St. Catharines

1

Sports Fields Strategy

City of St. Catharines | November 2024



mbpc
Monteith Brown planning consultants

in association with

DILLON CONSULTING

St. Catharines

City of St. Catharines

Sports Fields Strategy

November 20, 2024

Prepared by:

Monteith•Brown planning consultants

in association with

DILLON CONSULTING

Table of Contents

Section 1: Introduction 1

1.1 Purpose of the Sports Fields Strategy 1
1.2 Sports Fields in St. Catharines 2
1.3 Planning Context 5
1.4 Selected Trends 8
1.5 Alignment with City of St. Catharines Guiding Documents 12

Section 2: Sports Fields Classification System 16

2.1 Sports Fields Classification System 16
2.2 Departmental Responsibilities 18

Section 3: Sports Fields Strategy Consultations 20

3.1 Public Open Houses 20
3.2 Community Feedback Form 20
3.3 Advisory Committee Input 23
3.4 Sports Field Users Roundtables 24
3.5 City Staff Roundtables 25

Section 4: Rectangular Field Analysis 26

4.1 Synthetic Turf Fields 26
4.2 Natural Turf Fields 28
4.3 Usage Analysis 32
4.4 Participation Analysis 34
4.5 Provision Strategy to 2036 36
4.6 25-Year Outlook for Rectangular Fields 41
4.7 Opportunities & Directions: Rectangular Fields 43

Section 5: Ball Diamond Analysis 44

5.1 Ball Diamonds 44
5.2 Usage Analysis 46
5.3 Participation Analysis 47
5.4 Provision Strategy to 2036 49
5.5 25-Year Outlook for Ball Diamonds 54
5.6 Opportunities & Directions: Ball Diamonds 54

Section 6: Cricket Grounds 55

6.1 Cricket Grounds 55
6.2 Participation Analysis 58
6.3 Provision Strategy to 2036 59
6.4 25-Year Outlook for Cricket Grounds 59
6.5 Opportunities & Directions: Cricket Grounds 59

Section 7: Design Standards & Condition Assessments 60

7.1 Design Standards & Development 60
7.2 Ball Diamond Development Standards 61
7.3 Asset Management Practices 70
7.4 Approach to Ball Diamond Condition Assessments 72
7.5 Ball Diamond Component Service Life 74

Section 8: Sports Field Implementation Strategy 76

8.1 Sports Field Implementation Strategy to 2036 77
8.2 Capital Implications of the Strategy 79

Appendix A: Type A Sports Field Utilization
Appendix B: Community Feedback Form Results

Section 1:
Introduction

1.1 Purpose of the Sports Fields Strategy

The Sports Fields Strategy ("the Strategy") guides planning, design, and investment in sports fields owned by the City of St. Catharines to the year 2051, with an emphasis on prioritizing actions to the year 2036. The Strategy builds on the 2015 Recreation Facilities and Programming Master Plan (RFPMP) and will contribute findings to the RFPMP update taking place in 2024/2025.

The Strategy is prepared in accordance with a Terms of Reference developed and overseen by the City of St. Catharines. The scope of work is focused on sports fields defined in the City's current inventory and other future sports field assets that have not yet been considered but included in the RFPMP; this consists of fields that can be used for a variety of sports such as soccer, baseball or softball, football, rugby, cricket, ultimate frisbee, and other sports. The scope of work included condition assessments associated with selected ball diamonds at Alex Mackenzie Park, Community Park, John Dempsey Park and Pic Leeson Park.

Per the Terms of Reference, the Strategy's scope of work excludes outdoor playing courts (e.g. those intended for basketball, ball hockey, tennis, pickleball, etc.) as such facilities are considered through the City's Parks Renewal Plan. The City may carry out additional field condition assessments separately from this Strategy to inform asset management plans and future capital budgets. Also excluded are any service delivery analyses such as staffing reviews, pricing or user fee studies, affiliation or allocation policies, or scheduling practices.



1.2 Sports Fields in St. Catharines

St. Catharines' sports fields have supported physical activity, local athletic development and social connections for decades. Participation rates and interest in field sports such as soccer, baseball and softball, and football have ebbed and flowed over the years but the City's ongoing investments in rectangular fields and ball diamonds provide continued opportunities for play. The development of Lancaster Park in the 1950s, George Taylor Field / Community Park in the 1980s, Kiwanis Field in the 2000s and various other parks exemplify the City's longstanding commitment to quality sporting venues over the years. New and emerging field sports such as cricket, ultimate frisbee and other activities require thought based on sustained interest driven by changing community demographics, a growing post-secondary student base, and other factors.

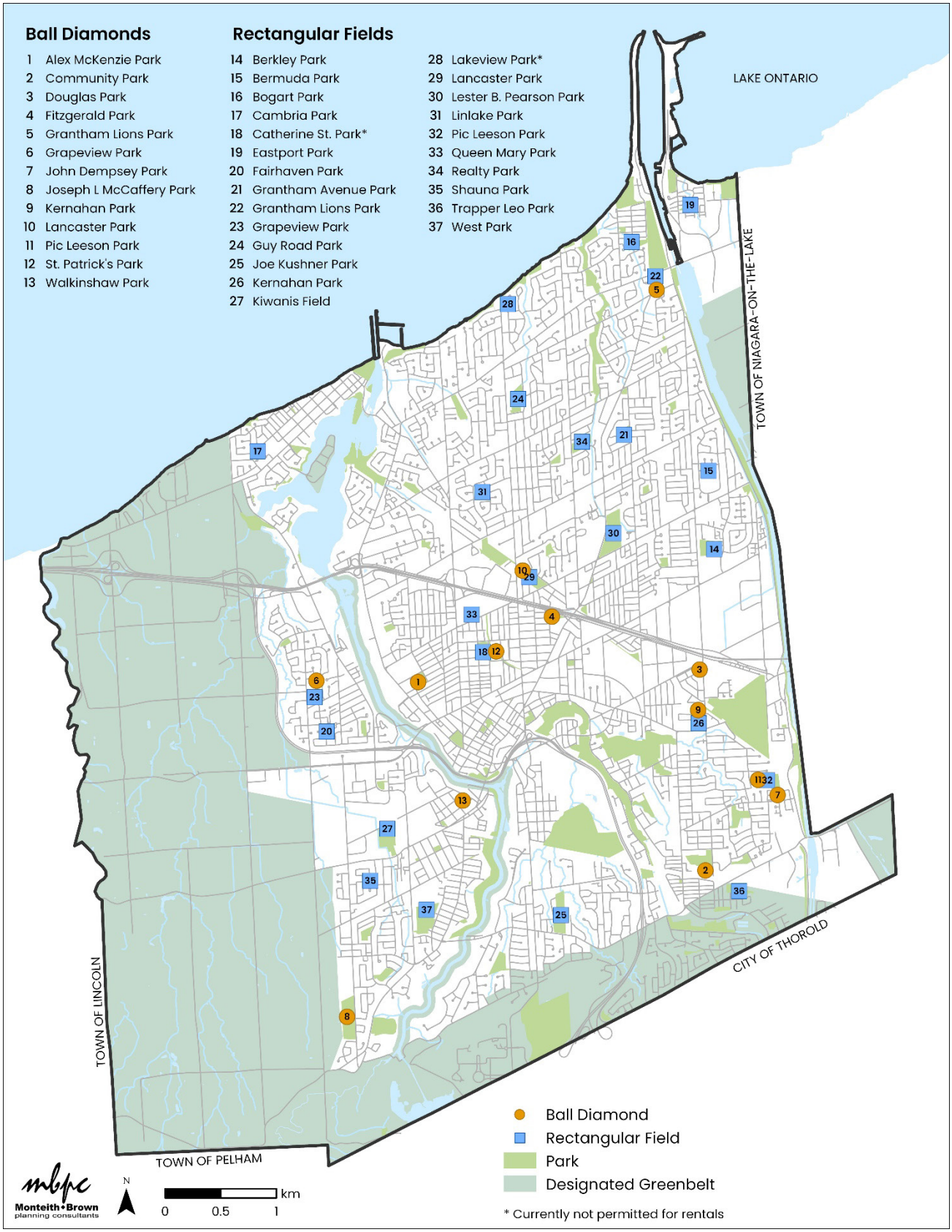
St. Catharines' sports fields are weaved into the urban fabric. Fields allow residents from across the socio-economic spectrum to be active, healthy and engaged in the community. Through sport, local fields have built foundations for local athletes, teamwork and self-confidence. Recreationally, selected fields are used for drop-in play as well as casual enjoyment by contributing large open greenspaces to neighbourhoods. Historical park design practices were to include a sports field in neighbourhood-level parks whereas the trend today is to direct fields to complexes or parks serving multiple neighbourhoods. Part of the shift away from neighbourhood park sports fields is due to changing provincial legislation reduces how much parkland can be acquired through the land development process, as well as user group desires for multi-field complexes.

As it stands, St. Catharines is able to offer sports fields in many parts of the city to serve communities and individual neighbourhoods. The majority of the City's sports fields are on publicly owned lands, however, there are selected fields located on lands that are not owned by the City (e.g. Grantham Lions Park). These fields are able to address needs ranging from practices for the youngest age groups to competitive representative teams and recreational adult leagues. Fields continue to be a place that can provide a free and safe place to play, including neighbourhoods experiencing greater degrees of vulnerability, while also providing facilities for local athletes to develop and pursue amateur and professional careers.

The City's sports field supply consists of the following and is distributed as shown in Map 1:

- **1 lit synthetic turf rectangular field**
- **31 natural turf rectangular fields** at 23 parks. The supply includes 8 lit grass fields.
- **20 ball diamonds** at 13 parks. The supply consists of 11 hardball diamonds and 9 softball diamonds, with a total of 10 diamonds being lit.

Map 1 : Distribution of City of St. Catharines Sports Field Supply



Unlit Equivalency Factor

Consistent with the RFPMP and a review of current sports field utilization rates, an equivalency factor is applied to fields with synthetic turf or lighting systems to reflect their capacity to accommodate additional usage over the course of a season. Synthetic turf does not require periods of time to be devoted to field resting or regeneration and can be used shortly after inclement weather, whereas natural grass fields would be closed to avoid damage. Lit fields allow for play to occur later into the evening, which is especially helpful early and later into the summer playing season when dusk falls earlier, thereby allowing more opportunities for use than an unlit field.

Rectangular Field Supply
37.0 Unlit Equivalents

Ball Diamond Supply
25.0 Unlit Equivalents

For the purposes of this Strategy, the following unlit equivalent (ULE) factors are applied.

- **Synthetic / Artificial Turf** is equal to 2.0 unlit grass fields. With the Kiwanis Field providing the sole synthetic turf surface in St. Catharines, the City achieves 2.0 ULEs at this location.
- **Lit Rectangular Grass Fields** are equivalent to 1.5 unlit grass fields. With 8 lit natural fields, the City achieves 13.5 ULEs. Combined with unlit grass fields and the synthetic turf field, this results in a total rectangular field supply of 37.0 ULEs.
- **Lit Ball Diamonds** are equivalent to 1.5 unlit diamonds. With 10 lit diamonds, the City achieves 15.0 ULEs which combined with unlit diamonds results in a total diamond supply of 25.0 ULEs.



Other Sports Fields in St. Catharines

Complementing the City's supply are sports fields located at schools, post-secondary institutions, and private properties. Notable non-municipal venues include:

- **Elementary & Secondary Schools**: there are dozens of fields at schools that are available for rental through the provincial Community Use of Schools initiative. However, school fields are designed and maintained to different standards than the City's which can affect the amount and type of play for community sport and recreation leagues. User groups permit these fields directly through the school boards.
- **Ridley College**: 8 natural grass rectangular fields that are used for soccer, football, rugby and field hockey. These fields support prep school athletic programs but are available for community rental.
- **Brock University**: 1 synthetic turf field (Alumni Field) lined for soccer, lacrosse, football and rugby plus 1 natural turf soccer field and 1 natural turf rugby pitch. There is a grass field inside the Canada Games Park track and field centre (located on University land but managed by a third party operator). University fields are primarily used by the student body for varsity sports and intramurals but are available for community rental.

1.3 Planning Context

The City and local organizations report rebounding registrations and sports field usage following the COVID-19 pandemic, albeit at levels below 10 years ago. Many factors have contributed to growth to field sports across the Greater Golden Horseshoe including the success of the Canada Soccer men's and women's programs, competitiveness of the Toronto Blue Jays, and popularity of Toronto FC.

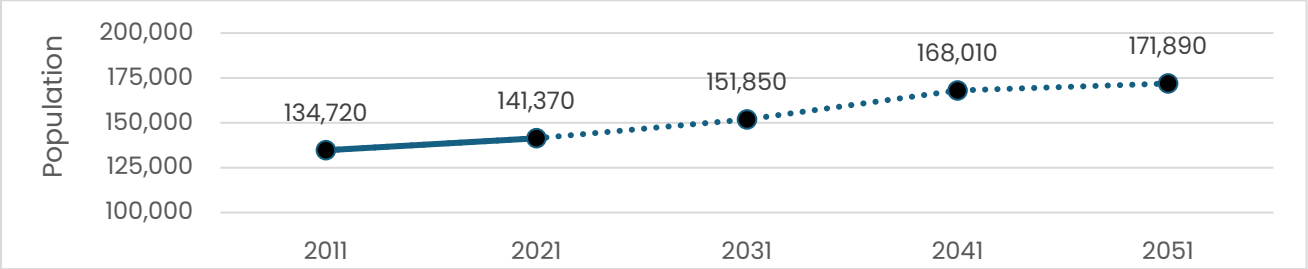
Population Growth & Evolution of the City Structure

The City's year population is estimated at 145,000 persons for the purposes of this Strategy and is forecasted to reach 151,850 persons by the year 2031.[1] St. Catharines is projected to grow to 171,890 persons by the year 2051. [2] St. Catharines historically directed most of its growth to lower-density subdivisions characterized by single-detached and semi-detached homes. Over time, the supply of readily developable 'greenfield' lands have been built out and expansion of St. Catharines' built boundary is limited due to provincially protected lands such as the Ontario Greenbelt and Niagara Escarpment. Demand for housing has significantly increased over the last decade and St. Catharines is viewed as an affordable option, leading to stronger rates of population growth. Recently, the City agreed to the Province's target of 11,000 new residential units by the year 2031;

[1] City of St. Catharines. 2021. Development Charges Background Study. Table 2-1, p.2-4.
[2] Region of Niagara Official Plan. November 2022 as approved by Regional Council. Table 2-1, p.16.

the expedited provision of new units will affect the rate at which the City will grow and have an increased demand on existing facilities.

Figure 1: Historical & Projected Population, 2011-2051



Sources: St. Catharines Development Charges Background Study, 2021; Region of Niagara Official Plan, 2022.

To meet needs for future housing and employment, the City's urban structure is evolving in light of above noted constraints as well as provincial transportation priorities including regional bus rapid transit. St. Catharines future residential growth will primarily be directed to established neighbourhoods and a designated Major Transit Station Area through medium and higher-density forms of housing, in line with provincial policy. However, it will be increasingly difficult to find larger parcels of land capable of providing sports fields due to the built-up nature of these neighbourhoods, the cost to acquire and redevelop any such lands, and a legislative environment that is directing a greater share of growth-related parkland acquisition costs to municipalities.

Reduced park sizes will limit the ability to accommodate the full range of recreation facilities typically associated with certain park typologies. Sports fields occupy significant land areas, may require parking lots, and typically function better when developed in multiples. This will be difficult to accommodate in smaller, new parks. The development of single purpose sports fields where land is limited may limit or preclude the provision of other types of parks or park space for playgrounds, socializing and relaxing, which are also popular activities in dense urban areas.

These issues may be somewhat mitigated through the following practices:

- **Locating sports fields outside of high density areas**. Community or City-serving sports facilities that are considered 'drive-to' destinations could be located outside of high density areas or having parkland conveyed offsite (e.g. outside of a Secondary Plan area).
- **Lighting of existing fields and use of synthetic turf for a soccer field (where appropriate)** can expand capacity 1.5 times to 2 times as will be discussed in the following pages.
- **Multi-purpose fields/spaces** can increase the functionality and usability of smaller, intensively used sites.
- **Seeking supplemental spaces to develop recreational facilities**, e.g. rooftop/roof slab locations, space in private development, underutilized parking lots, open space, and industrial/utility lands.

- **Working with Institutional Partners** such as school boards, area municipalities, and the Region of Niagara.
- **Use of mini-fields or practice facilities** (such as cricket or baseball batting cages) could be accommodated in smaller, neighbourhood-oriented parks which are more likely in intensifying residential areas, or in alternate spaces such as school sites.

Aging Population Trends

Population growth between the 2011 and 2021 Census periods was driven primarily by older adult populations ages 55 years and above, adding over 8,000 people. This has led to the City's median age increasing to 44.8 years, a median age that is above that of province but below that of Niagara Region. Conversely, the number of children under the age of 10 was effectively unchanged and there was a 12% reduction in the number of youth/teens between the ages of 10 and 19. Children and youth are the core market for most minor field sport organizations which is notable since any continued aging of the population may have a negative impact on overall registration rates for minor field sport associations.

Cultural Diversity

One out of five St. Catharines residents (20%) were born outside of Canada with the foreign-born population growing by 1,700 persons (7%) between 2016 and 2021. Most immigration has come from the United Kingdom, Italy, the Philippines and the United States. Much of the foreign-born population immigrated prior to 2011 and can thus be assumed to have some exposure – through direct participation, as spectators or through the media – to traditional Canadian sports including baseball, softball, football while soccer is regarded as a global game. Since the 2021 Census, City staff have observed continued cultural diversification.

Affordable Play

St. Catharines' Census median income of households was $72,500 in 2020, below both Niagara Region ($79,000) and Ontario ($91,000). 12% of St. Catharines residents live below Statistics Canada's Low-Income Measure After-Tax. Field sports are affordable to play relative to certain other sports, particularly at the house league level.

Aging Sports Fields

City staff take pride in providing quality sports fields. With recent and forecasted population growth, expansion of the parks system has and will continue to occur. Staffing levels for those tasked with maintaining sports fields has not grown at the same rate as the population while funding required to keep fields in a good state of repair is competing with other civic infrastructure priorities. Renewal of existing sports fields needs to be considered in the context of available staffing, funding and growth in the number of people using these facilities.

1.4 Selected Trends

Multi-Functional Fields & Complexes

Increasingly, municipalities, schools, universities, and private recreation providers are moving to the development of multi-use sport fields. This model allows a single field to serve more users and, in the case of artificial turf fields, to accommodate more frequent games. In its simplest form, a multi-use field can be several mini-soccer or "small-sided" game fields (e.g. 3v3, 5v5, 7v7 or 9v9) that are overlaid with a full size (11v11) field.



Multi-Use Field Configuration, Boston MA
Photo Credit: Sports Destination Management

Other layouts, as St. Catharines has done with Kiwanis Field and its synthetic turf, combine soccer with football, field lacrosse, field hockey or rugby. A less common option is a combination of baseball and softball with field sports, such as soccer and football. As well, due to the amount of land area needed for a cricket field, municipalities are frequently overlaying one cricket field with two soccer fields.



Multi-Use Field Configuration, Buffalo NY
Photo Credit: A-Turf Inc.

Although cost effective and offering efficiency in space and flexibility in programming, multi-functional fields can present challenges for the sports being played as the play area is not identical and double lining is required. Although differently coloured lines are used this can present visual difficulties for players and spectators. As non-regulation facilities, multi-use design may preclude the field from being used for rep or tournament play, however, this attitude may be changing with the recent development of the "One Turf" standard by the International Rugby Board (IRB) in collaboration with FIFA. The field design standard promotes multi-use and allows for rugby, soccer, football, cricket and field hockey to all be played on the same synthetic surface.

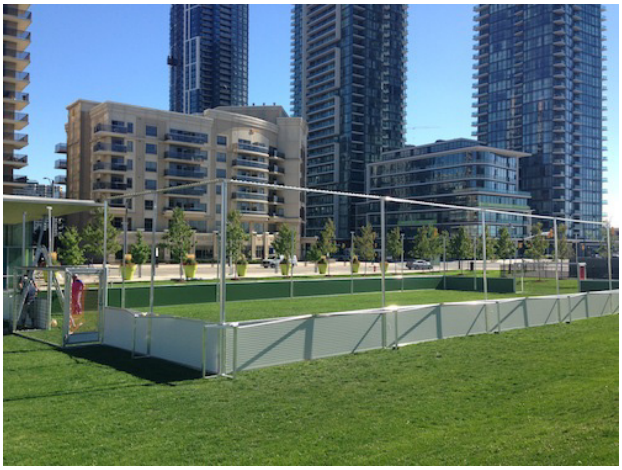
St. Catharines has concentrated multiple sports fields into complexes (e.g. Joseph McCaffery Park), allowing for operational efficiencies in scheduling and maintenance but also supporting league programs and tournaments. While many municipalities cluster sports fields of the same type – such as ball diamonds or rectangular field complexes – some that have combined both

types of fields. As cricket grows in Ontario, there may be opportunity for strategic configuration of soccer, baseball, and cricket to create sports field hubs that integrate all of the communities needs within one park.



Photo Credit: SportENG, Australia

There can be operational and maintenance challenges related to field setup and different wear on natural turf fields that can create safety hazards. Combined cricket and soccer fields can create scheduling conflicts as a traditional cricket game may last six hours or more, which pre-empts several games of soccer in the same time period. Consultation with cricket groups across Ontario indicates a preference that in the absence of dedicated grounds, to layer cricket fields with two baseball fields as the turf areas receive less wear than soccer, and baseball fields are often lit.



Mississauga Pop-Up Soccer Field
Photo Credit: Metro News

Notwithstanding logistical challenges for organized sports, multi-functional sports fields can offset reduced land available for parks and allow for greater functionality of smaller, high-use parks. As well, they have a role as spaces for informal, pick-up play. Celebration Square in Mississauga was initially conceived of as an urban green space to support City Centre events but became so highly used that the natural grass had to be replaced with synthetic turf. Celebration Square now supports a range of activities including pick-up soccer (noting it does not replace the need for sport fields in the downtown), picnics, and fitness programs together with its function as an event space.

Pop-up Facilities

Internationally, portable soccer pitches complete with artificial turf, boards, goals and netting are becoming increasingly popular as mini-pitches, training grounds, or for pick-up games in cities with limited greenspace. In Peel Region, Brampton and Mississauga have explored 'pop-up' and 'boxed' soccer fields which are generally interchangeable terms to service established neighbourhoods where acquisition of a full-size field is challenging. Both cities have explored partnerships and sponsorships to help these fields – roughly 30 by 15 metres in size - come to fruition.

Alternative Field Spaces

In dense urban areas, North American municipalities are turning to alternative, non-park spaces to provide for the leisure and recreation needs of inner city residents. These include: use of rooftops and roof slabs (e.g. above parking garages) for green space; creating pop-up parks in corners of underutilized parking lots; and re-purposing streets, either permanently or temporarily as shared spaces for vehicles and people.



