

**CITY OF YORKTON**  
**REGULAR COUNCIL MEETING AGENDA**  
**Monday, November 15, 2021 - 5:00 p.m.**  
**Council Chambers, City Hall**

1. **CALL TO ORDER**
2. **APPROVAL OF AGENDA**
3. **PUBLIC ACKNOWLEDGEMENTS**
4. **APPROVAL OF MINUTES**
  - Regular Council Meeting Minutes – October 25, 2021
5. **UNFINISHED BUSINESS**
6. **REPORTS OF COUNCIL COMMITTEES AND MATTERS REFERRED**
  - Recreation & Community Services Committee Meeting Minutes of October 5, 2021
7. **HEARING OF PETITIONS, PUBLIC NOTICES AND PRESENTATIONS**
  - Tom Seeley and Terry Pollock – Presentation – “Light Up the Water Tower” Proposal
  - Tony Hayden – Presentation – Proposal/Request for Basketball Training Facility
  - Yorkton & District Community Foundation, Inc. – Presentation – Updates on Activities of the Foundation
8. **BUSINESS ARISING OUT OF PETITIONS, PUBLIC NOTICES AND PRESENTATIONS**
9. **CORRESPONDENCE**
10. **BYLAWS**
  - Director of Recreation & Community Services
    - Bylaw No. 9/2021 a Revised Bylaw for the Control and Operation of Cemeteries within the City of Yorkton [Third Reading]
  - Planner
    - Bylaw No. 11/2021 Amend OCP Bylaw No. 12/2014 by Changing the Future Land Use Concept Map for 105 Darlington St W from Commercial to Residential [1<sup>st</sup> Reading]
    - Bylaw No. 12/2021 Amend Zoning Bylaw No. 14/2003 to Rezone 105 Darlington St W from C-4 Neighbourhood Commercial to R-5 Mixed Density Residential [1<sup>st</sup> Reading]
    - Bylaw No. 13/2021 Amend OCP Bylaw No. 12/2014 by Changing the Future Land Use Concept Map for 139 Dominion Ave from Industrial to Commercial [1<sup>st</sup> Reading]
    - Bylaw No. 14/2021 Amend Zoning Bylaw No. 14/2003 to Rezone 139 Dominion Ave from MI-1 Light Industrial to CMI-1 Industrial Transitional [1<sup>st</sup> Reading]
  - Assistant Director of Environmental Services
    - Bylaw No. 15/2021 Amend Water and Sewer Rates Bylaw No. 20/2006 & Repeal Bylaw No. 18/2020
11. **ADMINISTRATIVE REPORTS**
  - Director of Finance
    - Budget Plan 2022+
  - Planner
    - Discretionary Use – DU05-2021 Veterinary Service, Type 1 in C-1 City Centre Commercial Zoning District – 38 Smith St. W – Public Notice Authorization
  - Director of Recreation & Community Services
    - Kinsmen Arena Ice Systems Review & Cost Estimate
    - Pump Bike Park Development Review
12. **GIVING NOTICE OF MOTION**
13. **IN CAMERA SESSION**
  - 2 Other Items
    - Other Item A
    - Other Item B
14. **ADJOURNMENT**

Recreation and Community Services Committee

**MINUTES**

**OCTOBER 5, 2021**

**5:00 P.M.**

**YORKTON PUBLIC LIBRARY**

Attendees	Chairperson: Delmar Zwirsky, Councillor Randy Goulden, Councillor Ken Chyz, Don Pfeifer, Tonia Vermette
Regrets	Donna Brothwell, Melinda Sevilla
Absent	Isabel O'Soup
Guests	Nicole Baptist, Bylaw and Safety Supervisor, Bylaw Services
Staff	Darcy McLeod, Lisa Washington, Julia Schofer
Recording	Ashton Kingdon
Call to order	5:03 p.m.
Adjourn	6:08 p.m.

**Agenda topics**

<b>1. CALL TO ORDER</b>	
<b>2. ADOPTION OF AGENDA</b>	
<b>3. MINUTES OF PREVIOUS MEETINGS</b>	
<b>a. Minutes of the May 19, 2021 Meeting</b>	
Minutes from the May 19, 2021 meeting of the committee were circulated.	
<b>Motion 21-012</b>	<b>Vermette</b> That the minutes of the May 19, 2021 meeting of the Recreation and Community Services Committee be approved as circulated. CARRIED.
<b>b. Minutes of the June 23, 2021 Meeting</b>	
Minutes from the June 23, 2021 special meeting of the committee were circulated.	
<b>Motion 21-013</b>	<b>Vermette</b> That the minutes of the June 23, 2021 special meeting of the Recreation and Community Services Committee be approved as circulated. CARRIED.
<b>4. BUSINESS ARISING</b>	
<b>a. Safe Play Zones Review</b>	
Nicole Baptist, Bylaw & Safety Supervisor was in attendance to support Julia Schofer in her update of the Safe Play Zones Review.	
As a follow up from the May 19, 2021 meeting, Julia brought the Safe Play Zones Review back to the RCS Committee for updates regarding the concerns brought forward during the presentation to other City committees. The concerns brought forward during the presentation to other committee meetings were:	
1. Columbia School:	
<i>Concern:</i> Based on the TAC Standards, Administration initially proposed to reduce the size of the zone on the Southeast portion of the zone. Feedback received indicated that the zone should not be reduced because of the number of children that cross the street at that location is already a concern due to the curve in the road.	
<i>Solution:</i> Administration has changed its initial recommendation and are now recommending that the start and end of the zone on the Southeast portion remain as is. This School Zone was also extended to the North due to the proximity to the	



intersection, which will align this zone with TAC best practices, which has the start or end of a school zone a certain distance from intersections to provide sightlines for drivers.

2. St. Michael's and M.C. Knoll School:

*Concern:* Concerns were voiced that the west end of the Darlington zone going into the roundabout was to have a 50 km/hr sign, which is close to the start of the roundabout, which is designated 30km/hr. which may encourage drivers to enter the roundabout going 50 km/hr.

*Solution:* Administration will not place a 50 km/hr sign at that location at the west end of the zone, leading into the roundabout. 50 km/hr signs will continue to be placed at the end of all zones.

3. St. Paul's School:

*Concern:* TAC guidelines indicated that the school zone could be shortened to align with the property line offset. Concerns were brought forward that shortening the Zone at the east end will make the Yield sign at the corner of Dalebrooke Drive at Parkview Road insufficient. A stop sign was recommended as there are a number of children that walk from the East to St. Paul's School.

*Solution:* The Engineering and Asset Management Department indicated that the Yield sign will be replaced with a stop sign.

4. Former Simpson School:

*Concern:* A portion of Gladstone Avenue south is currently designated a school zone that supported the old Simpson School when it was in operation, and was never changed. Administration is recommending that the zone be removed as a school is no longer located at the old Simpson School property. A crosswalk is located at the intersection of Independent Street and Gladstone Avenue South that is used by children who attend St. Mary's School. A request has been made to consider installing crosswalk lights at that location.

*Solution:* Administration received a number of requests for crosswalks. It was determined that properly examining the need for crosswalks is an in-depth process. The Engineering and Asset Management Department is planning a review of all crosswalk, and possible crosswalk locations. This location and the Columbia School crosswalk noted earlier will be added to the list of crosswalks to review.

5. Yorkton Regional High School and Sacred Heart High School:

*Concern:* As per TAC guidelines, High Schools would not typically require a School Zone or Area. This is because high schools don't typically have young children walking to school. Administration originally proposed to remove the school zone entirely as TAC guidelines indicated it was not necessary. Stakeholder groups expressed concern over this proposal and requested Administration to reconsider.

*Solution:* The community engagement process informed administration's review of this location. Since TAC doesn't recommend a school zone at this location, anything that is done is well above TAC standards. Therefore, the City is recommending to retain the existing school zone, including maintaining the 40km/hr speed zone, along with a minor adjustment to shorten the zone at the north to end at the Sacred Heart High School building. This addresses the concern of having a lengthy reduced speed zone along a collector roadway for traffic in an out of the City.

With all these concerns brought forward being addressed by administration, the plan is to present it to Council with all the feedback and discussions for consideration. The timeline is still to implement these new Safety Play Zones for Fall of 2022.

The RCS Committee stressed the importance of a well-planned awareness and

communication strategy before the implementation date. The awareness campaign should focus on the safety with the involvement of the RCMP Officers and the school's.

**Motion 21-014**

**Vermette**

That the Recreation and Community Services Committee recommends that Council implement the recommendations of the Community Safety School and Play Zone Review as follows:

1. To assign park zones or areas in the City of Yorkton using the TAC Standards, and as presented by Administration.
2. Columbia School Zone: to maintain the southeast portion of the school zone at the current location, which exceeds the TAC Standard, and further extend the north portion of the school zone to the north of Independent Street, as per the TAC Standard to ensure driver's sight before an intersection.
3. M.C Knoll & St. Michael's School Zone: that the 50km/hr sign be removed from the west die of the Darlington School zone to prevent people from speeding up between the school zone and the round-a-bout, which has a speed zone of 30km/hr, which creates a consistent speed zone from the round-about through the school zone.
4. St. Paul's School Zone: That the Yield sign at the corner of Dalebrooke Drive at Parkview Road in the St. Paul's School Zone be replaced with a stop sign.
5. Former Simpson School: That the school zone be removed from Gladstone Avenue south and that the crosswalk at Independent Street be referred to Administration's crosswalk review process.
6. High School Zone: That the existing school zone designation be maintained on Gladstone Avenue north with a speed limit of 40km/hr., and further that the speed zone be shortened at the north end after the Sacred Heart High School building.
7. That all designated school and play zones be assigned a reduced speed limit of 30km/hr. and further, that the reduced speed zone be in effect 24 hours a day year-round. CARRIED.

**6. NEW BUSINESS**

**a. Pump Bike Park**

Darcy McLeod presented the Pump Bike and Basketball Court Location Review.

With the approval of a Basketball Court in 2021 capital and a presentation to Council requesting consideration of a Pump Bike Park, required Administration to find appropriate locations for these amenities in our City. A review of park spaces was completed with service gaps identified on a map of the City. A 600 metre circle was placed around parks with amenities to show the practical service areas for each park, which also identified service gaps. The area of the City that stuck out as having a significant service gap was in the south central part of the City. This gap would have stuck out more if not for the recent addition of a play structure in Tupper Park. Further, it was noted that residents in this neighborhood may be less likely to drive to other parks/amenities in other parts of the City. Developing a park in this location would give the City another great destination park in a different neighborhood.

The RCS Committee agreed that the best location to develop a park with a pump bike park

and basketball courts would be in the BMX Park located behind Columbia School.

Administration reassured the committee members that if a Pump Bike Park is developed, there will be minimal maintenance upkeep much like the Skate Board Park. Further, liability is no different from any of our other outdoor or indoor facilities. A parking area would be planned as well. Lights could be completed as funding permits.

The development of the Basketball Courts could proceed first as funding has already been set aside for 2022 construction. Administration would have to present to Council the location recommendation for the Pump Bike Park along with the development of parking and eventually lighting for the area.

**Motion 21-015**

**Chyz**

That the Recreation and Community Services Committee recommends to Council that a park development be created behind Columbia School that would see two basketball courts along with a pump bike park, that would replace the existing BMX track as well as an appropriate parking area. Further, that lights be completed as funding permits. CARRIED.

**b. Framework for Municipal Heritage and Community Archives**

Administration conducted a review of the Heritage researcher position duties as the demand for that position's time is significantly higher than the available hours (17.5/wk). The Heritage Researcher position is intended to gather information, and tell stories about Yorkton's history. Over time, the position took on more work by volunteering on additional projects, which gave the impression of a full-time position. Part of this extension was establishing a community archive, which is located in the basement of City Hall. Further, in support of other people's work, this position also provided historical research on various properties and for individuals, mostly at the expense of the intent of the Heritage Researcher position.

Therefore in an effort to regain the Heritage Research work, for which the position is intended, donations will not be accepted by the community archives until further notice. Further, requests for property and individual histories will be processed outside of the allotted time for the Heritage Research position. This means that any request for research into properties or individual histories may be completed by the Heritage Researcher as time permits and outside of the allotted Heritage research work. This "other" work will be charged an hourly rate and invoiced to the requesting body or person so that this work can be done at no cost to the City. A third party contractor may also be considered to provide this service. However, access to the community archives is required to complete this work, and access will be limited and supervised, by the Heritage Researcher, while the archives is located in City Hall.

With the temporary closure of the Archives, Administration will be looking to the community to gauge interest in establishing a volunteer-driven community archives, located outside of City Hall, for ease of access. This could be achieved through the establishment of a historical society. Funding opportunities are more readily available to non-profit organizations. Further, this non-profit could then assume the responsibility for providing assistance with research for property owners and families, in addition to cataloguing, describing, expanding and promoting the archives.

These changes will allow the Heritage Researcher to continue to tell Yorkton's story and how Yorkton fits in with the provincial history, which generates community pride in our

community.

**Motion 21-16**

**Pfeifer**

That the Recreation and Community Services Committee support Administration's clarification of the Heritage Researcher position and the re-structuring of the community archives with the goal of establishing a historical society to provide a property and family research community service. CARRIED.

**7. NEXT MEETING**

October 20, 2021 at 5:00 p.m. for SK Lotteries Community Grant Program Adjudications.

