation of a draft master plan to the City's Finance & Labour Relations Sub-committee.	Within 3 months of decision on future of Cooper Building			
To create a master plan to identify and plan locations for the City's building and land needs (CAO).	Presentation of a draft master plan to the City's Finance & Labour Relations Sub-committee.	Within 3 months of adoption of Cooper Site Master Plan.			
To submit City Budget to Council in accordance with the City's strategic priorities and target including use of new budget automation program (Corp Serv).	Draft budget tabled with City Council under a 2% residential tax increase over previous year.	November 30 th 2015			
Implement Asset management plan key recommendations (Corp. Serv).	Implement asset management plan within 2015 budget allowance. Continue updating asset management data.	December 31 st 2015			

Objective	Indicator	Target or End Date	Range Key		
			Celebrate	Monitor	Act Now
Implement IT Strategy with available resources (Corp Serv).	Implement IT Strategy recommendations within 2015 budget allowance	December 31 st 2015			
Implement Corporate Communications Plan (Corp. Serv.)	Implement Communications Strategy, Social Media Marketing Plan, and Social Media Policy within available 2015 budget.	December 31 st 2015			
Implementation of Trails and Bicycle master plan (I&DS).	Propose 2015 projects to the Active Transportation Committee as per the approved budget for 2015.	June 30 th 2015			
To undertake energy saving projects that can demonstrate a five to seven year (or less) return on investment (I &DS).	Five significant corporate projects in the City of Stratford.	December 31 2015			
To facilitate a community engagement exercise that will provide recommendations on a final design for Market Square (I&DS).	Final project design and approach presented to City Council.	June 30 th 2015			
Affordable Living Review (Soc. Serv)	Present a report to City Council on initiatives that can be undertaken by the City to promote affordable living in the City of Stratford.	December 31 st 2015			

Objective	Indicator	Target or End Date	Range Key		
			Celebrate	Monitor	Act Now
Housing and Homelessness Plan (Soc. Serv)	Implementation of Housing and Homelessness Plan within available resources.	December 31 st 2015			
Implementation of Health and Safety Plan – Phase 1 (HR)	Implement Phase 1 of the Health and Safety Plan	December 31 st 2015			



**CITY of
STRATFORD**
Chief Administrative Officer

10 December 2014

MANAGEMENT REPORT

To: Tom Clifford, Chair
Finance and Labour Relations Sub-Committee

From: Ronald R. Shaw
Chief Administrative Officer

Re: City Land Uses Master Plan

OBJECTIVE:

To consider building and facility requirements in the City of Stratford and to create a master plan for the allocation of these buildings and facilities on public lands in the City.

BACKGROUND:

A master plan for City land uses forms one of the City's corporate objectives for 2014.

Beyond the eight acres allocated to the University of Waterloo, the Cooper Site (including the future of the existing building) is a critical consideration, as its size and central location make it the ideal place for a number of the City's needs. It also presents an opportunity for private sector development, a matter which is currently under consideration given the Memorandum of Understanding with Riversedge Developments.

Given that City Council has deferred a decision on the future of the building until they receive and consider the forthcoming proposal from Riversedge Developments, there is only so far we can go with the allocation of lands. Heritage Stratford has also recommended that this building be designated under Part IV of the *Ontario Heritage Act*.

In the interim, staff have been working to identify and categorize the City's long-outstanding and emerging critical building and facility needs. Reports, business cases, studies, reports, and supporting documentation have been collected that might indicate the need for these facilities, identify potential locations, and/or estimate the space requirements and potential cost. Staff have also created an inventory of city-owned land and vacant city owned property.

The list of needs is long, and the availability of land and funding are limited. Therefore, we must prioritize these requirements. In this regard, we are seeking direction from Council on which facility and land needs priorities should be included in the final City Land Uses Master Plan.

ANALYSIS:

1. Facility Requirements – Corporate

The following general inventory indicates the City's corporate building and facility requirements as outlined in various reports and by stakeholder groups:

(See table on next page).

Corporate	
Use	Supporting Documentation
a) Justice Building (Police and possibly family court)	"Stratford Police Service Report on Existing Administration of Justice Building at 17 George Street." <i>Green Propeller Design</i> , February 2011.
b) Fire Hall (New & potential expansion of Fire Hall 1)	"Needs & Space Assessment for the Expansion of the Stratford Fire Department." <i>NA Engineering</i> , August 2009.
c) Library Expansion	Julia Merritt, "City Land Needs Stakeholder Survey," November 2014.
d) Expanded Parking	"Core Area/Public Parking Facility & Queens Park Area Parking Inventory Map," <i>City of Stratford</i> , 21 May 2014. Report on City parking needs is forthcoming.
e) Transit Terminal	"Stratford Transit – George Street West Preliminary Order of Magnitude Cost Estimate," <i>IBI Group</i> , July 2011. "Transit Operations Review – 5 Year Business Plan" <i>City of Stratford</i> , 5 July 2002.
f) Landfill Site (Buffering & possible expansion)	"City of Stratford Engineering and Public Works 2012 and 2013 Annual Operations and Monitoring Report," <i>WESA</i> , April 2014.
g) Market Square	Several reports from the CAO and Market Square Committee; Public engagement session with hired facilitator is forthcoming.
h) University (8 Acres)	"Agreement between the University of Waterloo and The Corporation of the City of Stratford," 23 November 2009. "Economic Impact Study: UW Stratford Institute," Deloitte, November 2008.
i) Social Housing	"A 10-Year Housing and Homelessness Plan for Stratford, Perth County and St. Marys," <i>OrgCode Consulting</i> , 11 September 2013.

Full copies of these reports are available upon request.

a) Justice Building

Summary: The Justice Building requires renovation and expansion, or a new purpose-built facility. The current building does not have sufficient space, cannot accommodate new functions, and requires several upgrades. Furthermore, the current building does not meet AODA requirements.

Location: Options for the future of the Justice Building include placing an addition on to the existing building in its current location, or relocating to a new building at an undetermined location.

Size & Required Space: Options include expanding the existing site to 35,000 sq.ft. and relocating the parking to the Cooper Site. Relocating will require the construction of a new building of at least 30,000 sq. ft.

Estimated Cost: Renovation and expansion of the current building is estimated to cost \$6.7-\$7.7 million plus HST (in 2015 dollars). Constructing a new building will cost approximately \$8.75-\$10.5 million plus HST (in 2015 dollars), plus site acquisition and “soft costs.” A new location is more money but better value in the long term.

Possibility for Partnership: None specified. There is always the possibility of partnerships; however, it often means constructing and financing two facilities at the same time.

Possibility of a Phased Approach: Expanding the existing building would have to be phased to allow new space to be built without disruption current operations. After the addition is built, renovation of the existing building would begin. However, this phased approach will make the project more expensive (adding approximately 4% to the construction cost due to the extra time and administration).

b) Fire Hall

Summary: The existing fire halls require additional space and equipment and facility upgrades to accommodate staffing levels and additional uses.

Location: The existing fire halls would be expanded in their current locations or additional facilities would be built adjacent to existing stations.

Size & Required Space: At Fire Station No. 1, there is very little room for horizontal expansion since the current building occupies most of the available space. Expansion would be vertical or through purchasing additional property in the vicinity. Fire Station No. 2 has the capacity for expansion in its current location.

Estimated Cost:

(See table on next page).

Option	Estimated Cost (2009)¹
Vertical expansion of Station No. 1 & Renovations to Station No. 2	\$900,000
Expansion of Station No. 1 to adjacent land & Renovations to Station No.2:	\$1,000,000
Expansion of Station No. 2 & Renovations to Station No. 1	\$1,200,000
Additional facilities adjacent to Station No. 2 & Renovations to Station No. 1	\$1,200,000
New facility in place of Station No. 1 & Renovations to Station No. 2	\$2,100,000 ²

Possibility for Partnership: None specified.

Possibility of a Phased Approach: None specified.³

c) Library Expansion

Summary: The Carnegie library has insufficient space and requires several upgrades, particularly because the existing facility does not meet AODA requirements. The existing facility is approximately one-third the size of the Southern Ontario Library Service benchmarks for a City our size. Finally, there is limited parking available on site, with only 8 spaces owned by the library.

Location: There is limited opportunity to expand the existing facility, as the structure cannot support vertical expansion and there is insufficient land space to accommodate an addition. Therefore, a new facility is required and should preferably be located within the downtown core. However, the Library is open to exploring other location options.

Size & Required Space: While the current building is 17,202 gross sq. ft., only 12,472 is usable by the public and staff. The Southern Ontario Library Service proposes 1.5 gross square feet per capita. This translates into a building of 46,500 gross square feet, with a net functional area of 32,500 square feet.

Estimated Cost: Similar library projects have ranged from \$300 to \$500 per square foot. Using an average of \$400 per square foot, this project is roughly estimated to cost approximately \$19,200,000.

¹ These are Class D estimates and may vary as much as 25%. They do not include land costs or consulting fees.

² The cost may be offset by the scale of the existing station property.

³ "Needs & Space Assessment for the Expansion of the Stratford Fire Department." *NA Engineering*, August 2009.

Possibility for Partnership: Yes – a new facility could be built in partnership with the YMCA, University of Waterloo, Stratford Police, and/or the Avon Maitland District School Board. Please note that it often means constructing and financing two or more facilities at the same time.