Adidas Futsal Park, Tokyo
Photo Credit: FIFA.com



Alpine Field, University of Colorado
Photo Credit: University of Colorado

While most non-park spaces are best suited to seating areas and small play spaces, there is an emerging trend toward the use of rooftops for community sport fields and sport courts in locations where there is insufficient ground level space. These facilities can be particularly effective if planned in tandem with multi-storey indoor community recreation or cultural facilities. The Adidas Futsal Park in Tokyo, constructed in 2001 as part of the run-up to the 2002 FIFA World Cup, is a rooftop futsal pitch with a commanding city view constructed as part of a department store and transportation hub. It is recognized that Tokyo's population and density is at a different scale than St. Catharines and that Tokyo's pitch was part of a legacy event, however, it serves as an example of what can be achieved when finding large parcels of land is severely challenged. Other innovative North American examples of community sport fields developed on rooftop/roof slab conditions include:

- University of Colorado at Colorado Springs Alpine Field: Alpine Field is a synthetic turf, multi-purpose sports field constructed on the 5th level of a campus-serving parking garage to serve both university and community needs. The field is approximately 2 acres in size and is lined to accommodate soccer, rugby, and lacrosse. It can be divided into two smaller fields for intramural events such as flag football, Ultimate Frisbee and short-sided soccer. The site includes a rooftop spectator area with bleachers, and a ground level plaza area with shade structure and turf lawn 'hangout' area, office space, washrooms and equipment storage.[3]

[3] Information about the field can be viewed online through www.youtube.com/watch?v=R6uiLy_BEwg

- Chesapeake Energy Campus, Oklahoma City: Centered in the middle of the Chesapeake commercial campus is a 75,000 square foot natural grass rooftop athletic field built on top of a 3-storey parking garage. The field serves both company employees and local residents and is used for sporting events, social gatherings, and concerts. The field was constructed using the strong, lightweight AirField System® which allows a complete inch of water storage space beneath the entire playing field surface to reduce irrigation needs.[4]

Co-location/Shared Use of Sport Fields with Schools

Many Greater Golden Horseshoe municipalities have co-developed parks and facilities with school boards. There are numerous provincial examples of shared use of sport fields between school boards and municipalities. Agreements range from shared use of existing fields on both school board and park properties, as well as purpose-built facilities for which costs are shared. The latter tend to be found most frequently in association with secondary schools since the size and quality of fields are more closely aligned with municipal standards. Most recently the trend in co-shared, co-developed facilities has been toward the development of multi-purpose, artificial turf fields. The use of artificial turf can extend the hours and season of play and offset damage and down-time as a result of the over-use of turf. Alternately, higher-performing classes of fields constructed with soil amendments, irrigation and engineered drainage systems are paramount to improving the long term 'playability' of intensively used athletic fields.

An agreement for shared development and use of recreational facilities, whether for an artificial field typically needs to consider and incorporate:

- a memorandum of understanding;
- type of ownership (e.g. single owner, joint owner, lease);
- design / procurement process (e.g. standards, construction management); and,
- operations /maintenance (e.g. hours of use, staffing levels, cost/benefit to both parties).

Some of the best examples of co-location and shared use of community and school sport fields can be found in multi-use community/school facilities that have been purpose built with the intent of shared use. With anticipation of reduced land in areas of intensification for both schools and municipal recreation, facility co-development is something that could become commonplace in St. Catharines. It bears noting that the District School Board of Niagara has constructed a number of synthetic turf fields but is generally not involving municipal partners in funding these.

[4] Information about the AirField System can be found at https://airfieldsystems.com/Case%20Studies/airdrain-natural-turf-installed-rooftop-sports-field/

1.5 Alignment with City of St. Catharines Guiding Documents

The Recreation Facility & Programming Master Plan, the Garden City Plan and the Strategic Plan 2023 to 2027 (2022) are St. Catharines' guiding documents that are aligned with this Sports Fields Strategy.

St. Catharines Strategic Plan

The St. Catharines Strategic Plan provides a framework to guide decisions of City Council and Staff between the years 2023 and 2027. The Strategic Plan sets out the following vision for the City:

> **"St. Catharines will be a safe, innovative, sustainable and caring city today and for future generations."**

The Strategic Plan advances five pillars of economic prosperity, social well-being, environmental stewardship, cultural vibrancy, and organizational excellence:

1) Economic Prosperity – St. Catharines will maintain and expand as a home to thriving businesses and a diverse and resilient economy. This goal has strategic directions to enrich the urban centre's vitality through creative placemaking initiatives, harness authentic tourism assets to promote St. Catharines as a premier visitor destination, and to build an inventory of community assets to anticipate development needs in the city. This SFS guides the provision of sports fields that are community assets which address local needs and are capable of supporting tournaments that support sports tourism, ultimately enriching the community's vitality.

2) Social Well-Being – St. Catharines will strengthen neighbourhoods and communities through quality-of-life opportunities that are accessible to all. This goal has a strategic direction to provide quality, well-maintained indoor and outdoor recreation facilities with programming based on community and best practices. The SFS has the ability to achieve this strategic direction through its informed analysis that guides sports field improvements, including adding synthetic surfaces, lighting and storage to specific locations. Partnerships are also recommended for the City to explore, as these may expand potential service provision opportunities.

3) Environmental Stewardship – St. Catharines will be recognized as a leader in environmental sustainability and resilient in the face of escalating climate change events. This goal has a strategic direction to increase use of permeable materials, which natural turf sports fields provide at parks. Another strategic direction of this goal is to ensure community planning if consistent with environmental sustainability through compliance with the Garden City Plan, Regional Official Plan Amendments and Provincial Policy Statement, which the SFS is aligned with.

4) Cultural Vibrancy – The rich culture, heritage, and vibrancy of St. Catharines communities will be communicated and celebrated by the City. This goal has a strategic direction to expand opportunities in Sport Tourism by aiding bid development and attracting signature events. The

Sports Fields Strategy supports the provision of facilities that are capable of supporting tournaments and generating sports tourism.

5) Organizational Excellence – The City of St. Catharines will achieve excellence in financial and service sustainability and high customer satisfaction. This pillar has strategic directions to maintain quality assets in a good state of repair and identify and close the municipal infrastructure gap, and modernize processes, systems, and performance measurement. The Sports Fields Strategy involved a condition assessment for selected ball diamonds and identifies design standards.

The Sports Fields Strategy supports having an effective and responsive sports field system in St. Catharines as it helps to achieve strategic directions identified in each of these Goals through contributions to physical health, social connection, economic development and tourism, environmental sustainability, and efficient use of municipal resources.

The Garden City Plan

The Garden City Plan, 2012 (Official Plan, 2018 Consolidation) provides guidance and direction for land use planning, development and growth in St. Catharines. Official Plan policies relating to parkland are most relevant to outdoor sports fields, notably those contained in Section 13.1 which speaks to the range of recreational opportunities permitted through the Parkland and Open Space land use designation, the types of parks provided for by the City, and how parkland is acquired.

The Parks Classification established in Section 13.1(2) identifies five categories of parkland being: i) Neighbourhood Parks and Playgrounds; ii) District Parks and Playfields; iii) City-wide Parks and Regional Open Spaces; iv) Linear Parks; and v) Special Urban Parks. While "outdoor playing fields" are specifically identified in the District Parks and Playfields classification, sports fields can be integrated into other classifications as well depending on size and intensity of use. For example, unlit fields and those intended for young children may be appropriate in Neighbourhood Parks while lit fields or multiple fields may be appropriate in City-Wide Parks. In addition, Section 13.1.3a(vii) identifies that parkland acquisition priorities should consider "lands for playing fields to accommodate recreational demand." The Garden City Plan specifies that the size, function and development of parkland shall have regard for the policies set out in the City's Parks Policy Plan and Recreation Master Plan (since renamed to the Recreation Facility & Programming Master Plan that will be described in the following paragraphs).

Upon approval of the Region of Niagara's new Official Plan and the new Provincial Planning Statement, which will come into effect in 2024, the City plans to undertake a comprehensive review of the Garden City Plan. In addition, the GO Transit Station Secondary Plan defines populations and locations for parkland in this built-up area of the City. The Ontario Street Secondary Plan is currently on hold.

Parks Policy Plan

The Parks Policy Plan, 2005 charts a course for providing a balanced and integrated system of parks, open space, and trails for St. Catharines. It includes strategies for planning, maintaining, and managing the City's parks, open space, trails, and associated facilities. The Plan projects future growth to be modest as the City has a limited supply of developable residential land and recognizes new development will consist primarily of infill and redevelopment.

The Plan indicates that municipalities are dealing with demands for higher quality amenities at outdoor sports fields such as washrooms, lighting, drinking fountains, better playing surfaces and shade. Its Action Plan for sports fields supported the development of a Sports Fields Strategy in consultation with user groups to identify field improvements, field conversions and management strategies (e.g., field allocation, requirements for registration data etc.) in a comprehensive manner. The Plan also encourages the Sports Fields Strategy to identify ways in which the City can finance needed field upgrades and additions (e.g., imposing surcharges).

Niagara Official Plan

The Niagara Official Plan, 2022 (2024 Consolidation) is the Regional Municipality of Niagara's long-term, strategic policy planning framework for managing growth coming to Niagara. The policies of Region's Official Plan guide land use and development thereby influencing economic, environmental, and planning decisions until 2051 and beyond. The Niagara Official Plan identifies what needs to be protected, how and where Niagara will grow, and policy tools to manage the same.

The Region Official Plan indicates development in urban areas will integrate land use planning and infrastructure planning to responsibly manage forecasted growth and to support a compact built form, a vibrant public realm, and a mix of land uses, including recreational uses and public service facilities, to support the creation of complete communities. Expanding convenient access to recreational facilities for social equity, public health and safety, and the overall quality of life for people of all ages, abilities, and incomes is also a responsibility of development in urban areas to support. Strategic growth areas are the highest priority for development and intensification, as well as the primary location for major recreational uses.

The Region's Official Plan indicates the Downtown St. Catharines urban growth centre will be planned as the focal point for investment for a number of land uses, including recreation. Of note, the recently released Provincial Planning Statement has removed the Urban Growth Centre designation which will be reflected in a subsequent update/amendment to the Region and City Official Plans.

Recreation Facility & Programming Master Plan

Since its approval in 2015, the RFPMP has played an important role in delivering high quality indoor and outdoor recreation facilities, programs and services to residents of St. Catharines. It articulates a vision specifically for recreation to make St. Catharines:

"The City where everybody can play."

The RFPMP recorded 32 rectangular fields and 22 ball diamonds in the City's supply and recommended that service levels be targeted at a rate of one rectangular field per 90 registered players and one ball diamond per 100 registered players. The RFPMP found that the number of ball diamonds was sufficient to meet needs over its 10-year planning horizon (i.e. the year 2026) but that there was a sizeable deficit of rectangular fields based on the service level target. However, utilization data showed available capacity in certain types of rectangular fields and thus recommended improvements to such fields including lighting and irrigation to increase their suitability for organized play, as well as improved field allocation practices (RFPMP Recommendations #14 and #15). Conversion of a softball diamond to a hardball diamond was also advanced through RFPMP Recommendation #17.

The City's scheduled a 10-year update the RFPMP in 2024 will re-engage the community, renew the vision for recreation, and consider indoor and outdoor recreation services collectively using the findings of this Sports Fields Strategy and other applicable studies.



Section 2:
Sports Fields Classification System

2.1 Sports Fields Classification System

The City has an established Sports Field Classification System in place that organizes its 32 rectangular fields and 20 ball diamonds into three distinct classifications. Having such a system in place is considered to be industry best practice as doing so provides a framework to guide planning, design, operations, user fees and other elements. The three classifications consist of:

- **Type A Field**: 'A' Fields have lighting and permanent washrooms, and are assigned a daily groundskeeper. Ball diamonds have clay or stone-dust infield surface, team benches and outfield fencing.
- **Type B Field**: 'B' Fields are maintained less frequently than 'A' Fields, typically on a weekly basis. Selected fields may have permanent or portable washrooms. Ball diamonds have clay or stone-dust infield surface, while selected diamonds have team benches and outfield fencing.
- **Type C Field:** 'C' Fields have basic amenities and minimal maintenance as their intent is primarily for neighbourhood-based and non-structured recreational uses. Rectangular fields are usually undersized while ball diamonds typically have a grass or stone infield.

Assigning different amenities, layouts and level of maintenance to a specific class of fields in turn influences the type of use that occurs (e.g. minor vs. adult sports, house league vs. completive play, tournaments, etc.). In doing so, the City can prioritize where capital and operating resources are directed in a fiscally responsible manner while user groups can prioritize how to allocate their field usage as appropriate to manage their rental expenditures accordingly.

For example, fields that are smaller, contain fewer amenities and subject to base maintenance standards are the most affordable for user groups to rent which may make them suitable for the youngest age divisions and/or practices. Conversely, the premier field classifications often reflect dimensions set out by national and provincial sport organizations, offer the greatest level of amenity, and have the most frequent maintenance which in turn is supportive for competitive uses, high performance sport and athlete development, and tournaments.

Table 1 identifies each sports field by its classification. Like the City's other assets, establishing standards for different categories of sports fields offers consistency in the user experience, intended use, staffing and other operating resource allocations, and safety. Creating asset standards for design and maintenance also informs future needs/obligations which can be carried through into asset management plans and long-range budgets.

Table 1 : Sports Fields by Classification

Class	Rectangular Fields	Ball Diamonds
Type A	1. Berkley Park (#1 & #2) 2. Grantham Lions Park 3. Kiwanis Field 4. Lancaster Park 5. Lester B. Pearson Park (#1 & #2) 6. West Park (#1 & #2) --- **Total: 9 fields**	1. Alex McKenzie Park 2. George Taylor Field (Community Park) 3. Grantham Lions Park 4. Grapeview Park 5. Joseph McCaffery Park (#1, #2, #3 & #4) 6. Lancaster Park (#1 & #2) --- **Total: 10 diamonds**
Type B	1. Bermuda Park 2. Bogart Park 3. Cambria Park 4. Grantham Avenue Park 5. Grapeview Park 6. Guy Road Park 7. Kernahan Park 8. Linlake Park (#1 & #2) 9. Pic Leeson Park (#1 & #2) 10. Queen Mary Park 11. Realty Park 12. Trapper Leo Park (#1 & #2) 13. West Park (#3 -Football) 14. Kushner Park --- **Total: 17 fields**	1. Community Park (#3 & #4)** 2. Douglas Park 3. Fitzgerald Park 4. John Dempsey Park (#1 & #2) 5. Kernahan Park 6. Pic Leeson Park 7. St. Patrick's Park 8. Walkinshaw Park --- **Total: 10 Ball diamonds**
Type C	1. Berkley Park (#3) 2. Eastport Park 3. Fairhaven Park 4. Shauna Park --- **Total: 4 fields**	No fields
Not Classified*	1. Catherine Street Park 2. Lakeview Park --- **Total: 2 fields**	Not applicable

* These fields were previously permitted for rentals but are no longer used due to current conditions or constraints. Fields are reflected for consideration should improvements result in their future availability.

** Community Park Diamond #2 has not been in use since 2020 due to sale of the school land.

Field Maintenance Standards by Classification

Similar to St. Catharines, other municipalities with field classification systems typically have three to four categories. Some alphabetize their tiers (e.g. A, B, C) while others use numbers (e.g. 1, 2, 3) and others apply prescriptive names (e.g. Premier, Community, Practice, Scrub). Whereas St. Catharines applies its classification to planning, design and operations, certain municipalities only apply their classifications to one or a few elements such as pricing or maintenance standards.

Scheduled maintenance, often prescribed through field classification, is essential to well-kept sport fields, ensuring they remain in ideal condition throughout the season, and. Daily and weekly maintenance contributes to creating a safe and high-quality playing surface, from mowing the grass, repairing ball diamond infield dirt and grooming the pitcher's mound. This proactive approach not only improves the aesthetics of the field but also minimizes potential player injuries and maximizes field usage. Inspecting sports fields plays a critical role of ongoing maintenance. Identifying issues in the initial stages help mitigate large capital costs in the long term. Table 2 compares St. Catharines design and maintenance standards to selected municipalities in Ontario.

2.2 Departmental Responsibilities

Sports field planning, design and operations is a multi-departmental endeavour involving the City's Community, Recreation and Culture Services Department (CRCS), Engineering, Facilities and Environmental Services Department (EFES), and Municipal Works Department (MW). The Planning and Building Services Department (PBS) plays an indirect role by striving to acquire sufficient lands in locations appropriate for sports fields. PBS implements municipal parkland planning and acquisition policies set out in the Garden City Plan, Secondary Plans and through the land development process (e.g. plans of subdivision, site plan control, etc.).

CRCS is responsible for liaising with sports field user groups, field allocation, scheduling and rentals while providing business planning support for selected performance analytics that inform needs for sports fields (e.g. trend tracking, utilization rate analysis, etc.). CRCS largely utilizes the Sports Field Classification System to allocate field times to user groups and establish rental rates in line with field allocation and user fee policies. CRCS and EFES leads sports field design, renewal and construction with involvement by CRCS where necessary. CRCS and EFES considers field sizes and amenities in accordance with the Sports Field Classification System when constructing new fields and redeveloping existing ones. MW is responsible for day-to-day maintenance and operations in accordance with standards applicable to Type A, B and C fields.

The organizational structure currently in place reflects the ability of the City to plan, program and deliver sports field services to the community while fulfilling day-to-day and long-range operations and maintenance to keep facilities in a good state of repair. St. Catharines' Sports Fields Team is well regarded among their peers for a progressive approach to exploring new and

emerging trends in the sector. The Sports Fields Team heavily relies on summer students for frontline staff positions who assist with routine upkeep of facilities.

Table 2: Maintenance Standards Relative to Selected Municipalities in Ontario

Maintenance Type	"A" Fields		"B" Fields		"C" Fields	
	St. Catharines	Others	St. Catharines	Others	St. Catharines	Others
Field Lighting	Yes	Yes	No	No	No	No
Irrigation	Yes	Yes	Some have irrigation	Some have irrigation	No	No
Mowing Standard	2-3 times per week 2.5" height of cut	1-2 times per week 2.5" height of cut	1-2 times per week 3" height of cut	1-2 times per week 3" height of cut	Bi-Weekly	1 time per week 3" height of cut
Aeration Standard	1-2 times per year	3-4 times per year	1 time per year	3 times per year	N/A	2 times per year
Fertilization Standard	2-3 times per year	2 times per year	1 time per year	2 times per year	N/A	2 times per year
Top Dressing Standard	1 time per year	2 times per year	Field Repaired as Required	1 time per year	Field Repaired as Required	1 time per year
Over Seeding Standard	1 time per year	2-3 times per year	As required	1 time per year	N/A	1 time per year
Field Lining Standard	Weekly	Weekly (Avg.)	Weekly	2-3 times per month	N/A	1 time per year
Infield Grooming Standard	Daily and between games	Daily	Daily	3-4 times per week	2-3 times per week	3 times per week

Notes: Information presented in the table represents general averages – maintenance can depend on type of play, amount of use, field condition, available staffing, and other factors. Reflects general maintenance standards for soccer fields and ball diamonds.

Source: Dillon Consulting, 2024

Section 3:
Sports Fields Strategy Consultations

Community engagement activities were held to support the development of the Sports Fields Strategy through consultations with members of the general public, representatives of field sport organizations, as well as feedback from City Council and staff. Project awareness and public communications were largely directed through Engage STC as well as social media and print advertising in community facilities. This section provides a high-level summary of engagement tactics supporting the Strategy.



3.1 Public Open Houses

A public open house was held in March 2024 at the Kiwanis Aquatics Centre to introduce the Strategy to the public, highlight the planning process and the various opportunities for feedback, and seek preliminary thoughts. Approximately 30 people were engaged in substantive conversations throughout the evening in addition to dozens of others that viewed the display boards. Key themes from the input provided prioritizes improvements to existing facilities rather than a need for facilities in new locations. This included an expressed need for improved washrooms, shade structures and enhanced field servicing at various locations. Lightning at various unlit locations was also expressed as a potential improvement for extending field usage. A second public open house will be scheduled after the Project Team has reviewed the Draft Strategy.

3.2 Community Feedback Form

A voluntary community feedback form was administered through Engage STC in March and April 2024, during which 200 responses were received. The survey explored a number of sports field topics including facility usage, frequency of use, access, preferences for types of sports field facilities and potential improvements to be considered. It bears noting that the questionnaire was available for any person wishing to complete it, thus results should not be interpreted as being statistically representative of the population. For example, 85% of feedback responses were received from households belonging to a sports club or league which indicates such individuals were more likely to contribute feedback but also provides assurance that responses are likely to be completed by persons who are informed about the state of local fields.

The following points summarize selected findings with the complete set of tabulated survey responses is contained in Appendix B.

- **Participation**: Over 40% of responses were received from households that played either hardball or softball in the past two years, while over 30% of responses were received from those participating in soccer. Other field sports such as football, rugby, cricket, field lacrosse and field hockey all recorded participation rates below 10% through received responses.

- **Frequency of Use**: during a typical summer, over 80% of forms were submitted by those using the City's sports fields once a week or more. Just 4% of responses were received from persons that do not use sports fields in St. Catharines.

- **Rectangular Fields Used**: The top five rectangular fields used by respondents were Lester B. Pearson Park, Kiwanis Field, Berkely Park, Kernahan Park and Lancaster Park.

- **Ball Diamonds Used**: The top five ball diamonds used by respondents were John Dempsey Park, Kernahan Park, Pic Leeson Park, Joseph McCaffery Park, and Alex Mackenzie Park.

- **Mode of Transportation**: The vast majority of respondents (91%) drive themselves to local sports fields followed by 25% who walk and 12% who cycle. Just 2% of respondents use transit to get to fields. It bears noting that some respondents use multiple modes of transportation, likely indicative that some fields may be closer to home than others.

- **Barriers to Use**: The top five barriers preventing people from participating in field sports were that the fields seem old or out of date, maintenance or cleanliness not meeting expectations, insufficient parking, sports field designs not meeting expectations, and field rentals or programs being too expensive. Encouragingly, 37% of respondents indicated that nothing prevents them from playing a field sport.

- **Encouraging More Use**: Nearly two out of three respondents (63%) indicated that they would use fields more often if the quality of the fields and associated amenities was improved. Between 20% and 25% indicated that they would use fields more if provided in more convenient locations or if user fees were reduced.

- **Investment Priorities**: The highest levels of support for new or improved fields was directed to facilities for soccer, baseball, and softball. The order of priorities was consistent with usage by sport.