**8. ADJOURNMENT**

**Motion 21-017**

**Chyz**

That the Recreation and Community Services Committee Meeting be adjourned at 6:08 p.m. CARRIED.

**Delmar Zwirsky**

Chairperson, Delmar Zwirsky

**Ashton Kingdon**

Recording, Ashton Kingdon

**RECEIVED**

Request to Appear Before Council

NOV 02 2021

Full names of presenters: Tom Seeley/Terry Pollock

**CITY CLERK'S OFFICE  
CITY OF YORKTON**

Mailing address:  \*

Tom Seeley/Terry Pollock

\*Redacted pursuant to LAFOIPP Sec. 23(1)

Daytime telephone number:  \*

Date of Request: November 1, 2021

Date of Council meeting we wish to attend: November 15, 2021

Topic being presented: "Light up the Water Tower"

What we are seeking: 1) Council's initial reaction to our idea  
2) Referring us to City of Yorkton Administration and/or Committees we  
can consult as we pursue the feasibility of our ideas

- Yorkton has some tourist attractions, such as Harvest Showdown, the Yorkton Exhibition with its fireworks display as well as some others.
- We believe that our idea will provide a year-round tourist attraction that will not only be visually pleasing and even better, spectacular, but will also provide an opportunity for the celebration of our diverse cultures.
- The City of Yorkton water tower, 48 meters in height, was constructed and activated in 1999. In daylight hours it is an attractive structure, but at night it is barely visible.
- Initially, we believed that there would be an opportunity make this into a tourist attraction by brilliantly illuminating it. There are examples of this in other communities.
- On further discussion we realized there could be an additional opportunity to celebrate cultures through either changing of colors (such as orange for the Reconciliation Day) or through project of various images on the surface in celebration of our diverse cultural heritage. We believe this could make an important contribution to Yorkton's Cultural Plan.
- It is our intention to seek sponsorship for both feasibility and developmental costs as well as for the capital costs if the City or Yorkton approves of a final plan for the project.

Proposed For A Basketball Training Facility

Submitted by Tony Hayden - Rise Basketball

[REDACTED], Yorkton, Sask. S3N 2Z8

ph [REDACTED]

Submitted on Oct 27, 2021

THayden

RECEIVED

\*Redacted pursuant to LAFOIPP Sec. 23(1)

OCT 27 2021

CITY CLERK'S OFFICE  
CITY OF YORKTON



"A person is sitting in the shade today because someone planted a tree 40 years ago."

In Canada, basketball is the fastest growing sport for ages 12 to 17.

For world wide popularity

- |               |                                     |
|---------------|-------------------------------------|
| 1. U.S.A      | Probably little or no hockey in the |
| 2 Philippines |                                     |
| 3 Australia   | Philippines or Australia            |
| 4 Canada      |                                     |

Basketball is a challenging yet beautiful sport that can be enjoyed 1v0 on the driveway or 5v5 in a championship game.

This proposal is presented on behalf of the young basketball players in our city. In 2008 a small skill development program was started using any gym space we could find. By 2018 the program grew to 100 boys and girls participating in a grade 4 to 6 Mini Basketball

program. Unfortunately, the boys program had to be discontinued when we were asked to vacate the gym space we were using, thus cutting the program in half.

In March of 2020 the girls league was also stopped due to the Covid-19 outbreak. We are currently attempting to re-establish it.

Prior to Covid-19 we operated these programs

Mini Basketball	Gr 4-6 girls	Mar. Apr. May
Row 1 - Skill Development	Gr 4-6 girls	4-5 week periods
Row 2 - Skill Development	Gr 7-8 girls	4-5 week periods
Row 3 - Skill Development	Gr 9-12 girls	4-5 week periods
Row 4 - Skill Development	Gr 9-12 girls-boys	year round (only program currently active)

All programs low cost - no cost

Having a basketball facility would enable us resume these programs plus the ability to



expand our programs; such as.

Jr. NBA.

Enrichment

Minor Basketball - gr. 7-8.

Parent-child

Sr. Mens Basketball

Special Skills eg shooting skills

Philippino League

Camps-clinics.

3x3 Basketball

Boys skill development

Daytime options

- Seniors days eg pickle ball
- Sport ball
- Spike ball
- School use.

Some Benefits to city

Participants in our programs have come from

Melville, Saltcoats, Canora, Bredenburg etc. Parents

transporting their children to Yorkton will spend money in Yorkton

Hoopla is now rotated around the province.

and followers to Yorkton for the 3 day event.

Construction would benefit trades people in Yorkton

The space required would be

94' x 50' court plus safety space on sides and ends.

storage

training area

change rooms - washrooms.

office entrance

aprox 10,000 sq. ft

viewing area - open space above storage/training area

Location options

Kinsmen Arena area

Blackstone - Darlington

Adjacent - Blain-Hayken Centre.

## Support possibilities

Sask Lotteries

Jump Start

Coop

WISE

Basketball Canada

Nike-Gatorade

Canada Infrastructure

A group we currently work with includes male and female athletes ages 13 to 17. We rent the gym at the G.H.C. on Wednesday mornings before school. These are motivated students who strive for excellence. One is planning a career in medicine and two others have a goal of playing beyond high school. These young people want to write their own story but with limited opportunities to train, it is like the pen has been taken from their hand. These



Stories often see the athlete move to a bigger city.

In March 2022 we plan to restart the girls Mini Basketball League. Our registrations are mid thirtys, encouraging in the current environment, but also demonstrates the interest in basketball.

Thank you for your consideration.

Respectfully submitted

Tony Hayden

From: [corporatecommunications@yorkton.ca](mailto:corporatecommunications@yorkton.ca)  
To: [Sharon Tropin](#)  
Subject: New Response Completed for Request to Appear Before Council Form  
Date: Tuesday, November 2, 2021 11:20:00 AM

**CAUTION: External Email**

Hello,

Please note the following response to Request to Appear Before Council Form has been submitted at Tuesday November 2nd 2021 11:19 AM with reference number 2021-11-02-001.

- **First name:**  
Sharon
- **Last Name:**  
Tropin
- **Committee/ Organization name:**  
Yorkton & District Community Foundation, Inc.
- **Address:**  
XXXXXXXXXX \*
- **City:**  
Yorkton
- **Province:**  
Saskatchewan
- **Postal code:**  
S3N2W1
- **Name:**  
Ray Bailey
- **Title:**  
President
- **Daytime phone number:**  
XXXXXXXXXX \*
- **Email:**  
XXXXXXXXXX \*
- **Date of request:**  
11/2/2021
- **Date of council meeting that the presenter is wishing to attend:**  
1/31/2022
- **Topic being presented:**  
Update on Activities of the Yorkton & District Community Foundation, Inc.
- **Description of request: (Clearly state what is being asked of Council. Provide detailed information about why the information is being presented and the importance to the community)**  
The Yorkton & District Community Foundation (YDCF) was launched in October 2019. The YDCF Board of Directors has made significant progress in establishing this new Community Foundation for the area and endowment funds that will continue to support charitable work year after year. The first of what will be annual grants were given out in March of 2021. The YDCF Board Chairperson would like to provide a brief update for Council about the work of the Community Foundation and our volunteer board. The presentation will be in form of a 5 min. PowerPoint video followed by opportunity for council to ask questions of the YDCF Chairperson, Ray Bailey, and Secretary, Sharon Tropin. Yorkton City Council is named in our bylaws as having a representative on the YDCF Board (currently Lisa Washington) and as the body that would assume responsibility should a breakdown of the YDCF Board occur. We are also grateful to the city for providing meeting and records storage space for the Foundation (currently at the Fire Hall).

[This is an automated email notification -- please do not respond]

<b>TITLE:</b> <b>Revised Cemetery Bylaw No. 9/2021, Fees and Charges - 3<sup>rd</sup> Reading</b>	<b>DATE OF MEETING: November 15, 2021</b>
	<b>REPORT DATE: November 10, 2021</b>
<b>CLEARANCES:</b>	<b>ATTACHMENTS:</b> 1. October 25, 2021 Council Report
Written by: Darcy McLeod – Director of Recreation & Community Services <p style="text-align: center;"><b>Darcy McLeod</b></p>	
Reviewed by: Jessica Matsalla - City Clerk <p style="text-align: center;"><b>Jessica Matsalla</b></p>	
Approved by: Lonnie Kaal - City Manager <p style="text-align: center;"><b>Lonnie Kaal</b></p>	

## **PURPOSE**

This report is being provided to bring the proposed City of Yorkton *Cemetery Bylaw No.9/2021* back to Council for 3<sup>rd</sup> reading. It passed through 2 readings at the October 25, 2021 Council meeting but failed to obtain unanimous consent of Council needed to proceed to 3<sup>rd</sup> Reading.

As per *The City of Yorkton Procedures Bylaw No. 1/2016, subsection 15.17*, “if a unanimous vote for third reading of a bylaw at the same meeting is not received, the bylaw will then be brought forward to subsequent meetings of Council, at which time only a majority of Council is required to vote in the affirmative to pass the bylaw.” However, “Previous readings of a bylaw are rescinded if the bylaw doesn’t get approved within 2 years of the first reading or if it is defeated on second or third reading.” This means that a new report would have to come back for Council consideration at a future meeting, as there are required changes contained within the bylaw that need to be implemented.

## **OPTIONS**

1. That Bylaw No. 9/2021, a bylaw to Provide for the Control and to Regulate the Operation of Cemeteries within the City of Yorkton, known as The City of Yorkton Cemetery Bylaw, including the fees and charges as proposed, be read a 3<sup>rd</sup> time.
  - a. Further, that Administration analyze the impact the new fees and charges have on the Cemetery operating budget and bring back options on future use of the Perpetual Care Fund.
2. If the Bylaw fails to pass the 3<sup>rd</sup> Reading, then Administration will require direction from Council on how they would like to proceed with the Cemetery Bylaw and proposed fees and charges.

## **RECOMMENDATION**

1. That Bylaw No. 9/2021, a bylaw to Provide for the Control and to Regulate the Operation of Cemeteries within the City of Yorkton, known as The City of Yorkton Cemetery Bylaw, be given third and final reading this 15<sup>th</sup> day of November A.D. 2021 and be registered in the Bylaw Register of the City of Yorkton.
2. That Council direct Administration to conduct an analysis of the impact that new Cemetery fees and charges have on the annual operating budget and Perpetual Care Fund, and report back at a future meeting of Council.

## REPORTS TO COUNCIL

TITLE: <b>Bylaw No. 9/2021 Revised Cemetery Bylaw, Fees and Charges</b>	DATE OF MEETING: <b>October 25, 2021</b>
	REPORT DATE: October 19, 2021
CLEARANCES:	ATTACHMENTS: <ol style="list-style-type: none"> <li>1. Draft Consolidated Cemetery Bylaw No. 9/2021</li> <li>2. 2021 Fees &amp; Charges Comparison</li> <li>3. 2022 – 2024 Proposed Fee Structure</li> <li>4. Cemetery Map</li> </ol>
Written by: Darcy McLeod – Director of Recreation & Community Services <b>Darcy McLeod</b>	
Reviewed by: Jessica Matsalla - City Clerk <b>Jessica Matsalla</b>	
Approved by: Lonnie Kaal - City Manager <b>Lonnie Kaal</b>	

### **PURPOSE**

This report is being provided to update the City of Yorkton *Cemetery Bylaw*, which provides for the control and operation of Cemeteries within the City of Yorkton. The second phase of additional plots, added as part of the 2015 Cemetery expansion, are now ready to open for sales and therefore, the regulations for control and operation of this new area must be included in the Cemetery Bylaw.

Further, a review of fees and charges was completed as part of the upcoming budget process to ensure that they were still pertinent when compared to our operating costs and comparable to other City Cemeteries. The last comprehensive fee review occurred in the fall of 2019 and a new 3-year fee structure was approved in early 2020.

### **BACKGROUND**

All Cemeteries in Saskatchewan are subject to provincial legislation through *The Cemeteries Act, 1999* and *The Cemeteries Regulations, 2001* and are required to be registered with the province. Following the expansion of the existing Cemetery, the entire Cemetery was re-registered in 2016 to include the expansion. The old portion (referred to as The Hill) of the City Cemetery has a capacity of 11,565 plots with 201 plots remaining for sale. The Cemetery was expanded in 2015/16 by providing an additional 922 plots, and is referred to as The Meadow. Although all plots are registered, not all plots were ready for sale. Phase 1 (of 4) of the expansion opened to sales in the fall of 2017 with work continuing on the other phases as resources became available. These other phases include:

Phase 2: Completing the Woodland Path, which is a cremation only area, set along a wooded path within the Cemetery. It has 93 plots with a max capacity of 186 inurnments.

Phase 3: Building a second columbarium in the designated area of The Meadow, which can accommodate approximately 72 niches with a max of 144 inurnments.

Phase 4: Providing concrete runners for the remaining plots in The Meadow, which will be completed as existing plots in The Meadow are 75% sold, or as resources become available. This would provide an additional 184 plots.

Work continued on completing the Woodland Path section and it is now ready for sales. Therefore the following additions or changes have been made to the *Cemetery Bylaw*, which require Council approval.