Possibility of a Phased Approach: No.⁴

d) Expanded Parking

- There is a general need for expanded public parking in the City of Stratford, particularly in the downtown core. Furthermore, proceeding with the Market Square redesign will necessitate the relocation of at least 44 parking spaces.
- The development of the Cooper Site will, in all likelihood continue to provide public parking; however, we don't know if it will mean the same number of public spaces, more or even less.
- Current available public parking is as follows (see map, attached):

Location	# of Spaces
Core Area	1164
Kiwanis Centre/Allman Arena	215
Queens Park Area	563
Rotary Complex	911
Dufferin Arena	48

- An updated report on parking, focused mostly on the Erie Street lot and related areas is forthcoming following further information on the development of Market Square.
- The estimated cost of new parking is highly variable because the cost of land accounts for at least half the cost of each space. Previous estimates state that new parking can cost between \$3,500 and \$5,000 per space. However, the 2013 Rambri zone change application included a cash-in-lieu of parking fee of \$10,000 per spaced, based on 2010 figures. Parking in a covered or tiered structure is even more.

e) Transit Terminal

Summary: The existing transit terminal behind City Hall has a number of deficiencies and there is a general desire to relocate to a more appropriate and purpose-built location. Furthermore, proceeding with the Market Square redesign will require us to either incorporate a bus terminal, or necessitate a transit terminal relocation.

⁴ For further details, see Julia Merritt, "City Land Needs Stakeholder Survey," November 2014.

Location: Since 2002, several locations have been suggested for the relocation of the transit terminal:

- The Cooper Site/St. Patrick St. Parking Lot
- Erie Street Parking lot
- George Street
- Wellington/Downie St beside City Hall
- VIA Rail Station

Size & Required Space: To be determined based on the nature of the proposed terminal.

Estimated Cost: To be determined based on the nature and location of the new terminal. As per the Market Square report, the relocation of the transit terminal is roughly estimated to cost \$1,000,000. Below is a table of estimates for the options presented in the 2008 Transit Operations Review as part of the 5 Year Business Plan:

Cost Item	Terminal Location		
	Cooper / St. Patrick	Erie St	Wellington / Downie
Site Preparation	\$19,400	\$8,300	\$7,400
Sanitary, water, storm	\$20,700	\$7,500	\$10,800
Roadworks	\$148,400	\$91,300	\$35,600
Landscaping	\$103,100	\$33,800	\$15,000
Electrical	\$25,000	\$15,000	\$25,000
Misc.	\$3,100	\$2,400	\$3,100
Shelters & Building	\$224,000	\$124,000	\$24,000
Contingency	\$81,555	\$42,345	\$12,000
Engineering	\$62,525	\$32,464	\$13,000
TOTAL	\$687,780	\$357,109	\$145,000

Cost estimates for relocating the bus terminal to George Street are as follows (2011):

George Street Option	Estimated Cost
Double-Sided Loading	\$600,000
Centre Platform	\$580,000
Single-Sided Loading	\$450,000
Sawtooth	\$590,000

Possibility for Partnership: None specified.

Possibility of a Phased Approach: The transit terminal cannot be constructed in phases but the relocation of the transit terminal can take place as part of a phased approach to the redevelopment of Market Square.⁵

f) Landfill Site

- The City's landfill has a total capacity of 5,282,900m³.
- As of 31 December 2013, the remaining landfill capacity is 1,972,754 m³.
- An average waste volume of 48,794.03 m³/annum was placed in the landfill in 2012 and 2013.
- Using the most recent data and calculated utilization rates, the estimated remaining life of the landfill is 30 years.⁶
- Continued success in waste reduction and diversion could increase the remaining life of the landfill site.

g) Market Square

- In 2014, the redevelopment of Market Square was identified as Council's Top Unfunded Priority.
- After a Public Meeting on 2 July 2014, Council directed Staff to hire a consultant to facilitate a public engagement process for input into the final design for Market Square.
- \$100,000 of Walmart's \$1.25 million contribution will be released to the City to cover the cost of consulting and design once Council passes a resolution to proceed with the Market Square project.
- There is a 2018 deadline for the use of the funds provided by Wal-Mart and with the looming 2017 Sesquicentennial, it is prudent for the City to be ready to proceed with the first phase of the Market Square project should funds become available. Council has discussed using the accumulated surplus to begin the development.
- Total cost estimates are as follows:

(See table on next page).

⁵ For further details, see "Stratford Transit – George Street West Preliminary Order of Magnitude Cost Estimate," IBI Group, July 2011, and "Transit Operations Review – 5 Year Business Plan" City of Stratford, 5 July 2002.

⁶ Stated to be 31 years from the end of 2013 in the report. For details, see "City of Stratford Engineering and Public Works 2012 and 2013 Annual Operations and Monitoring Report," WESA, April 2014, 4-5.

Item	Total Estimated Cost
Infrastructure – 2014 Water, Sanitary, Storm, Road (etc.) ⁷	\$2,098,750
Infrastructure – 2013 City Storm System Master Plan	\$1,500,000
Bus Terminal Relocation	\$1,000,000
Replacement Parking	\$500,000
Market Square Development	\$4-6,000,000
TOTAL	<u>\$9,098,750-\$11,098,750</u>

- Given the municipality's current financial situation, the revitalization of Market Square will have to be completed in phases.
- It is possible to initiate the first phase of the Market Square project without relocating the bus terminal and only integrating the design features that can be covered by the \$1.25 million from Wal-Mart.
- Total Estimated Cost for first phase for the project in 2014:

o Without Queen Street Storm:

Service	Gross Cost	Other Revenue	Tax Base
Water	\$426,650	\$426,650	
Sanitary	\$262,200	\$262,200	
Basic Storm	\$144,900	0	\$144,900
New Trunk	\$525,000	0	\$525,000
Road/Misc.	\$1,265,000	0	\$1,265,000
Bus Terminal	0	0	0
Parking (loss of 44 spaces)	\$204,000	\$204,000	0
Market Square Development	\$1,250,000	\$1,250,000	0
Total	\$4,077,750	\$2,142,850	\$1,934,900

o With Queen Street Storm:

Service	Gross Cost	Other Revenue	Tax Base
Water	\$426,650	\$426,650	
Sanitary	\$262,200	\$262,200	
Basic Storm	\$144,900	0	\$144,900
New Trunk	0	0	0
Road/Misc.	\$1,265,000	0	\$1,265,000
Bus Terminal	0	0	0
Parking (loss of 44 spaces)	\$204,000	\$204,000	0
Market Square Development	\$1,250,000	\$1,250,000	0
Total	\$3,552,750	\$2,142,850	\$1,409,900

⁷ Note that the 2011 costs outlined for infrastructure in section b) i) above have been adjusted for 2014 to reflect an annual inflation rate of 5% per year.

Please note that the recent review of the City's storm sewer requirements completed by the City's engineering division, indicates that the construction of the Queen Street storm sewer would negate the need to install the trunk storm sewer in Market Square.

h) University

- As per the 29 November 2009 agreement with the University of Waterloo, the City of Stratford agreed to provide a single site of at least 8 acres for the initial Phase I development of the University of Waterloo Stratford.
- With Phase I complete, the City is still obligated to make all reasonable efforts to secure additional abutting lands for the future expansion of the university, which will include Student residences, building expansions, new buildings, and additional parking.
- The current building is location the Cooper Site/St. Patrick Street Parking lot lands. Therefore, this is the ideal location for future expansions.⁸
- As per the 2008 Economic Impact Study by Deloitte:
 - o Phase 1 would encompass the Stratford Institute, research activities, the professional Master's program (100 students) and a 200-room residence;
 - o Phase 2 incrementally including the undergraduate program (500 students) and expanded residence (to 400 rooms) at an estimated construction cost of \$37.4 million.
- On-going discussions with the University indicate positive consideration for future development.

i) Social Housing

- The Housing & Homelessness Report indicates that the City of Stratford, as the CMSM, is responsible for an existing inventory of 1,251 housing units, of which 726 units are within the City of Stratford.
- Within the next 10 years, the City's Housing and Homelessness Report indicates that between 103 and 187 additional units will be required within the City of Stratford, with 124 the final recommended number of new units (Scenario 2).
- For the entire service area, the report indicates between 241 and 437 units are required for the geographical county of Perth, with 290 being the recommended number.
- The location, cost, and square footage requirements for these new units have not yet been specified.⁹
- For a full breakdown of housing recommendations, see graph below (Scenario 2 is the recommended model)¹⁰:

⁸ For further details, see "Agreement between the University of Waterloo and The Corporation of the City of Stratford," 23 November 2009.

"Economic Impact Study: UW Stratford Institute," Deloitte, November 2008.