Figure 2 : Participation in Organized and Unstructured Field Sports in the Last Two Years

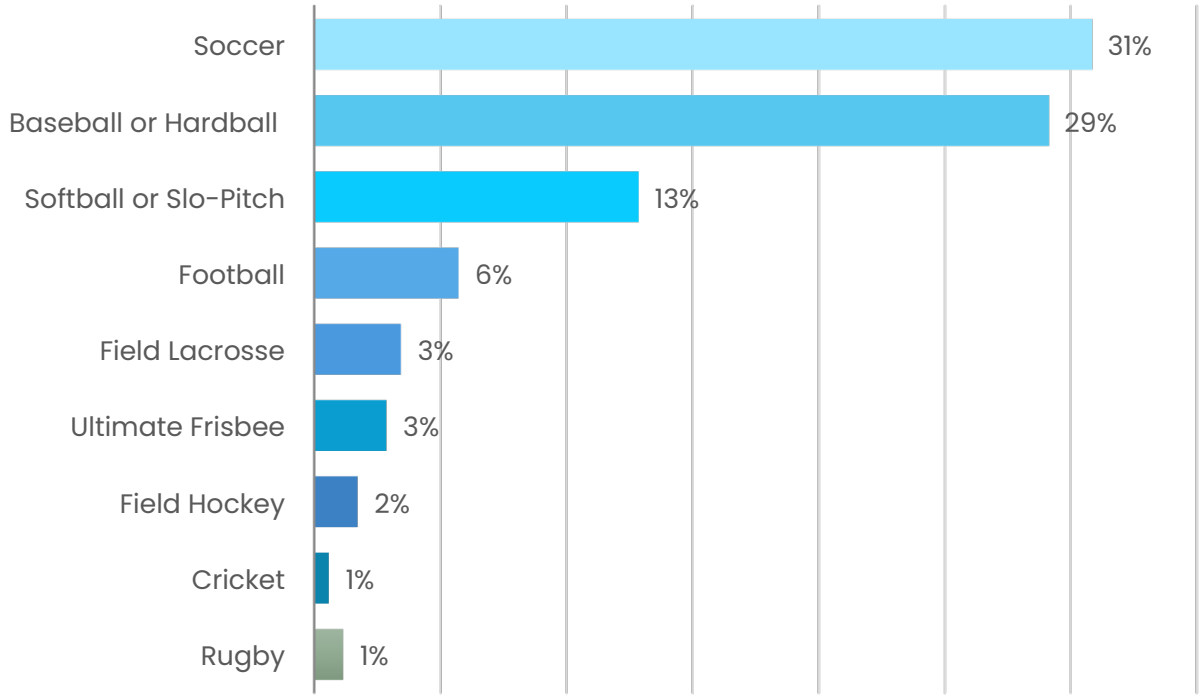
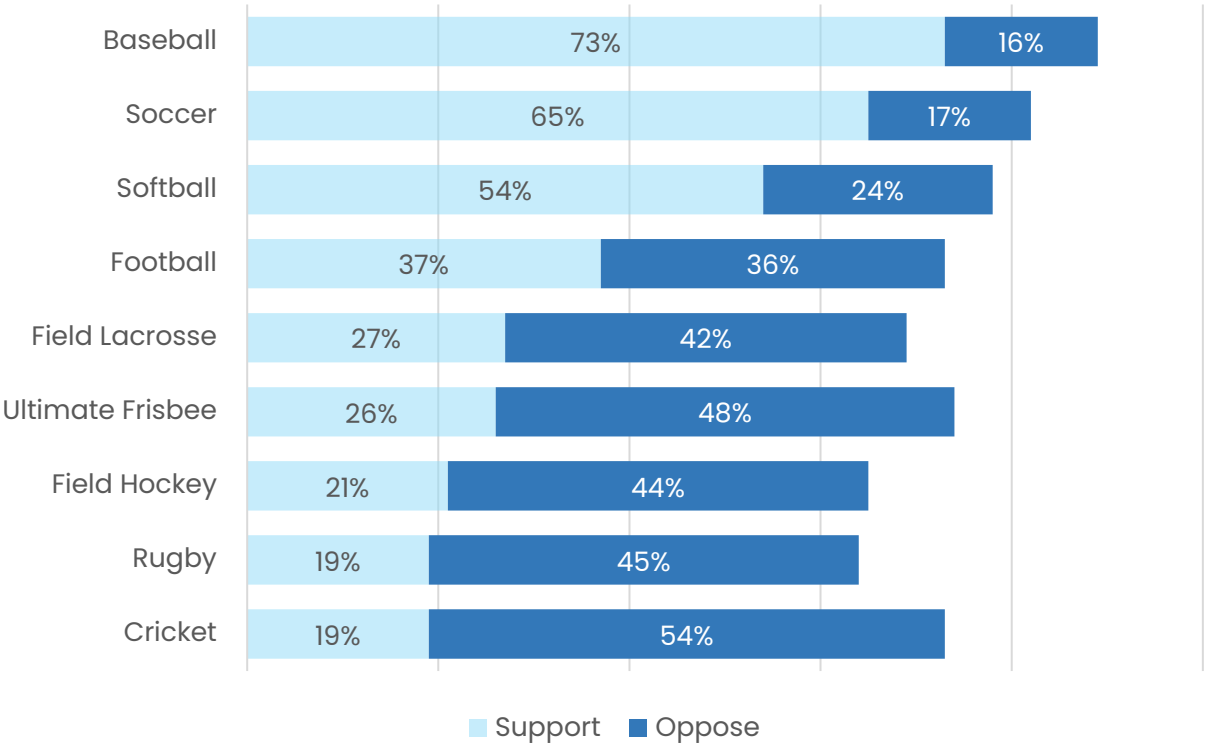


Figure 3 : Support & Opposition for Investment in Sports Fields



3.3 Advisory Committee Input



Three virtual presentations were held in Spring 2024 with the Equity and Inclusion Advisory Committee, Accessibility Advisory Committee, and Recreation Master Plan Advisory Committee to collect feedback about the City's sports fields in line with their respective mandates. While each Advisory Committee brought unique perspective, there were common points of discussion including recognition that sports fields are important to engaging many residents in physical and social activity. Reflecting principles of inclusion through sports field planning and design was a frequent theme with multiple Committees recognizing that these facilities:

- provide affordable opportunities through house league play as well as free drop-in amenities in neighbourhoods;
- should reflect barrier-free features in conjunction with the broader park in they are situated;
- serve young children to adults, and should be designed according to age of players; and
- that new types of sports fields may be required in response to ethnocultural diversification and emerging interests (such as cricket and ultimate frisbee).

The Recreation Master Plan Advisory Committee was re-engaged in November 2024 as part of the finalization of the SFS, given their direct role in municipal recreation system.

3.4 Sports Field Users Roundtables

Roundtables were held in June 2024 with major field sport organizations operating in the City as part of the Strategy in order to understand trends and local needs. Representatives from nine field sport groups attended.

Field Users

- Club Roma
- Bullett Proof Baseball
- Niagara Rec Sports
- Niagara Regional Slo-Pitch
- Port Weller Soccer League
- Royal City Soccer Club
- St. Catharines Ladies Softball
- St. Catharines Minor Baseball
- Yaguars Sports and Social Club

Growth and Change in Soccer Participation – While most user groups were impacted by the pandemic, their registration numbers have continued to grow due to an increasing interest in soccer. Organizations have noted that demand for summer camps is higher with parents requiring activities to occupy their children as they are required in office for work more often than the past few years due to the pandemic. Alongside this surge of younger children participating, the older age groups such as teens have dropped off and have not returned to the sport.

Demand for Field Amenities – To allow organizations to grow in the future, existing rectangular fields need to be optimized for the various age groups and their requirements. Many organizations need access to additional mini fields for their programming and would find it convenient if the infrastructure such as permanent posts were made available at more locations. Transporting and carrying portable nets to various locations is not optimal to set up for practices and games. Lighting more fields can also increase the use of existing fields as older groups play later into the night. An unlit field does not allow for older user groups to play due to safety reasons and the game requirements. Additionally, the general upkeep of natural grass field surfaces would ensure optimal utilization as they are impacted by other sports groups, vandalism, and rainouts which prohibit use.

Requirements for Affiliated Groups – Some organizations contain teams which must follow certain requirements as they are part of an affiliation with the Ontario Soccer Association (OSA). Teams may require change rooms for their games or practices, which are not currently available at all parks. More competitive teams also require a certain amount of time playing on artificial turf fields; Kiwanis Field Park is the only public City Park containing this requirement.

Consolidating Ball Diamond Locations – Baseball organizations would value the convenience of having multiple ball diamonds within the same park location for tournaments and ease of travel. A clover type facility, seen in other municipalities, is something that is desired by St. Catharine's baseball community. The benefits of a multi diamond facility include a more positive atmosphere and social environment for both athletes and spectators.

Ball Diamond Maintenance – The City's ball diamonds are generally small in size, with exception to the ball diamond at Joe McCaffery park. Ball diamond issues are led by drainage and home plate maintenance, as well as safety concerns regarding fencing and parking. There is a need for more full-sized ball diamonds to serve U15 to adult users, which could be met through the addition of a ball diamond complex.

Field sport organizations were also invited to a presentation in November 2024 to review findings of the Draft SFS with the consulting team and city staff prior to the report's finalization.

3.5 City Staff Roundtables

Roundtables were held separately with front-line staff and management staff responsible for the City's sports field system. From these sessions, staff highlighted the strong distribution of soccer fields and ball diamonds at neighbourhood parks across St. Catharines along with equitable allocation practices for groups using prime time hours. Similar to the Joe McCaffery and Lancaster Park ball diamond complexes, it could be beneficial to establish a rectangular field complex in the city. Changing demographics appear to be leading to requests for cricket grounds and is something staff would see benefit in exploring.

Staff indicated that a number of sports fields have been improved through surface enhancements and better drainage. However, continued improvements are required to minimize downtime following periods of rain and still protect the integrity of the turf. Consideration of additional synthetic turf fields, lighting systems and irrigation/drainage systems could help increase the number of hours available to user groups over the course of a season. Staff also highlighted requests for amenities such as player and spectator seating (including shaded areas), onsite storage, concessions, etc.

Section 4:
Rectangular Field Analysis

This Section articulates the supply of outdoor rectangular sports fields in St. Catharines along with information relating to participation, use and design of these facilities.

4.1 Synthetic Turf Fields

Kiwanis Field is the City's sole synthetic turf venue. Opened in 2011, it is a full size rectangular field with playout dimensions of approximately 140 metres by 60 metres including endzones along with bleacher seating and player dressing rooms. For this Strategy, the terms synthetic turf and artificial turf are used interchangeably.

St. Catharines was an early adopter of outdoor synthetic turf among municipalities in Ontario. Artificial turf fields have become increasingly prevalent over the past decade, particularly among mid to large size municipalities but also in areas with growing land scarcity and/or strong participation rates in field sports. Although soccer is a major user of these fields, the multi-use nature and hardiness of artificial turf fields makes them attractive to football, rugby, field lacrosse, field hockey and Ultimate Frisbee users. These sports often have difficulty in accessing soccer fields (their seasons often run in the spring and fall when wet weather makes fields vulnerable to damage from intensive use), and they can be challenged by the quality and availability of school fields that they so heavily tend to rely upon.

Kiwanis Field is the only municipally-operated artificial turf field in Niagara Region; while the Youngs Sportsplex is located on land owned by the City of Welland, its operations are managed by a third party. The District School Board of Niagara (DSBN) has invested heavily in artificial turf fields in recent years with 13 such venues either built or approved for construction. In St. Catharines, DSBN has built artificial fields at Governor Simcoe Secondary School, Sir Winston Churchill Secondary School, and St. Catharines Collegiate, and will be constructing two more at the Laura Secord and Eden Secondary Schools. Niagara Catholic District School Board (NCDSB) has also begun to invest in synthetic turf across the region.

Kiwanis Field results in a service level of 1 synthetic field per 145,000 population. Service levels for synthetic turf range widely anywhere from 1 per 30,000 to 275,000 population across the Greater Golden Horseshoe, reflecting that a number municipalities provide at least one artificial field as an amenity and offer a venue for shoulder-season usage. however, service levels can increase based on partnerships with schools and user groups who contribute capital, as well as intensification pressures where artificial turf is adding capacity equivalent to multiple grass fields.

Design Considerations

Synthetic or artificial turf is selectively being used to replace natural turf sport fields on high-use municipal and institutional sites as a means of extending playability, and reducing field maintenance. The trend toward artificial turf is extending beyond sport fields to lawn areas, school sites, streetscapes and parks.

Despite a higher introductory cost, synthetic turf tends to require less maintenance compared to natural grass fields although general maintenance and upkeep is required to maintain a high quality playing experience. As new fibres and materials are developed, artificial turf fields can offer true to life playing surfaces together with several other benefits including, but not limited to:

- higher shock absorption, grip, and uniform surface over the entire field reduces joint stress and risk of injury;
- durable and resilient materials less susceptible to damage than natural turf;
- environmentally and operationally friendly (does not require mowing, fertilizing, irrigating or aerating);
- specifically designed for high demand sports use;
- offers more playability and is not impacted by rain; and
- customizable materials in colour and size.

The current ranges of synthetic turf products are less abrasive and more shock-absorbing than previous generations and are manufactured with environmentally-friendly products. Typically, they are comprised of a mat of evenly-spaced 'grass' fibres, filled with small recycled rubber granules, sand or other material, and sometimes with a shock pad for added safety. The evolution of artificial turf has come about, not only to improve the experience but to address safety concerns which include excessive heat, toxicity of the products and injury.

Toronto Public Health undertook a study[5] of the health impacts of artificial turf sport fields to gain a more complete understanding of these health concerns. The study examined several factors from both an impact and a benefit perspective, and generally found that:

- new generations of artificial turf are largely addressing safety concerns and risk of injury;
- the positive benefits of physical exercise outweighed risks of toxicity relating to the products; and
- the main concerns related to increased use of artificial turf are linked to climate change mitigation and impacts on storm drainage due to the lack of impermeability of the surfacing.

[5] Toronto Public Health. 2015. Health Impact Assessment of the Use of Artificial Turf in Toronto.

The Toronto Public Health study recommended that installation of artificial turf only be considered in situations where the conditions on the site and anticipated high usage would prevent the maintenance of a healthy natural turf. It also recommended protocols around the prevention of heat-related health impacts such as providing shade and drinking water, prohibiting the use of the field during extreme heat alerts, as well as best practices for reducing exposure to toxic substances, such as hand, shoe and equipment washing.

The facility model for developing artificial turf and multi-use fields varies in each community and is typically dependent on the size of the local market, availability of capital funding and resources (e.g., partnerships), and financial viability of the business model as artificial fields are costly to develop compared to a traditional grass field. Capital costs of construction vary depending upon turf quality and supporting amenities (e.g. tracks, seating, scoreboards, changerooms, etc.) but are multi-million dollar endeavours. In 2024, Kiwanis Field underwent a $1 million renewal to replace the turf and goal posts after 13 years of service.

4.2 Natural Turf Fields

The City provides 32 natural grass fields, one of which is designed for football (West Park #3). The number of fields by classification are as follows:

- 8 Type A Fields
- 17 Type B Fields
- 4 Type C Fields
- 3 fields are unclassified as they are not presently rented or allocated

With the 8 lit fields (Type A) contributing the equivalent capacity of 12.0 unlit grass fields and Kiwanis Field's synthetic surface contributing the equivalent of 2.0 fields, the effective supply of artificial and natural rectangular fields in St. Catharines is 37.0 ULEs.

As the largest municipality by population, St. Catharines maintains the most sports fields in the Region and achieves a service level of one unlit rectangular field equivalent per 3,900 population. St. Catharines provides the fewest rectangular fields per population in Niagara Region (Table 3); however, the City remains in line, albeit on the lower end of the spectrum, with municipalities across the Greater Golden Horseshoe where the average tends to be in the range of one field per 2,500 to 4,000 population depending on factors such as residential densities, supply of developable land, and historical provision.

Table 3 : Municipal Rectangular Fields in Niagara Region

Municipality	Population	No. of Rectangular Fields (ULEs)	Population Per Rectangular Field
Wainfleet	6,887	15	1 : 500
West Lincoln	15,454	9.5	1 : 1,600
Grimsby	28,883	17	1 : 1,700
Lincoln	25,719	13.5	1 : 1,900
Fort Erie	32,901	14	1 : 2,300
Welland*	55,750	24	1 : 2,300
Niagara on the Lake	19,088	9.5	1 : 2,000
Pelham	18,192	9	1 : 2,000
Port Colborne	20,033	9	1 : 2,200
Niagara Falls	98,000	33.5	1 : 2,900
Thorold	23,816	6.5	1 : 3,700
Regional Average	**31,013**	**14.5**	**1 : 2,100**
Regional Median	**23,816**	**13.5**	**1 : 2,000**
St. Catharines	**145,000**	**37.0**	**1 : 3,900**

* Welland's supply includes sports fields independently operated by a third party on municipal lands at the Youngs Sportsplex.

Notes: Field supplies are reflected in Unlit Equivalents (ULEs) where synthetic turf is equivalent to 2.0 natural fields and lit fields are equivalent to 1.5 unlit fields. Service levels are rounded to the nearest 100 persons.

Design Considerations

Ontario Soccer's Long Term Player Development model (LTPD) aims to bolster grassroots soccer programming by focusing upon improved coaching, fewer games, more ball time, and skill development as opposed to the historical emphasis on scoring and winning games. LTPD tailors field dimensions specifically to the age and ability of players, recognizing the various stages of physical and cognitive development. Under the LTPD model, there are six field sizes oriented to 11 versus 11 (referred to as 11v11), 9v9, 7v7, 5v5 and 3v3 whose respective dimensions and age divisions are articulated in Table 4.

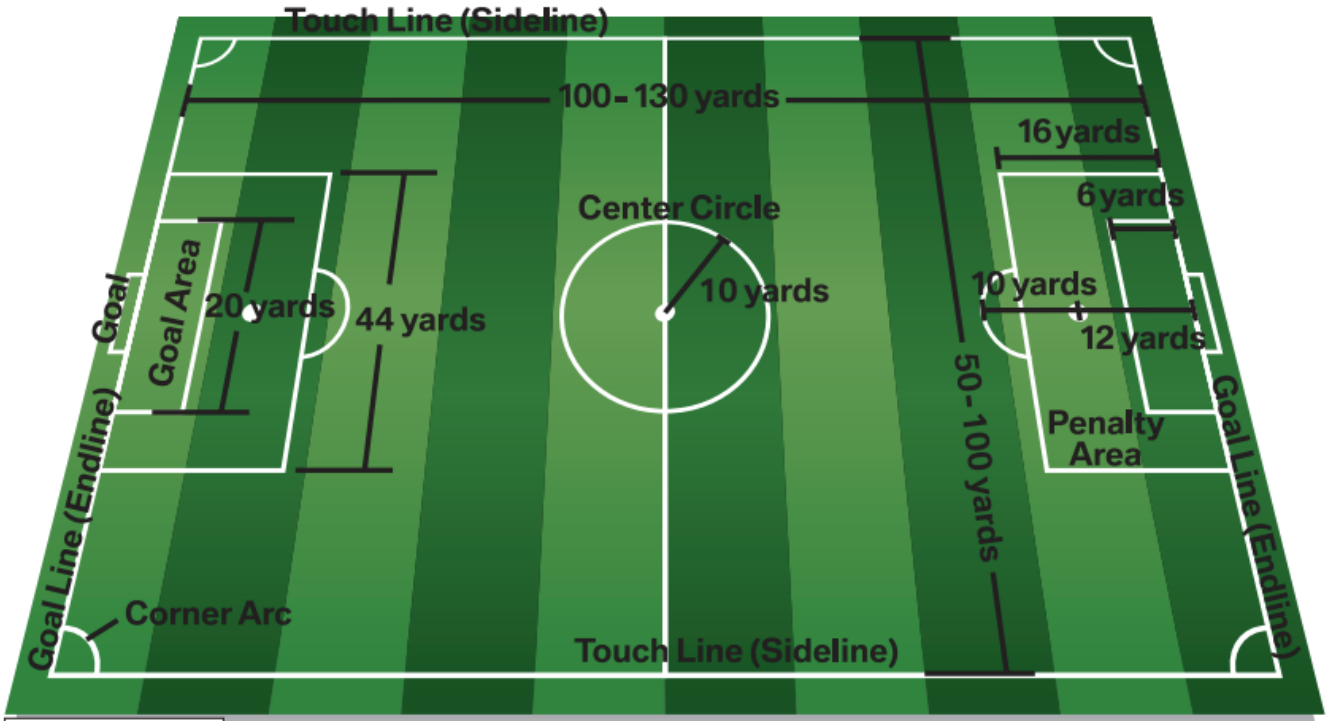
Table 4: Long Term Player Development Field Dimensions

	U4 / U5	U6	U7	U8	U9 / U10	U11 – U12
Game Day Squad Size	Parent & Child	Max 6	Max 8	Max 10	Ideal 9 Max 12	Ideal 12 Max 16
Field Width	n/a	18m to 22m	25m to 30m	25m to 30m	30m to 36m	42m to 55m
Field Length	n/a	25m to 30m	30m to 36m	30m to 36m	40m to 55m	60m to 75m

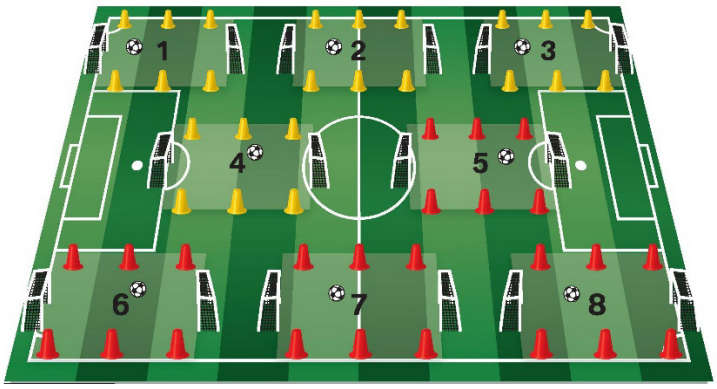
Source: Ontario Soccer, 2021

Research has shown that soccer organizations typically prefer smaller fields measuring 60 metres by 30 metres (200 feet by 100 feet) to run programming, although 100 metres by 60 metres (360 feet by 200 feet) field templates are also desirable to support rep-level and adult play. Dimensions for other rectangular field sports varies between football, rugby, field hockey, etc. However, most of these sports can be accommodated on a full-size soccer field subject to their requisite amenities (e.g. uprights), field markings, and grass height.

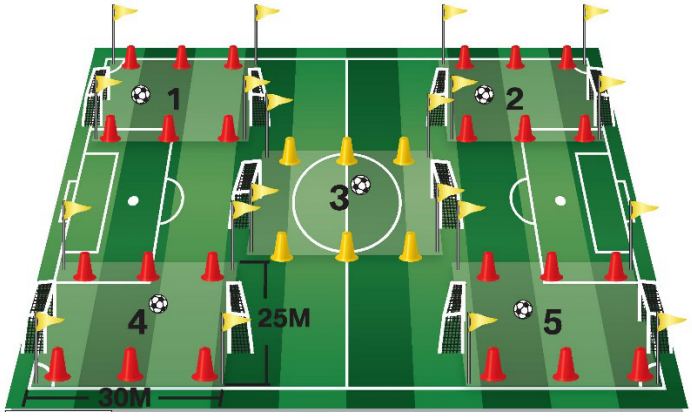
Figure 4: Ontario Soccer 11v11 Field Dimensions & Configurations



11v11 Configuration



3v3 Configuration



5v5 Configuration

Table 5: Rectangular Field Sizes by Classification

Location	# of Fields	Size
Class A		
Berkley Park (Fields #1 and #2)	2	11 v 11 (Field #1) 11 v 11 (Field #2)
Grantham Lions Park	1	11 v 11
Kiwanis Field	1	Artificial Turf
Lancaster Park	1	11 v 11
Lester B. Pearson Park	2	11 v 11 (East) 11 v 11 (West)
West Park (Fields #1 and #2)	2	11 v 11 (Field #1) 11 v 11 (Field #2)
Subtotal Class A	**9**	
Class B		
Bermuda Park	1	11 v 11
Bogart Park	1	11 v 11
Cambria Park	1	9 v 9
Grantham Avenue Park	1	11 v 11
Grapeview Park	1	11 v 11
Guy Road Park	1	11 v 11
Kernahan Park	1	11 v 11
Linlake Park	2	9 v 9 (Field #1) 9 v 9 (Field #2)
Pic Leeson Park	2	11 v 11 (Field #1) 11 v 11 (Field #2)
Queen Mary Park	1	9v9
Realty Park	1	11 v 11
Trapper Leo Park	2	11 v 11 (Field #1) 9 v 9 (Field #2)
West Park - Field #3 (Football Field)	1	100 metres plus end zone
Kushner Park	1	9 v 9
Subtotal Class B	**17**	
Class C		
Berkley Park (Field #3)	1	7 v 7
Eastport Park	1	11 v 11
Fairhaven Park	1	Not Painted
Shauna Park	1	Not Painted
Subtotal Class C	**4**	
Non-Permitted		
Catherine Street Park	1	9v9
Lakeview Park	1	9v9
Non-Permitted Fields	**2**	
TOTAL	**32**	

Table 5 illustrates that 20 of the 32 rectangular fields in St. Catharines are sized for 11v11 play (i.e. full size fields) and all but one of the remainder are 9v9 dimensions (i.e. intermediate fields). Having larger fields offers strong flexibility to deliver programming for all LTPD formats since large fields

can be subdivided for 5v5 and 3v3 using portable nets, and thus allowing local soccer associations to use fields even when age divisions change by season. As shown in Research has shown that soccer organizations typically prefer smaller fields measuring 60 metres by 30 metres (200 feet by 100 feet) to run programming, although 100 metres by 60 metres (360 feet by 200 feet) field templates are also desirable to support rep-level and adult play. Dimensions for other rectangular field sports varies between football, rugby, field hockey, etc. However, most of these sports can be accommodated on a full-size soccer field subject to their requisite amenities (e.g. uprights), field markings, and grass height.