As a result, changes, additions and revisions were completed to:

1. Change the Department name to Recreation and Community Services throughout the document.
2. Clarify how many interments can be accommodated in the various plots available throughout the Cemetery.
3. Clarify the definitions to better explain the difference between the Perpetual Care fee and the Annual Care & Maintenance fee that are applied to each interment along with definitions related to the Woodland Path and other memorial clarifications.
4. Provide regulations specific to the Woodland Path.
5. Clarify the intent of the Redemptorist Fathers plots.
6. Provide a regulation for monument installations that are not in compliance with the Bylaw will be corrected by the City, with the costs being invoiced to the installer.
7. Provide a regulation stating that food and beverages are not permitted as part of memorials.
8. Update the various Schedules attached to the Bylaw as a result of the changes above.
9. Establish fees and charges that reflect the actual cost of providing services including continuing general care and maintenance of the entire Cemetery.

### **FINANCIAL IMPLICATIONS**

There are no financial implications to the Cemetery Bylaw changes, other than the fees and charges, as the content of the Bylaw is procedural in nature.

A review of fees and charges has been completed and compared to other Saskatchewan Municipal Cemeteries to determine where changes in the fee structure could positively impact our cost recovery. The Cemetery endeavors to operate on a cost recovery basis with the main source of revenue being through plot sales and interment services. Plot sales have slowed as multiple burials in the same plot are becoming more common. Plot prices are established using a market value comparison, where we aim to be in the mid-range of similar Saskatchewan municipal cemetery plot prices.

The review of our service fees and charges indicates that they do not reflect all the costs associated with annual general maintenance. Generally, the proposed fees and charges have been increased, however some fees have been reduced; initially to reflect the actual cost of the services being provided, then an annual care and maintenance fee was applied (described below). The reductions include some less desirable, smaller plots: as well, some fees were reduced to ensure that fees charged reflect the actual costs to provide the service. The plot price reduction would act as an incentive to ensure maximum use of the land in the Cemetery. Further, there is no direct fee to provide ongoing annual care and maintenance after the date of the interment (except the perpetual care fund which is set aside for after-capacity care and maintenance).

Plots can accommodate a different number of interments depending on the size of the plot. A traditional plot can accommodate one casket and three cremation interments. Some cremation only plots can accommodate 3 or 4 inurnments, depending on the size of the plot. One Perpetual Care fee is included with every plot purchase, where 25% of the plot sale is allocated to the Perpetual Care Fund. The Perpetual Care Fund is a reserve account that holds funds for future use that will ensure after-



capacity cemetery care and maintenance can be completed when no revenue sources are available to pay for ongoing maintenance. Further, because multiple interments are available in each plot, and it is important that each interment contributes to the Perpetual Care Fund to ensure after-capacity care and maintenance, a perpetual care fee is added to each multiple interment in each plot. This was 15% of the interment cost in 2021, however it is being recommended to increase this to 25% to ensure all interments are contributing a relative amount to the Perpetual Care Fund. This will ensure that each person interred in the Cemetery contributes to the after-capacity care and maintenance required once the Cemetery reaches capacity. Please note, that municipalities are not required to carry a Perpetual Care Fund, however the expectation is that the Cemetery recovers 100% of its operating costs, therefore this Fund is how we can ensure it will be able to do that after it reaches capacity, (when the Cemetery will have no revenue generated for its operation). The other option would be to consider the Cemetery similar to any other park space, once it reaches capacity, and include the after-capacity maintenance as part of the Parks operating budget.

The Cemetery does not have dedicated staff, however staff do attend to daily and weekly duties, outside of services, to ensure the continued care and maintenance of the Cemetery. This work does not get charged to anyone and has no revenue sources, which makes it difficult to operate at 100% cost recovery. Although people being interred in the Cemetery are contributing to the after-capacity care and maintenance of the Cemetery, including their plot; there are no fees generated to cover the annual costs of care and maintenance within the Cemetery or to individual plots. (until such time as the Cemetery has reached capacity, which is when the Perpetual Care Fund would be used for general maintenance).

To partly address the issue related to recovering costs for annual care and maintenance, the plot prices have been increased by 25%. This increase is meant to address the ongoing annual care and maintenance costs of the plot, for one interment. Since multiple interments are permitted in most plots, an increase in the annual care and maintenance fee is being proposed for every additional interment in a plot. The increase would move 15% to 25% of the additional interment service fee to address this annual care and maintenance cost. These annual care and maintenance fees would address costs that are not related to a specific interment but is required to maintain the entire Cemetery. This includes general maintenance throughout the Cemetery such as grass maintenance and general beautification, tree trimming, levelling and over-seeding plots, monument levelling, roadway snow removal, marking of flat monuments for winter (so they don't get hit when moving about the plots with equipment), garbage removal and flower or memorial clean-up.

There are other costs that impact services as well. Winter interments have significantly higher costs due to requirements for snow removal to the plot site as well as harder ground to dig which takes significantly more time. Although we have had the winter surcharge in place before, we are looking to implement it differently, and for all interments, not just traditional interments. Therefore, the basic interment fee reflects the actual cost of a warm weather service and the winter surcharge is added for any services between November 1 and April 30 to cover the snow removal and extended digging costs. Other areas where the City assumes costs is in the stat holiday services or for services that require staff to work overtime. These costs are passed on to the service and have been updated to reflect actual costs in the proposed fees and charges.

In summary, the 25% annual care and maintenance fee, which is proposed to be added on to plot sales and additional interments, is intended to offset the general care and maintenance provide in the

Cemetery, however it may not cover all other maintenance depending on the type of year the Cemetery has (sales, # of interments and weather). In this case any difference is covered by the general revenue fund or pulled from the perpetual care fund (which impacts the City's ability to provide after capacity care and maintenance).

Other sources of revenue available to cemeteries include selling of vaults (which cover caskets and prevents settling of soil and are required in our Cemetery) and monument sales. Monument sales are a specialized businesses and would require additional staff. Administration was previously denied the opportunity to provide our own vaults and funeral homes were allowed to provide vaults for services in our cemetery.

It should be noted that recently, other municipal governments are also having trouble recovering 100% of the cemetery operational costs requiring the municipality to cover the difference. Further, Administration will monitor this new fee structure to determine the impact on cost recovery. If, (when planning for future once the Cemetery reaches capacity) Council chose to treat the Cemetery as a park and include it in the parks budget, the purpose of the Perpetual Care Fund could be reviewed to either assist with operational costs or reduce the cost of services. Administration will monitor the impact of the new fees and charges on the cost recovery and provide options for the Perpetual Care Fund for Council consideration.

The proposed fees and charges are outlined in "Schedule F" of Bylaw No. 9/2021, which were developed by:

1. Comparing plot prices to other Saskatchewan municipal cemeteries.
2. Ensuring the cost of the services are reflected in the various service fees and charges.
3. Adding a 25% annual care and maintenance fee to plot sales and additional interment service fees.
4. Applying a 3% increase to each year thereafter.

Although a three-year plan is proposed, fees and charges are reviewed annually as part of the operating budget process and changes will be brought forward for Council consideration as required.

### **COMMUNICATION PLAN/PUBLIC NOTICE**

Once approved by Yorkton City Council, a copy of the amended Bylaw will be provided to the funeral services providers and it will also be placed on the City's website. There are not any provisions in *The Cemeteries Act, 1999* or the *Cemeteries Regulations, 2001* that require public notice be provided prior to giving all three readings of a Cemetery Bylaw. Therefore, Council could provide all three readings of this Bylaw at the October 25, 2021 Council meeting.

### **STRATEGIC PRIORITIES/OCP/COMMITTEE RECOMMENDATION(S)**

Cemeteries speak symbolically about our attitudes towards the deceased and therefore attention is taken to ensure the Cemetery is as peaceful and restful as possible and respects and honors our loved ones in a dignified manner allowing for appropriate reflection of loved ones past. The City Cemetery has strong personal and emotional significance to many individuals and is as appropriate, restful and peaceful as possible.

### **OPTIONS**

1. That Bylaw No. 9/2021, a bylaw to Provide for the Control and to Regulate the Operation of Cemeteries within the City of Yorkton, known as The City of Yorkton Cemetery Bylaw, including

the fees and charges as proposed, be given all three readings with unanimous consent of Council at tonight's meeting.

- a. Further, that Administration analyze the impact the new fees and charges have on the Cemetery operating budget and bring back options on future use of the Perpetual Care Fund.
2. That Bylaw No. 9/2021, a bylaw to Provide for the Control and to Regulate the Operation of Cemeteries within the City of Yorkton, known as The City of Yorkton Cemetery Bylaw, be given all three readings with unanimous consent of Council at tonight's meeting.
  - a. Further, that the fees and charges remain at the 2021 levels and that any shortfall be considered an investment by the taxpayers.
3. Provide alternate direction to Administration.

**RECOMMENDATION**

1. **That Bylaw No. 9/2021, a bylaw to Provide for the Control and to Regulate the Operation of Cemeteries within the City of Yorkton, known as The City of Yorkton Cemetery Bylaw, be given first reading this 25<sup>th</sup> day of October A.D., 2021.**
  - a) **That Bylaw No. 9/2021 be given second reading this 25<sup>th</sup> day of October A.D. 2021.**
  - b) **That with the unanimous consent of Council, Bylaw No. 3/2021, proceed to third reading this 25<sup>th</sup> day of October A.D. 2021.**
  - c) **That Bylaw No. 9/2021, a bylaw to Provide for the Control and to Regulate the Operation of Cemeteries within the City of Yorkton, known as The City of Yorkton Cemetery Bylaw, be given third and final reading this 25<sup>th</sup> day of October A.D. 2021 and be registered in the Bylaw Register of the City of Yorkton.**
2. **That Council direct Administration to conduct an analysis of the impact that new fees and charges have on the annual operating budget and bring back options for the future use of the Perpetual Care Fund.**

City of Yorkton  
Saskatchewan

Bylaw No. 9/2021

**A Bylaw of the City of Yorkton to provide for the Control and to  
Regulate the Operation of Cemeteries within the City of Yorkton**

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**WHEREAS**, pursuant to Part VIII, Section 54(1) of *The Cemeteries Act, 1999* an owner of a cemetery that is not a commercial cemetery may make bylaws for the operation of the cemetery;

**NOW THEREFORE**, the Council of the City of Yorkton in Council assembled hereby enacts as follows:

**Short Title**

1. This Bylaw shall be known as “The City of Yorkton Cemetery Bylaw”.

**Definitions and Interpretations**

2. In this Bylaw, unless the context otherwise requires, the expression:

**"Authorized Decision Maker"** means a person designated as an authorized decision-maker pursuant to The Funeral and Cremation Services Act and if no one can be located using reasonable efforts, or no one is willing to act or the identity of the deceased is not known, the Director may make any decision required to be made by an authorized decision-maker pursuant to this Bylaw.

**“Base”** means the lower portion of a two-piece monument set on a foundation.

**“Block”** means a number assigned to a section of the Cemetery to assist with identifying a land location within the Cemetery.

**“Caretaker”** means the person placed in charge of the day-to-day operations of the Cemetery.

**“Cemetery”** means any area set aside and/or used for the burial of human remains known as the City of Yorkton Cemetery.

**“Care and Maintenance Fee”** means the amount paid by each plot and interment to ensure that annual care and maintenance of the Cemetery is provided until such time as the Cemetery reaches capacity and when the Perpetual Care Fund will be accessed for care maintenance. This fee applies to all interments. One care and maintenance fee is included with each plot purchase.

**“Child”** means an individual ten (10) years of age or less.

**“Child Plot”** means a plot that is smaller than a standard plot that does not accommodate an adult casket interment and can only be used for the interment of human child remains

**“Columbarium”** means a structure or building in a Cemetery designated for the purpose of storing or interring cremated human remains in sealed compartments or niches.

**“Council”** means the Council of the City of Yorkton.

**“Cremation Monument”** means a memorial structure that is specially designed to hold one or more cremation urns for ashes. This structure does not require a foundation but is inset in the ground to ensure stability, with inscribed lettering or artwork as a means of commemoration and made of granite and only to be used in the Woodland Path.

**“Cremation Plot”** means a plot that is smaller than a standard plot that does not accommodate a casket interment and can only be used for the interment of cremated human remains.

**“Deferred Payment Plan”** means an option to pay for the purchase of cemetery plots/niches over a specified period of time, rather than full payment at the time of purchase. The Deferred Payment Plan is only available for pre-need purchases. Payment in full is required before any product or service can be provided to the purchaser.

**“Die”** means the upper portion of a two-piece monument and part of the monument that is placed on the base.

**“Dimensions”** shall be interpreted as follows:

- a. **“Depth”** means the dimension of the monument as measured from the front edge to the back edge, when facing the monument.
- b. **“Height”** means the dimension of the unit being measured from the bottom of the unit to the top.
- c. **“Width”** means the dimension of the unit as measured from left edge of the unit being measured to the right edge of the unit when facing the unit begin measured.

**“Director”** means the Director assigned responsibility for the City Cemetery by the City Manager and includes anyone acting as their designate in carrying out the provisions of the Bylaw.

**“Flat Marker”** means a type of monument set flush with the ground with a flat and level surface upon which an inscription may be made or a bronze plaque affixed. **However, in the Woodland Path a foundation is not required. Please refer to Schedule C, Woodland Path Monument Regulations for monument restrictions.**

**“Foundation”** means a pre-cast granite pad; a pre-cast concrete slab or a poured in place pad reinforced with steel mesh, set at a grade for the purpose of placing a monument.