⁹ For further details, see "A 10-Year Housing and Homelessness Plan for Stratford, Perth County and St. Marys," *OrgCode Consulting*, 11 September 2013, 10-11

	Current Units in Social Housing Portfolio	Number of NEW Units Scenario 1	Number of NEW Units Scenario 2	Number of NEW Units Scenario 3
Stratford	726	103	124	187
St. Marys	99	13	15	22
North Perth	133	42	51	77
Perth East	30	40	48	73
Perth South		13	16	24
West Perth	90	30	36	54
Rent Supplements	173			
TOTAL	1251	241	290	437

2. Facility Requirements – Recreation

The following general inventory indicates the City's recreational building and facility requirements as outlined in various reports and by stakeholder groups:

Recreation	
Use	Supporting Documentation
a) Indoor & Outdoor Soccer (in process)	"Indoor Soccer Facility Project" <i>Stratford Soccer Association</i> , April 2012; "Stratford Fairgrounds Park Master Plan," <i>GSP Group</i> , August 2012.
b) Youth Centre / YMCA Pool	Mimi Price, "City Land Needs Stakeholder Survey," November 2014.
c) New Skate / BMX Bike Park	"Public Survey Results: Skatepark Site Investigation." City of Stratford, 2013.
d) Community Centre	No report.
e) Outdoor Ice Rink	No report other than what has been proposed for Market Square.
f) Campground	Information forthcoming from the Agricultural Society
g) Agricultural Barn	Information forthcoming from the Agricultural Society
h) Vendor space (festival / fair)	Information forthcoming from the Agricultural Society
i) Horse Ring	Information forthcoming from the Agricultural Society

¹⁰ These numbers include RGI housing that is owned and administered by the City of Stratford, RGI units in co-operatives and non-profits, and federally funded seniors housing.

a) Indoor and Outdoor Soccer

Summary: The Stratford Soccer Association has proposed an indoor soccer facility to be constructed adjacent to a premier full-sized regulation soccer field that is irrigated, fenced, floodlit, and that provides full seating and parking for 250 vehicles. The facility is expected to be City owned and operated.

Location: Possible locations include the Fairgrounds and the Packham Road Soccer Fields.

Size & Required Space: See attached concept options prepared for the Community Services Department for the “retained lands” for the old Fairgrounds, about 10.3 acres. Please note that other suggestions for these lands have been put forward, including social housing.

Estimated Cost:

- The Fairgrounds Master Plan estimated the indoor soccer facility will cost \$7,000,000, with a total cost of \$8,986,100 for the entire park (including an outdoor soccer field, playground, basketball court, and beach volleyball).¹¹
- The Soccer Association indicated that they expect to raise \$6,750,000 in funding over a five-year period. The Soccer Association expects the City to provide 51% of this funding (\$3,472,000), with the remainder provided through grants, sponsorships, and the sale of naming rights.
- In addition to this will be the on-going operating, maintenance and replacement costs that have not been estimated.

Possibility for Partnership: None specified. As per the Fairground Master Plan, the soccer facility can be located on a site with other uses. However, it is difficult to construct a soccer field as a mixed-use facility.

Possibility of a Phased Approach: None specified.¹²

b) YMCA Pool/Youth Centre

Summary: The YMCA is proposing construction of a new YMCA that will provide year-round full aquatics programming and Stratford Youth Centre.

Location: City staff and the YMCA have indicated that they would prefer the facility to remain at its current location or within the vicinity/downtown core (i.e. – the Cooper Site/St. Patrick Street parking lot area).

¹¹ Note that this does not include any consultant fees or operational costs.

¹² For further details, see “Indoor Soccer Facility Project” *Stratford Soccer Association*, April 2012, and “Stratford Fairgrounds Park Master Plan,” *GSP Group*, August 2012.

Size & Required Space: The YMCA would require 3.5 acres of land and the size of the facility would be approx. 45,000 sq. feet.

Estimated Cost: \$15 million. We fully expect that the City will be asked to be a major capital contributor. It may be that adding on a pool to the existing building is the only feasible option.

Possibility for Partnership: Suggested incorporating a renewed skate park and could potentially partner with schools, libraries and police stations as has been carried out in other municipalities. Again, this would require money and financing for all components at once.

Possibility of a Phased Approach: Possible but not preferred. Usual construction for a YMCA is 18 months.¹³

c) New Skate/BMX Bike Park

Summary: On 22 July 2014, council adopted the Community Services Committee recommendation that staff consult with the public to investigate proposed locations for a new skatepark facility.

Location: After investigating several potential sites, Shakespeare Park was identified as the preferred location. In the end, Council decided to keep it at the Cooper Site.

Size & Required Space: Not specified, but space required is minimal and can easily be accommodated in an existing park.

Estimated Cost: \$120,000 from reserves (2013).

Possibility for Partnership: To be built in existing parks where other facilities exist.

Possibility of a Phased Approach: None specified.¹⁴

d) Community Centre

No existing report. However, there may be an opportunity to construct a new community facility in partnership with the YMCA, Library, or Justice Building.

¹³ For further details, see Mimi Price, "City Land Needs Stakeholder Survey," November 2014.

¹⁴ For further details, see "Public Survey Results: Skatepark Site Investigation." City of Stratford, 2013.

e) Outdoor Ice Rink

No existing reports aside from some mentions of design preferences for Market Square. However, an outdoor ice rink requires additional infrastructure and maintenance that may be not be feasible within operating budgets that require additional funding for on-going maintenance.

f) Campground

No existing report – awaiting stakeholder survey completion by the Stratford Agricultural Society.

g) Agricultural Barn

No existing report – awaiting stakeholder survey completion by the Stratford Agricultural Society.

h) Vendor Space

No existing report – awaiting stakeholder survey completion by the Stratford Agricultural Society.

i) Horse Ring

No existing report – awaiting stakeholder survey completion by the Stratford Agricultural Society. However, the need for a horse ring at the annual fair is briefly mentioned in the Fairgrounds Master Plan.¹⁵

3. Inventory of City Owned Land

For a detailed map all of city-owned properties, see the attached map. Vacant city-owned land is available in the following increments (see attached maps for locations):

(See table on next page).

¹⁵ See “Stratford Fairgrounds Park Master Plan,” *GSP Group*, August 2012.

Land Use	Vacant Residential		Vacant Industrial			Vacant Undesignated
Individual Hectares Available (see attached map for locations)	2.32	0.07	10.1	1.62	0.29	0.01
	0.84	0.05	4.89	1.42	0.29	
	0.79	0.04	¹⁶ 4.61	1.3	0.29	
	0.59	0.04	4.57	1.1	0.28	
	0.47	0.03	4.11	0.54	0.27	
	0.39	0.03	3.67	0.51	0.27	
	0.34	0.03	2.73	0.41	0.25	
	0.31	0.02	2.72	0.40	0.23	
	0.29	0.02	2.44	0.38	0.2	
	0.26	0.02	1.88	0.32	¹⁷ 0.11	
	0.23	0.02	1.69	0.31	0.06	
	0.16	0.01	1.65	0.3		
	0.14					

4. Inventory of Current City Buildings

City-owned buildings are the following sizes:

Building	Square Feet
Justice Building	29,000
Normal School	26,400
City Hall	24,000
82 Erie St	23,000
Anne Hathaway	5,500
47 Downie St	3,111
Economic Development	2,330
Police Annex	1,800

5. Council Direction Requested

It should be Council itself that provides overall direction on the list of needs that should be addressed in the final City Land Uses Master Plan report, and directs staff on the priority land uses and facility needs before we finalize the Master Plan. While all items on the inventory have been brought forward by City departments and various interest groups, we need to know which ones we should consider during this exercise.

Furthermore, Council may feel some of these proposed facilities may be more appropriate left to the private sector to provide if a private sector business case can be developed.

¹⁶ Cooper Site.

¹⁷ Beside University of Waterloo.

FINANCIAL IMPACT:

There of course will be a considerable financial impact to construct these facilities. This planning exercise really provides a master plan for future building and facility construction. There is little financial impact to doing the plan, which we consider necessary; however, the future construction will involve a considerable financial impact, some of which may be offset from user group contributions.

The other comment that the Corporate Leadership Team would like to again put forward, as unpopular as it is, is that city facilities, whether initially funded by the taxpayer, user groups or a combination of both, inevitably require funding for operations as well as funds that should be set aside for repair and eventual replacement.

Our recent Asset Management Study certainly demonstrated this gap. Adding more facilities will only add to that gap without funding for future maintenance and replacement. It also highlights the issue that we are looking at adding new buildings and facilities before we have addressed the existing infrastructure gap.

In any event, we still require a master plan so we know where best to locate any of these facilities when and if the decision to move forward with any of these projects.

Once we have a decision from Council on the future of both the land and buildings at the Cooper Site and direction on what facilities you wish us to find land for, we will then prepare a final report. Such report has been included in our proposed 2015 objectives.