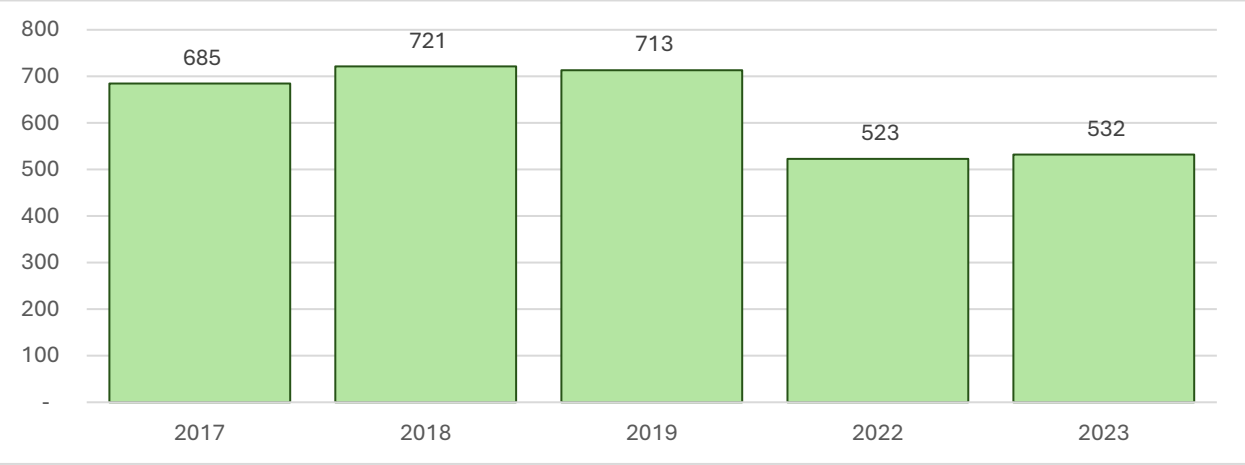
Figure 4, a full-size field can be subdivided into eight 3v3 fields using cones and flags to facilitate adaptable gameplay for different age groups or training purposes. This approach enables customization of the soccer field to suit specific age groups or field formats, optimizing space while maintaining the regulation field.

4.3 Usage Analysis

Synthetic Fields

Usage at Kiwanis Field was trending upward until the COVID-19 pandemic as shown in Figure 5. Slightly more than 500 hours were booked at Kiwanis Field in 2023, which is about 25% below pre-pandemic rentals which were in the range of 700 hours. Approximately twice as many hours are used in the spring and fall (May to April and September to November) compared to the summer which is due to a number of factors. For example, football tends to be a fall sport while soccer groups will book outside of the summer to get programs going early on and wind down their outdoor seasons before heading to indoor fields. During the summer, groups may be more likely to seek natural fields as rental rates are priced below those of synthetic fields. Based on the fact that there were fewer hours booked in 2023 compared to past years, it is surmised that capacity presently exists to accommodate additional usage at Kiwanis Field, particularly in the summer.

Figure 5: Hours Used at Kiwanis Field, 2017-2023



Note: 2020 and 2021 seasons excluded due to COVID-19 pandemic restrictions.

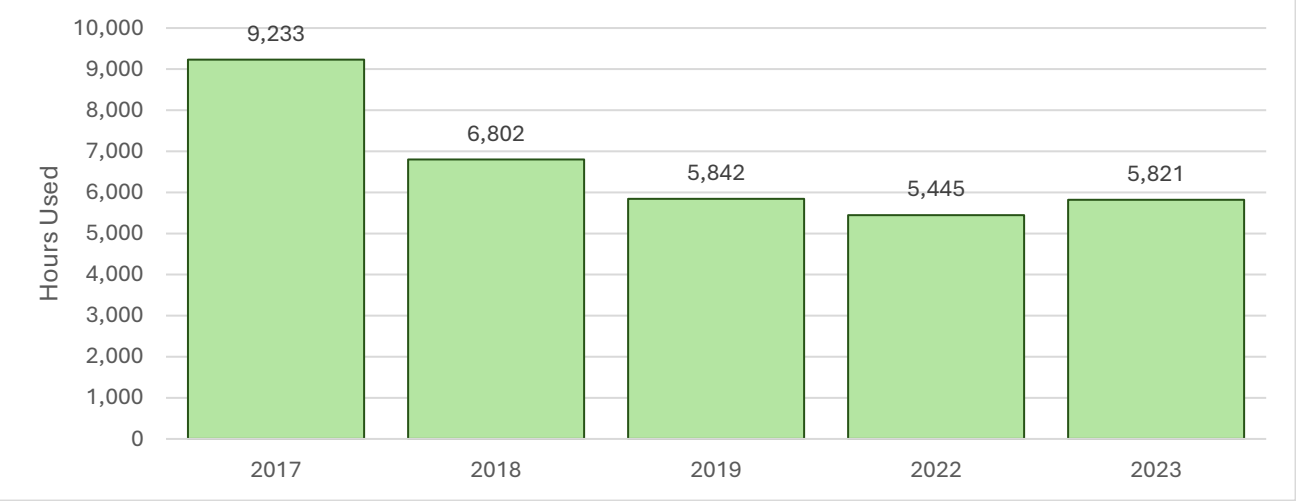
Natural Fields

A total of 5,800 hours were used at local rectangular fields in 2023, which is approximately 3,400 hours less than 2017 rental usage or a decline of 37%. As will be discussed in the pages that follow, player registrations have decreased over the past 10 years which could be resulting in lower rental demand. Table 6 illustrates that user groups pulled back the most on rentals of Type B and Type C fields which collectively booked 2,275 fewer hours in 2023 compared to 2017 (a 67% reduction). Type A fields, which are typically the most in-demand facilities, also lost over 1,110 hours in rentals which indicates that there is capacity for additional usage at existing rectangular fields.

Peak Season Utilization

Utilization data recorded during the months of June, July and August in 2022 and 2023 revealed that all Type A rectangular fields (natural and synthetic) collectively averaged a 30% utilization rate between those two years. From Monday to Friday, Type A rectangular fields averaged 35% utilization, whereas on weekends, their utilization decreased to 26%. The full list of utilization rates for the peak seasons of 2022 and 2023 is presented in **Appendix A.**

Figure 6: Hours Used at Natural Rectangular Fields, 2017-2023



Note: 2020 and 2021 seasons excluded due to COVID-19 pandemic restrictions.

Table 6 : Natural Rectangular Field Usage by Classification, 2017-2023

Hours Used	2017	2018	2019	2022	2023	Change 2017-2023
Type A	4,202	3,512	3,010	2,991	3,069	**-27%**
Type B	4,360	2,779	2,576	2,307	2,503	**-43%**
Type C	671	512	255	147	250	**-63%**
Total	**9,233**	**6,803**	**5,841**	**5,445**	**5,822**	**-37%**

Note: 2020 and 2021 seasons excluded due to COVID-19 pandemic restrictions.

4.4 Participation Analysis

Soccer has been well established in Canadian sporting culture, particularly after a period of rapid participation growth in the 1990s when it replaced baseball and hockey as the most popular organized sport among Canada's youth. The Niagara Soccer Association, which encompasses St. Catharines-based clubs sanctioned by Ontario Soccer, has fairly consistent registration rates over the past 20 years ranging between 12,000 participants to a peak of 17,800 players in 2007. The past 2023 season (current season data is not yet published) recorded 14,000 players though registrations had been slowing prior to the COVID-19 pandemic. Fewer Niagara Region residents are playing outdoor soccer through sanctioned clubs and there may be a few reasons for this:

- While the Region of Niagara's population has been growing, the area is experiencing aging trends and it is understood that a sizeable share of new growth is attributable to retirees. Niagara's population under the age of 20 remained relatively unchanged between 2011 and 2021 meaning the market size for minor soccer has not substantially grown.

- Interest in soccer in may be levelling off among Niagara residents, potentially impacted by interests in other sports.

- Formation of unsanctioned soccer leagues, clubs and academies that are not affiliated and competing with Ontario Soccer, and whose participation is not published.

The above being said, continued demand for soccer fields is possible with implementation of the LTPD standards particularly if more households are enticed by Ontario Soccer's grassroots approach to fun and skill development. As Figure 7 and Table 7 show, St. Catharines soccer clubs have recovered their registrations to 4,225 players since the pandemic due in part to the formation of regional leagues that have replaced certain leagues that folded. Looking over the course of the last 10 years, however, player registrations have decreased by 20% over the past 10 years when there were 5,300 players reported in 2014.

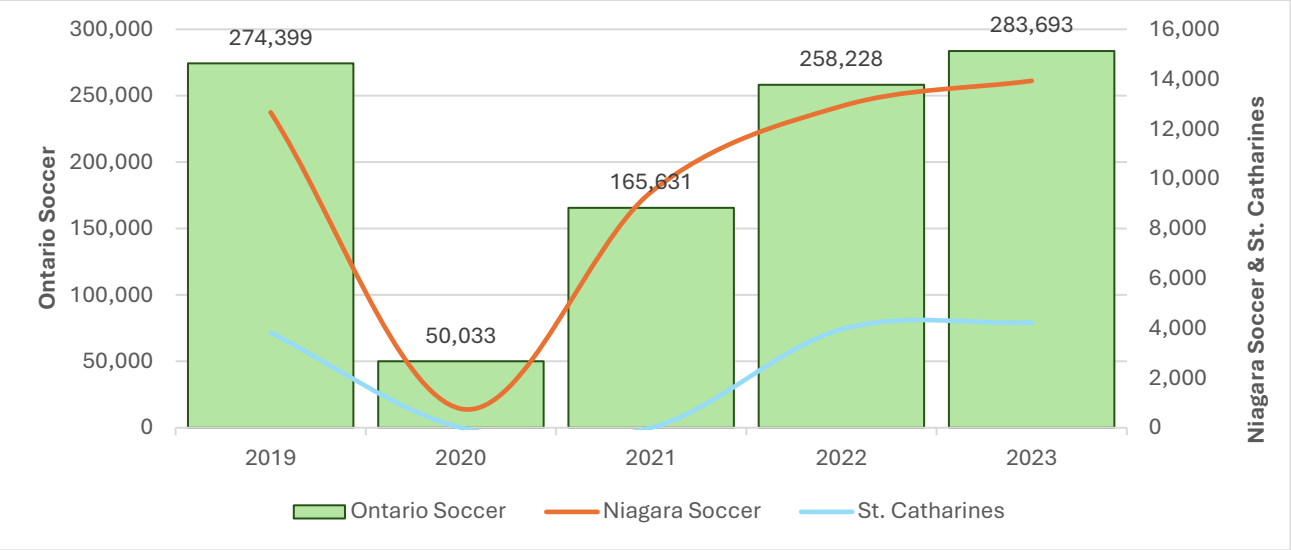
Table 7: St. Catharines Reported Soccer Registrations, 2023

Club	Participants
Port Weller Soccer League	1,375
St. Catharines Jets	1,272
Club Roma	1,072
Niagara Sport & Social Club*	166
Kiddie Sports Academy*	118
Royal Soccer Club	162
Yaguars Sport & Social Club*	60
Total Reported Registration	**4,225**

* Regionally-based group using fields in multiple municipalities and whose reported registration is adjusted using an assumption that 50% of its players are St. Catharines residents.

Note: Registrations provided by user groups responding to request from City staff and may not include any users that did not submit player data. Port Weller registration reported at User Group Workshop.

Figure 7: Provincial, Regional & Local Soccer Registrations, 2019-2023



Notes: Ontario and Niagara registrations are from sanctioned clubs while St. Catharines registrations include sanctioned and non-sanctioned clubs. Data from 2020 and 2021 pandemic-impacted seasons was not available for St. Catharines user groups. Port Weller Soccer League registrations were only available for 2023 and are applied to previous years for comparative purposes.

Source: Ontario Soccer, City of St. Catharines

Table 8: Rectangular Field Provision Targets in Selected Municipalities

Municipality	Rectangular Field Target	Source
Brampton	1 per 75 players	Parks and Recreation Master Plan
Georgina	1 per 80 registered players	Recreation Facility Needs Study
Guelph-Eramosa	1 per 65 registered players	Parks and Recreation Master Plan
Halton Hills	1 per 90 registered players	Recreation & Parks Strategic Action Plan
London	1 per 2,000 population (ages 0-54)	Sports Facilities & Services Review
Kitchener	1 per 100 minor players	Comprehensive Demand Study for Rectangular Fields, Ball Diamonds & Gyms
Milton	1 per 90 registered players	Community Services Master Plan Update
Mississauga	1 per 3,000 population	Future Directions for Parks & Forestry
Niagara Falls	1 per 90 registered players	Recreation, Culture & Parks Plan
North Dumfries	1 per 75 registered players	Community Use Facility Needs Study
Oshawa	1 per 90 registered players	Parks, Recreation, Library & Culture Facility Needs Assessment
Oakville	1 per 105 registered players	Parks, Recreation & Library Facilities Master Plan 5-Year Review
Waterloo	Complex methodology based on capacity, utilization, and five-year age-cohort growth	Outdoor Sports Field Strategy
Wilmot	1 per 80 registered players	Parks, Facilities & Recreation Services Master Plan

Most communities target one rectangular field per 80 to 100 registered soccer players (Table 8). With 4,225 registered soccer players in St. Catharines playing on 37.0 unlit equivalent fields, St. Catharines is presently servicing its organizations at a rate of one field per 114 players which is lower than typical.

Many municipalities exclude non-soccer field sports from the registration-based service level standard in recognition that:

- Soccer tends to be the most popular field sport and largest volume user of field time in most communities;
- Other field sports typically have lower player registrations than soccer; and
- Certain field sports are typically played in shoulder seasons (i.e. spring and fall months).

Other field sports have historically secured time at school or post-secondary fields, are accommodated on multi-use fields, or overlaid on soccer fields. It bears noting field sports such as lacrosse and football have approximately 1,500 registrants in organizations that serve the St. Catharines and the broader Niagara region, and thus also make use of rectangular fields in communities outside of St. Catharines.

4.5 Provision Strategy to 2036

The City has historically applied a market-based provision standard to determining needs for rectangular fields at a rate of one field per 90 registered players. Application of the player-based metric would indicate a deficit position (Table 9) but is contradictory to utilization data.

Table 9: Forecasted Registrations & Rectangular Field Needs, 2024-2051

	2024	2031	2036	2041	2051
Forecasted Number of Registrants	4,225	4,400	**4,650**	4,875	4,975
Number of Rectangular Fields Required (ULEs) based a provision target of 1 field per 90 registrants	**47.0**	**49.0**	**51.5**	**54.0**	**55.0**
Unadjusted Field Deficit based on a current supply of 37.0 ULE fields	10.0	12.0	**14.5**	17.0	18.0
LTPD Adjusted Field Deficit based on an adjusted supply of 45.0 ULE fields*	**2.0**	**4.0**	**6.5**	**9.0**	**10.0**

*Counts 8 Type B and C fields as 16 fields due to their ability to be temporarily separated in half for use by younger age divisions.

A field deficit on a participant basis could be partially explained by minor soccer organizations who indicated during the Strategy's workshop that they cannot secure sufficient mini fields with permanent nets in St. Catharines. If there is a sizeable number of children playing in 3v3 and 5v5 divisions, the market-based field metric is likely reflecting this as a deficit. However, it is not clear from user group conversations as to whether they require more fields in total or if the desire would be to convert existing fields to mini fields with permanent goals. With City fields sized for either 9v9 or 11v11 play and capacity in them to accommodate more rentals, it would seem existing fields should be able to be used more frequently by subdividing them and using portable nets.

6.5 Unit Equivalents

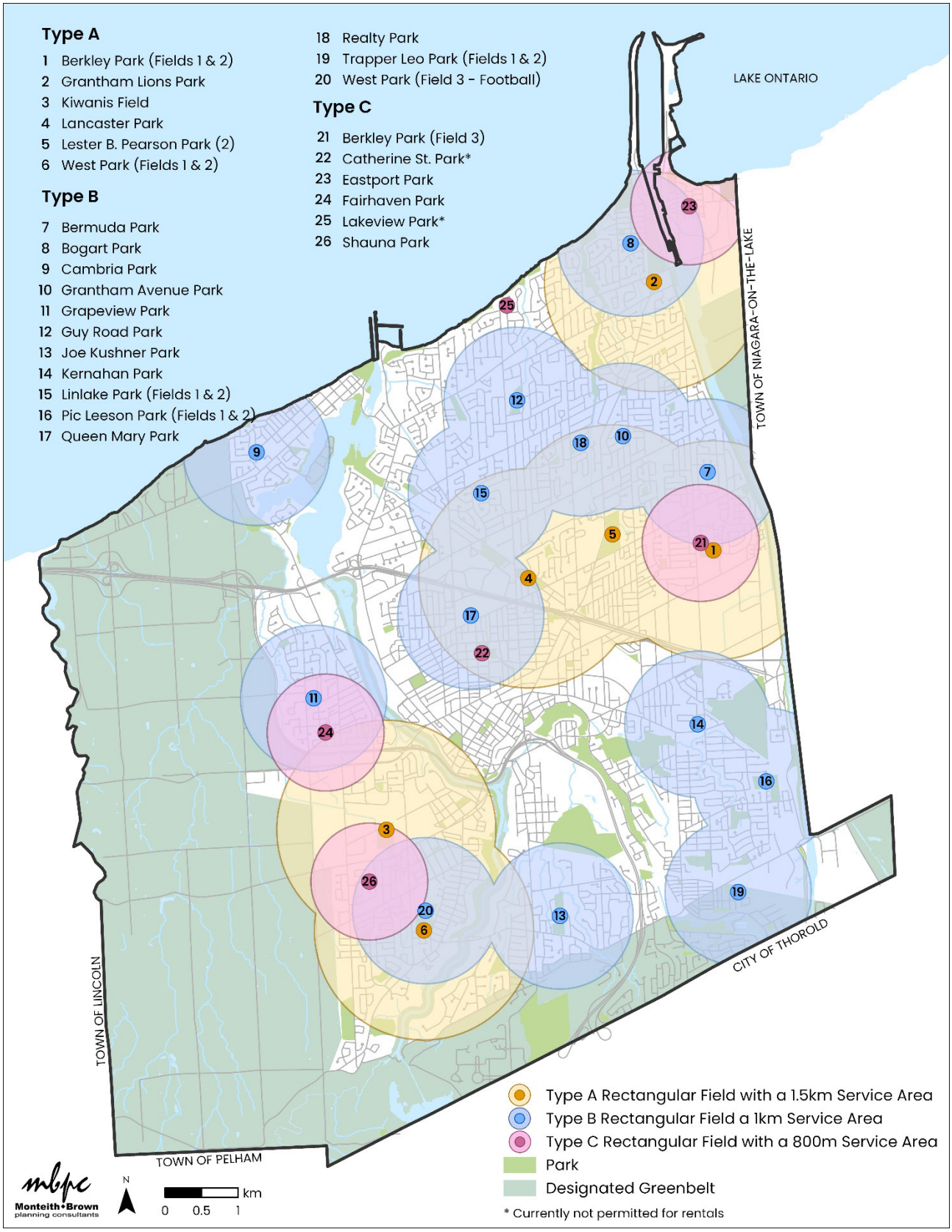
Additional fields required by the year 2036, growing to a need for 11.0 ULEs by 2051.

To reflect the temporary nature of a deficit driven by concentrations in Under 8 and younger age divisions, an adjustment factor has been applied to Type B and Type C fields that are sized for 9v9. There are eight fields in these classifications sized for 9v9 or 7v7. Under LTPD dimensions, it is assumed that these fields can accommodate 2 smaller fields for younger divisions and thus providing the equivalent of 16, 5v5 fields (noting, however, that more 3v3 fields would fit). The adjustment assumes all Type B and C 11v11 fields continue to be counted as one field since older age divisions would still need access to full size fields, but it is recognized that these full fields could alleviate a portion of demand for younger age divisions.

On this basis the City's registrant-based service level would increase to one field per 94 players and reflect greater consistency with field capacities demonstrated through the utilization analysis. A field deficit continues to exist but is not as substantial before the adjustment factor is applied to reflect LTPD field dimensions. There would be a need for 6.5 unlit equivalent full-size fields by the year 2036 which would ultimately increase to 11.0 ULEs by the year 2051.

The City offers strong geospatial coverage through its sports field system, particularly in the northeast and southwest (Map 2). Two notable gaps are in the downtown core and in proximity to the Ontario Street corridor. While these areas historically have had fewer children and youth compared to other areas of St. Catharines, the degree of residential intensification planned for the former General Motors lands, GO Transit Station and downtown St. Catharines could see an influx of younger households.

Map 2: Distribution of Rectangular Fields by Classification



Based on utilization, participation and geographic assessments, an incremental approach is recommended with building up the number of sports fields in conjunction with a focus on increasing capacity through lighting and other amenities. The following activities are suggested.

Building Supplies in Areas of Intensification

A select few municipalities in Canada have used artificial turf for boxed soccer courts and pop-up soccer fields (see Section 1.4). A boxed soccer court is something that the City should explore in areas of intensification – such as the Ontario Street Corridor and/or the GO Transit Station Secondary Plan areas - where parks may be smaller and not able to accommodate a traditional soccer field. The boxed court concept should also be explored in established areas that are deemed 'priority neighbourhoods' based on marginalization or vulnerability measures to provide safe and free physical activities.

Given a more challenging parkland acquisition environment due to amendments to the Planning Act, the boxed soccer approach will alleviate a portion of rectangular needs. However, the City should also secure sufficient land for a minimum of one rectangular field in the Ontario Street Corridor Secondary Plan area.

Conversions to Type A Fields

Soccer clubs participating in the Strategy's workshop for this Strategy emphasized improved amenities (lighting, storage, washrooms, etc.), turf remediation and maintenance activities, and better field drainage more so than the need for additional full-size fields. Conversion of existing Type B fields to Type A facilities would increase quality and if lit would add the equivalent of 50% more capacity per field.

In looking at quality of fields, Type A fields are generally well distributed on a north-south basis although there are currently no such field types in the south-east. Upgrading Kushner Park and/or Trapper Leo Park to Type A fields makes good sense to address this geographic gap as well as add rental capacity through lighting. Assuming all three of these fields could be lit, the equivalent of 1.5 fields would be added to count towards the participant-based deficiency without having to acquire additional lands. Both parks already have onsite parking lots though a photometric study would need to confirm compatibility with adjacent land uses while geotechnical analysis may be needed if required for improved irrigation or drainage.

New Lands for Fields

With the above noted provision of a Type A field in the Ontario Street Corridor and proposed conversions of three Type A Fields reconciling up to 3.0 ULEs of the projected 6.5 ULEs needed by 2036, there is a need to add the equivalent of another 3.0 ULEs. The City should secure at least one future park that is capable of providing two Type A fields which would reconcile 3.0 of the outstanding 3.5 ULEs (i.e. leaving a nominal deficit). In the event that a parcel of land large enough for two fields cannot be secured, one of the recommended Type A fields would

be located at a second park or alternatively the City could initiate exploratory discussions with the DSBN or NCDSB to obtain enhanced public access to an existing or future synthetic field on school property.