**“Infant”** means an individual no more than two (2) years of age and may include inter-foetal remains.

**“Infant Plot”** means a plot that is smaller than a standard plot that does not accommodate an adult casket interment and can only be used for the interment of infant human remains

and when the outside measurements of the casket are no more than twenty-four (24) inches in length.

**“Interment”** includes:

- a. The burial of human remains or cremated human remains in a Cemetery;
- b. The inurnment of cremated human remains in a columbarium.

**“Interment Rights”** means a license granted by the City to a person to allow a interment in a designated lot or niche in accordance with this Bylaw and *The Cemeteries Act, 1999*.

**“License”** means the interment rights for a lot or niche within the Cemetery.

**“Licensee”** means a person whom a license has been issued pursuant to this Bylaw.

**“Lot”** means a number assigned to a sub-grouping of burial plots in a Block, used to describe a land location within the Cemetery.

**“Marker”** for the purpose of this bylaw, marker means the same as Monument.

**“Monument”** means a memorial structure set upon a foundation, which projects above the ground, with inscribed or attached lettering or artwork as a means of commemoration and made of granite, marble, bronze or other approved material.

**“Monument Rendering”** means a descriptive, drawing or presentation of the monument style depicting the width, depth and height of each of the foundation, base and die shown together.

**“Niche”** means each individual compartment in a columbarium to be used for the interment of cremated human remains.

**“Regular Working Hours”** means weekdays, 9:00 a.m. to 12:00 noon; 1:00 p.m. to 4:00 p.m. excluding statutory holidays.

**“Normal Cemetery Visiting Hours”** means open daily, from dawn to dusk.

**“Parks Manager”** means the person placed in charge of day-to-day administration of the City Cemetery.

**“Perpetual Care”** means the amount paid by each plot provided to ensure that annual care and maintenance of the Cemetery is provided after the Cemetery reaches capacity. This fee applies to all plot sales.

**“Plot”** means a specific piece of property within a Lot, identified with a letter, within the Cemetery, that is purchased for a burial or burials.

**“Post”** is an upright monument for cremation interments permitted only in the Woodland Path. This structure does not require a foundation or a base but is inset in the ground to ensure stability, with inscribed lettering or artwork as a means of commemoration and made of granite.

**“Redemptorist Father”** are the Most Holy Redeemer, is a religious congregation of Catholic Priests and Brothers.

**“Standard Plot”** means a plot designed to accommodate casket interment and:

- a. In the Hill, either a plot measuring three (3) feet by ten (10) feet or four (4) feet by ten (10) feet, and;
- b. In the Meadow, a plot measuring four (4) feet by eight (8) feet.

**“The Hill”** means the section in the Cemetery defined as block one (1) through to block twenty-seven (27).

**“The Meadow”** means the Cemetery expansion in 2016 defined as block twenty-seven (27) A through to block thirty-eight (38).

**“Woodland Path”** means the naturalized cremation area within the wooded areas of The Meadow and defined as block thirty-six (36) and thirty-eight (38).

**“Veteran”** means a person entitled to interment in the Field of Honour and who is a past or present member of the Canadian Armed Forces, para-military forces (R.C.M.P.), Allied Forces or other like group as determined at the discretion of the Director.

### **General Supervision**

3. Subject to the other provisions of this Bylaw and to *The Cemeteries Act, 1999* and the regulations thereto, where a person makes an application in the form provided by the Director and pays the requisite fees, the Director shall issue to the person a license for the exclusive use of a lot or a niche. (**Schedule “D”**)
  - a. The holder of the License acquires no property rights in the Cemetery or any niche within a columbarium.
4. All funerals in the Cemetery shall comply with the provisions of *The Public Health Act, The Vital Statistics Act, The Funeral Service & Cremation Act* and *The Cemeteries Act, 1999* of the Province of Saskatchewan and with any regulations issued thereunder and as amended from time to time.
5. The Director shall furnish Council with a written report at the end of each year, of all interments, disinterments and removals for the year, and shall keep and maintain a complete set of records of all transactions in connection with the operation of the Cemetery.
6. In the event of a discrepancy between the License and the administrative records, the latter shall take preference.
7. Notice given to any person pursuant to this Bylaw shall be deemed sufficient if in writing and mailed to the last known address of such person as entered into the Cemetery records.
8. The Director may close the cemetery from time to time as deemed necessary and appropriate by the Director.



## General Regulations

9. During a burial service, all work in the immediate vicinity of the City Cemetery shall be discontinued.
10. The City of Yorkton reserves the right to limit the number of services in any given morning or afternoon, so that the number of interments does not impact the City's commitment to fulfill the obligations of any interment.
11. In the event of the consecration of the said Cemetery or any part thereof, such act of consecration shall not be held to invest that religious body with any exclusive rights and powers or jurisdiction either spiritual or temporal.
12. Funeral Directors shall have all Licenses for interments in the Cemetery approved by the authorized decision-maker of the plot in which such interment is to be made.
13. No person shall enter upon any portion of the Cemetery, which is set apart for storage facilities without first having obtained the consent of the Director.
14. Vehicles must stay on roadways and shall not travel in the Cemetery at a speed greater than ten (10) kilometres per hour, provided however, the Director may in their discretion, prohibit vehicular traffic where the condition of the roads and/or the weather conditions so warrant.
  - a. Recreation vehicles and snowmobiles are not permitted.
15. No animals shall be allowed in the Cemetery.
16. The Director shall have power to remove from the grounds any person disturbing the quiet or good order of the Cemetery by noisy or improper conduct or language, or any person violating any of the provisions of this Bylaw.

## Cemetery Plots

17. A plan of the Cemetery showing all plot locations thereon shall be open for inspection, during normal cemetery business hours, at the office of the Cemetery Caretaker or the **Recreation and Community Services** ~~Community Development, Parks and Recreation~~ Department office.
18. All arrangements for sale of lots and/or services in the Cemetery requesting assistance from the Cemetery Caretaker will require an appointment prior to viewing. Arrangements shall be made through the City of Yorkton, **Recreation and Community Services** ~~Community Development, Parks and Recreation~~ Department office.
  - a. Sales of plots in the Meadow will be sold in sections. When a section has sold seventy-five percent (75%) of the plots, another section will be open for sales.
19. Any person(s) who purchases cemetery plots utilizing **Schedule "I"** Cemetery Deferred Payment Plan shall also pay the Non-Refundable Deposit prescribed therein.
20. **All plot sales will include the Perpetual Care at the percentage specified in Schedule G.**
  - a. **Any additional interments within a plot will be required to pay the Perpetual Care percentage as specified in Schedule G.**



21. It shall be the responsibility of the Licensee to maintain a current address for service in the office of the Director. Direction to that effect shall be so noted on the License.
22. Each standard plot will accommodate a maximum of one (1) casket interment and three (3) cremation interments. The casket interment must take place first or a cremation disinterment fee will be implemented at the time of the casket interment.
23. Each standard plot has established buffer zones to allow multiple interments and related memorials.
  - a. A two (2) foot buffer, within the plot, has been designated at the head of the plot to establish the primary monument.
  - b. The head cremation interment is to be located three (3) feet from the monument buffer zone.
  - c. Another cremation may be accommodated two (2) from the head cremation interment.
24. Three cremation interments are permitted in any standard casket plot and shall be located at either the head, middle or foot of a plot, with the following exceptions:
  - a. In a four (4) foot by five (5) foot plot, a maximum of four (4) cremation interments located at the head - left, head – right, foot- left and foot – right, and
  - b. In the Woodland Path, two (2) cremation interments, located left and right.
25. Notwithstanding section 22, 23 and 24 above, the Director may in their sole discretion, on written request, increase the number of interments permitted in a plot or niche, having regard to such considerations as the circumstances surrounding the death, the relationship with the deceased, continuity of monuments and landscaping, and any other relevant factor under the circumstances.

#### **Field of Honour**

26. The City shall set aside and maintain an area within the Cemetery as a Field of Honour for the interment of veterans.
27. Pre-need purchases of lots shall be permitted for veterans provided that a location shall not be assigned until the time of need or in accordance with section 27 below.
28. The surviving spouse of a veteran may purchase a burial lot adjacent to that of his or her deceased spouse at the time of the deceased spouse's interment, provided that the surviving spouse:
  - a. Is also a veteran;
  - b. Purchases and installs a standard veteran's memorial on the unused lot at the time a memorial is installed on the lot of the deceased spouse; and
  - c. Ensures that the memorial referred to in subsection 27(b) bears the name of the surviving spouse and that memorialization is complete in every detail possible.
29. A Licensee who has purchased a lot pursuant to section 26 or 27 may transfer the lot back to the City in accordance with sections 112 through 116. The Licensee may not transfer the lot to any other person.
30. When the human remains or cremated human remains of a veteran have been interred in a Field of Honour, the human remains or cremated human remains of the veteran's spouse may be interred in that veteran's lot, subject to the following:

- a. The interments may be comprised of the cremated human remains of both the veteran and the spouse or the human remains of either the veteran or spouse together with the cremated human remains of either the veteran or the spouse, but in any case, shall not be comprised of the non-cremated human remains of both spouses;
  - b. Payment of the opening and closing fees as set out in **Schedule "G"** is made.
31. Notwithstanding any other provision of this Bylaw:
- a. A memorial in memory of the veteran's spouse and in accordance with the specifications set out in Schedule "A" may be placed on the lot or on the base of the veteran's monument; and
  - b. The spouse of a veteran may be memorialized on the headstone of the veteran provided the spouse is also a veteran.

### **Columbarium**

32. A single niche is ten (10) inches on the vertical by ten (10) inches on the horizontal and fourteen (14) inches deep from front to back.
33. Niche plaques are twelve (12) inches square.
34. The capacity of each niche shall not be defined so long as they do not exceed the dimensions of the niche.
35. Each urn must contain markers identifying the deceased.
36. Temporary urns and/or containers are permitted, however the City shall not be responsible for any damage incurred to the temporary urn. Approved fees and charges will be applied to each niche opening/closing.

### **Woodland Path**

37. **In an effort to maintain the natural esthetic and the natural environment of the Woodland Path, minimal grounds maintenance will be provided, and the following restrictions apply to the Woodland Path:**
- a. **Fence, railing, bedding plants, potted plants and materials intended for growth are not permitted.**
  - b. **Border, fences, railings, trellises, coping, hedges, concrete or stone comers or iron posts are not permitted.**
  - c. **Ornaments and/or decorations including but not limited to flower holders or vases, crosses and statues, flowers, mementos, ceramics, statues, windmills, balloons, glass, baskets, solar lights and lanterns are not permitted.**
  - d. **Removal and/or planting of any plant species will not be permitted.**
  - e. **Grass and weed maintenance will be completed only to ensure visibility of the face of the Memorial.**
  - f. **Food and/or beverages used for memorialization are not permitted.**
38. **A cremation plot may accommodate a maximum of 2 cremation interments.**
39. **Only flat, Cremation and Post monuments will be permitted. No other monuments, benches or other memorialization will be allowed in the Woodland Path.**
- a. **Each plot shall be allowed a maximum of one (1) Monument.**

- b. Refer to the Woodland Path Monument regulations as set out in Schedule C of this Bylaw.
- 40. No memorial shall be installed of a height extending more than thirty-six (36) inches above the surface of the ground at the point of installation.
- 41. The monument shall be constructed of granite.
  - a. Other materials requested are subject to prior approval by the Director.

### **Interments**

- 42. The Licensee or the Authorized Decision Maker for a plot and/or niche shall, prior to any interment or disinterment:
  - a. Provide to the Director a properly authorized burial permit or cremation certificate.
  - b. Provide interment requests which include the name of the deceased, location of the plot, date and time of the interment, type of interment and the arrangers contact info prior to the notice period beginning.
  - c. Provide written notice to the Director at their office that an interment is to take place.
  - d. During the period from May 1 to October 31, notice must be provided by 11:00 a.m. two (2) days prior to the interment date. (example: interment on the 20<sup>th</sup>, notice must be provided by 11:00 a.m. on the 18<sup>th</sup>)
    - i. The intent of the notice is to provide at least twelve (12) regular working hours, for the purpose of opening and preparing the plot.
  - e. During the period from November 1 to April 30, notice must be provided by 11:00 a.m. three (3) days prior to the date of the interment. (example: interment on the 20<sup>th</sup>, notice must be provided by 11:00 a.m. on the 17<sup>th</sup>)
    - i. The intent of the notice is to provide at least sixteen (16) regular working hours for the purpose of opening and preparing the plot prior to the interment date.
  - f. The notice period shall not begin until all the required information has been received by **Recreation and Community Services** ~~Community Development, Parks and Recreation~~ office.
  - g. Notice is exclusive of Saturdays, Sundays and Statutory holidays.
  - h. Pay all required fees in full in accordance with **Schedule "G"** Fees and Charges.
  - i. Ensure that any casket interment or casket disinterment is completed under the supervision of a licensed funeral director.
- 43. All funeral processions shall depart the Cemetery no later than 4:00 p.m.
- 44. No application or notice shall be received on Saturday, Sunday or on an observed Holiday, except on production of a medical certificate that an early interment is desirable.
- 45. For all casket interments, the use of vaults, with a base, shall be mandatory. Vaults are to be delivered to the Cemetery one (1) business day prior to the time set for the interment. Vault Construction materials shall be restricted to fiberglass.
- 46. Every License issued in respect to any plot in the Cemetery shall be subject to the conditions that the authorized decision maker shall not use the plot or plots for any purpose other than burial ground for human remains.