The list of proposed facilities is as follows:

- Justice Building
- Fire Hall
- Library Expansion
- Expanded Parking
- Transit Terminal
- Landfill Site
- Market Square
- University
- Social Housing
- Indoor and Outdoor Soccer
- Youth Centre/YMCA Pool
- New Skate/BMX Bike Park
- Community Centre
- Outdoor Ice Rink
- Campground
- Agricultural Barn
- Vendor Space (festival/fair)
- Horse Ring

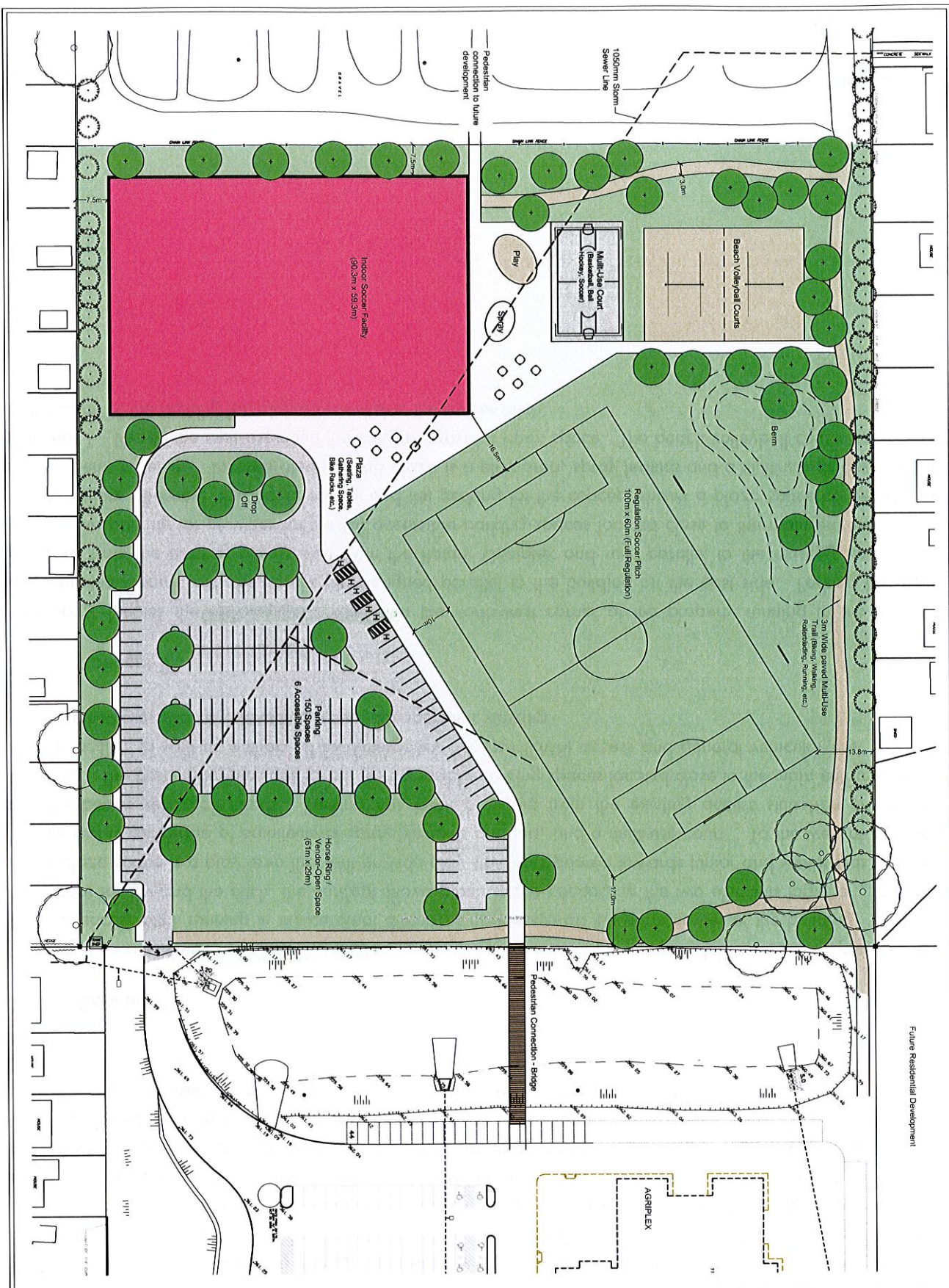
RECOMMENDATION:

That Council provide direction on what facilities should be subject to the City Lands Needs Master Plan Final Report.