In adding 6.0 ULE fields to the supply by 2036, the City would have 43.0 ULEs in total and result in a population-based service level of one rectangular field per 3,700 persons, slightly above today's service level of 1:3,900.

Mini Field Amenities

With demand expressed for mini fields, certain rectangular fields could be adapted to meeting needs of the youngest age groups on a temporary basis. While groups are seeking mini fields with permanent net installations, this could be cost-prohibitive to the City and compromise future flexibility as the youngest age divisions advance to older divisions requiring the large field formats.

An interim and more cost-effective solution may be to invest in onsite storage options at selected fields for temporary goalposts and nets instead of in-ground installations. It is recommended that the City investigate selected intermediate and full-size Type B and C fields to temporarily re-orient them for mini field usage as Type A fields are best reserved for older and rep-level players.

As noted in preceding pages, there are 1,500 players people presently registered with St. Catharines Touch Football, Niagara Regional Minor Football Association, and St. Catharines Minor Lacrosse. It is anticipated that the field needs of these organizations will largely be met over the next ten years given capacity available at Kiwanis Field, West Park #3 as well as the DSBN's recent investments in synthetic turf.

Artificial Turf

With no set industry standards or service levels to guide future provision of artificial turf fields, the City of St. Catharines should employ a business planning assessment based on a number of variables given construction of artificial turf is a multi-million dollar investment. Considerations include, but are not limited to:

- The current supply of rectangular fields as a whole is generally sufficient in St. Catharines and growth-related needs over the next 10 years can be addressed primarily using natural grass fields (as will be discussed in Section 4.2).

- The fact that there is already one synthetic turf field operated by the City and five will soon be available at local secondary schools alongside turf at Brock University.

- The utilization rate of St. Catharines' existing sport fields with natural and artificial turf fields, with a focus on whether these fields are being used in a manner that maximizes their available capacity.

- Having sufficient rental demand during the spring and fall months, as well as throughout the summer. This is usually dictated by St. Catharines' market size associated with soccer and other field sport organizations.

- Successfully obtaining commitments from user groups – usually through usage agreements or financial contributions – to provide ongoing security to the City in generating future cash flow to offset the costs of the field.

- The degree to which land scarcity or land cost is prohibitive to securing multiple sport fields (as one artificial turf is often considered to provide the equivalent capacity of two to three grass fields). With limited greenfield development opportunities in St. Catharines and a need to address demands in areas of intensification, a more compelling case may exist to consider artificial turf.

- Whether there is a willingness from a third party to partner with the municipality on construction and/or operation of an artificial turf field. If investments by DSBN and NCDSB are any indication, there may be an appetite to partner with the City particularly if new schools are required where land and/or financial resources need to be shared. Other potential partners could be soccer clubs, and sometimes private sector operators as in the case of Welland.

- Whether there is a desire on the part of the City to provide another high quality, destination venue for field sports.

- Any outcomes of a financial cost-benefit exercise including the desired level of cost-recovery for an artificial turf field based on the City's fee structure and anticipated rental volumes.

4.6 25-Year Outlook for Rectangular Fields

Artificial turf is envisioned to play a more prominent role in the City of St. Catharines rectangular field supply based upon the population growth, increasing land scarcity, competing demands for parkland space, and escalating land costs in St. Catharines. Assuming that participation rates in most field sports remain consistent, then substantial pressures could be generated post-2031. With fewer cost-effective opportunities to assemble lands to address the needs for ultimately 10.0 ULE fields by 2051, artificial turf fields will provide an opportunity to deliver additional field capacity in increasingly scarce space devoted to parkland.

Artificial turf will continue to offer flexibility to create multi-use venues that can be used for many sports during the spring, summer and fall. Consideration should be given to designing future artificial turf fields in a manner that they could be bubbled with an air-supported structure to proactively position to meet any future indoor field requirements over the next 25 years (a number of municipalities with populations over 75,000 have indoor fields). Since the capital cost of construction and renewal for artificial turf is substantial, greater pursuit of partnerships will be highly beneficial to maximize utilization and cost-sharing benefits.

While artificial turf surfaces will likely become a greater part of the City's inventory beyond 2031, natural grass fields are still expected to play a prominent role given their cost is substantially less. However, greater operational resources may need to be expended above current levels with more frequent maintenance, more robust irrigation/drainage systems, use of hardier turf grass varieties, etc. to accommodate increased usage from population-related pressures.

Furthermore, parks located in downtown St. Catharines, the GO Transit Secondary Plan and Ontario Street Corridor will face greater pressures as new residents will increasingly rely upon the public realm for outdoor enjoyment, particularly those living in dwellings that have little or no backyard space. The City will have to review the use of sport fields in such parks to determine whether the fields are generating sufficient usage, or whether fields should be removed and/or relocated in favour of conversion to other needed recreational space that serves surrounding residential areas.



4.7 Opportunities & Directions: Rectangular Fields

#1. Add a total of 6.0 unlit equivalent rectangular fields by the year 2036 through new field developments and conversion of existing fields to Type A facilities, achieved through the following actions.

i. Secure land for a minimum of one lit rectangular field in the Ontario Street Corridor Secondary Plan area in response to geographic gaps and growth-related needs (+1.5 ULE).

ii. Convert some or all fields at Kushner Park and Trapper Leo Park to Type A Rectangular Fields subject to confirmation of geotechnical conditions and compatibility with adjacent land uses (+1.5 ULE).

iii. Provide two new Type A fields at a future park (3.0 ULE).

iv. Explore the potential to integrate rectangular field uses and amenities in partnership with Niagara Olympic Track and Field Club at West Park.

#2. Engage the District School Board of Niagara and the Niagara Catholic District School Board to understand their short and long-term plans for provision of future artificial and natural turf fields, and whether there is an opportunity for a partnership that can share costs in exchange for enhanced public access.

#3. As part of a park in the Ontario Street Corridor or GO Transit Station Secondary Plan, implement a pilot project to provide a boxed soccer court or pop-up field. Partnerships or sponsorships should be sought, potentially with the land development industry, a national or provincial sport organization, or others to help fund the pilot and/or a resulting permanent facility.

#4. Provide onsite storage at selected Type B and Type C Rectangular Fields to increase functionality for user groups to better program these fields for 3v3, 5v5 and 7v7 play.

#5. Secure a new site to replace the Pic Leeson Park 11v11 field that is proposed for relocation in order to implement Recommendation #6 of this Sports Fields Strategy. The replacement field would preferably be reconstructed as a Type A facility and if possible should be co-located with a future multi-field park specified in Recommendation #1 of this Strategy.

Section 5:
Ball Diamond Analysis

This Section articulates the supply of outdoor rectangular sports fields in St. Catharines along with information relating to the participation and use of these facilities. Section 7 of this Strategy describes ball diamond design and development standards.

5.1 Ball Diamonds

The City distributes 11 hardball and 9 softball diamonds across 13 parks, classified as follows:

Hardball
- 2 Type A Diamonds
- 9 Type B Diamonds

Softball
- 8 Type A Diamonds
- 1 Type B Diamonds

With the 10 lit diamonds (Type A) contributing the equivalent capacity of 15.0 unlit diamonds, the effective supply of ball diamonds in St. Catharines is considered to be 25.0 ULEs. Excluded from the supply but recognized for contributions to minor sports are the four diamonds at the Grantham Optimist Club along with 14 informal diamonds and backstops at City parks that enable opportunities for spontaneous neighbourhood-level play.

St. Catharines trails only Niagara Falls and Welland in terms of total ULEs among Niagara Region municipalities (Table 11). However, St. Catharines provides less than half as many diamonds per population than the Regional average and median, and is lower than averages across the Greater Golden Horseshoe which are in the range of one diamond per 4,000 to 5,000 population.



Table 10: Ball Diamond Types by Classification

Location	No. of Diamonds	Sports Field Classification
Hardball Diamonds	**11**	
Alex Mackenzie Park	1	Type A
George Taylor Field (Community Park)	1	Type A
Community Park	2	Type B (Diamonds #3 and #4)
Douglas Park	1	Type B
Fitzgerald Park	1	Type B
Kernahan Park	1	Type B
John Dempsey Park	2	Type B
Pic Leeson Park	1	Type B
Walkinshaw Park	1	Type B
Softball Diamonds	**9**	
Grantham Lions Park	1	Type A
Grapeview Park	1	Type A
Joseph McCaffery Park	4	Type A
Lancaster Park	2	Type A
St. Patrick's Park	1	Type B

Table 11: Municipal Ball Diamonds in Niagara Region

Municipality	Population	Number of Ball Diamonds (ULEs)	Population Per Ball Diamond
Port Colborne	20,033	13.5	1,500
Pelham	18,192	10.5	1,700
Lincoln	25,719	13.5	1,900
West Lincoln	15,454	7.5	2,100
Welland	55,750	25.5	2,200
Thorold	23,816	11.0	2,200
Fort Erie	32,901	14.0	2,300
Wainfleet	6,887	3.0	2,300
Grimsby	28,883	10.5	2,800
Niagara Falls	98,000	33.0	3,000
Niagara on the Lake	19,088	6.0	3,200
Regional Average	**31,013**	**13.5**	**2,300**
Regional Median	**23,816**	**11.0**	**2,200**
St. Catharines	**145,000**	**25.0**	**5,800**

Notes: Field supplies are reflected in Unlit Equivalents (ULEs) where lit fields are equivalent to 1.5 unlit fields. Service levels are rounded to the nearest 100 persons.

5.2 Usage Analysis

A total of 4,700 hours were used at ball diamonds in 2023, which is 770 hours less than 2017 rental usage or a decline of 14%. Table 12 illustrates that users pulled back the most on Type B diamond rentals which were collectively used 500 hours less in 2023 compared to 2017. Type A fields, which are typically the most in-demand facilities, lost 275 hours in rentals which indicates that there is capacity for additional usage at existing ball diamonds relative to past years.

Over the course of the peak season, the overall utilization rate equates to 38% of capacity. After accounting for maintenance downtime and field closures, Type A diamonds were used 49% of available times while Type B fields were used just 22% of capacity. For both Type A and B diamonds, a considerable amount of unused capacity is likely attributable to weekends and rentable timeslots up to10pm.

38%

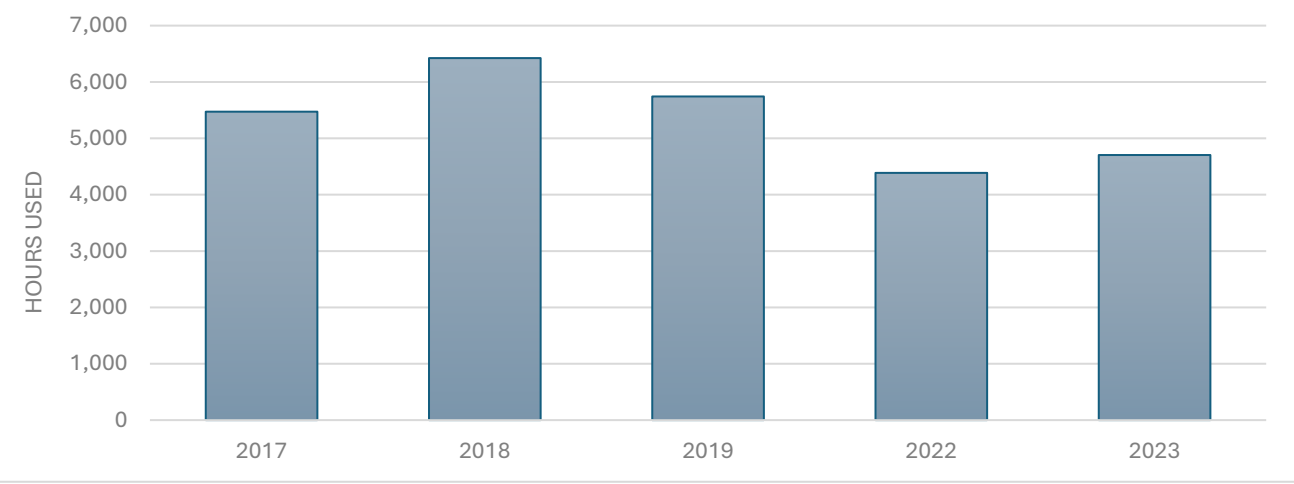
Ball Diamond Utilization Rate in 2023

Use of Type A ball diamonds during the shoulder season equates to about half of peak season rentals for those same diamonds in 2023, indicating a propensity by local users to use these facilities over an extended period; by comparison, shoulder season usage of Type A rectangular fields was about a third of peak season rentals. Since Type A diamonds are lit, user groups can play on them when dusk falls in the early evening.

Peak Season Utilization

Utilization data recorded during the months of June, July and August in 2022 and 2023 revealed that all Type A ball diamonds collectively averaged a 23% utilization rate between those two years. From Monday to Friday, Type A ball diamonds averaged 36% utilization, whereas on weekends, their utilization decreased to 14%. The full list of utilization rates for the peak seasons of 2022 and 2023 is presented in **Appendix A.**

Figure 8: Hours Used at Ball Diamonds, 2017-2023



Note: 2020 and 2021 seasons excluded due to COVID-19 pandemic restrictions.

Table 12: Ball Diamond Usage by Classification, 2017-2023

Hours Used	2017	2018	2019	2022	2023	Change 2017-2023
Type A	3,724	4,297	3,900	3,186	3,448	**-7%**
Type B	1,749	2,128	1,843	1,202	1,256	**-28%**
Total	**5,473**	**6,424**	**5,743**	**4,387**	**4,704**	**-14%**

Note: 2020 and 2021 seasons excluded due to COVID-19 pandemic restrictions.

5.3 Participation Analysis

Baseball and softball are relatively affordable compared to other sports and engage children and youth during summer months to be part of a team. The sport is an important teacher of skill development for all ages. Baseball's growth and popularity is often correlated with the success of the Toronto Blue Jays and the team's resurgence over the past decade has helped lifted baseball registrations after a period of steady decline in the early 2000s. Since Baseball Canada adopted the Long Term Athletic Development (LTAD) model, the organization has focused on developing and honing skills and coaching styles, as well as fostering leadership and organization. Suitable competition formats and facility types are also core components of Baseball Canada's LTAD model, the latter of which will have implications on the provision of diamond types and sizes in St. Catharines.

Registrations in Ontario Baseball and its affiliates in the Niagara District Baseball Association (NDBA) have rebounded and now exceed pre-pandemic levels (Figure 9). Among user groups renting diamonds in St. Catharines, local user groups reporting their registrations to the City have also grown their player base from before the pandemic with the exception of Niagara Regional Slo-Pitch whose membership has declined by 30%. Users responding to a request from City staff for registration data reported a player base of 2,015 St. Catharines-based participants (Table 13). However, registration data for Merritton Alliance was not provided as of time of writing which will skew overall registrations lower than the actual.

Most communities target one ball diamond per 100 registered players. With 2,015 registered baseball and softball players in St. Catharines playing on 25.0 unlit equivalent fields, St. Catharines is presently servicing its organizations at a rate of one field per 77 players which is higher than typical.

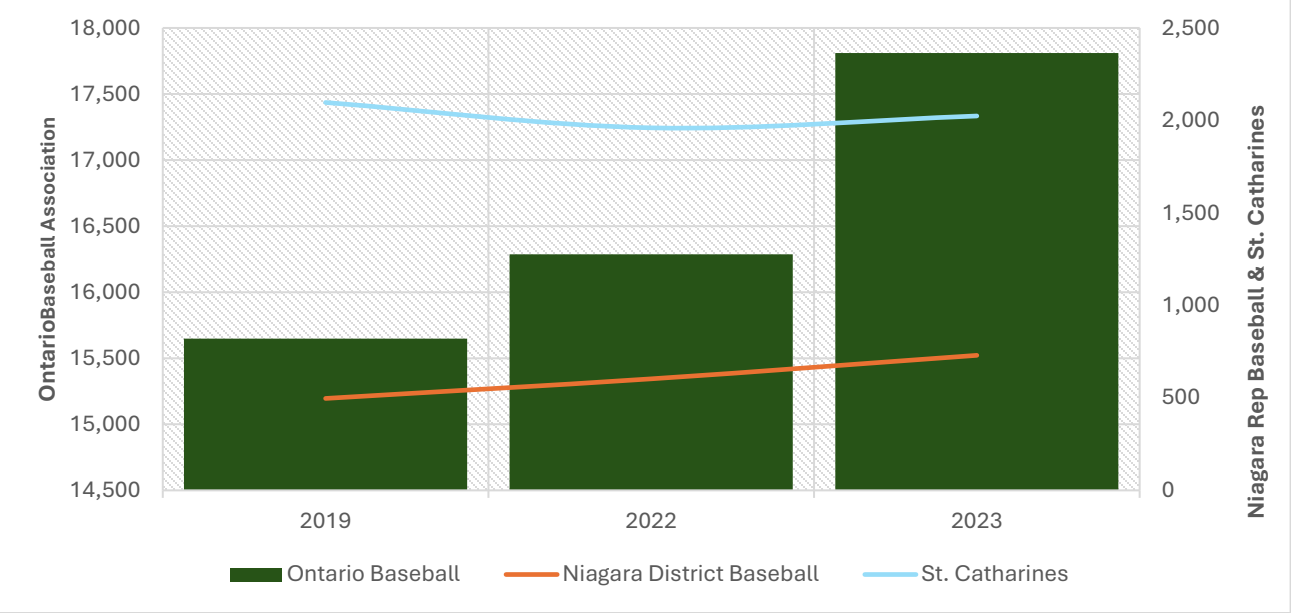
Table 13: Reported Baseball & Softball Registrations, 2023

Association / League	Participants
St. Catharines Minor Baseball	640
Niagara Rec Sports Softball*	450
Niagara Regional Slo-Pitch*	437
St. Catharines Ladies Softball	350
Bulletproof Baseball	108
Brock Men's Baseball	30
Total Reported Registration	**2,015**

* Regionally-based group using fields in multiple municipalities and whose reported registration is adjusted using an assumption that 50% of its players are St. Catharines residents.

Note: Registrations provided by user groups responding to request from City staff and may not include any users that did not submit player data. Ladies softball and Niagara Rec Sports registration reported at User Group Workshop.

Figure 9: Provincial, Regional & Local Baseball / Softball Registrations, 2019-2023



Notes: Ontario and Niagara registrations are from sanctioned hardball clubs and excludes house league participants and softball players. St. Catharines registrations include sanctioned and non-sanctioned leagues as well as softball players. Data from 2020 and 2021 pandemic-impacted seasons was not available.
Source: Ontario Baseball Association, City of St. Catharines

5.4 Provision Strategy to 2036

The City applies a standard of one ball diamond per 100 registered players to determine field requirements. On this basis, the City would have a surplus over ball diamonds in its system and confirms the utilization analysis that demonstrates capacity exists to accommodate additional rentals, presumably with the majority of available time on weekends.

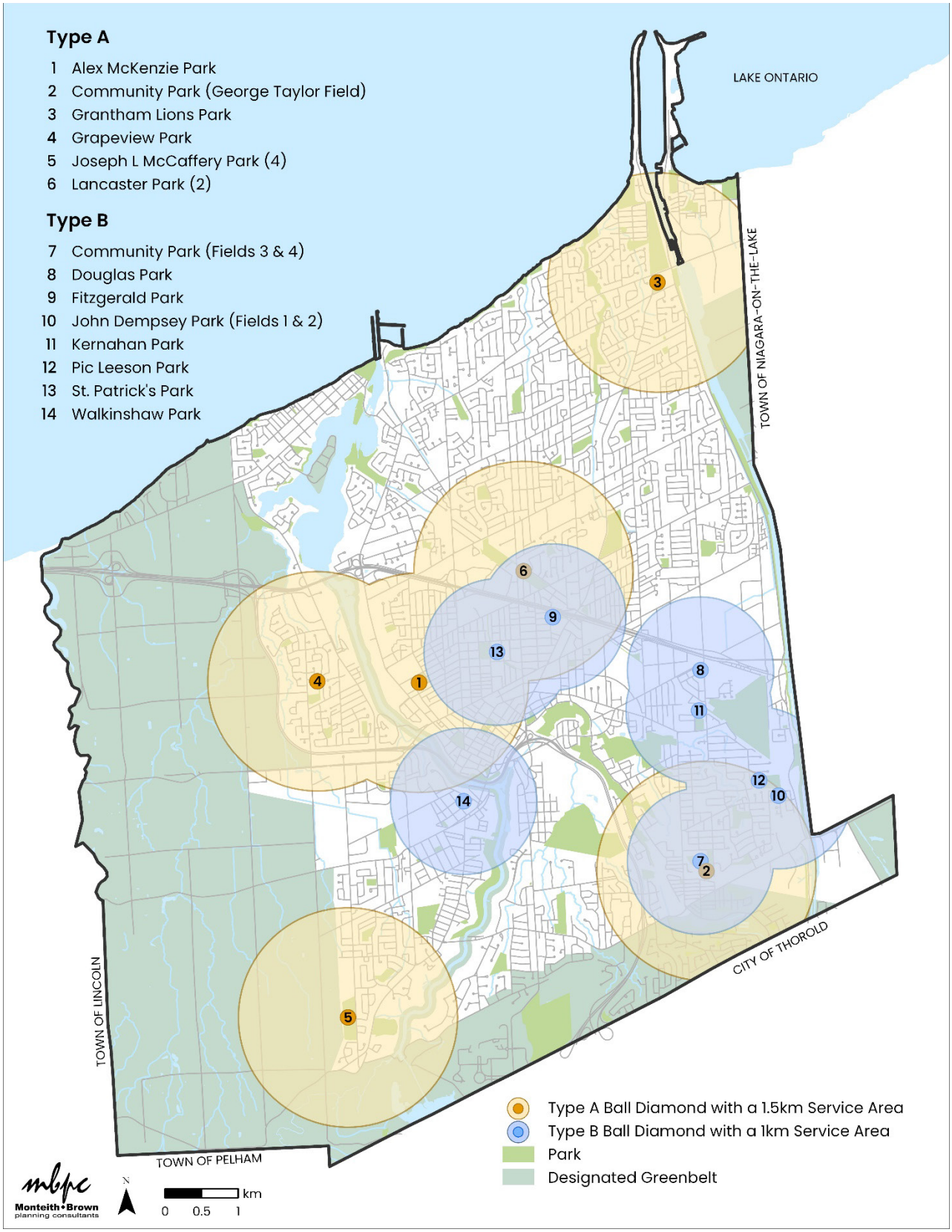
Table 14: Forecasted Registrations & Ball Diamond Needs, 2024-2051

	2024	2031	2036	2041	2051
Forecasted Number of Registrants	2,015	2,125	**2,225**	2,350	2,400
Number of Ball Diamonds Required (ULEs) based a provision target of 1 field per 100 registrants	**20.0**	**21.25**	**22.25**	**23.5**	**24.0**
Ball Diamond Surplus based on a current supply of 25.0 ULE diamonds	5.0	3.75	**2.75**	1.5	1.0

Map 3 illustrates that the majority of St. Catharines ball diamond supply is concentrated south of the QEW; there are three City-run diamonds situated on the north side of the highway although the Grantham Optimists Club adds another four diamonds which reconciles a geographic gap in municipal diamond distribution and reduces pressures on the City so long as those facilities remain available for play in the future.