47. Child plots are only available in The Hill section and their use shall be determined on the basis of the child being ten (10) year of age or younger and the outside measurements of the casket being no more than forty-eight (48) inches in length.
48. Infants plots are only available in The Hill section and their use shall be determined on the basis of the child being two (2) years of age or younger and the outside measurements of the casket being no more than twenty-four (24) inches in length.
49. No plot for the burial of an adult shall be less than six feet in depth from the surface of the ground surrounding the plot.

### **Interment of Indigent Persons**

50. The Director shall provide interment rights free of charge for an unclaimed body or for a deceased indigent person where the City is instructed to provide interments rights free of charge pursuant to the provisions of *The Cemeteries Act, 1999* and any regulations thereto addressing the interment of indigent persons.
51. The interment of indigent persons shall occur in single plots, the location of which shall be at the sole discretion of the Director.
52. No one may install a memorial on a plot utilized for the interment of an indigent person until the plot Care and Maintenance fee has been paid in full as set out in **Schedule “G” Fees and Charges**.
53. No other interments will be permitted in a plot provided pursuant to this section until the full purchase price of the plot has been paid in full as set out in Schedule “F” Fees and Charges.
  - a. Only family members, who are also considered an indigent person, may be interred into an occupied plot provided free of charge by the City of Yorkton.
  - b. If a person wishes to inter a non-indigent family member in an occupied indigent plot, the full purchase price of the plot must be paid in full at the approved rate as per **Schedule “G” Fees and Charges**.

### **Monuments**

54. **The following regulations do not pertain to the Woodland Path Cremation Monument. (Please refer to Schedule C, Monument Regulations for The Woodland Path)**
55. No memorial shall be installed of a height extending more than thirty-six (36) inches above the surface of the ground at the point of installation.
  - a. **Within the Redemptorist Father plots, a traditional cross monument may be placed. The accepted cross dimensions are maximum of thirty-two (32) inches high with a base of ten (10) inches high.**
56. The die of a monument shall be constructed of granite, marble and/or bronze.
  - a. Other materials requested are subject to prior approval by the Director.
57. The finish on any side of the granite base (excluding the top and bottom) of the monument must have a rock-pitch finish.
58. The purpose of a rock-pitch finish is to act as a maintenance buffer and is subject to wear and tear.

59. Foundations:
- must be a minimum of four (4) inches thick;
  - where a concrete runner is not provided, foundations must be installed flush with the surrounding soil surface, centered at the head end of the plot(s) it is serving;
  - must protrude a minimum of four (4) inches from all sides of the base;
  - monuments set on a continuous runner/foundation must have a minimum of two (2) inch of buffer space extending at the front and back of the monument.
60. Each plot shall be allowed a maximum of one (1) monument. Where more than one interment occurs in a plot, additional memorialization is permitted through the use of bronze plaques mounted to the base of a primary monument; or the use of **one (1) flat markers**, except in The Meadow section where it is only permitted through the use of bronze plaques mounted to the base of a primary monument.
61. Bronze flat markers must be installed on a granite or concrete foundation.
- The foundation must have a two (2) inch border exposed on all sides and must be installed flush with the surrounding soil surface.
62. Granite flat markers in The Hill do not require a foundation, but must be a minimum of three (3) inches thick and shall be installed flush with the surrounding soil surface.
- The Meadow section only permits granite flat markers on the concrete runner provided by the Cemetery.
63. A flat marker, in memory of the veteran's spouse; and in accordance with this Bylaw, may be placed on the plot centered at the head of the veteran plot.
64. The spouse of a veteran may be memorialized on the monument of the veteran provided the spouse was also a veteran.
65. Infant or child plots shall only be permitted to use flat markers unless the head of the plot is aligned with monuments on either side of the plot.

#### **Monument Installation and Maintenance**

66. Any person or company installing monuments or completing monument maintenance in the City Cemetery must provide the City with the following documentation:
- A valid City of Yorkton Business License;
  - ~~A letter of good standing from the Workers Compensation Board;~~
  - A minimum of \$2 million liability insurance.
67. Monuments or markers, for the purpose of designating plots, shall not be installed until an application for a Monument Permit has been submitted by a monument company as defined in section 65 above, and the Monument Permit issued by the City. (**Schedule "E"**)
68. The Monument Permit application shall include the:
- Date of the Monument Application.
  - Contact information of the Monument Company proceeding with the installation.
  - Plot location for the monument.
  - Confirmation of the plot width.
  - Name of the deceased.

- f. Monument type (upright, flat, pillow) including measurements for the foundation, base and die as detailed in the Monument Regulations.
  - g. Type of materials used for the foundation, the base and the die.
  - h. Detailed rendering of the monument.
  - i. Confirmation of installation appointment provided by the Parks Division.
69. A review of the Monument Permit application will occur and approval will be provided once the following has been completed:
- a. Confirmation by City administration that all requirements listed in section 66 above have been met.
  - b. All related fees as per **Schedule “G” Fees and Charges** have been paid in full by the applicant.
70. No monument shall be installed in the City Cemetery until an installation appointment has been confirmed with the Parks Division by the applicant.
- a. Once the appointment has been confirmed, Parks staff will mark the centre of each plot location where a marker is to be installed.
71. No one may install a monument or a flat marker on a plot utilized for the interment of an indigent person until the Care and Maintenance Fee as set out in **Schedule “G” Fees and Charges** has been paid.
72. All maintenance and installation of monuments and flat markers in the Cemetery shall take place during normal business hours as defined in this Bylaw.
73. Monument foundation installations must be flush with the surrounding ground.
74. All persons employed in the installation of monuments or in doing any other work on a plot or plots in the Cemetery, shall be subject to all conditions stated:
- a. The City of Yorkton Cemetery Bylaw, and
  - b. The City’s Health & Safety Program for Contractor Policy No. CITY-1.1.
  - c. Any such persons refusing to abide by the regulations shall be removed from the Cemetery.
75. Any monument company, its employees, contracted employees thereof and/or authorized individuals carrying out any monument work on existing cemetery monuments (i.e. inscriptions, vase installations) are required to obtain approval from the Parks Manager, or their designate, prior to conducting any work. Further, they shall be responsible for the restoration or repair of any damages to the Cemetery grounds or fixtures resulting from their actions.
- a. The City of Yorkton is not responsible for any monument damages or repairs required due to improper installation.
76. Each plot shall be allowed a maximum of one monument as follows:
- a. In The Hill, the monument shall be centered at the head end of the plot.
  - b. In The Meadow, centered on the concrete runner of the designated plot(s).
  - c. **In The Woodland Path, centered on the plot, not nearer than six (6) inches from path.**
77. Where more than one interment occurs in a plot, additional memorialization is permitted as follows:

- a. In The Hill; only through the use of flat markers.
  - b. In The Meadow; only through the use of bronze plaques mounted to the base of a primary monument situated on the concrete runner.
78. Any monument company making application for a monument permit shall be responsible to ensure the dimensions of the monument do not exceed the maximum allowable dimensions as per Schedule “A” and Schedule “B” of this bylaw.
79. Any monument or flat marker that varies in dimensions listed in Schedule “A” and Schedule “B” of this Bylaw will be removed from the City Cemetery upon written notice of contravention.
80. Anyone wishing to place a monument or flat marker of dimensions other than those stipulated in Schedule “A” and Schedule “B” on a plot in the City of Yorkton Cemetery, may apply to the Director in writing for approval.
- a. The application must contain plans showing the exact dimensions and design of the proposed monument.
81. Monument permit applications that exceed the Monument Regulations as set out in Schedules “A”, “B” and “C”, shall not be approved.
- a. Any monument that is deemed by the Director to impede or restrict the operation and maintenance of the Cemetery, shall be assessed a repositioning surcharge equivalent to the costs of repositioning.
82. Installations are subject to pre and post inspections and any work completed by a contractor or a third party that is not in compliance with this Bylaw will be corrected by the City at the cost to the third party.

#### **Columbarium Niche Cover Plates**

83. To maintain columbarium in a uniform manner, the City of Yorkton shall arrange for the engraving of the niche plaque.
- a. The Niche Plate Engraving Application (Schedule “J”) must be completed and submitted to the office of the Director before engraving can be ordered.
84. The maximum engraving area is eleven (11) inches wide by ten (10) inches of height (i.e. half (½) inch border on bottom and sides and one and a half (1½) inches from top edge of door).
85. Under no circumstances will any portion of a “~~date of death~~ ~~of date~~” be pre-engraved.
86. All lettering shall be standard Times New Roman style – plain finish.
87. The “Family” name will be engraved in the maximum type-size of one and a quarter (1¼) inches and will be located on one single line of the engraving area.
88. In the case of hyphenated Family names that are longer than twelve (12) letters, the second part shall fall to the second line in place of the optional upper epitaph lines.
89. In cases whereby two (2) cremated human remains each having a different last name (i.e. common law) the optional upper epitaph lines will be omitted to accommodate two (2)



lines of one and a quarter (1¼) inch letters. Given names and dates shall be engraved in a type size smaller than that of the family name.

90. First names and initials will be engraved in three quarter (¾) inch type.
91. Dates of birth, death and optional epitaphs will be engraved in half (½) inch letters.
92. The engraving fee is included in the total cost of a columbarium niche.
93. Engraving of the niche plaque is allowed before inurnment of the human cremated remains. A temporary replacement cover will be installed by the City of Yorkton until the engraved cover is returned.

### **Memorialization**

94. **Memorialization regulations for the Woodland Path shall be found in Sections 37 through 41 and/or Schedule “C”)**
95. In order to maintain the safety of all visitors, employees and equipment, as well as the appearance of the Cemetery, Cemetery staff may remove any memorial or memorialization when it is considered necessary for the efficient operation of the Cemetery.
96. Flowers and/or memorial items are permitted at the interment site following the service, for approximately ten (10) days, including at the base of the columbarium, and then it will be removed by Cemetery staff.
97. Those persons wishing to commemorate a significant day or holiday by placing flowers or personal items should contact the Cemetery Administration prior to placing.
  - a. Items may be placed for approximately ten (10) days and then will be removed by Cemetery staff.
98. Ornaments including flower holders or vases, crosses and statues are not permitted on flat markers, unless the flat marker is in-line with the row of monuments; but are permitted to be attached to the base of monuments if they:
  - a. Are unbreakable;
  - b. Are permanently secured to the base of the monument;
  - c. Do not exceed thirty-six (36) centimeters (fourteen (14) inches) in height; and
  - d. Do not project beyond the outside edge of the monument base.
99. Items placed in permanent flower holders or vases will be removed if they have deteriorated or present an obstacle or hazard to the operation of the Cemetery.
100. Decorations, including but not limited to flowers, mementos, ceramics, statues, windmills, balloons, glass, baskets, solar lights and lanterns may be left only on a monument (not a flat marker) and are subject to removal and disposal without notice.
101. Any memorial or memorialization which has been removed by Cemetery staff that is considered to be valuable will be tagged for identification and stored for thirty (30) days, then disposed of if unclaimed.



102. The City is not responsible for loss or removal of any decoration and is not required to retain any decoration left in the Cemetery.
103. **Food and/or beverages are not permitted as part of any memorialization.**
104. Fence, railing, bedding plants, potted plants and materials intended for growth are not permitted.
105. Maintenance of plantings is restricted exclusively to the City.
106. Any person who damages or defaces plots, monuments, fencing, buildings, plantings or any other structure shall be liable to the City of Yorkton for damages in addition to the penalties listed in this Bylaw.
107. Border, fences, railings, trellises, coping, hedges, concrete or stone comers or iron posts are not permitted.
  - a. Any border, fence, railing, coping, hedge or any other bounding or enclosing material installed before the passing of this Bylaw may be removed by the City, or by reason of neglect or age it becomes in a state of disrepair.

#### **Disinterments**

108. The disinterment of human remains, except for that of cremated human remains, shall be permitted only by order of the Chief Coroner or upon issuance of a disinterment permit from the Minister of Health or their designate issued pursuant to an application under *The Public Health Act, 1994* and payment of the required fees as set out in **Schedule “G” Fees and Charges**.
109. A person making an application for a disinterment pursuant to **107. above** shall ensure that a licensed funeral director is present during the disinterment for the handling and transportation of the human remains, except for that of cremated human remains. City staff will only expose to the liner, or casket to a maximum depth of six (6) feet. All handling of liners, casket or remains are the responsibility of a licensed funeral director.
110. The disinterment of cremated human remains shall be permitted only by approval of the Director upon receipt of a written request and payment of the requisite fees as set out in **Schedule “G” Fees and Charges**.
111. Any requests for disinterment from a columbarium must be made in writing to the City of Yorkton by an authorized decision-maker.

#### **License Transfers and Buy Backs**

112. Any request for transfer of ownership of a pre-arranged plot or columbarium niche must be made in writing through the **Recreation and Community Services** ~~Community Development, Parks and Recreation~~ office, and must be accompanied by the original License before such request is accepted. All correspondence must include the complete name, address and telephone number of both the seller and the purchaser, and be signed by both parties.
113. All transfers of ownership shall be subject to an administration fee as outlined in **Schedule “G” Fees and Charges**.