Respectfully submitted,

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

Ronald R. Shaw
Chief Administrative Officer



Future Residential Development

FIGURE 3

STRATFORD FAIRGROUNDS PARK MASTER PLAN CONCEPT 1 STRATFORD ONTARIO



SK - 1

DATE: 01/11/2011
DRAWN BY: J. HARRIS
CHECKED BY: J. HARRIS

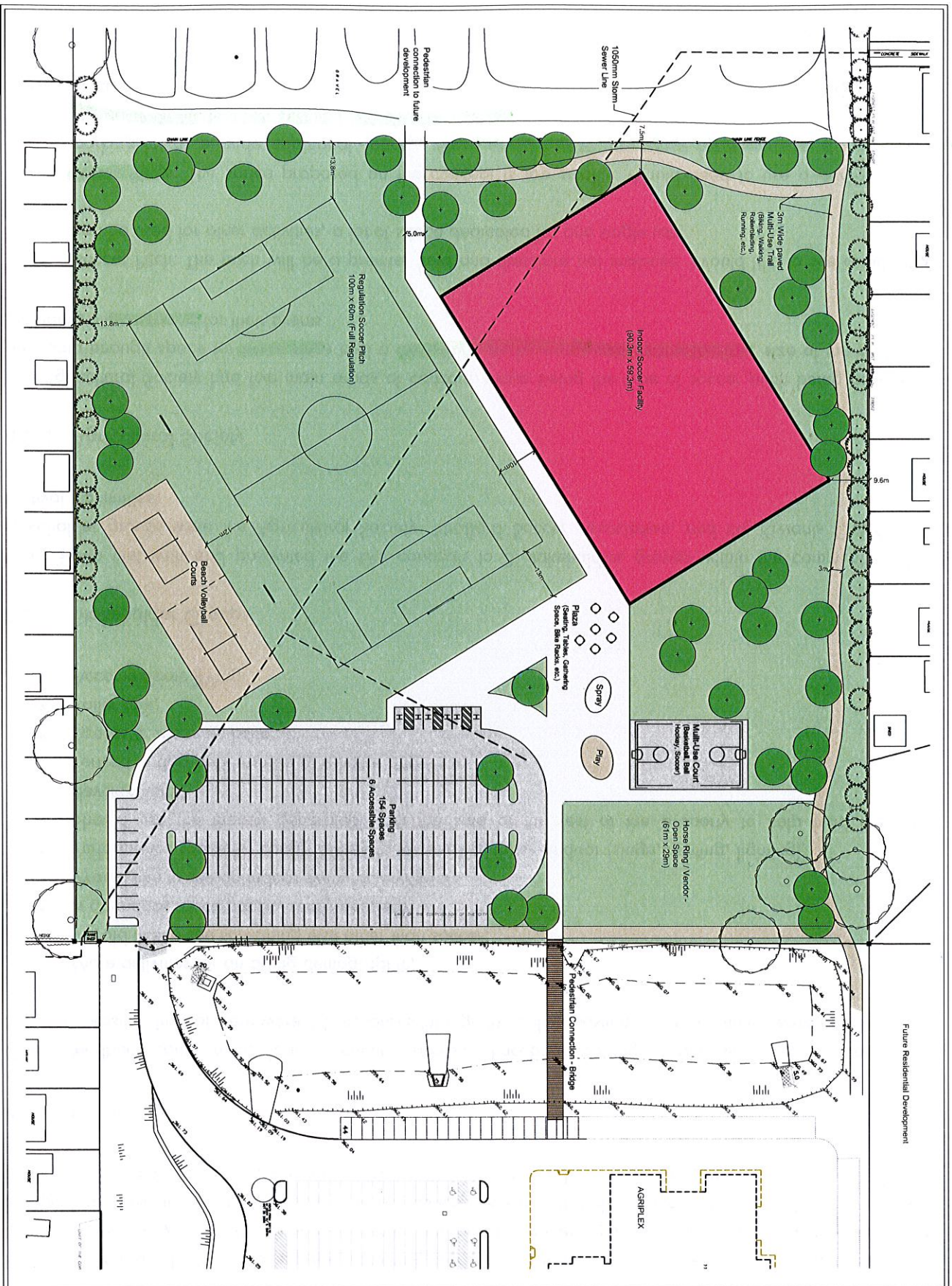


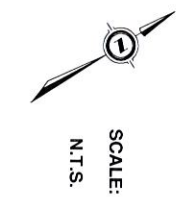
FIGURE 4

STRATFORD FAIRGROUNDS PARK MASTER PLAN CONCEPT 2 STRATFORD ONTARIO

SK - 2

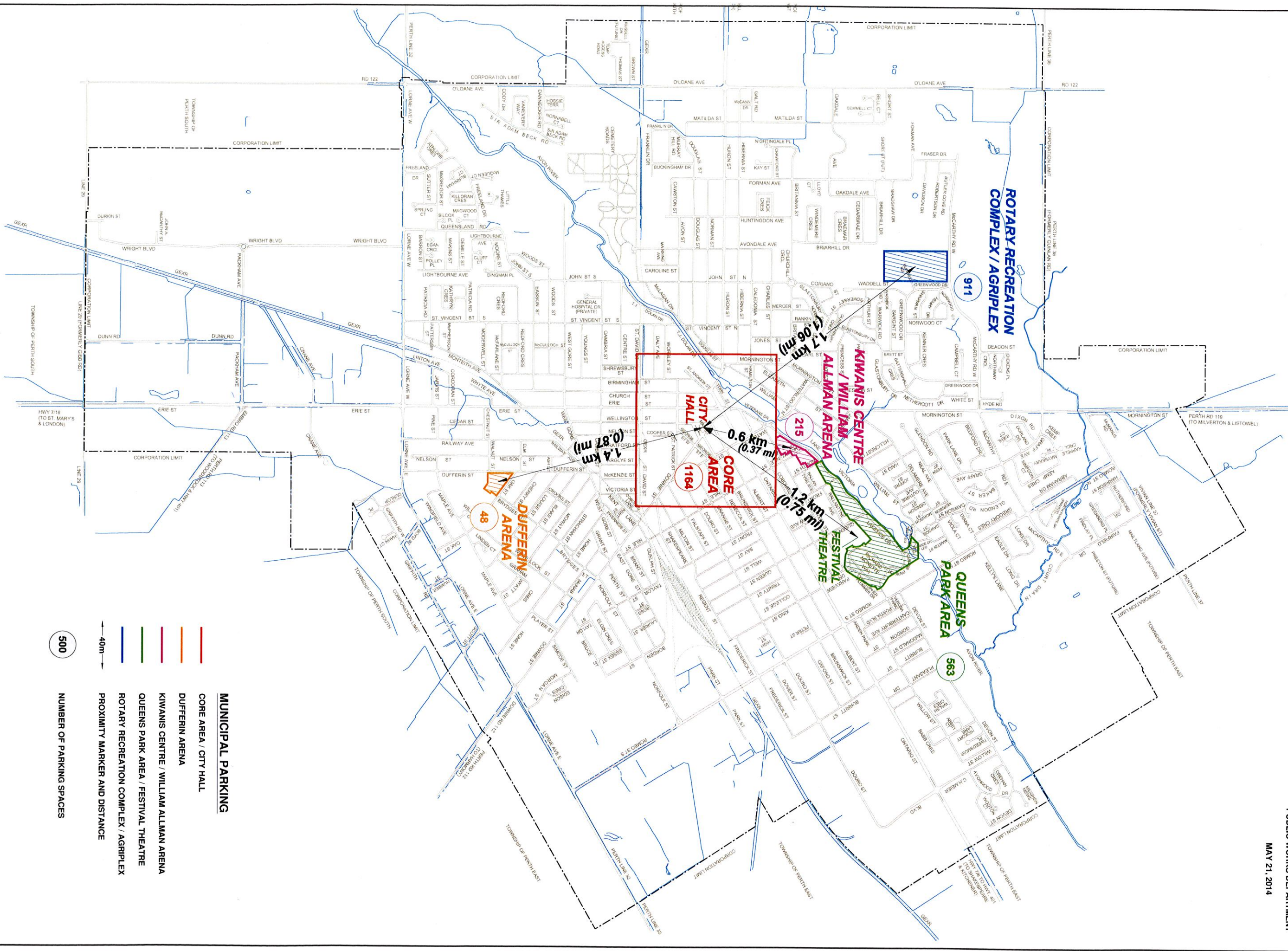


DATE: 2023-07-10
DRAWN BY: [Name]
CHECKED BY: [Name]
SCALE: 1:1000



SCALE:
N.T.S.

CORE AREA / PUBLIC FACILITY & QUEENS PARK AREA PARKING INVENTORY MAP



- CORE AREA / CITY HALL
- DUFFERIN ARENA
- KIWANIS CENTRE / WILLIAM ALLMAN ARENA
- QUEENS PARK AREA / FESTIVAL THEATRE
- ROTARY RECREATION COMPLEX / AGRIPLEX
- PROXIMITY MARKER AND DISTANCE

500

NUMBER OF PARKING SPACES

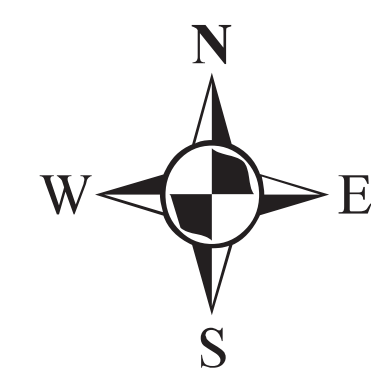


City of Stratford
Infrastructure and
Development Services
Department

City Property Ownership by Land Use



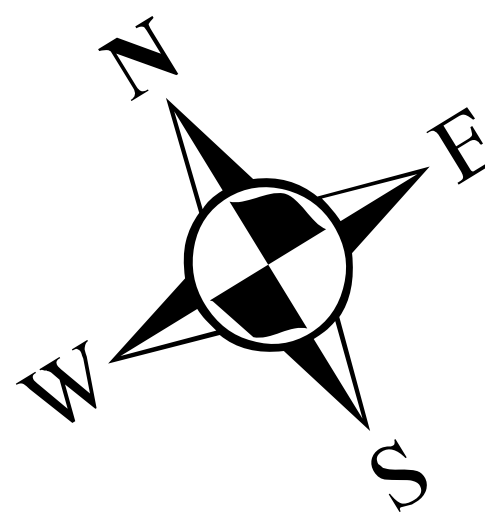
- City Property Ownership**
- Land Use**
- Cemetery
 - City Facility
 - Flood Plain
 - Future Residential
 - Golf Course
 - Industrial
 - Library
 - Landfill
 - Park/Floodplain
 - Park/Playground
 - Park/Recreational Facility
 - Park/Recreational Facility/Playground
 - Parking Lot
 - Parkland
 - Parkland/Gallery
 - Police Station
 - Pool
 - Recreational Facility
 - Retirement Home
 - Road Allowance
 - Tennis Courts/Playground
 - Vacant - Industrial
 - Vacant - No Current Designation
 - Vacant - Residential
 - Water Tower
 - WPCP



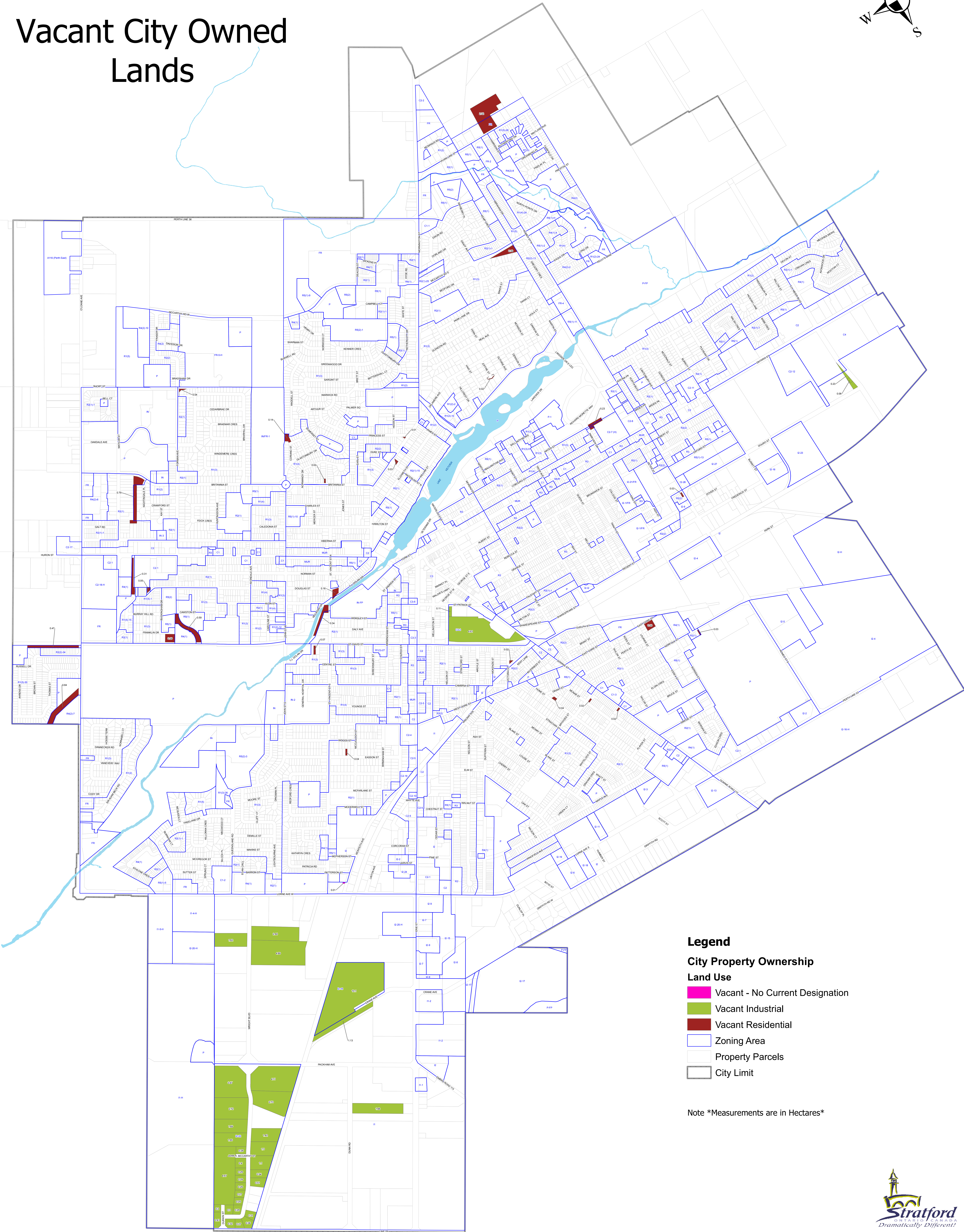
1:7,500



Revision Date: November 2014



Vacant City Owned Lands



- Legend**
- City Property Ownership**
- Land Use**
- Vacant - No Current Designation
 - Vacant Industrial
 - Vacant Residential
 - Zoning Area
 - Property Parcels
 - City Limit

Note *Measurements are in Hectares*



City of Stratford
Infrastructure and
Development Services
Department
08/12/2014



City of Stratford Information Technology Strategy

**Submitted to Finance and Labour Relations Subcommittee
16 December 2014**

Submitted by:

Naeem Khan
Manager of IT & Business Systems, Corporate Services

Stephanie Potter
Municipal Management Intern, CAO Office

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1. EXECUTIVE SUMMARY

The City of Stratford is committed to technological excellence, having been named one of the world's Top 7 Intelligent Communities for three consecutive years. Information Technology (IT) services are essential to the day to day operation of the City of Stratford, and the IT department is a vital part of effective service delivery. The demand for IT services will continue to increase due to the growing requirement for e-services, asset management, communication, open data and transparency. Therefore, our IT Department requires strategic direction that will prioritize projects and spending and align IT activities with the City's Strategic Priorities. This strategy will ensure that wise investments are made in the IT department that will help the City of Stratford achieve its goals and objectives.