Ball diamond users spoke to challenges in securing diamonds that are large enough for adult leagues and competitive minor divisions. Their other priorities were largely centred upon improved drainage and amenities such as shaded seating, fencing, replacing old light standards, and vehicular parking. User groups also indicated a strong preference for additional multi-diamond complexes; this comment appears to have merit as 9 out of the 13 ball parks in St. Catharines have single diamonds. Of the five existing multi-diamond complexes, McCaffery Park and Merritton Community Park (including George Taylor Field) provides more than two diamonds and two of these complexes contain Type B fields which can limit the type of use that can occur.

Map 3: Distribution of Ball Diamonds by Classification



To meet needs to the year 2036, a prevailing strategy of leveraging and adding capacity through the existing supply of ball diamonds is applied. In doing so, the City reduces the need to acquire new parkland specifically to accommodate net new additions to the diamond supply. The following actions are recommended.

Re-Allocate an Existing Diamond to a Multi-Diamond Complex

As noted above, there is a plausible case to be made for a second ball diamond complex in St. Catharines to complement Joseph McCaffrey Park but sized to better serve the needs for adult and more competitive play. An opportunity exists to do so by redeveloping and/or re-orienting diamonds found at Pic Leeson Park and John Dempsey Park which are adjacent to each other but separated by a sizeable grade differential. These two parks collectively have three diamonds but there is no formal pedestrian or vehicular access internally between them.

A fourth ball diamond presents an opportunity to not only reinforce programming and operational efficiencies of a complex but also to reconcile the need for an adult-sized hardball diamond in St. Catharines. Pic Leeson Park / John Dempsey Park would introduce a complex on the east side of the city and balance distribution with Joseph McCaffrey Park in the City's west end. The fourth diamond could be added to the northwest portion of Pic Leeson Park in place of the rectangular field; the potential to acquire lands east of the park should be explored which may allow greater flexibility in meeting an adult sized hardball diamond (Figure 10).

Figure 10: Aerial Image of Pic Leeson Park & John Dempsey Park



A park-specific master plan should be prepared to examine opportunities to re-orient any of the existing diamonds, convert all or some of them to Type A facilities, create internal pedestrian and/or vehicular circulation routes, and address the slope. A plan should also explore potential to accommodate washroom, storage and/or shade structures which could

potentially require relocation of the other rectangular field. Studies will be required to determine if and how to mitigate impacts on the adjacent residential areas based on any increase to the intensity of use onsite.

As an alternative, there is undeveloped land located on the southern portion of Joseph McCaffrey Park that could be used should Pic Leeson Park not be deemed feasible or should a need for another ball diamond emerge in the future.

As the registration and utilization-based analyses confirm surplus capacity in the system, the fourth diamond would ideally be provided by relocating an existing undersized diamond from elsewhere in the City; doing so could effectively increase rental capacity without having to acquire a new park. The ball diamond at Alex MacKenzie Park is a popular venue with a quality design and a number of supporting amenities, however, its small size is a limiting factor for older age groups and more competitive players with limited ability to expand the diamond's playout area.

Further, the degree of residential and employment intensification that is presently envisioned for the Ontario Street Corridor will likely generate pressures for public parkland which could translate into more needs at Alex MacKenzie Park beyond sports fields. Therefore, relocation of the Alex MacKenzie diamond to Pic Leeson Park allows the City to reallocate capital from lifecycle replacements to a new diamond while also repurposing the space at Alex MacKenzie to alleviate growth-related intensification pressures. A separate study or park-specific master plan would need to be carried out to determine the types of outdoor amenities/facilities that would form part of a redeveloped/rejuvenated Alex MacKenzie Park.

Develop an Accessible Ball Diamond

The vision for recreation in St. Catharines established in the RFPMP is to be "The City where everybody can play." In support of this vision and promoting inclusion in sport, the City should consider development of a fully barrier-free ball diamond. A number of accessible ball diamonds have been constructed over the past decade including in Oshawa, Windsor, Amherstburg, and Mississauga (to name a few) that are conducive to play by ball players with physical, developmental or cognitive disabilities. Sometimes referred to as Challenger Diamonds or Field of Dreams, these accessible diamonds incorporate synthetic surfaces, large and accessible dugouts, etc. and have sometimes leveraged external funding through sources such as the Jays Care Foundation, Canadian Tire Jumpstart, and senior government grants.

An inclusive ball diamond can be developed through new construction or conversion of an existing diamond. If looking at an existing diamond, St. Patrick's Park is one candidate to consider given its ability to form a destination in conjunction with the nearby Russell Avenue Community Centre and Catharine Street Park which has a playground with an accessible surface and splash pad across the street. Whatever park is selected for an inclusive diamond should have an enhanced level of barrier-free accessibility beyond minimum requirements of

the AODA or Accessible Facility Design Standards, and at the very least should have unobstructed connections between the diamond, park entrance and parking lot.

Continue to Invest in Improved Field Lighting & Drainage Systems

The City has been working diligently to 'skin' existing diamonds after obtaining funding approvals to carry out these works. These efforts are commendable as staff strive to provide quality playing surfaces; Kernahan Park and George Taylor Field are examples in the past five years where infield surfacing has been rejuvenated.

However, a number of diamonds have basic or outdated drainage systems dating back to original era of construction, or are in low-lying areas that make them prone to saturation for extended periods following inclement weather. The City should establish a long-range plan to install modern drainage systems at existing diamonds where saturation is of concern, preferably targeting a minimum of one Type A diamond per year followed by Type B diamonds. This is another way of increasing useable capacity of the existing supply without having to acquire new parks with new ball diamonds.

To add capacity for adult leagues, it is recommended that the City install lighting at selected diamonds. Merritton Community Park Diamond #3 would be an ideal candidate given that there are no conflicting land uses adjacent to it and this park is already an established multi-diamond complex with both onsite and on-street parking available. At the same time, the City should explore the ability to redevelop and reorient Community Park Diamond #4 so that it faces south, though this could require acquisition of the undeveloped lands south of the park's property line. Doing so would add between 0.5 and 1.0 ULEs to the municipal supply, depending if one or both diamonds are lit, and add capacity for more adult games.

Higher Calibre Play at George Taylor Field

George Taylor Field is a stadium facility that is located within Merritton Community Park and used by the Brock University team as well as adult leagues. City staff have fielded inquiries for higher calibre baseball over the years including amateur and semi-professional teams. However, this calibre of play would require time allocated to practices as well as early evenings for games given the spectator-based nature of these businesses. George Taylor Field has a peak season prime time utilization rate in the range of 35% which would suggest capacity would exist but accommodating an amateur or semi-professional team requires a creative approach to balancing varsity teams and not unduly displacing existing community users.

Ultimately, attracting an amateur or semi-professional team or league will be a business decision that considers economic impact, sport tourism, and the long-term athlete pathway. In the event that the City agrees to be home to such a team, George Taylor Field is the logical location for them. Should this be the case, however, a new adult size ball diamond would likely be required elsewhere in St. Catharines in order to accommodate any displaced user groups.

5.5 25-Year Outlook for Ball Diamonds

Future ball participation trends are murky. Despite resurging participation levels in and around the Greater Golden Horseshoe, local registrations have remained fairly stagnant over the last 10 years and the City's population continues to age. The City's current supply, along with field lighting and multi-diamond venue provision recommended herein, provide flexibility to adjust to changing participation trends. Use of synthetic infield surfaces may be considered over time to manage wear on the diamonds associated with greater usage but also to provide contingencies in the case of inclement weather, recognizing that synthetic surfaces will represent a higher capital cost to budget for.

5.6 Opportunities & Directions: Ball Diamonds

#6. Relocate the Alex MacKenzie ball diamond to the Pic Leeson Park / John Dempsey Park in order to provide four diamonds at that location – all or some of which are full-sized for competitive play - to enhance league programming, tournament potential, and centralize municipal maintenance operations. A park-specific master plan should be prepared to examine how to configure the diamonds, incorporate supporting amenities, and address vehicular parking and circulation at a minimum.

#7. Construct an inclusive diamond using synthetic surfacing and other barrier-free features through new construction or redevelopment of an existing diamond, potentially St. Patrick's Park if the latter. This diamond should be accessible without barriers from park entrances and vehicular parking areas at a minimum and should seek external funding opportunities available through Foundations and other levels of government.

#8. Redevelop Merritton Community Park Diamond #3 with improved drainage (also see Sports Fields Strategy Recommendation #9) and install field lighting. Subject to an ability to assemble lands to the south of the park, Diamond #4 should be re-oriented, redeveloped and lit to also allow for additional play.

#9. Carry out ball diamond drainage system improvement projects for those diamonds that are prone to flooding and saturation, targeting a minimum of one diamond per year beginning with George Taylor Field and Merritton Community Park Diamond #3, followed by other Type A facilities. The same approach should be applied to rectangular fields.

Section 6:
Cricket Grounds

This Section examines the need for cricket grounds which are emerging across the Greater Golden Horseshoe and other parts of the country.

6.1 Cricket Grounds

St. Catharines does not currently provide dedicated cricket pitches and there are no cricket groups presently permitting time at municipal sports fields; the degree to which unstructured cricket is taking place at local fields or other open spaces is undocumented though City staff have anecdotally observed some play taking place at Kushner Park and the St. Patrick's Park ball diamond. Most cricket play in the immediate region likely takes place in the City of Niagara Falls where a cricket pitch is provided at John N. Allan Park (approximately a 20 minute drive from central St. Catharines) as well as a private facility in Thorold.

For the sole purposes of providing comparable service levels to inform the Study, cricket pitches were benchmarked against selected municipalities. It bears noting that there is no standard template among them as the size, quality, amenities and type of play (tapeball vs. hardball) varies.

Table 15: Cricket Pitch Supply and Service Level Benchmarks of Selected Municipalities

Municipality	Population Estimate	Supply	Service Level
Brampton	757,000	19	1 : 39,842
Waterloo	121,436	2	1 : 60,718
Niagara Falls	98,000	1	1 : 98,000
Windsor	229,660	1	1 : 229,660
Milton	132,979	2	1 : 66,490
Hamilton	584,000	2	1 : 292,000
Oakville	225,000	2	1 : 112,500
Kitchener	256,885	4	1 : 64,221
London	422,324	3	1 : 140,775
Oshawa	191,600	2	1 : 95,800
Whitby	151,500	2	1 : 75,750
Average	**288,217**	**4**	**1 : 115,978**
Median	**225,000**	**2**	**1 : 95,800**
St. Catharines	145,000	0	0

Design Considerations

Cricket is one of the few sports that require a large circular field to play on, resulting in unique design specifications that are challenging for municipalities to accommodate. Other communities (e.g., Mississauga, Brampton) have overlaid cricket pitches across multiple soccer fields or in sub-optimal remnant spaces, while also providing dedicated cricket pitches.

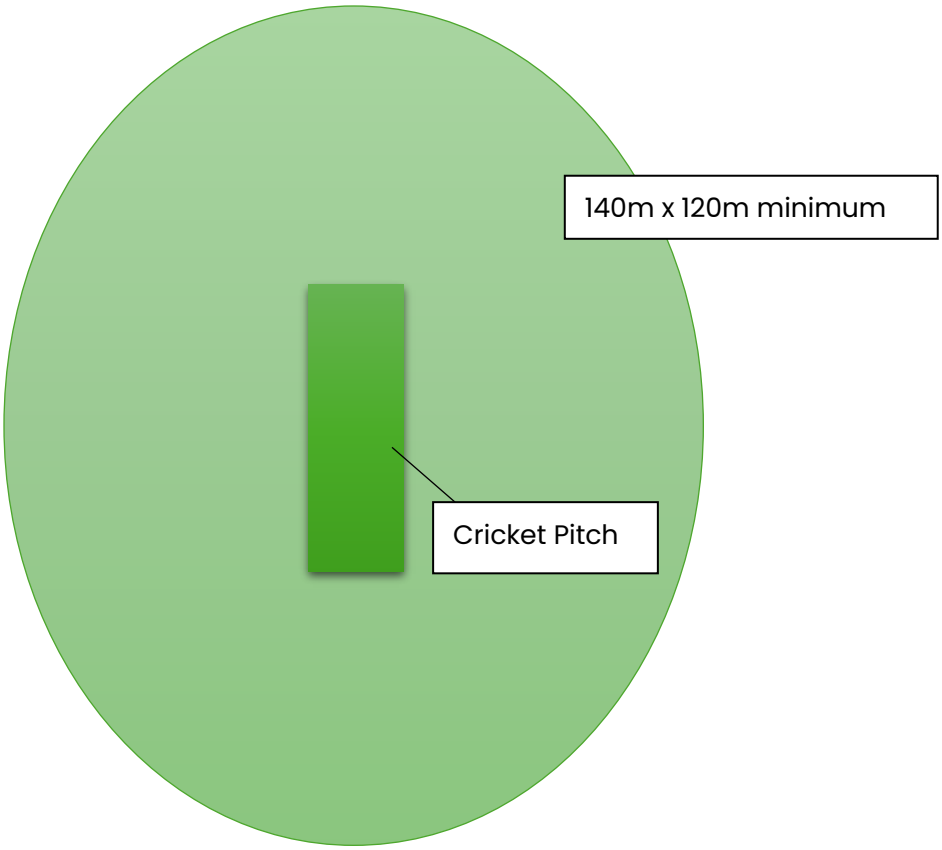
Cricket grounds consist of two main components: an oval playing field and a clay loam bowling (or pitching) area. Size of the outer field ranges in diameter between 130 metres to 150 metres though Cricket Canada identifies a minimum size of 140 metres by 120 metres. A rectangular strip is located in the middle is known as the "pitch" and contains the wickets. A traditional pitching area measures 22 metres by 3 metres[6] although the dimensions may be modified for youth level play. Dimensions of a cricket grounds are shown in Figure 11 while the suggested pitch dimensions for different age groups are contained in Table 16, although regional differences may exist. Land requirements for cricket grounds typically range between 2.0 to 2.5 hectares (5 to 6 acres).

Synthetic pitches (i.e. the rectangular strip in the middle, containing the wickets) are increasing in popularity for community-based fields as they are less susceptible to weather conditions and can withstand diverse climates. These pitches are highly dependable and offer consistency in performance between different fields. They require less maintenance and can be used in the shoulder seasons. However, players transitioning from natural to artificial turf will experience a difference in play as the ball performs differently by skidding rather than gripping.

Cricket demands a unique set of field maintenance standards distinct from those of soccer and baseball. In particular, grass length is cut much shorter at 12mm to 16mm. Repurposing the outfield of a baseball diamond as a multi-use field for cricket introduces its own set of challenges due to the specific requirements of a cricket playing surface.

[6] Government of Western Australia Department of Sport and Recreation. 2008. Dimensions for cricket.

Figure 11: Full-Size Regulation Cricket Field Dimensions



Source: Cricket Canada

Table 16: Recommended Cricket Pitch Dimensions

Level of Play	Length	Width
Ages 5 to 8	13 – 16 metres	2.4 – 2.8 metres
Ages 8 to 12	18 metres	2.4 – 2.8 metres
Under 16	25 – 28 metres	2.4 – 2.8 metres
Adult Cricket	22 metres	3 metres

Source: Government of Western Australia Department of Sport and Recreation

6.2 Participation Analysis

The sport of cricket dates back hundreds of years, originating in England and grew in popularity in areas formerly comprised of the British Empire. By the 19th century, cricket had been well established in India, Australia, and North America. During this time, cricket had become so popular in Canada that it was declared as the national sport; however, the popularity of the sport declined due to the growth of baseball and influence from the United States.

Cricket has been established in certain pockets throughout Canada for a number of years, including the GTA, due to the increasing number of active newcomers from European, Asian, and Caribbean countries where this sport is typically played. The sport has the potential for gaining increased traction in St. Catharines as the region's cultural mix has diversified substantially over the past decade along with interest being generated from the post-secondary student base (including international students, many of whom reside in the area throughout the year).

Cricket is played with a bat and ball between two teams, each composed of 11 players. Generally speaking, there are numerous styles of play that vary in duration and rules. At the international level, there are three variations known as Test Cricket, One Day Internationals, and Twenty20 (T20) Internationals. At the community level, playing formats vary considerably with altered rules. Common forms of the sport played (particularly in the GTA) are described below:

- Long-format cricket typically takes an 8 hour period (40 to 50 overs) and is played for competitive purposes.
- Short-format cricket allows the game to be played within a one to four hour period. This is the fastest growing format in Canada, usually in the form of T20/T25 (i.e. 20 to 25 overs).
- Tennis ball / Tape-ball cricket uses a tennis ball or a tennis ball wrapped in tape to add additional weight. Given that a tennis ball is not as hard as a cricket ball, safety equipment is generally not required.

The sport is governed by Cricket Canada that represents Canada's cricket team at the national level and supports grassroots cricket in schools and community-based development programs across Canada. The sport appeals to a broad spectrum of age groups from children to older adults – in the GTA, adults are the prominent users of cricket grounds – and it is expected that the popularity and growth of the sport will continue both locally and nationally. The size of St. Catharines' cricket market is presently not quantified in the absence of local facilities and no feedback specific to needs of cricket organizations was provided during this Strategy's consultation phase.

6.3 Provision Strategy to 2036

Certain municipalities – primarily larger, culturally-diverse, GTA-based communities – target one cricket pitch per 100,000 residents. With St. Catharines population at 145,000 persons, the City is at a threshold where a cricket grounds could be considered. While St. Catharines continues to become more culturally-diverse, the segment of the population who are most likely to play cricket (place of birth in the United Kingdom, South Asia, Caribbean, Australia, etc.) make up less than 5% of St. Catharines population.[7] As a result, the level of interest in cricket may still be relatively low in St. Catharines compared to other sports notwithstanding cultural composition of area municipalities and post-secondary populations. Due to these factors, application of a population-based provision target is not appropriate at this time.

While St. Catharines is above the 100,000 person threshold, there is limited rationale to support the provision of a cricket pitch over the next 10 years on the basis of a small local market defined by ethnocultural status of permanent residents, the lack of feedback received from cricket organizations and the low priority placed on these field among the general public participating in this Strategy's consultations (City staff have received a few requests in the past). The City's update to its RFPMP may uncover greater interest in cricket facilities in which case needs could be revisited.

In lieu of dedicating between 2 and 3 hectares to a cricket grounds, the City should position itself to respond to more focused amenities such as cricket batting cages in selected parks. If needs become more substantial, the City should explore an overlay template at an existing Type B or C rectangular field or ball diamond, as a temporary measure, to better quantify demand before proceeding with a dedicated grounds.

6.4 25-Year Outlook for Cricket Grounds

Continued cultural diversity, local and regional interest in cricket, and potential for growth in regional cricket organizations could increase the need for cricket pitches over time. Should the need for a dedicated grounds be rationalized, the City should explore the use of the aforementioned overlay approach but should also begin a process of acquiring a large site that could be developed for future cricket or other sports fields when required.

6.5 Opportunities & Directions: Cricket Grounds

#10. Select two parks, located on either side of the QEW, to install cricket batting cages intended to serve casual/drop-in usage for practice and skill development.

#11. Land bank a parcel of land that is of sufficient size for a cricket grounds should the need arise in the future. In the event that the need for a cricket grounds does not materialize in the next 10 to 15 years, this land could be re-allocated to address other sports field needs.

[7] Statistics Canada Census, 2021.

Section 7:
Design Standards & Condition Assessments

In accordance with the Terms of Reference for this Strategy, Dillon Consulting has undertaken a review and condition assessment of selected ball diamonds in St. Catharines. This section presents an overview of design standards, asset management practices and an approach to condition assessments.

7.1 Design Standards & Development

The City of St. Catharines currently does not have a list of standards for their sports fields or respective components. Design standards provide consistency between ball diamonds by utilizing similar materials, components, and design features. This allows the City to identify components and have supplier information readily available. The design standards provide safety guidelines for aspects like field dimensions, pitches, dugouts, fencing, backstops, and lighting.

Adhering to these standards helps minimize potential hazards, adhering to regulatory bodies (Ontario Building Code), and ensures a safe playing environment. Maintenance standards will help city authorities allocate resources and ensure long-term goals are met in terms of durability, usability, and community satisfaction. The following standards are commonly used in local municipalities.

Baseball

- Baseball Diamond Layout
- Baseball Warning Track
- Baseball Backstop Fencing (Elevation and sections)
- Baseball Player's Enclosure
- Baseball Foul Line Post
- Baseball Pitcher's Mound
- Baseball Scoreboards

Soccer

- Soccer Senior Field
- Soccer Senior Goal
- Soccer Junior Field
- Soccer Junior Goal

Cricket

- Cricket Layout including Stump Box and Wicket

7.2 Ball Diamond Development Standards

Field Layout & Dimensions

The arrangement of a baseball diamond involves the infield, outfield, pitcher's mound, foul lines, and base paths. Figure 12 outlines a common ball diamond arrangement according to the Baseball Ontario Association.

Figure 12: Baseball Diamond Dimensions

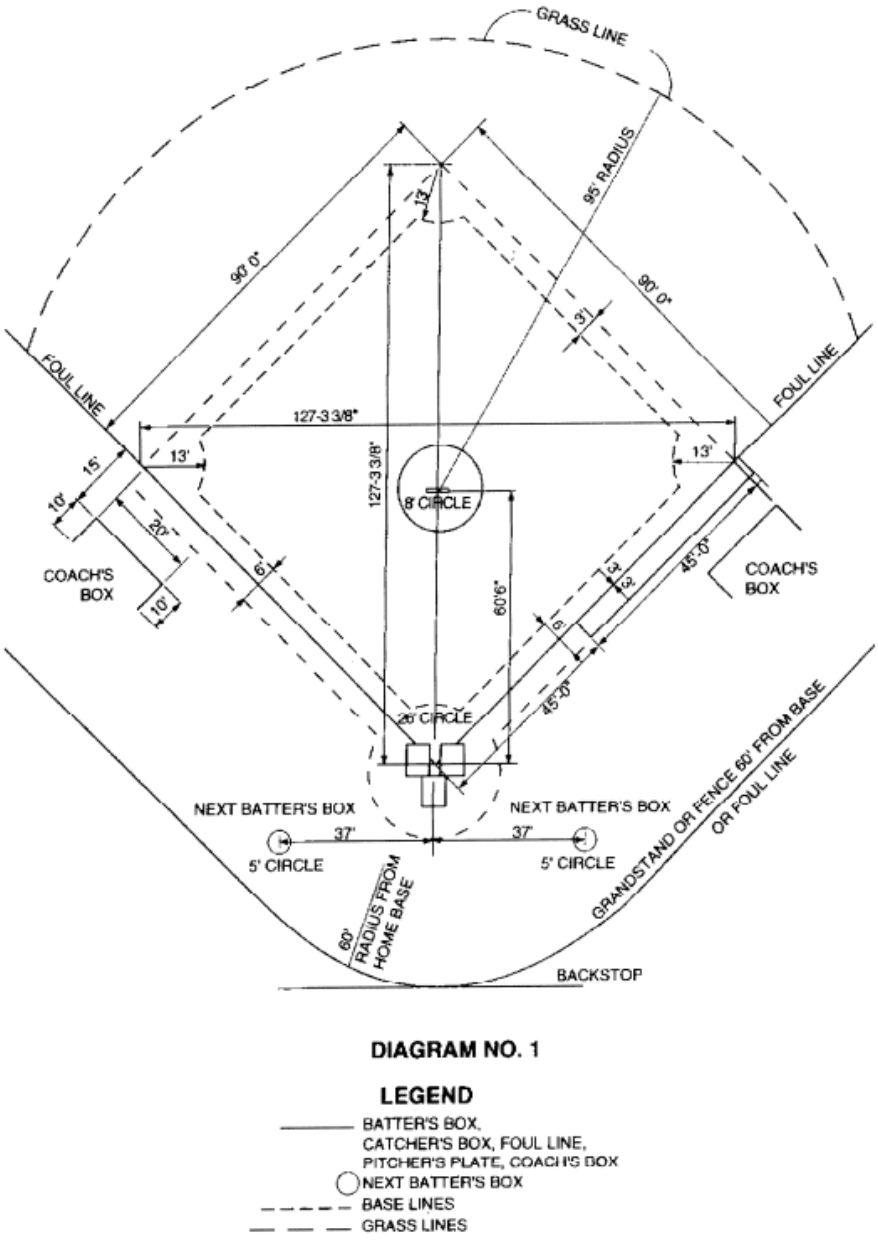


DIAGRAM NO. 1

LEGEND

- BATTER'S BOX, CATCHER'S BOX, FOUL LINE, PITCHER'S PLATE, COACH'S BOX
- NEXT BATTER'S BOX
- BASE LINES
- GRASS LINES

Source: Baseball Ontario Constitution and Playing Rules 2020

The field layout, the distance between bases, and pitching mound heights will differ between age categories and leagues. Portable pitching mounds are a great solution to maximize field usability and allow for different league games. These mounds are lightweight and can be easily moved/adjusted to meet each age category's specific pitching height requirement. These mounds promote efficient field management and disperse the demand on one ball diamond.