114. All requests for buy back must be submitted to the **Recreation and Community Services** ~~Community Development, Parks and Recreation~~ office using **Schedule "F"** Buy Back Request Form. Requests that are made by someone other than the original purchaser must be accompanied by a **Schedule "H"** Declaration of Kinship affirmed by a Commissioner for Oaths or Notary Public.
115. Requests for plot/niche buy backs shall not be approved until an inspection is completed by the Parks Manager, or their designate, and it is determined appropriate for buy back.
- When the City is requested to buy back a plot which has an existing monument, removal costs for the monument shall be the sole responsibility of the registered plot original buyer or original buyer's representative.
  - If a niche's plaque has already been engraved, the cost of replacement cover shall be the responsibility of the applicant. Replacement plaques must be obtained from the City of Yorkton.
  - If a plot is determined not appropriate for transfer or re-sale, the City will enter into a buy back agreement with the authorized decision-maker.
116. The City of Yorkton will buy back a plot/niche on the basis of 90% (ninety percent) of the original fees paid for the plot and perpetual care OR 30% (thirty percent) of the current combined plot and perpetual care fees; whichever is greater.

### **Fees and Charges**

117. The license fees and all charges for work done or services rendered at a Cemetery shall be in accordance with the fees and charges as set out in **Schedule "G"**.
118. The fees and charges set out in **Schedule "G"** come into effect on the date specified in **Schedule "G"** or, where no date is specified in **Schedule "G"**, on the first date of the month following the passage of the Fee Schedule by City Council.
119. Interments outside normal Cemetery business hours shall be permitted only as authorized by the Director and on payment of the appropriate surcharge set out in **Schedule "G"** Fees and Charges.
120. In the case of service departures after 4:00 p.m., the Licensee and/or Funeral Home that made the arrangements shall pay the applicable Surcharge as set out in **Schedule "G"**. If a Funeral Home did not make the arrangements then the Licensee, or if the Licensee is deceased, the authorized decision-maker shall pay the applicable Surcharge as set out in **Schedule "G"** Fees and Charges.
121. The Director may make available a Deferred Payment Plan for a pre-need product or service on any terms deemed reasonable by the Director provided that payment in full is required before any product or service can be provided to the purchaser.
122. A person who purchases a license or cemetery goods and services under the Deferred Payment Plan shall also pay the appropriate Administrative Fee set out in **Schedule "G"**

### **Offences and Penalties**

123. No person shall injure any shrub or tree or pick or destroy any flower, wild or cultivated, growing in the Cemetery.

124. No person shall write upon, mark, scratch or deface any monument, structure or fence in or around the Cemetery.
125. Any person who damages any plot, marker, monument, fence, building or other structure in the Cemetery shall be liable to the City for such damages, besides being guilty of a breach of this Bylaw.
126. No person shall remove or destroy or attempt to remove or destroy any remains put in any plot.
127. No person shall dig or open any plot or cause any plots to be dug or opened in any place within the City other than that now used and/or hereinafter appropriated for the purpose of a cemetery; nor shall any person inter or deposit or cause to be interred or deposited any human remains in any plot within the City other than as prescribed in this bylaw.
128. Any person guilty of an infraction of the Bylaw or any part thereof shall be liable on summary conviction to the penalties prescribed in section 131 below.
129. No person shall disturb the quiet or good order of a Cemetery by noise or other improper conduct.
130. It is an offense to operate any recreational vehicles within the Cemetery.
131. Any person who contravenes any provision of this Bylaw is guilty of an offence and liable on summary conviction:
  - a. In the case of an individual, to a fine not exceeding \$2,000, or in default of payment, to imprisonment for a term not exceeding ninety (90) days;
  - b. In the case of a corporation, to a fine not exceeding \$5,000.

#### **Repealing Bylaw**

132. Bylaw No. 03/2017 and Bylaw 01/2020 are hereby repealed.

#### **Effective Date of Bylaw**

133. This Bylaw shall come into force and take effect on the day of final passing hereof.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
City Clerk

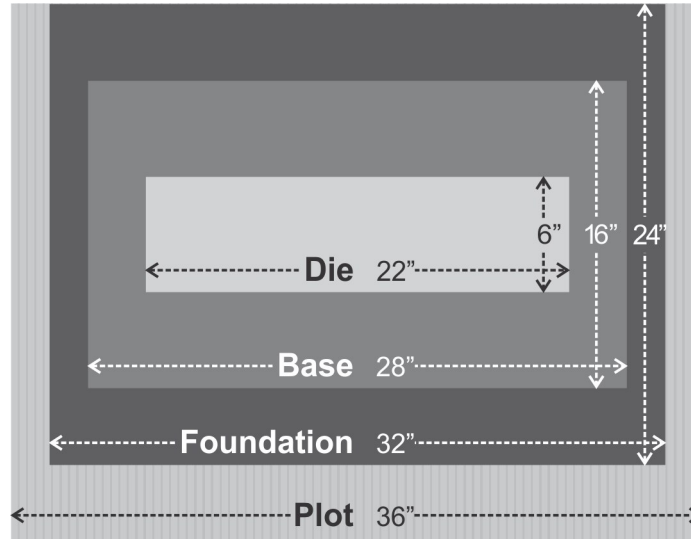
Introduced and read a first time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a second time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a third time and adopted this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

**Schedule "A"**  
**City of Yorkton**

**Monument Regulations "The Hill"**  
**Single 36" (3') Plot Dimensions**



Foundation

Maximum Foundation Measurement  
Width 32" x Depth 24" x Height 6"

Upright Monument

Maximum Base Measurement  
Width 28" x Depth 16" x Height 6"

Maximum Die Measurement  
Width 22" x Depth 6" x Height 28"

Flat Marker

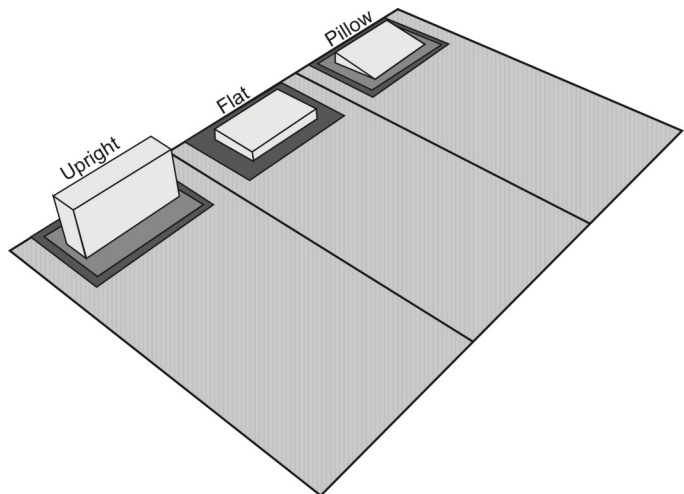
Maximum Die Measurement  
Width 28" x Depth 16" x Height 6"

Pillow Monument

Maximum Foundation Measurement  
Width 32" x Depth 25" x Height 6"

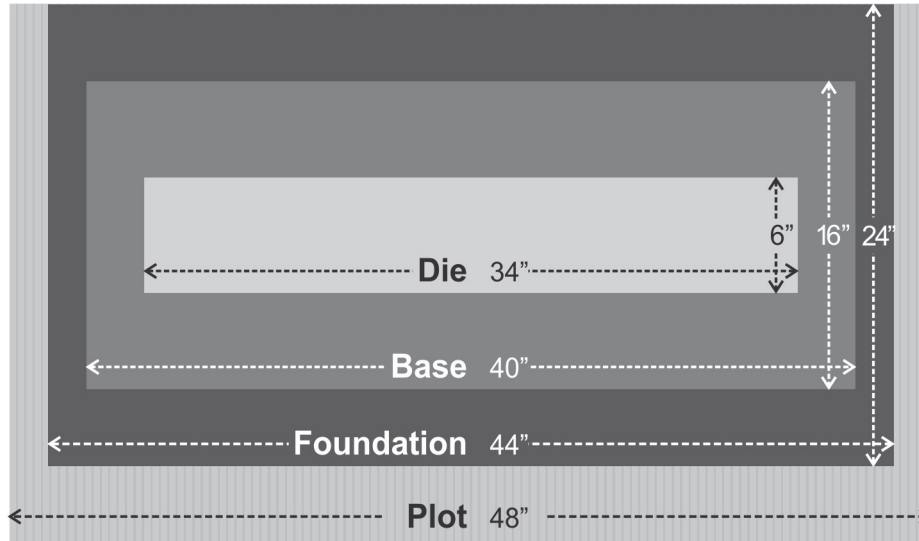
Maximum Base Measurement  
Width 28" x Depth 17" x Height 6"

Maximum Die Measurement  
Width 22" x Depth 12" x Height 8"



**Schedule "A"**  
**City of Yorkton**

**Monument Regulations "The Hill"**  
**Single 48" (4') Plot Dimensions**



**Foundation**

Maximum Foundation Measurement  
Width 44" x Depth 24" x Height 6"

**Upright Monument**

Maximum Base Measurement  
Width 40" x Depth 16" x Height 6"

Maximum Die Measurement  
Width 34" x Depth 6" x Height 30"

**Flat Monument**

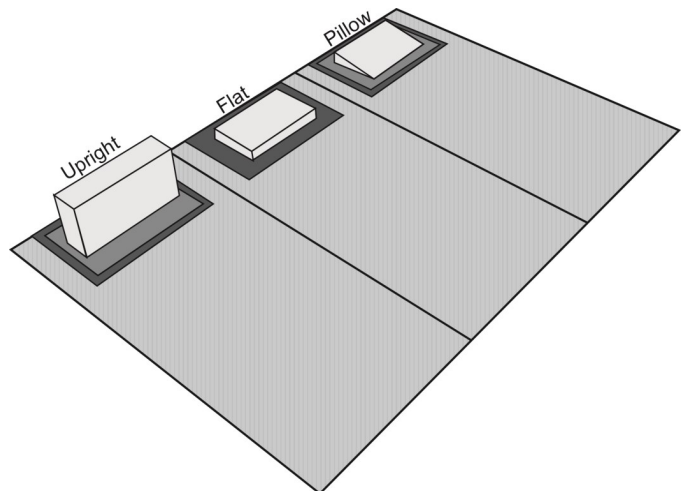
Maximum Die Measurement  
Width 40" x Depth 16" x Height 6"

**Pillow Monument**

Maximum Foundation Measurement  
Width 44" x Depth 25" x Height 6"

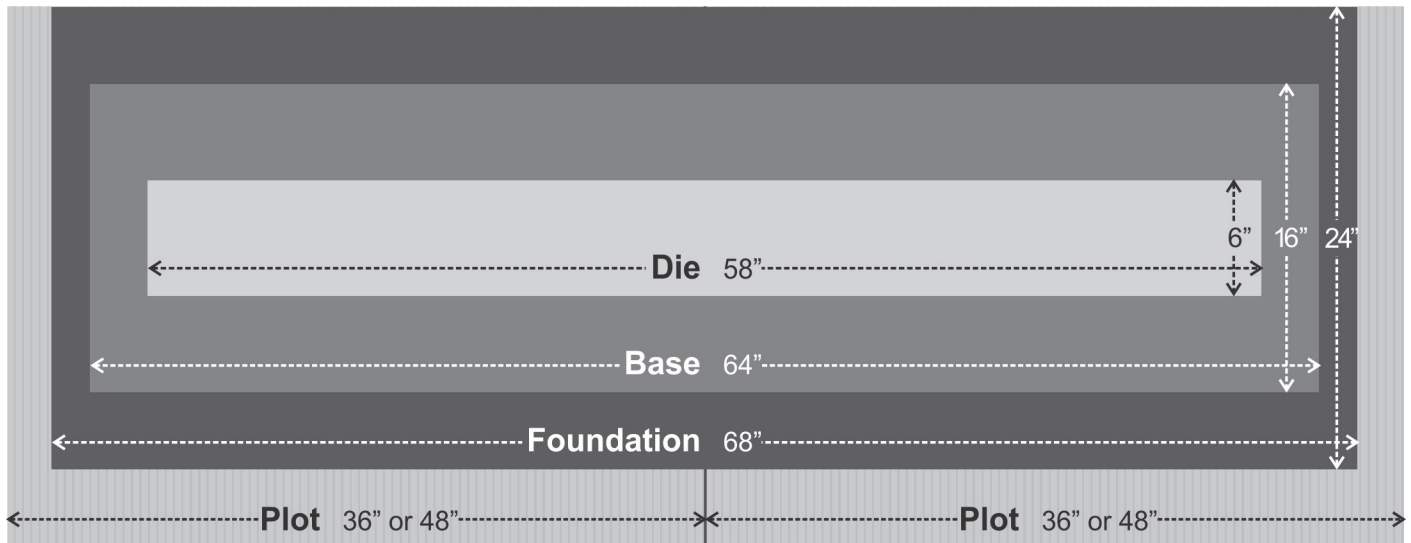
Maximum Base Measurement  
Width 40" x Depth 17" x Height 6"

Maximum Die Measurement  
Width 34" x Depth 12" x Height 8"



**Schedule "A"**  
**City of Yorkton**

**Monument Regulations "The Hill"**  
**Double 36" (3') or 48" (4') Plot Dimensions**



**Foundation**

Maximum Foundation Measurement  
Width 68" x Depth 24" x Height 6"

**Upright Monument**

Maximum Base Measurement  
Width 64" x Depth 16" x Height 6"

Maximum Die Measurement  
Width 58" x Depth 6" x Height 30"