1.1 Scope

This Strategy assesses the current status and capabilities of the City are IT Department, identifies future objectives, and proposes a strategy for realizing these goals. It provides an opportunity to re-evaluate our IT needs in full compliance with the City's Strategic Priorities.

1.2 Research & Methodology

This strategy was drafted in consultation with the IT Manager, Director of Corporate Services, and Corporate Leadership Team. Budget documents and Corporate and IT dashboards were consulted throughout this process. Best practice research was collected from nearby and like-sized municipalities. This strategy was drafted in full compliance with the city of Stratford's Strategic Priorities and Communications Strategy.

2. BACKGROUND: *Where We Are Now*

2.1 Staffing

In the past, the City of Stratford's IT Department was comprised entirely of contracted employees hired through a third party IT Company. In 2012, a city-employed IT Manager was hired to oversee this department. Xylotek will continue to provide three contract IT employees until the contract expires in 2016. Contracted positions include one Help Desk Support technician, one Project lead, and one Network and Infrastructure Support technician.

2.2 Current Status

While the current IT department has been able to provide the City with excellent network infrastructure and desktop support services, managing the IT needs of the Corporation with a staff of four employees is an extraordinary undertaking, as all City departments require IT services to function effectively. The following City services are supported by IT:

- Building Services
- Corporate Services
- Economic Development
- Enforcement
- Engineering
- Fire
- Health Services
- Housing
- Library (Partial Support)
- Licencing
- Parks
- Planning
- Police (Partial Support)
- Public Works
- Recreation
- Sanitary & Storm Sewer
- Social Services
- Solid Waste
- Tax
- Tourism
- Transit
- Water Distribution
- Water Treatment

Corporate accounts serviced by the IT department in 2013 are as follows:

City of Stratford	Total #
# of Employees	561
# of Full Time Employees	354
# of Part-Time Employees	119
# of Seasonal Workers	88
# of IT Users/Accounts	380
# of Workstations (PCs & Laptops)	210
# of Telephone Devices	210
# of Smart Phones	50
# of Cell Phones	45
# of Radios	5

The IT department is also responsible for maintaining and upgrading corporate business systems that are central to City's daily operations:

- GP Dynamics
- GIS
- AMANDA
- WorksManager
- CityWide
- ESRI
- FirePro
- Cemetery2000
- Class
- Ticket Tracer
- Windows
- MS Office
- SIRE
- AutoCAD
- Adobe

IT is also responsible for carrying out special projects that enable the City to deliver services efficiently. Projects completed in 2013 include the following:

- New website
- Microsoft Office Upgrade & Training
- New Antivirus and Anti-Spam Implementation
- Backup System upgrade
- Training Lab Setup
- Firewall Upgrade
- Core Switch Upgrade
- Parking System Upgrade
- Tree Inventory Software
- Geoportal Replacement
- GIS Integration

In addition to the duties listed above, the IT department provides day-to-day support services for City staff. Statistics for 2012 and 2013 are as follows:

Year	Number of IT Tickets Launched	# of IT Hours Spent
2012	1732	3,587
2013	1718	4,456

Essentially, our current IT Department is able to “keep the lights on” by providing technical support to City Staff and Council, but they are too understaffed to take on many important projects and necessary upgrades.

3. OBJECTIVES: *Where We Want To Go*

3.1 Value Statements

3.1.1 Mission

“To provide enterprise solutions that empowers staff to deliver outstanding customer service.”

3.1.2 Vision

“To be an engine of growth and innovation and use technology to drive service excellence.”

3.1.3 Goals

- To position the City as a leader in municipal service delivery;
- To continue to work with Intelligent Community initiatives and increase innovation for long term sustainability;
- To increase investment in technology and IT staff resources to support core business processes, innovative services, and new capabilities.

3.2 Projects

Over the last two and half years, the IT department has established the foundation for reaching its Mission, Vision, and Goals by investing in IT infrastructure upgrades and maintenance. The next step is to upgrade our Corporate Business Systems, some of which is already underway (see 3.2.1 and 3.2.2). After the required upgrades are complete, we will begin implementing e-services (3.2.3).

The following are high-level projects for 2014-2017 that will allow the IT Department to realize its Mission, Vision, and Goals, while enabling the City meet its Strategic Priorities.

3.2.1 Current Projects

- Paperless Agendas: The City has undertaken a Paperless Meetings and Agenda Management Solution project this year. The project will be implemented in phases over the next two years due to the scope and resource requirement for this project;
- GIS: The Geographic Information System (GIS) system and internal GIS viewer will be out of date by the end of 2014, and is in the process of being upgraded and integrated with existing City databases. The GIS is the City's most critical database, as it provides data to the Works Order Management System and Asset Management. This project is expected to be complete by the end of 2014;
- Desktop & Laptop Upgrades: We currently run Windows XP on the majority of our hardware devices. Windows XP is no longer supported by Microsoft, therefore we must upgrade to Windows 7 to maintain the City's infrastructure. The new hardware will perform better and will therefore improve efficiency. For example, the upgrade will enable staff to access files remotely if required. The upgrade will also provide staff with larger monitor screens. Finally, the upgrade supports the City's Energy Savings Plan.
- Mobile Devices: City's current contract with our cellular provider will expire by the end of 2014. IT department is reviewing different options and will provide a report to CLT with recommendations on next steps.

- Other projects currently underway or completed but not discussed in detail are below:
 - Parking Devices and Software Upgrade
 - Tree Inventory and Management System Implementation
 - IT Security Review
 - IT Policies Review
 - GIS Integration
 - Large File Transfer – email add in
 - Firewall upgrade
 - New Terminal Server
 - Upgrade File Server
 - WiFi Cleanup
 - Desktop System Upgrades

3.2.2 Corporate Business Systems

Corporate Business Systems provide operational support for millions of transactions that the City does each year. Currently, the City operates the following Systems:

System	Function
Microsoft Great Plains	Financial Information, Accounting, Payroll
WorksManager	Asset Inventory, service request, work order
AMANDA	Planning, permitting, licensing
CLASS	Recreational programming, booking & facility rental
GIS	Corporate mapping system
SIRE	Corporate electronic document management system
Ticket Tracer	Parking enforcement & administration

The City has already invested in these systems, and they should be acknowledged as core parts of the City's citizen centric platform. They also provide the foundation for our Asset Management Plan. The City should now focus on opportunities to fully utilize these systems and employ them to support new business processes.

Recommendations:

- Establish an application steering committee for each corporate system (i.e. – one each for Amanda, Works Manager, Microsoft Great Plains, GIS and Class) to provide direction to departments and IT;
- Continue to use WorksManager and Microsoft Great Plains. Discussions with key stakeholders appeared to affirm this view; however, a firm direction shared by all key stakeholders will be necessary;
- Upgrade Microsoft Great Plains, WorksManager, AMANDA and CLASS. Conduct a fit-gap assessment of City's current and future requirements prior to redesign of business processes and this upgrade (the IT manager should begin this process in 2014 in consultation with vendor support and allocate additional funding for budget year 2015).
- No new IT projects should be taken on until these upgrades are complete

It is estimated that it will take IT 18 months to complete these upgrades with current resources. This timeline may be reduced if additional resources are provided.

3.2.3 New Technology Solutions

If the City wishes to engage the community as a Smart City, we need to invest in electronic services (e-services). E-services will improve customer service and efficiency. For example, we could offer better customer service if we were able to channel all citizen phone calls and e-mails into one place and then pass on citizen messages to appropriate departments. We could also offer applications that provide citizens with information and allow them to give us feedback.

Recommendations:

After the required Corporate Business Systems Upgrades are complete (as outlined in Section 3.2.2), top priority e-service projects are as follows:

- Online Payments:
 - Parking Tickets
 - Property Tax
 - Licensing (i.e. – Business, Pets, Marriage, etc.).
- Online review of Property Tax information
- CRM-centric solutions

3.2.4 Future Projects

The City's IT needs are continuously changing, and therefore IT project needs will continue to change. There are other one-time projects that IT will continue to take on as necessary. Expensive resource-heavy projects that will be taken on in the future as necessary or as resources become available are as follows:

- Corporate Intranet
- Corporate Reporting Solution (Dashboard)
- Mobile Apps
- Open Data
- GIS Warehouse
- Disaster Recovery

3.2.5 Summary of Project Recommendations

Summary of Project Recommendations	
Current Projects	
• Paperless Agenda • GIS & GIS Integration • Parking devices and software upgrade • Tree inventory & management system implementation	• IT Security Review • IT Policies Review • Large file transfer (e-mail add-in) • Firewall upgrade • New Terminal Server • Upgrade File Server • Wi-Fi clean-up • Desktop system upgrades • Desktop & Laptop Upgrades • Mobile Devices
2015-2017 Projects	
Corporate Business Systems	New Technology Solutions
• Establish an application steering committee for each corporate system • Upgrade Great Plains, WorksManager, AMANDA and CLASS and conduct a fit-gap analysis beginning in 2015 • No new IT projects should be taken on until the current upgrades are complete	• After the required Corporate Business Systems Upgrades are complete, the following new technology solutions will be implemented: ○ Online Payments (Parking Tickets; Property Tax; Licensing) ○ Online Review of Property Tax Information ○ CRM-Centric Solutions
Future Projects	
• Asset Management • Corporate Intranet	• Corporate Reporting Solution (Dashboard) • Mobile Apps • Open Data • GIS Data Warehouse • Disaster Recovery

4. RESOURCING: *How We Will Get There*

4.1 Staffing

Increasing IT staffing levels is the most efficient and cost-effective means of achieving our objectives and realizing our Mission and Vision. While the current department has accomplished a great deal and provides the City with essential IT services, they are unable to take on many other special projects in enterprise application, database, GIS, website, Asset Management and communication services due to staffing limitations. As illustrated, staff time is consumed by day-to maintenance instead of undertaking these necessary projects.