Baseball diamonds in Ontario adhere to standardized dimensions outlined by organizations such as the Baseball Ontario Association and Softball Canada. These dimensions include the distance between bases, the pitching mound, and the outfield fence, ensuring consistency and fairness in gameplay across different venues. The field dimensions will vary depending on the age of the participants and intended use, including hardball, softball, or slo-pitch, Table 17 to Table 19 details the design requirements.

Table 17: Hardball Field Dimension Requirements

Series	Mound	Bases	Diagonal	RECOMMENDED GUIDELINES				
				Foul Area	Outfield Fence			Grass Radius
					Left	Centre	Right	
	A	B	C	D	E	F	G	H
Regulation	60'6"	90'0"	127' 3 3/8"	60'	325'	400'	325'	95'
16U Girls (16U)	55'0"	82'0"	115' 11 5/8"	55'	300'	365'	300'	85'
13U (13U)	50'0"	75'0"	106' 3/4"	50'	270'	335'	270'	80'
13U Girls (13U)	50'0"	75'0"	106' 3/4"	50'	270'	335'	270'	80'
11U (11U)	44'0"	65'0"	91'11"	44'	235'	290'	235'	70'
9U	44'0"‡	65'0"	91'11"	44'	235'	290'	235'	70'
T-Ball (6U)	50'0"	60'0"	84' 10 1/4"	40'	215'	265'	215'	50'†

† – measured from the centre of the Playing Line. ‡ – located at the centre point of an 8' diameter safety circle. The respective dimensions for any Series shall be deemed to include the corresponding Minor Series, except where noted.

Source: Ontario Baseball Association

Table 18: Softball Field Dimension Requirements

CATEGORY	AGE (prior to January 1st of the current year)	BALL	PITCHING	BASELINES	FENCES Min Max.
MALE					
Masters*	40 or over	30.5 cm (12")	14.0 m (46')	18.3 m (60')	68.6 m – 81.0 m (225' - 265')
*** In Master Men's Fast Pitch the minimum age limit will be 40 years of age in the year of the event.**					
Men's		30.5 cm (12")	14.0 m (46')	18.3 m (60')	68.6 m – 81.0 m (225' – 265')
U23	Under 23	30.5 cm (12")	14.0 m (46')	18.3 m (60')	68.6 m – 81.0 m (225' – 265')
U20	***Under 20***	30.5 cm (12")	14.0 m (46')	18.3 m (60')	68.6 m – 81.0 m (225' – 265')
U17	***Under 17***	30.5 cm (12")	***14.0 m (46')***	18.3 m (60')	68.6 m – 81.0 m (225' – 265')
U15	***Under 15***	30.5 cm (12")	***12.8 m (42')***	18.3 m (60')	64.0 m – 76.2 m (210' – 250')
U13	***Under 13***	***27.95 cm (11")***	***11.58 m (38')***	16.76 m (55')	51.8 m – 68.6 m (170' – 225')
U11	***Under 11***	27.95 cm (11")	***10.67 m (35')***	13.7 m (45')	48.5 m – 68.6 m (160' – 225')
U9	***Under 9***	27.95 cm (11")	9.14 m (30')	13.7 m (45')	48.5 m – 68.6 m (160' – 225')
U7	***Under 7***	27.95 cm (11")	9.14 m (30')	13.7 m (45')	48.5 m – 68.6 m (160' – 225')
FEMALE					
**** In Masters Women's Fast Pitch the minimum age limit will be 35 years of age in the year of the event.***					
Women's		30.5 cm (12")	13.1 m (43')	18.3 m (60')	67.1 m – 71.6 m (220' – 235')
U23	***Under 23***	***30.5 cm (12")***	***13.1 m (43')***	***18.3 m (60')***	***61.0 m – 64.0 m (200' – 210')***
U19	Under 19	30.5 cm (12")	13.1 m (43')	18.3 m (60')	61.0 m – 64.0 m (200' – 210')
U17	***Under 17***	30.5 cm (12")	***13.1 m (43')***	18.3 m (60')	54.9 m – 64.0 m (180' – 210')
U15	***Under 15***	30.5 cm (12")	***12.2 m (40')***	18.3 m (60')	51.8 m – 64.0 m (170' – 210')
U13	***Under 13***	27.95 cm (11")	***11.58 m (38')***	16.76 m (55')	48.5 m – 64.0 m (160' – 210')
U11	***Under 11***	27.95 cm (11")	***10.67 m (35')***	13.7 m (45')	45.7 m – 64.0 m (150' – 210')
U9	***Under 9***	27.95 cm (11")	9.14 m (30')	13.7 m (45')	45.7 m – 64.0 m (150' – 210')
U7	***Under 7***	27.95 cm (11")	9.14 m (30')	13.7 m (45')	45.7 m – 64.0 m (150' – 210')

Source: Softball Canada, Official Fast Pitch Softball Rules

Table 19: Slo-Pitch Field Dimension Requirements

CATEGORY	AGE (prior to January 1st of the current year)	BALL	PITCHING	BASELINES	FENCES Min Max.
MALE					
Masters*	35 or over	30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 99.1 m (275' – 325')
Masters*	40 or over	30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 99.1 m (275' – 325')
* In Master Men's Slo-Pitch the minimum age limit will be 35 (or 40) years of age in the year of the event.					
Men's		30.5 cm (12")	15.2 m (50')	21.34 m (70')	91.4 m – 114.3 m (300' – 375')
U23	Under 23	30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 91.4 m (275' – 300')
U19	Under 19	30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 91.4 m (275' – 300')
U16	Under 16	30.5 cm (12")	14.0 m (46')	19.81 m (65')	83.8 m – 91.4 m (275' – 300')
U14	Under 14	30.5 cm (12")	14.0 m (46')	19.81 m (65')	76.2 m – 83.8 m (250' – 275')
U12	Under 12	27.95 cm (11")	12.2 m (40')	18.29 m (60')	53.3 m – 61.0 m (175' – 200')
U10	Under 10	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
U8	Under 8	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
U6	Under 6	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
FEMALE					
Masters	35 or over	27.95 cm (11")	15.2 m (50')	19.81 m (65')	76.2 m – 91.4 m (250' – 300')
Women's		27.95 cm (11")	15.2 m (50')	19.81 m (65')	76.2 m – 91.4 m (250' – 300')
U19	Under 19	27.95 cm (11")	15.2 m (50')	19.81 m (65')	68.6 m – 83.8 m (225' – 275')
U16	Under 16	27.95 cm (11")	14.0 m (46')	19.81 m (65')	68.6 m – 83.8 m (225' – 275')
U14	Under 14	27.95 cm (11")	14.0 m (46')	19.81 m (65')	68.6 m – 83.8 m (225' – 275')
U12	Under 12	27.95 cm (11")	12.2 m (40')	18.29 m (60')	53.3 m – 61.0 m (175' – 200')
U10	Under 10	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
U8	Under 8	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
U6	Under 6	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
CO-ED					
Men's / Women's		30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 99.1 m (275' – 325')
U23	Under 23	30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 91.4 m (275' – 300')
U19	Under 19	30.5 cm (12")	15.2 m (50')	19.81 m (65')	83.8 m – 91.4 m (275' – 300')
U16	Under 16	30.5 cm (12")	14.0 m (46')	19.81 m (65')	83.8 m – 91.4 m (275' – 300')
U14	Under 14	30.5 cm (12")	14.0 m (46')	19.81 m (65')	76.2 m – 83.8 m (250' – 275')
U12	Under 12	27.95 cm (11")	12.2 m (40')	18.29 m (60')	53.3 m – 61.0 m (175' – 200')
U10	Under 10	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
U8	Under 8	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')
U6	Under 6	27.95 cm (11")	10.67 m (35')	16.76 m (55')	45.7 m – 53.3 m (150' – 175')

Source: Softball Canada, Official Fast Pitch Softball Rules

Field Surface

Baseball turfs consist of various playing surfaces depending on the field location and usage. These surfaces integrate various materials and cutting-edge technologies to maximize performance, longevity, improve player safety, adapting seamlessly to diverse playing conditions and surroundings.

- **Native Soil Fields:** These fields are most typical among residential communities.
- **Modified Native Soil Fields:** These fields have taken the native soils and added other materials, such as sand and organics, to improve the soil structure.
- **Sand-Based Fields:** These are high-end use fields that are designed using a modified sand base. These fields drain better than the native soil fields and modified native soil fields.
- **Synthetic Turf Fields:** These fields are generally designed for multi-use sports. There are specific types of synthetics used for baseball. There are numerous synthetic turf companies worldwide; some are better for baseball and softball than others.

One of the most common types of baseball turf is synthetic turf, which has gained popularity due to its ability to provide a consistent playing surface regardless of weather conditions. Synthetic turfs often consist of a base layer of compacted stone or gravel, followed by layers of drainage materials, shock-absorbing padding, and artificial grass fibers made from materials like polyethylene or polypropylene. These turfs are designed to mimic the look and feel of natural grass while offering benefits such as improved traction, reduced maintenance requirements, and increased durability over time.





Photo Credits: www.truepitchmounds.com and www.keystonesportsconstruction.com/10-ways-synthetic-turf-fields-beat-the-competition-grass-fields

Drainage

Poor drainage is one of the most common problems in high-use fields, resulting in rain-out days and scheduling conflicts; discussions with St. Catharines staff and user groups confirms this locally. Soil tests are critical in determining the soil composition and drainage requirements. There are two common resolutions for rectifying field drainage issues:

- **Surface Drainage:** The infields are graded so that the water sheets off the skin and into the turf, where it can infiltrate and collect in a drain system. Center crown grading provides the most effective grading due to its shorter distances. Typically, fields with native soil have a minimum slope of 1%, and sand-based fields have a 0-0.5% slope.

- **Sub-surface Drainage:** Pipe drains are traditionally used to lower the water table to allow efficient drying times and to discharge water to its final location. These pipes are generally 18 inches to 3 feet deep and filled with gravel or coarse sand to the field subgrade. Strip drains are becoming increasing popular to drain sports fields. Narrow trenches (2-4 inches wide) are cut with trenches and are located 8-18 inches deep provide quicker water removal. These sand trenches will improve aeration and moisture content.

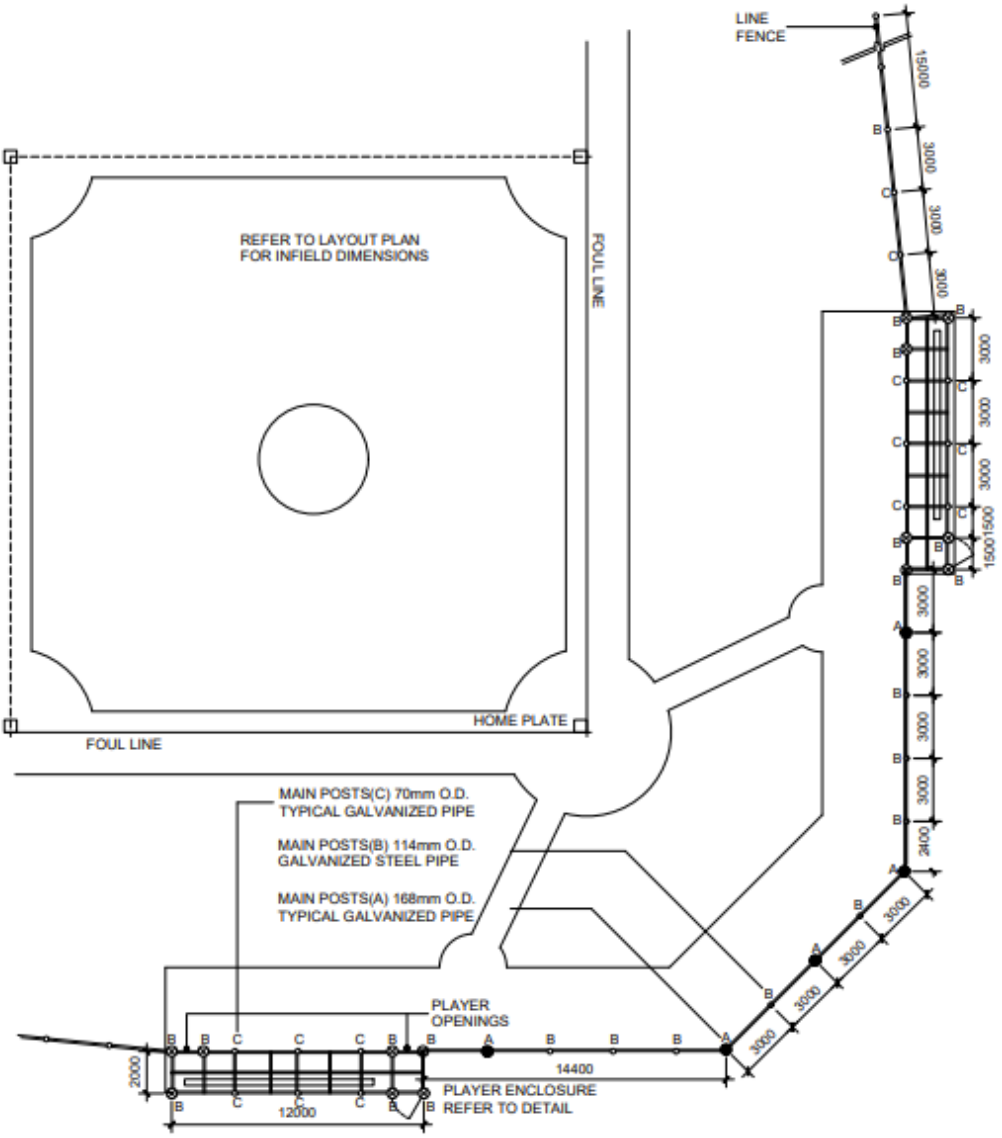


Photo Credit: https://scgfields.com/articles/field-surface-drainage/

Fencing and Backstops

Fencing and backstops play a critical role in protecting players, spectators and neighbouring properties. Design standards specify the height, material, construction, and anchoring to confirm structural integrity and safety. Padding or netting might be required in certain areas to mitigate the risk of injury and property damage from foul balls. Standard baseball fencing is 12-foot high for the backstop with a 4-foot overhang and baseline fencing as per Figure 13**.** Outfield fencing is also considered depending on the field configuration and proximity to neighbouring properties or parking lots. A protective guard is added to the top edges of the rail to prevent player injuries. The following figure displays a standard fencing for a baseball diamond.

Figure 13: Ajax Fencing Standard for Baseball Diamonds



Lighting

Baseball lighting improves play condition during dusk periods and increases the usage on the field. Baseball is a high-speed, multidirectional aerial sport and requires sufficient lighting. The white baseball may be momentarily lost from sight due to direct glare of light sources or a background producing low contrast. Lighting pole locations hold a key importance to ensure great visibility for both the players as well as the spectators. Comparatively, little league baseball games will not require the same amount of lighting as a major league baseball game. Table 20 classifies the lighting requirements to different classes of play ranging from Class 1 (Major League Baseball) to Class 4 (Amateur Leagues). Similar to baseball, soccer is categorized in 4 different classes of play. Each class has a different lighting requirement that is determined the age or league member and the spectator capacity.

Baseball infield dimensions are standard, however, outfield dimensions vary in distance and area. The foul-zone strip would be considered as well. Lighting should be designed to minimize shadows and provide good modeling of the players, which usually requires lighting from three or four directions.

Table 20: Recommended Maintained Illuminance Targets for Baseball Fields & Soccer Fields

Baseball	Class of Play	Average (Foot-Candle)
I	Infield	150
	Outfield	100
II	Infield	100
	Outfield	75
III	Infield	50
	Outfield	30
IV	Infield	30
	Outfield	20

Soccer Class of Play	Spectator Capacity	Average (Foot-Candle)
I (College level, sports clubs)	Over 5,000	75
II (Amateur Leagues, High Schools)	Up to 5,000	50
III (High Schools, training facilities)	Up to 2,000	30
IV (Elementary Schools, Recreational, Social Events)	Limited to None	20

Light Emitting Diode (LED) lighting is increasingly used in baseball diamonds and became the preferred choice for the Major League Baseball. LED lights are highly recommended for baseball fields due to their ability to produce bright, focused illumination while minimizing glare and shadows. Traditional lighting in stadiums involved the use of metal halide or high-pressure sodium lights. Transitional lighting had several limitations, long warm-up and restrike times, poor colour rendering, and high energy consumption. LED stadium lights have high CRI values, ensuring vibrant and true-to-life colors, which is crucial for players' visual perception during the game. LED are emerging technology and trends that are enhancing the spectator experiences by creating colour customizations and interactive experiences.



Photo Credit: https://sportsvenuecalculator.com/knowledge/sports-field-lighting/complete-guide-to-baseball-field-lighting/

Bleachers

Safety on ball diamond bleachers is vital, and adherence to regulations outlined in the Ontario Building Code ensures a secure environment for spectators. These guidelines cover areas such as the dimensions of steps, inclusion of intermediate steps, use of footboards, establishment of guard heights, and specifications for opening sizes. They are all designed to minimize accidents and promote the safety and comfort of individuals utilizing the bleachers.

The Ontario Building Code describes regulations for both mobile and fixed bleachers. The following page details regulations specifically for mobile bleachers, which are frequently utilized in St. Catharines.

Ontario Building Code

3.3.2.10 Bleachers

1) Steps provided in aisles of bleachers of the telescopic type shall,
    a. have risers not more than 250 mm high, and
    b. have treads with a run not less than 280 mm.

2) If the vertical distance between seating platforms in bleachers is more than 280 mm, an intermediate step shall be provided the full width of the aisle and proportioned to provide two equal risers between platforms.

3) If the vertical distance between seating platforms in bleachers is more than 450 mm, two intermediate steps shall be provided the full width of the aisle so that there are three equal risers between platforms.

4) If the passageway between rows of seats is not a closed deck, footboards shall be provided so that,
    a. the total width of the footboards shall be not less than three-quarters of the centre-to-centre spacing between rows of seats, and
    b. the spacing between footboard members shall be not more than 25 mm.

5) Openings above footboards and below the seats in rows of bleachers shall be of a size that will prevent the passage of a sphere having a diameter more than 100 mm.

3.3.2.8. Guards

1) Excepts as required by Sentence (2) to (4) for bleacher seats, guards shall be installed in outdoor and indoor places of assembly with fixed seats so that,
    a. At the fascia of every box, balcony, or gallery where the seats extend to the edge, the height of guards is not less than,
        i. 760 mm in front of the seats, and
        ii. 920 mm if located at the end of aisles or at the foot of steps

    b. The height of guards along every cross aisle other than those adjacent to the fascia of every box, balcony, or gallery is not less than 660 mm, except that guards need not be provided if the backs of the seats along the front side of the aisle are not less than 600 mm above the floor of the aisle, and

    c. Where the seating is arranged in successive tiers and the height of rise between platforms is more than 450 mm, the height of guards is not less than 660 mm along the entire row of seats at the edge of the platform.

    The backs and ends of bleachers seats more than 1,200 mm above the ground or floor are not adjacent to a wall shall be protected with a guard,
    d. Not less than 1,070 mm high above an adjacent aisle surface or footrest, and
    e. Not less than 920 mm high above the centre of an adjacent seat board.

2) If the front of a bleacher is more than 600 mm above the ground or floor, it shall be protected with a guard not less than 840 mm high above the front footrest.

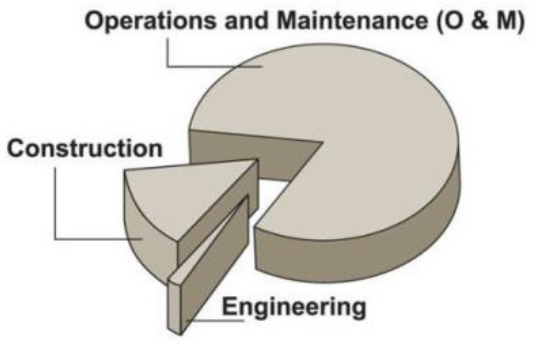
3) Openings through any guard that is required by Sentence (2) and (3) shall be of a size that will prevent the passage of a sphere having a diameter more than 300mm.

7.3 Asset Management Practices

Asset management makes the most informed decisions regarding the creation, maintenance, renewal, rehabilitation, disposal, expansion, and procurement of infrastructure assets. Asset management aims to maximize the benefits of the assets, minimize risk, and provide satisfactory levels of service to the public in a sustainable manner. It considers risks related to the lifecycle of the assets and requires a multi-disciplinary team that includes planning, finance, engineering, technology, maintenance, and operations.

Asset management considers the entire lifecycle of the infrastructure, not just the initial cost for designing and constructing the asset (15%), but the operations and maintenance each year (80%) as exemplified in Figure 14.

Figure 14: Lifecycle Approach



Source: Infraguide, 2005

Asset management is an integrated approach that communities use to make informed decisions about their infrastructure. Asset management can assist but doesn't do it on its own. At its core, asset management is about delivering services to communities in a sustainable way. Essential questions for asset management include:

1. What do you have and where is it?
2. What is it worth?
3. What is its condition and expected remaining service life?
4. What is the level of service expectation, and what needs to be done?
5. When do you need to do it?
6. How much will it cost and what is the acceptable level of risk(s)?
7. How do you ensure long-term affordability?[8]

[8] Infraguide. 2005. Managing Infrastructure Assets

These seven essential questions align with four phases of asset management: asset inventory, condition, levels of service (LOS) and analysis and strategy development. These questions align with *O.Reg. 588/17* and the international standard for asset management, ISO55000.

Asset management strategies relating to baseball diamonds involve different approaches aimed at optimizing the efficiency, maintenance, and lifespan. The chart below outlines essential aspects of asset management practices:

Data-Driven Decision Making

- Utilizing metrics such as demographics, field usage, rain-out days, community feedback, and maintenance
- Provides insight for reasource allocation and inventory requirements

Accessibility

- Provides an inclusive enviromention and accomodates for individuals with disabilities
- Accessibility for Ontarians with Disabilities Act (AODA) has standards for washroom facilities, parking, pathways, seating areas, and amenities. These standards shall be considered in new developments and planned renovations

Sustainable Practices

- Establishing environmentally sustainable practices helps lowers the environmental impact of baseball diamonds and operating costs
- Water conservation, LED lighting, maintenance schedules, and waste management are some examples of sustainability practices that help lower the carbon footprint

Planning and Budgeting

- Establishing short and long terms goals allows the City to meet the requirements of the community
- Budgeting allows the city to efficielty allocate reasources and support strargetic goals

Continued Education and Standards Training

- Allows the groundkeeper stay updated on the latest techniques, equipment, and best practices to enhance field qualtiy and player safety
- Standard maintances practices provides consitiency between types of ball diamonds and ensures longeivity of the field

7.4 Approach to Ball Diamond Condition Assessments

Asset inventory and background data were provided by the City through a series of emails and data transfers. The assessment of facilities can be organized by discipline and facility components or systems and sub-components as presented in Table 21.