**Flat Monument**

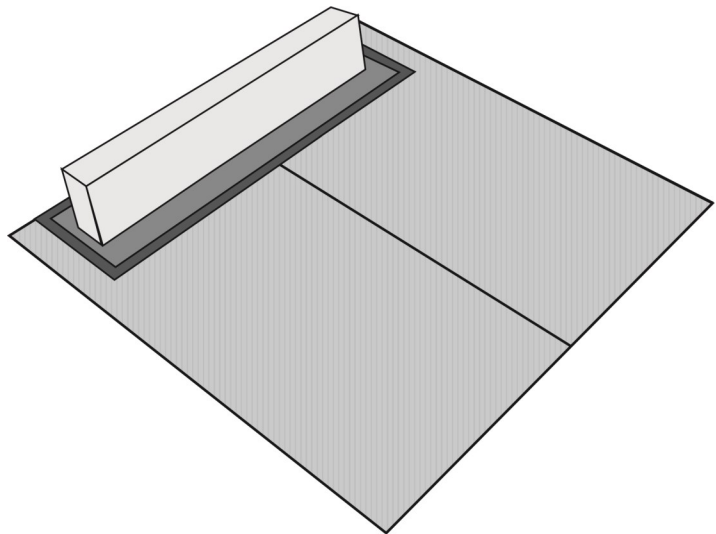
Maximum Die Measurement  
Width 64" x Depth 16" x Height 6"

**Pillow Monument**

Maximum Foundation Measurement  
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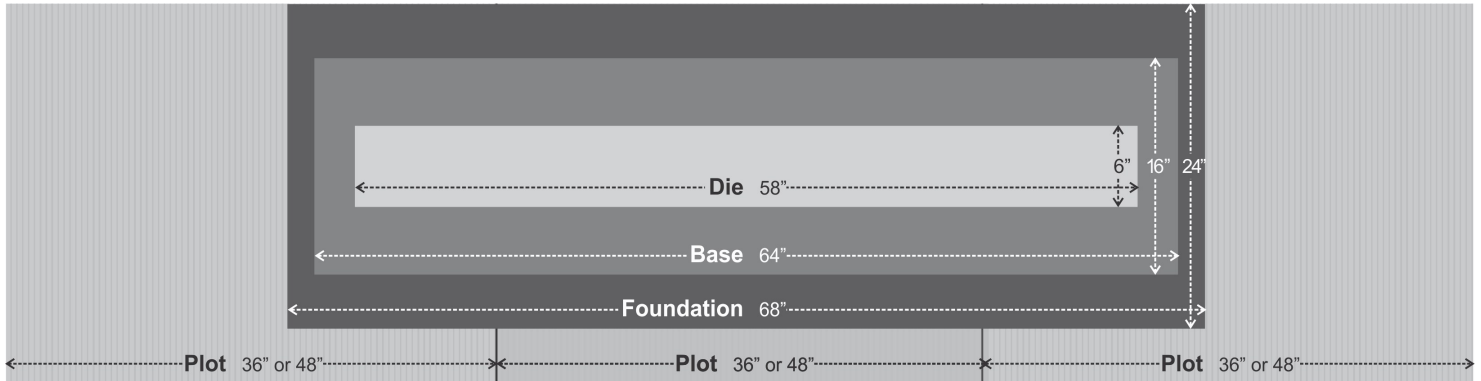
Maximum Base Measurement  
Width 64" x Depth 17" x Height 6"

Maximum Die Measurement  
Width 58" x Depth 12" x Height 8"



**Schedule "A"**  
**City of Yorkton**

**Monument Regulations "The Hill"**  
**Triple 36" (3') or 48" (4') Plot Dimensions**



Foundation

Maximum Foundation Measurement  
Width 68" x Depth 24" x Height 6"

Upright Monument

Maximum Base Measurement  
Width 64" x Depth 16" x Height 6"

Maximum Die Measurement  
Width 58" x Depth 6" x Height 30"

Flat Monument

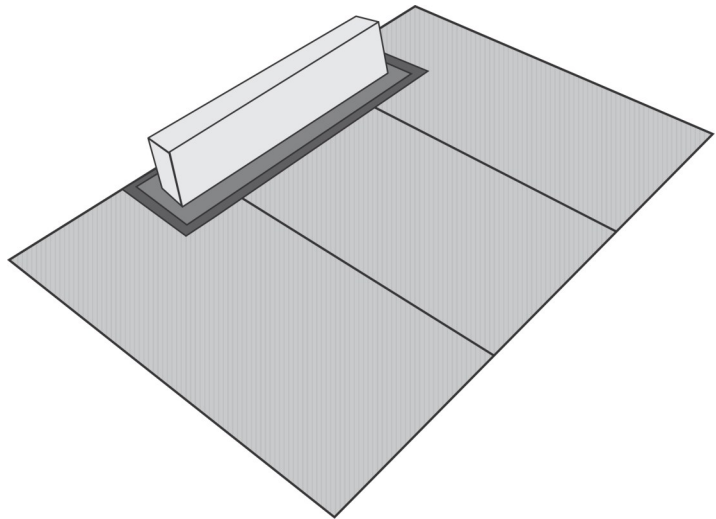
Maximum Die Measurement  
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Pillow Monument

Maximum Foundation Measurement  
Width 68" x Depth 25" x Height 6"

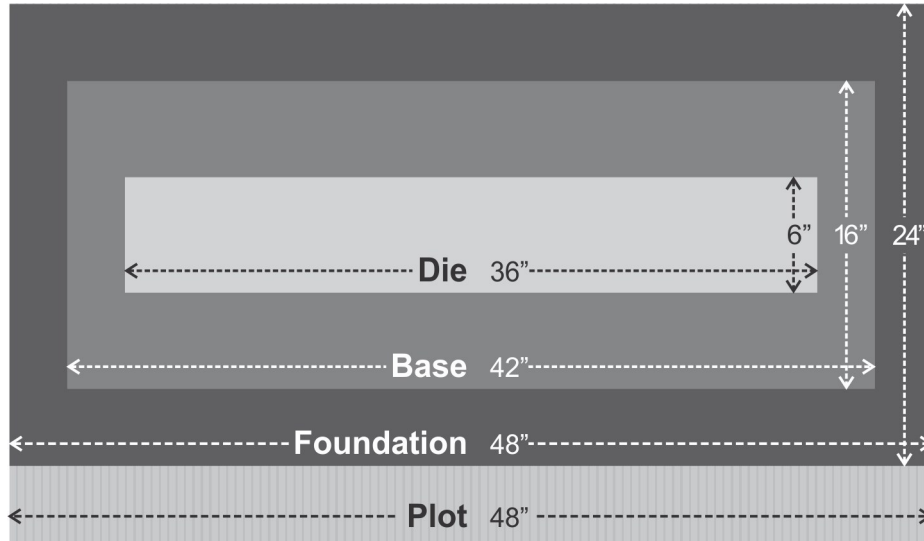
Maximum Base Measurement  
Width 64" x Depth 17" x Height 6"

Maximum Die Measurement  
Width 58" x Depth 12" x Height 8"



**Schedule "B"**  
**City of Yorkton**

**Monument Regulations "The Meadow"**  
**Single 48" (4') Plot Dimensions**



**\*Monument must be installed on the provided concrete slab.**

Foundation

Continuous concrete slab provided with plot(s)  
Width 48" x Depth 24" x Height 6"

Upright Monument

Maximum Base Measurement  
Width 42" x Depth 16" x Height 6"

Maximum Die Measurement  
Width 36" x Depth 6" x Height 30"

Flat Monument

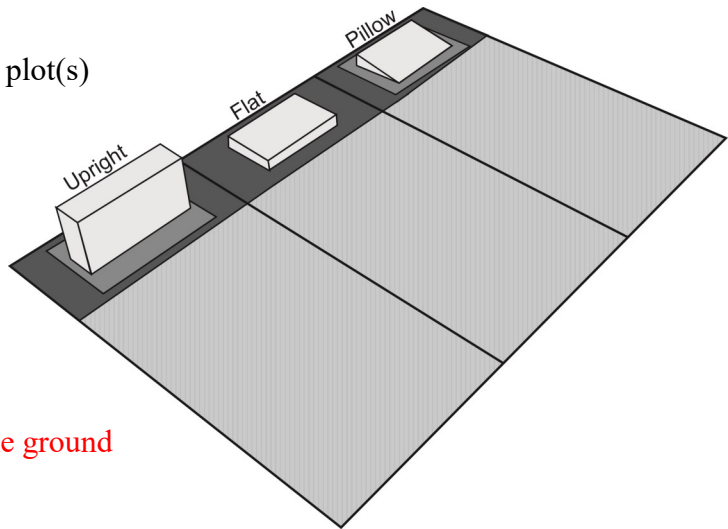
**\*not permitted to be installed flush in the ground**

Maximum Die Measurement  
Width 42" x Depth 16" x Height 6"

Pillow Monument

Maximum Base Measurement  
Width 42" x Depth 17" x Height 6"

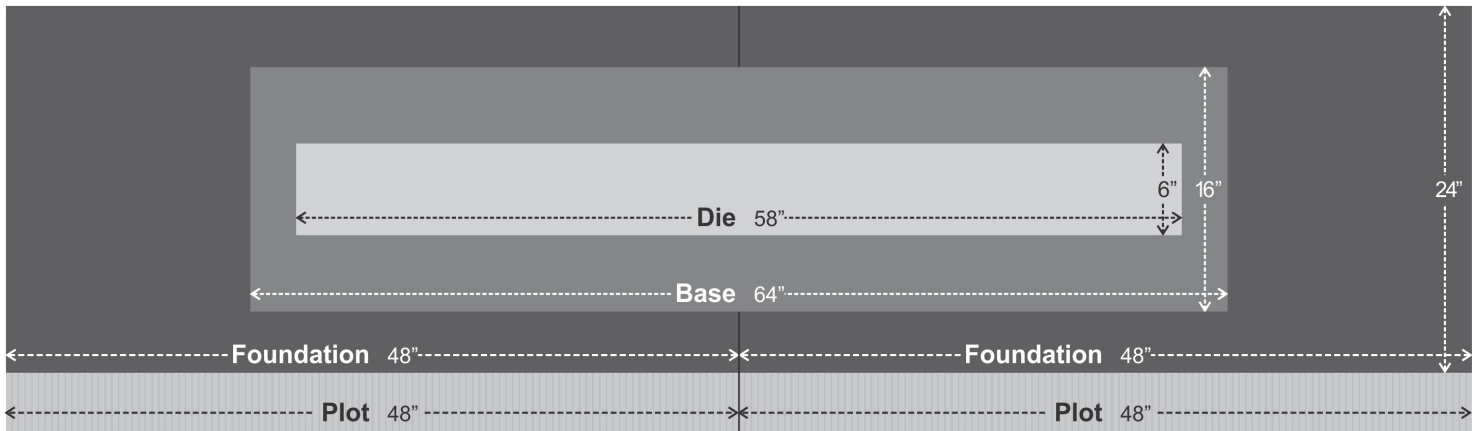
Maximum Die Measurement  
Width 36" x Depth 12" x Height 8"





**Schedule "B"**  
**City of Yorkton**

**Monument Regulations "The Meadow"**  
**Double 48" (4') Plot Dimensions**



**\*Monument must be installed on the provided concrete slab.**

Foundation

Continuous concrete slab provided with plot(s)  
Width 48" x Depth 24" x Height 6"

Upright Monument

Maximum Base Measurement  
Width 64" x Depth 16" x Height 6"

Maximum Die Measurement  
Width 58" x Depth 6" x Height 30"

Flat Monument

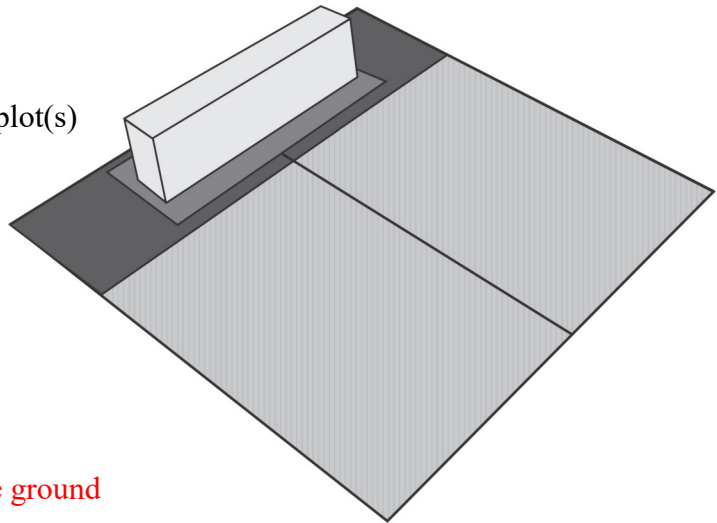
**\*not permitted to be installed flush in the ground**

Maximum Die Measurement  
Width 64" x Depth 16" x Height 6"