Furthermore, our current IT staff members have the skills to complete many projects "in-house," with no need to hire outside consultants. Recent in-house enterprise implementation projects include a new accessible website. The IT department managed the website redesign in consultation with an internal City Committee. This approach was far more cost effective than hiring consultants to redesign the website. Other municipalities spent more through consultants and achieved similar results. Similarly, our IT Manager was able to upgrade the existing GIS system and build a new GIS viewer for internal users that is now integrated with our tax database. This integration has eliminated approximately 10 hours manual work that was completed by various staff on bi-weekly basis. Hiring a consultant to integrate our GIS system would have cost over \$100,000 before licencing and renewal fees are considered. Other in-house upgrades include a new Tree Inventory and Management System, and upgraded Office 2010. This in-house capability is a tremendous asset to the City, as it creates efficiencies and provides substantial savings in initial start-up costs, maintenance, and licencing fees.

Therefore, due to the growing demand for IT services, the continuing development of new IT responsibilities, and the cost-saving potential of utilizing in-house IT capabilities, the City of Stratford's IT department will have to expand to be sustainable. Recommended positions are outlined in the sections that follow.

4.1.1 Application Analyst

The City is in the process of contracting an Application Analyst that will provide us with a justifiable minimum in IT staffing in 2014 and allow important projects to be taken on. The salary for this position including benefits is estimated to be \$85,000/year. The budget for this position was approved for 2014. It is expected that the creation of this

position will allow us to maintain service levels and move IT forward as a business partner with all City departments.

The addition of a second application analyst should also be considered by 2017. Future requirements for this position include:

- Asset Management: most municipalities have an asset management team or department with an IT resource staff member to provide project management and business analytics support. As we move ahead with City's Asset Management implementation, this resource will be required;
- GIS: there is a significant amount of GIS data that needs to be maintained and properly allocated to business applications. A GIS business analyst resource within IT will be critical in the near future to build and manage a GIS data warehouse.

4.1.2 Administrative Assistant

An Administrative Assistant will help IT with day to day administrative tasks such as creating purchase orders, verifying invoices, equipment inventory, coordinating between departments for day to day operational issues, scheduling and coordinating meetings, handling website issues from citizens and city staff, provide IT training and small IT projects. As we move forward with this strategy, our requirement for coordination between IT and City's departments will increase. At present, most of these tasks are handled by IT Manager but could be better handled by an administrative assistant, thus allowing our IT Manager to take on more important projects to further the IT vision, mission and goals.

4.1.3 Contract Services

The City's current contract with Xylotek will end in December 2016. The IT Manager will review our options in 2015 and will make recommendations in early 2016.

4.1.4 Best Practices

Staffing levels in similar-sized municipalities are higher than our current staff. For example, the City of Orillia has recently hired a Business Analyst to offer information systems support to their three technicians and IT Manager. While the nearby City of London is approximately twelve times larger than Stratford, their total IT Staff of 90 indicates that Stratford could employ a staff one-twelfth this size to be comparable (i.e. – 7.5 staff members).

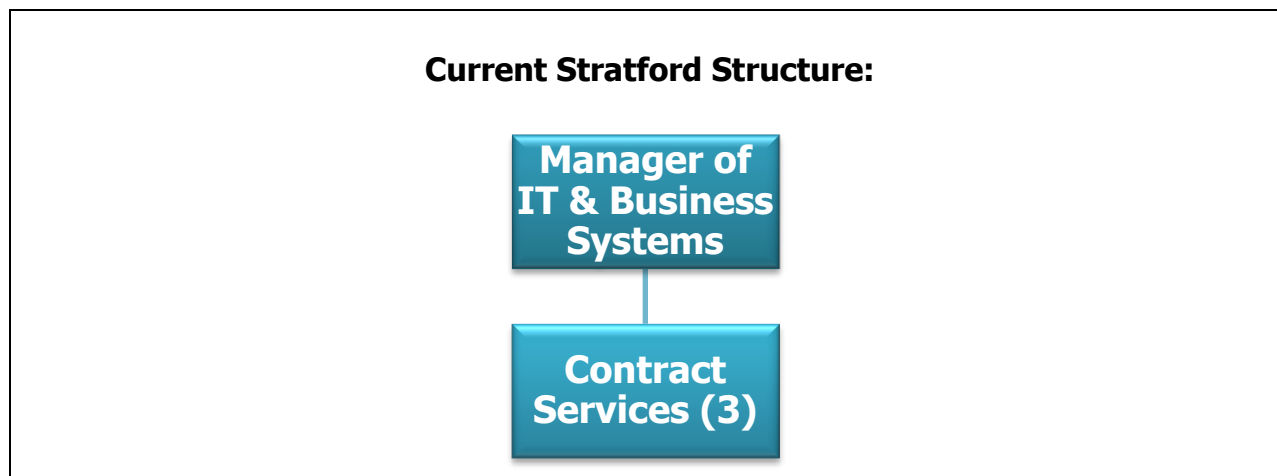
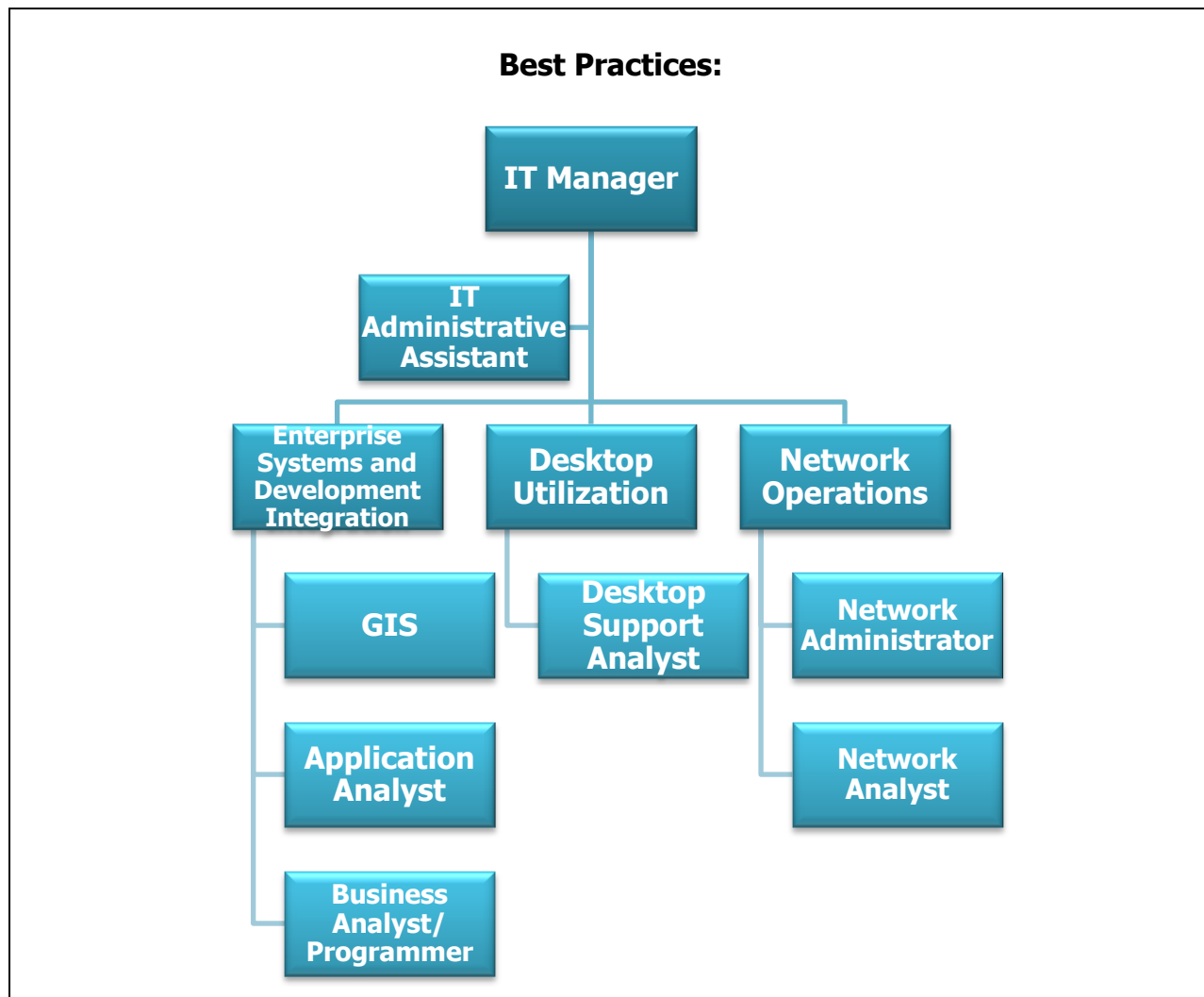
See comparisons as follows:

Municipality	Population (2011 Census)	# of IT Staff	# of IT Staff Stratford Needs to be Comparable
Stratford	30,886	4	N/A
Orillia	30,586	5	5
Prince Albert (SK)	35,129	5	5
Moosejaw (SK)	35,671	8.5	8
Brant County	35,638	6	6
Brandon (MB)	46,061	15	10
Peterborough	78,698	15.5	6
Brantford	93,650	25	8.25
Waterloo	98,780	19	6
Guelph	121,668	30	7.5
Kingston	123,363	25	6.25
Kitchener	219,153	55	7.75
London	366,151	90 ¹	7.5
Average # of IT Staff Stratford Needs to be Comparable			7

In most municipalities, IT departments are led by an IT Director or Chief Information Officer, and are organized into different divisions such as Networks, Desktop, Software, and GIS.