Table 21: Condition Assessment – Building Components and Disciplines

Discipline	Facility Components	Description of Sub-components
Architectural/Structural	Structure Building exterior Building interior	Includes roofing, foundations, stairs, finishes and accessibility
Mechanical/Electrical	Electrical systems Mechanical systems	Includes irrigation, fire protection, HVAC, plumbing, electrical sub-panels, distribution, and lighting
Site/Civil	Stormwater systems Parking areas Fencing	Includes netting, fencing, bleachers, benches, site drainage, parking areas, and lighting

The condition of each building element can be scored using a five-point scale, which is in alignment with the Canadian Infrastructure Report Card, where ratings consist of Very Good (1), Good (2), Fair (3), Poor (4) and Very Poor (5). The condition assessment rating presented in Table 22 describes the condition rating for architectural/structural, mechanical, electrical, and siteworks.

Table 22: Condition Assessment Rating Table

Grade	Condition	Architectural / Structural Siteworks / Civil	Mechanical	Electrical
1	**Very Good**	• Asset is physically sound and performing as intended. • Secure weatherproof structure or building, which is well maintained. • Good access and secure safe site.	• Equipment is physically sound and performing as intended.	• No abnormalities and resembles as new.
2	**Good**	• Asset is physically sound and performing as intended. • Minor deterioration of surfaces / cladding. Some spalling but no corrosion staining. • Some maintenance needed to prevent initial stages of decay or dereliction commencing. • Needs to be re-inspected in the medium term.	• Minor signs of equipment deterioration such as increased vibration, looseness, misalignment, slight leaks. • Protective coating still evident. • Efficiency undiminished. Minor oil leaks and gland wear becoming more evident.	• Minor signs of equipment deterioration. • Requires little if any repairs, but these are generally not affecting safety and/or its ability to perform its intended function.

Grade	Condition	Architectural / Structural Siteworks / Civil	Mechanical	Electrical
3	**Fair**	• Showing deterioration, with some components physically deficient. • Structure / Building functionally sound, but appearance affected by minor cracking, staining, peeling paintwork, minor leakage or overgrown vegetation. • Early stages of decay or dereliction are becoming evident.	• Showing signs of equipment deterioration. • All components functioning acceptably but showing significant wear and tear. Efficiency diminished. • Minor failures with increasing corrosion of metal components, bearings and or gland wear (vibration) becoming more evident.	• Showing signs of equipment deterioration. • Functionally sound, but showing some wear, tear and deterioration. • Deterioration beginning to affect the safety, efficiency and operation of the system.
4	**Poor**	• Major portion of asset is physically deficient. • Structure is functioning but with problems due to significant leakage, cracking, spalling, loss of stability or deformation, corrosion substantially reducing size of structural member. • Building not functioning properly due to leakage; rising damp; rotting woodwork; decayed brickwork; inadequate security.	• Significant leaks, vibration, looseness, misalignment or out of balance. • Parts and components function but require significant maintenance to remain operational.	• The condition of the equipment is impacting on performance, serviceability and affecting the process. • System is functioning, but with problems due to serious defects that require significant maintenance to remain operational.
5	**Very Poor**	• Physically unsound. High probability of failure. • Serious structural problems having a detrimental effect on the performance of the structure/building. • Access extremely poor or hazardous. Site safety at risk.	• Unreliable with frequent breakdowns and adverse impact on performance. • Effective life exceeded and equipment now incurring excessive maintenance costs compared to replacement costs.	• A high risk of breakdown with a serious impact on the systems safety, efficiency and operation. • Systems effective life exceeded and excessive maintenance required.

7.5 Ball Diamond Component Service Life

The service life of components on a baseball diamond will vary depending on material quality, maintenance practices, environmental conditions, and frequency of use. Table 23 summarizes the typical service life of various components commonly found on a baseball diamond. It is important to note that these are general estimates, and the actual service life of components will vary based on specific circumstances and maintenance practices. Regular inspection, maintenance, and proactive replacement or refurbishment are factors in maximizing the lifespan and functionality of individual components.

Table 23: Typical Service Life of Ball Diamond Components

Component	Typical Service Life (years)	Comment
Natural Grass Turf	15	• Proper care and maintenance (regular mowing, fertilization, aeration, irrigation, etc.), natural grass turf on a baseball diamond can last 15 years or more • Factors such as climate, soil quality, drainage and usage intensity can change the longevity of the turf
Infield Clay / Infield Mix	10	• Infield clay or infield mix, which forms the playing surface of the infield, typically has a service life 10 years. • Regular grooming, watering, and rolling are necessary to maintain the integrity of the infield surface and prolong its service life
Pitcher's Mound	5	• The pitcher's mound, constructed primarily of clay or specialized mound clay, may require regular rebuilding or reshaping to maintain proper slope and consistency • Pitcher's mound can last 5 years or longer with proper maintenance and occasional refurbishment.
Baseball Bases	5	• Baseball bases, typically made of rubber or moulded rubber, have a service life of approximately 5 years with regular use • Factors such as exposure to sunlight, weather, and frequent sliding can contribute to wear and deterioration over time.
Fencing & Backstops	18	• Fencing and backstops, commonly constructed of chain-link and vinyl-coated chain-link, typically have a service life of 18 years or more • Regular inspection, maintenance, and occasional repairs or replacement of damaged sections will extend the life span of fencing and backstops

Component	Typical Service Life (years)	Comment
Dugouts & Shelters	20	• Dugouts and shelters, typically constructed of wood, concrete, or metal, can last 20 years or longer with proper maintenance and occasional refurbishment • Regular inspection for structural integrity, pest control, and cosmetic upkeep can help preserve the functionality and appearance of dugouts and shelters.
Lighting Fixtures	15	• Lighting fixtures for nighttime games have a service life of approximately 15 years, depending on the type of fixture (e.g., metal halide, LED) and usage intensity • Regular cleaning, maintenance, and occasional replacement of bulbs or fixtures are necessary to ensure optimal performance and energy efficiency
Scoreboards & Amenities	15	• Depending on material quality and usage, scoreboards, seating, signage, and other amenities on a baseball diamond may have varying service lives. • Well-maintained amenities can last 15 years or more, while electronic components such as scoreboards may require occasional upgrades or replacements to stay current with technology
Irrigation Systems	15	• This lifespan can vary based on factors such as the quality of the components, installation practices, maintenance routines, frequency of use, and environmental conditions

Section 8:
Sports Field Implementation Strategy

The Strategy provides focused recommendations to the year 2031 along with a broader outlook to the year 2051. Recommendations and future-term outlooks should be considered through long-range capital budgets, parkland acquisition strategies, and ongoing updates the RFPMP.

It bears noting that while the scope of the Strategy focuses on infrastructure and capital projects, the City must be prepared to also respond to operational resources that are required to sustain and maintain the sports field system. Population growth, changing user group expectations, and this Strategy's focus on conversions to Type A facilities will add pressures in terms of staffing, equipment, materials and other elements. For example, the City has been able to maintain its sports fields with a fairly lean crew but new fields combined with more frequent maintenance and scheduling/allocation activities is likely to require increasing the staff complement. At the time of capital requests for sports fields, the City should also assess associated operating implications.

The substantial population growth forecasted in St. Catharines along with evolving participation preferences among residents has the potential to alter future needs and demands for outdoor recreation facilities. For this reason, the City should update the Strategy in five years in order to reflect any changes to the supply, opportunities to accommodate new infrastructure through parks that have been added across the City, completion of ongoing Secondary Plans and an update to the City's Official Plan, socio-demographic characteristics in St. Catharines, and respond to trends in outdoor recreation activity.

8.1 Sports Field Implementation Strategy to 2036

Recommendation	Suggested Timing	2024 to 2028	2029 to 2036
Rectangular Fields			
#1 Add a total of 6.0 unlit equivalent rectangular fields by the year 2036 through new field developments and conversion of existing fields to Type A facilities, achieved through the following actions.			
i. Secure land for a minimum of one lit rectangular field in the Ontario Street Corridor Secondary Plan area in response to geographic gaps and growth-related needs (+1.5 ULE).			•
ii. Convert some or all fields at Kushner Park and Trapper Leo Park to Type A Rectangular Fields subject to confirmation of geotechnical conditions and compatibility with adjacent land uses (+1.5 ULE).		•	
iii. Provide two new Type A fields at a future park (3.0 ULE).			•
iv. Explore the potential to integrate rectangular field uses and amenities in partnership with Niagara Olympic Track and Field Club at West Park.		•	
#2 Engage the District School Board of Niagara and the Niagara Catholic District School Board to understand their short and long-term plans for provision of future artificial and natural turf fields, and whether there is an opportunity for a partnership that can share costs in exchange for enhanced public access.		•	•
#3 As part of a park in the Ontario Street Corridor or GO Transit Station Secondary Plan, implement a pilot project to provide a boxed soccer court or pop-up field. Partnerships or sponsorships should be sought, potentially with the land development industry, a national or provincial sport organization, or others to help fund the pilot and/or a resulting permanent facility.			•
#4 Provide onsite storage at selected Type B and Type C Rectangular Fields to increase functionality for user groups to better program these fields for 3v3, 5v5 and 7v7 play.		•	
#5 Secure a new site to replace the Pic Leeson Park 11v11 field that is proposed for relocation in order to implement Recommendation #6 of this Sports Fields Strategy. The replacement field would preferably be reconstructed as a Type A facility and if possible should be co-located with a future multi-field park specified in Recommendation #1 of this Strategy.		•	

Recommendation	Suggested Timing	2024 to 2028	2029 to 2036
Ball Diamonds			
#6	Relocate the Alex MacKenzie ball diamond to the Pic Leeson Park / John Dempsey Park in order to provide four diamonds at that location – all or some of which are full-sized for competitive play - to enhance league programming, tournament potential, and centralize municipal maintenance operations. A park-specific master plan should be prepared to examine how to configure the diamonds, incorporate supporting amenities, and address vehicular parking and circulation at a minimum.	•	
#7	Construct an inclusive diamond using synthetic surfacing and other barrier-free features through new construction or redevelopment of an existing diamond, potentially St. Patrick's Park if the latter. This diamond should be accessible without barriers from park entrances and vehicular parking areas at a minimum and should seek external funding opportunities available through Foundations and other levels of government.		•
#8	Redevelop Merritton Community Park Diamond #3 with improved drainage (also see Sports Fields Strategy Recommendation #9) and install field lighting. Subject to an ability to assemble lands to the south of the park, Diamond #4 should be re-oriented, redeveloped and lit to also allow for additional play.		•
#9	Carry out ball diamond drainage system improvement projects for those diamonds that are prone to flooding and saturation, targeting a minimum of one diamond per year beginning with George Taylor Field and Merritton Community Park Diamond #3, followed by other Type A facilities. The same approach should be applied to rectangular fields.	•	•
Cricket Facilities			
#10	Select two parks, located on either side of the QEW, to install cricket batting cages intended to serve casual/drop-in usage for practice and skill development.	•	•
#11	Land bank a parcel of land that is of sufficient size for a cricket grounds should the need arise in the future. In the event that the need for a cricket grounds does not materialize in the next 10 to 15 years, this land could be re-allocated to address other sports field needs.		•

8.2 Capital Implications of the Strategy

The estimated capital costs of implementing the Strategy's Recommendations amount to $6.8 million (Table 24). All costs should be confirmed by the City through future design processes.

Table 24: Estimated Capital Cost of Implementation

Recommendation	Unit Cost	Number Recommended	Total Cost
New Type A Rectangular Field	$370,000	4	$1,480,000
New Type A Ball Diamond	$840,000	1	$840,000
Pic Leeson Washroom Building	$1,500,000	1	$1,500,000
New Challenger Ball Diamond	$120,000	1	$120,000
Conversion of Existing Rectangular Field to Type A	$235,000	3	$705,000
Conversion of Existing Ball Diamond to Type A	$750,000	2	$1,500,000
Boxed Soccer(40m x 20m)	$165,000	1	$165,000
Soccer Field Storage (1,020 ft^2)	$185,000	2	$370,000
Cricket Batting Cage	$60,000	2	$120,000
Future Land Banking	TBD	TBD	TBD
Annual Irrigation/Drainage Improvements	TBD	TBD	TBD
	Sub-Total: Rectangular Fields		***$2,720,000***
	Sub-Total: Ball Diamonds		***$3,960,000***
	Sub-Total: Cricket		***$120,000***
	Total: All Sports Fields		**$6,800,000**

Cost Assumptions: Estimates are provided in 2024 dollars and should be considered as preliminary and should be reviewed/reconfirmed before implementation through appropriate facility design processes. Costs assume optimal site development conditions and exclude land acquisition, landscaping, earth fill temporary storage and transportation engineering and architectural design fees, contractor administration, permits, geotechnical assessment, stormwater management, and taxes. Cost estimates will vary depending on the final proposed design and site-specific requirements. The costing is prepared at a Class D level with an expected accuracy of +/- 25%, prepared using RSMeans data (Gordian, 2022), experience with similar projects, and previous quotes from manufacturers.

Appendix A:
Type A Sports Field Utilization, Peak Season

Peak season for rectangular fields runs from June 1 to August 31. Utilization dates are based on 5pm-11pm Monday-Friday and 7am-11pm Saturday and Sundays.

Rectangular Fields	Peak Season Utilization		
	2022	2023	Average
Artificial Turf - Kiwanis Field	22%	22%	**22%**
Berkley - Sport Field #1	31%	31%	**31%**
Berkley - Sport Field #2	24%	24%	**24%**
Grantham Lions - Sport Field	33%	33%	**33%**
Lancaster - Sport Field	30%	30%	**30%**
Lester Pearson Park - Field #1 - West	43%	43%	**43%**
Lester Pearson Park - Field #2 - East	34%	34%	**34%**
West Park - Sport Field #1	22%	22%	**22%**
West Park - Sport Field #2	36%	36%	**36%**
	30%	**30%**	**30%**

Rectangular Fields	Monday to Friday			Saturday & Sunday		
Peak Utilization	**2022**	**2023**	**Average**	**2022**	**2023**	**Average**
Artificial Turf - Kiwanis Field	19%	19%	**19%**	25%	25%	**25%**
Berkley - Sport Field #1	42%	42%	**42%**	20%	20%	**20%**
Berkley - Sport Field #2	23%	23%	**23%**	26%	26%	**26%**
Grantham Lions - Sport Field	42%	42%	**42%**	24%	24%	**24%**
Lancaster - Sport Field	42%	42%	**42%**	18%	18%	**18%**
Lester Pearson Park - Field #1 - West	48%	48%	**48%**	38%	38%	**38%**
Lester Pearson Park - Field #2 - East	43%	43%	**43%**	26%	26%	**26%**
West Park - Sport Field #1	21%	21%	**21%**	22%	22%	**22%**
West Park - Sport Field #2	36%	36%	**36%**	35%	35%	**35%**
	35%	**35%**	**35%**	**26%**	**26%**	**26%**

Peak season for ball diamonds runs from June 1 to August 31. Utilization dates are based on 5pm-11pm Monday-Friday and 7am-11pm Saturday and Sundays.

Ball Diamonds	Peak Season Utilization		
	2022	2023	Average
Alex McKenzie - Baseball Diamond	53%	40%	**46%**
Community Park - George Taylor Field	36%	34%	**35%**
Grantham Lions - Softball Diamond	2%	11%	**6%**
Grapeview - Softball Diamond	17%	15%	**16%**
Lancaster - Softball Diamond #1	16%	12%	**14%**
Lancaster - Softball Diamond #2	16%	12%	**14%**
McCaffery Park - Softball Diamond #1	27%	29%	**28%**
McCaffery Park - Softball Diamond #2	21%	23%	**22%**
McCaffery Park - Softball Diamond #3	26%	27%	**26%**
McCaffery Park - Softball Diamond #4	22%	20%	**21%**
	24%	**22%**	**23%**

Ball Diamonds	Monday to Friday			Saturday & Sunday		
Peak Utilization	**2022**	**2023**	**Average**	**2022**	**2023**	**Average**
Alex McKenzie - Baseball Diamond	59%	45%	**52%**	47%	35%	**41%**
Community Park - George Taylor Field	39%	37%	**38%**	34%	31%	**33%**
Grantham Lions - Softball Diamond	3%	22%	**13%**	Not Booked		
Grapeview - Softball Diamond	36%	31%	**33%**	Not Booked		
Lancaster - Softball Diamond #1	31%	18%	**25%**	3%	7%	**5%**
Lancaster - Softball Diamond #2	33%	22%	**28%**	Not Booked	2%	**2%**
McCaffery Park - Softball Diamond #1	43%	46%	**44%**	11%	14%	**13%**
McCaffery Park - Softball Diamond #2	39%	37%	**38%**	4%	10%	**7%**
McCaffery Park - Softball Diamond #3	48%	49%	**49%**	6%	6%	**6%**
McCaffery Park - Softball Diamond #4	41%	42%	**41%**	5%	1%	**3%**
	37%	**35%**	**36%**	**16%**	**13%**	**14%**

Appendix B:
Community Feedback Form Results

Q1. Are you a resident of St. Catharines?

	#	%
Yes	184	92%
No	17	8%

Q2. Do you or anyone in your household belong to a sports club, league or organization either as a player, coach, volunteer or staff person?

	#	%
Yes	168	85%
No	30	15%

Q3. What are the first three digits of your postal code?

	#	%		#	%
L2N	62	41%	L2T	13	5%
L2M	46	23%	L0S	6	2%
L2P	14	15%	L2W	2	1%
L2R	25	14%	Other	9	3%
L2S	21	8%	Unsure	1	0%

Q4. Indicate any of the following field sports that you and/or a member of your household have played in the last two years, whether as part of a league or for fun.

	#	%		#	%
Soccer	108	31%	Ultimate Frisbee	10	3%
Baseball or Hardball	102	29%	Rugby	4	1%
Softball or Slo-Pitch	45	13%	Field Hockey	6	2%
Football	20	6%	Cricket	2	1%
Field Lacrosse	12	3%	Other	29	8%
Have not played	12	3%			

Q5. Let us know how frequently you or other members of your household visit the City's outdoor sports fields in a typical summer:

	#	%
More than once per week	139	59%
Once per week	25	13%
A couple of times each month	23	12%
My household does not use sports fields in St. Catharines	8	4%
Once a month or less	6	3%

Q6. Indicate if you or a member of your household have used any of the following rectangular sports fields in St. Catharines in the past two years:

	#	%
Lester B. Pearson Park	63	10%
Kiwanis Field	59	9%
Berkeley Park	49	7%
Kernahan Park	47	7%
Lancaster Park	43	7%
Grantham Lions Park	41	6%
Pic Leeson Park	40	6%
West Park	40	6%
I have not used rectangular fields	36	5%
Realty Park	26	4%
Linlake Park	28	4%
Grantham Avenue Park	24	4%
Guy Road Park	22	3%

	#	%
Bogart Street Park	21	3%
Cambria Drive Park	20	3%
Grapeview Park	18	3%
Lakeview Park	11	2%
Kushner (Woodgale) Park	10	2%
Bermuda Park	9	1%
Trapper Leo Park	9	1%
Queen Mary Park	8	1%
Catherine Street Park	6	1%
Shauna Park	6	1%
Fairhaven Park	5	1%
Eastport Park	3	0%
Other	12	2%

Q7. Indicate if you or a member of your household have used any of the following ball diamonds in St. Catharines in the past two years:

	#	%
No one in my household used ball diamonds	65	14%
John Dempsey Park	51	10%
Kernahan Park	49	10%
Pic Leeson Park	49	10%
Joseph McCaffery Park	46	10%
Alex Mackenzie Park	35	9%
Lancaster Park	28	7%
Community Park	27	7%

	#	%
George Taylor Field	26	6%
Douglas Park	23	6%
Walkinshaw Park	23	5%
Grapeview Park	20	5%
Grantham Lions Park	18	4%
Fitzgerald Park	6	2%
St. Patrick's Park	4	1%
Other	3	1%

Q8. Identify any mode(s) of transportation that you typically use to access a St. Catharines sports field:

	#	%
Personal automobile	182	67%
Walk	50	19%
Bicycle	24	9%
I do not use sports fields	7	3%
Public transit	4	1%
Other	3	1%

Q9. Share any reasons that typically prevent you from participating in sports field activities as often as you would like:

	#	%
No barriers - Nothing stops me from using the City's sports fields	73	18%
Sports Fields seem old and out-of-date	57	14%
Maintenance / cleanliness of parks or sport fields do not meet my expectations	50	13%
The park lacks sufficient parking	37	9%
The design of the sports fields do not meet my expectations	34	9%
Sports field rentals or programs are too expensive	27	7%
Sports fields are not available when we want to rent or use them	27	7%
I prefer to use sports fields in other municipalities	16	4%
The sports fields are not accessible to persons with disabilities	10	3%
Sports fields are located too far away / cannot easily get there	9	2%
Health issues / disability / age	7	2%
We are too busy to play field sports	7	2%
Members of my household are not interested in using sports fields	5	1%
I do not know where sports fields are located	4	1%
Other	32	8%

Q10. What would encourage you or members of your household to use sport fields in the future?

	#	%
Improve the quality of sport fields and amenities	127	32%
Provide more sports fields in convenient locations	47	12%
Reduce user fees	38	10%
Nothing	30	8%
If they were closer to my home	12	3%
Less crowded	6	2%
Other	32	8%

Q11. Please indicate your level of support for the city investing in new or improved sports fields for soccer, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	20	12%
2	9	5%
3	28	17%
4	23	14%
5 (Strongly Support)	84	51%

Q12. Please indicate your level of support for the city investing in new or improved sports fields for baseball, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	19	11%
2	8	5%
3	20	11%
4	18	10%
5 (Strongly Support)	109	63%

Q13. Please indicate your level of support for the city investing in new or improved sports fields for softball, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	23	15%
2	13	9%
3	34	22%
4	21	14%
5 (Strongly Support)	61	40%

Q14. Please indicate your level of support for the city investing in new or improved sports fields for cricket, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	56	41%
2	17	13%
3	37	27%
4	6	4%
5 (Strongly Support)	20	15%

Q15. Please indicate your level of support for the city investing in new or improved sports fields for football, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	31	21%
2	22	15%
3	38	26%
4	15	10%
5 (Strongly Support)	39	27%

Q16. Please indicate your level of support for the city investing in new or improved sports fields for ultimate frisbee, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	47	34%
2	20	14%
3	36	26%
4	10	7%
5(Strongly Support)	27	19%

Q17. Please indicate your level of support for the city investing in new or improved sports fields for field lacrosse, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	38	27%
2	21	15%
3	43	31%
4	10	7%
5 (Strongly Support)	28	20%

Q18. Please indicate your level of support for the city investing in new or improved sports fields for field hockey, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	41	30%
2	20	14%
3	48	35%
4	8	6%
5 (Strongly Support)	21	15%

Q19. Please indicate your level of support for the city investing in new or improved sports fields for rugby, using a scale of 1 to 5 (where 1 means "strongly oppose" and 5 means "strongly support").

	#	%
1 (Strongly Opposed)	39	28%
2	23	17%
3	49	36%
4	5	4%
5 (Strongly Support)	21	15%

Q20. What is your birth year?

Year	#	%
1971	1	11%
1972	2	22%
1982	2	22%
1990	1	11%

Year	#	%
1991	1	11%
1993	1	11%
1995	1	11%