¹ 10 are contract

Typical municipal IT department structures are contrasted with our own as follows:



4.1.5 Summary of Staffing Recommendations

Given the current IT needs of the City of Stratford, our objective should be:

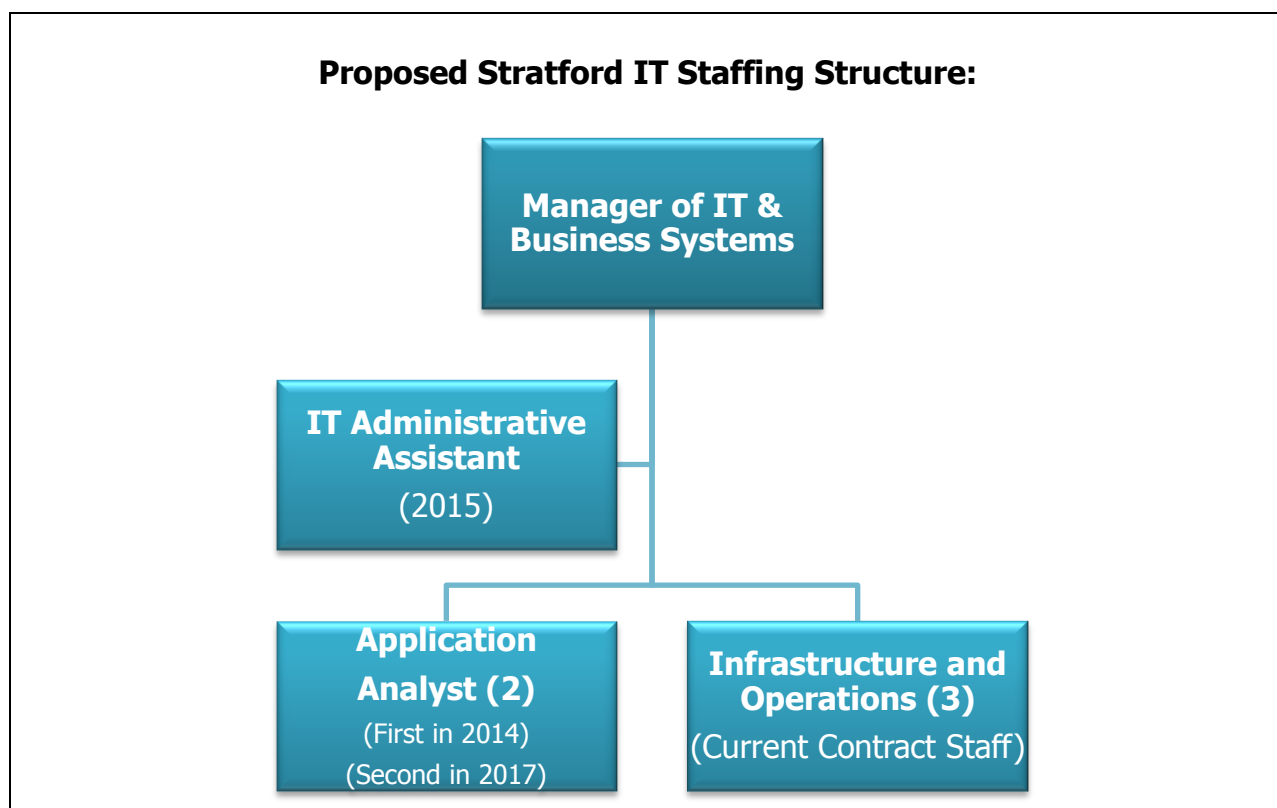
2014: Hire Application Analyst (FTE)

2015: Hire Administrative Assistant (PTE)

2016: Review Contract

2017: Hire Application Analyst (FTE)

The proposed IT department structure is outlined as follows:



These new positions should be hired through contract and then reassessed in two years.

4.2 Budget

4.2.1 IT Budget 2014-2017: Transfer from Capital to Operating

As per the City of Stratford's Strategic Priorities, no additional funds will be made available aside from the existing budget and the additional funds that have been

allocated through the Strategic Priorities (see 4.2.3). Therefore, for IT to achieve a sustainable minimum in staff resourcing, money must be transferred from the Capital to the Operating Budget to ensure staffing levels are met and projects can be completed. Transferring 25% from the Capital to the Operating budget will provide the IT Department with the staffing resources it requires to complete necessary projects and upgrades. Indeed, without additional staffing, the City will lack the resources to implement future IT projects.

Operating Budget			
Year	Total Operating Budget	Total IT Operating Budget	IT Operating as % of Total Operating
2014 (final)	\$49,823,189	\$787,221	1.58%
Capital Budget			
Year	Total Capital Budget	Total IT Capital Budget	IT Capital as % of Total Capital
2014 (final)	\$21,534,243	\$215,000	1.00%

4.2.2 Money allocated through Strategic Priorities

The funding allocated the IT Department through the Strategic Priorities exercise is to be distributed as follows:

2015	\$50,000 allocated to IT Infrastructure
2017	\$50,000 allocated to IT Infrastructure
2018	\$50,000 allocated to IT Infrastructure

This funding should be put into Capital Projects as outlined in Section 3.

4.2.3 IT Project Request Funding

Consideration must be given to where the funding for IT services required by each department should come from. Between 2015 and 2017, any new project requests should be funded out of the requesting department's budget. In the future, IT may begin charging departments for all projects.

4.3 Policy

Attention must be given to the following IT Policy requirements:

- Technology Usage Policy: It is recommended that we review and update this policy, to be tabled with CLT by June 2015.
- Open Data Policy: It is recommended that the City undertake a Business Case to determine our Open Data needs, and the impact this will have on resources and service levels.
- Social Media Policy: This draft policy should be updated to reflect the recommendations made in the January 2014 Communications Strategy, and the December 2014 Social Media Marketing Plan.

5. CONCLUSION

IT services are essential to the daily operations of the Corporation of the City of Stratford. The absence of IT resources will impede the efficiency and productivity of the organization. Therefore, funds should be reallocated into IT staff resourcing to ensure the IT department can meet its goals and objectives. If the staffing recommendations outlined in this strategy are not approved, the IT Department will be unable to complete the following projects:

- eServices – Tax, Business License, Permits
- Finance, Accounting, Payroll Software Upgrade
- Works Order Management System
- Human Resources Information Systems
- Asset Management
- Paperless Council Project
- Building permit application upgrade
- GIS Integration

The desertion of these projects will compromise the capabilities of the entire organization, as the functionality of all departments will be continually undermined without necessary system upgrades and new technology solutions.

The implementation of this Strategy will enable the City of Stratford to continue achieving its Strategic Priorities while serving the community as a Smart City. Upon the approval of this Strategy, IT will produce project plans based on available resources.

IT Strategy Summary	
OBJECTIVES	
Value Statements	
Mission	To provide enterprise solutions that empower staff to deliver outstanding customer service.
Vision	To be an engine of growth and innovation and use technology to drive service excellence.
Goals	• To position the City as a leader in municipal service delivery; • To continue to work with Intelligent Community initiatives and increase innovation for long term sustainability; • To increase investment in technology and IT staff resources to support core business processes, innovative services, and new capabilities.
Project Recommendations	
Corporate Business Systems	• Establish an application steering committee for each corporate system • Upgrade Great Plains, WorksManager, AMANDA and CLASS and conduct a fit-gap analysis beginning in 2015 • No new IT projects should be taken on until the current upgrades are complete
New Technology Solutions	• After the required Corporate Business Systems Upgrades are complete, the following new technology solutions will be implemented: ○ Online Payments (Parking Tickets; Property Tax; Licensing) ○ Online Review of Property Tax Information ○ CRM-Centric Solutions
Future Projects	• Asset Management IT Resource • Corporate Intranet • Corporate Reporting Solution (Dashboard) • Mobile Apps • Open Data • GIS Data Warehouse • Disaster Recovery
RESOURCING	
Staffing	2014: Application Analyst (FTE) 2015: Administrative assistant (PTE) 2016: Renew Contract 2017: Application Analyst (FTE)
Budget	• Transfer 25% of funds from the IT Capital to IT Operating Budget to support required staffing levels • Use money allocated through Strategic Priorities for Capital Projects • Consider new process for IT project funding for each department
Policy	• Update Technology Usage Policy • Create an Open Data Policy • Create a Social Media Policy