Pillow Monument

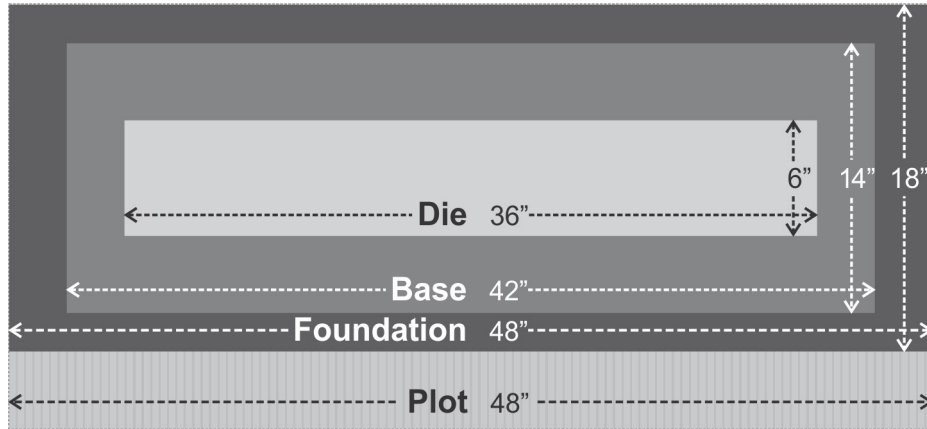
Maximum Base Measurement  
Width 64" x Depth 17" x Height 6"

Maximum Die Measurement  
Width 58" x Depth 12" x Height 8"



**Schedule "B"**  
**City of Yorkton**

**Monument Regulations "The Meadow"**  
**Cremation 48" (4') Plot Dimensions**



**\*Monument must be installed on the provided concrete slab.**

Foundation

Continuous concrete slab provided with plot(s)  
Width 48" x Depth 18" x Height 6"

Upright Monument

Maximum Base Measurement  
Width 42" x Depth 14" x Height 6"

Maximum Die Measurement  
Width 36" x Depth 6" x Height 30"

Flat Monument

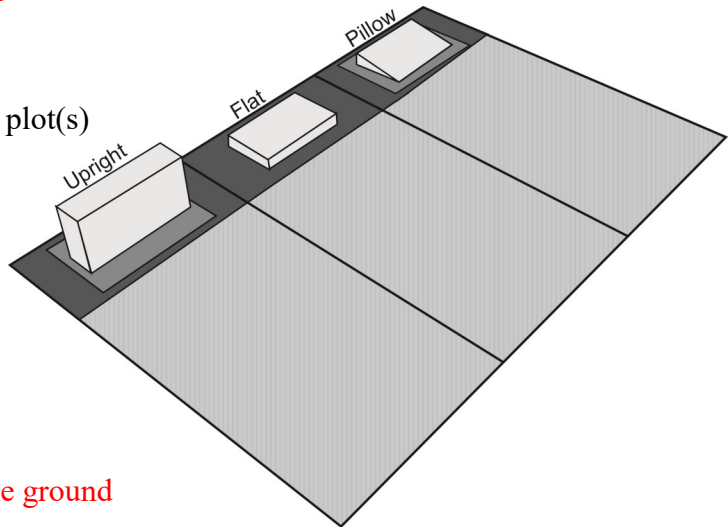
**\*not permitted to be installed flush in the ground**

Maximum Die Measurement  
Width 42" x Depth 14" x Height 6"

Pillow Monument

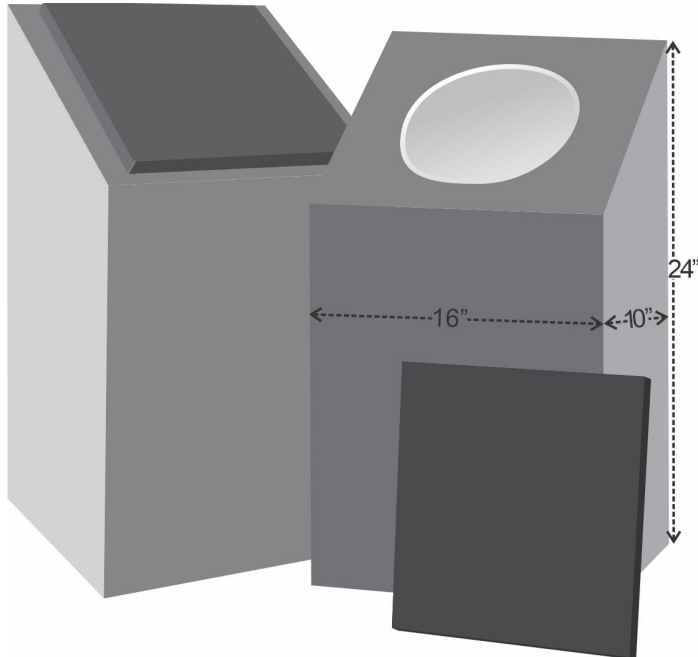
Maximum Base Measurement  
Width 42" x Depth 14" x Height 6"

Maximum Die Measurement  
Width 36" x Depth 10" x Height 8"



**Schedule "C"**  
**City of Yorkton**

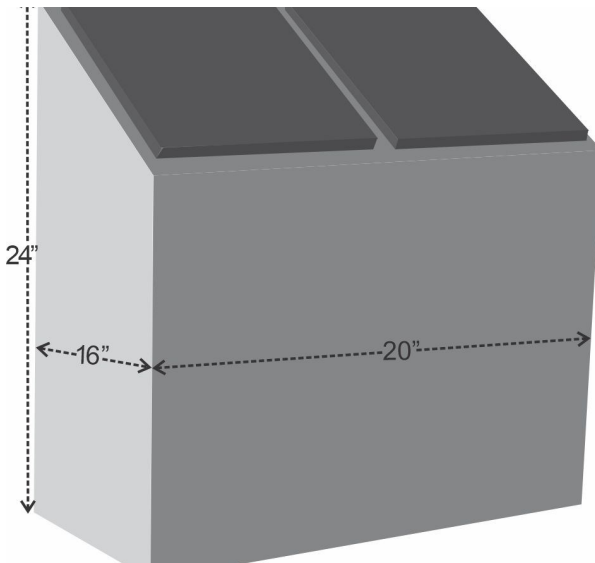
**Monument Regulations "The Woodland Path"**  
**Cremation Post Monuments**



Single Post Monument  
Maximum Measurement  
Width 16" x depth 10" x Height 24"

Foundation is not required.

Urn capacity is dependent on the size purchased from the monument company. It is the responsibility of the rights holder to ensure the urn will fit the space purchased through the monument company.



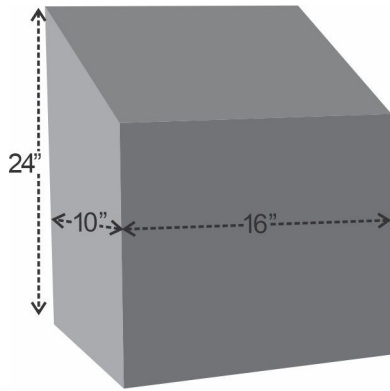
Double Post Monument  
Maximum Measurement  
Width 20" x depth 16" x Height 24"

Foundation is not required

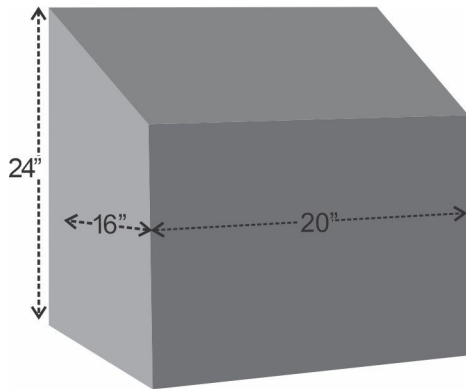
Urn capacity is dependent on the size purchased from the monument company. It is the responsibility of the rights holder to ensure the urn will fit the space purchased through the monument company.

**Schedule "C"**  
**City of Yorkton**

**Monument Regulations "The Woodland Path"**  
**Post Monuments**



Single Post Monument  
Maximum Measurement  
Width 16" x depth 10" x Height 24"



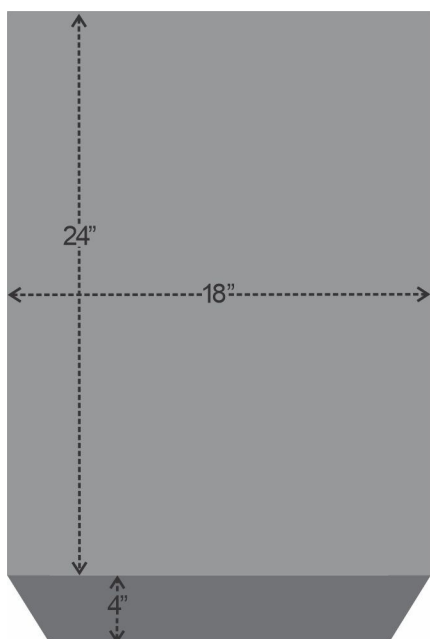
Double Post Monument  
Maximum Measurement  
Width 20" x depth 16" x Height 24"

Foundation is not required



**Schedule "C"**  
**City of Yorkton**

**Monument Regulations "The Woodland Path"**  
**Flat Markers**



Flat Marker

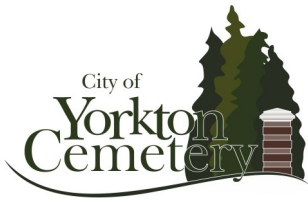
Maximum Measurement

Width 18" x Depth 24" x Height 4"

Foundation is not required.

Installation is above ground.





## Schedule "D"

# Yorkton City Cemetery Plot Interment Application

cemeteryadmin@yorkton.ca

306-786-1750

### DECEASED

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ Middle Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Gender: ☐ Male ☐ Female Age: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Date of Death: \_\_\_\_\_

### NEXT OF KIN / EXECUTOR

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Email: \_\_\_\_\_ Relationship to Deceased: \_\_\_\_\_

### INTERMENT DETAILS

Cremation: ☐ Casket: ☐ Columbarium: ☐

Cemetery Site: Hill: ☐ Meadow: ☐ Woodland Path: ☐

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ Columbarium Niche: \_\_\_\_\_

Cremation Interment: Location: ☐ Head ☐ Middle ☐ Foot ☐ Woodland Path

Placement: ☐ Left ☐ Right ☐ Middle

Cremation Interment Size: ☐ Standard 12 x 12 ☐ Larger (please indicate size): \_\_\_\_\_

Fiberglass Liner Required from City of Yorkton: ☐ Yes ☐ No

Interment Date: \_\_\_\_\_ Interment Time: \_\_\_\_\_

Winter Surcharge: ☐ Saturday Surcharge: ☐ Stat Holiday Surcharge: ☐ Social Services: ☐ Late Arrival: ☐

Interment Notes: \_\_\_\_\_

### CREMATORIUM

Crematorium: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_

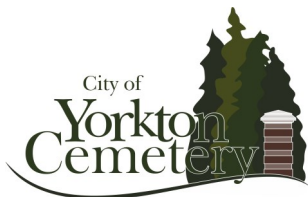
City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

### FUNERAL HOME

Funeral Home: \_\_\_\_\_ Contact Person: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_



Schedule "D"

**Yorkton City Cemetery Plot Purchase Application**

cemeteryadmin@yorkton.ca

306-786-1750

---

**PURCHASER**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ Middle Name: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Email: \_\_\_\_\_

---

**RIGHTS HOLDER (if different than Purchaser)**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ Middle Name: \_\_\_\_\_

Address: \_\_\_\_\_ Phone Number: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Email: \_\_\_\_\_

---

**LOCATION DETAILS**

Cemetery Site: Hill: ☐ Meadow: ☐ Woodland Path: ☐ Columbarium: ☐

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ Columbarium Niche: \_\_\_\_\_

Plot Type: ☐ Traditional 4' (48") Plot - Hill

☐ Niche Middle

☐ Traditional 3' (36") Plot - Hill

☐ Niche Bottom/Top

☐ Traditional Plot - Meadow

☐ Cremation Plot - Hill

☐ Cremation Plot - Meadow

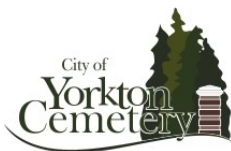
☐ Cremation Plot - Woodland Path

Notes: \_\_\_\_\_

---



**Schedule "D"**



**Rights Transfer**

**Date Effective:** \_\_\_\_\_

**Sale**

**Sale:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Price:** \_\_\_\_\_

**Site**

**Site (s) Location:** \_\_\_\_\_

**Site Type:** \_\_\_\_\_

**Site Width:** \_\_\_\_\_

**New Rights Holder**

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

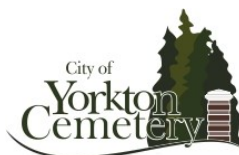
**Previous Owner**

**Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Memo:** \_\_\_\_\_

Schedule "D"



Interment License

**Deceased**

**Name:** \_\_\_\_\_

**Gender:** \_\_\_\_\_

**Age:** \_\_\_\_\_

**Date of Birth:** \_\_\_\_\_

**Date of Death:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Next of Kin**

**Name:** \_\_\_\_\_

**Relationship to Deceased:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Email:** \_\_\_\_\_

**Interment**

**Date of Interment:** \_\_\_\_\_ **Time of Interment:** \_\_\_\_\_

**Interment Site:** \_\_\_\_\_ **Site Width:** \_\_\_\_\_

**In Site At:** \_\_\_\_\_ **Container:** \_\_\_\_\_

**Funeral Home:** \_\_\_\_\_ **Contact Person:** \_\_\_\_\_

**Crematorium:** \_\_\_\_\_

**Memo:** \_\_\_\_\_

**Schedule "E"**  
**City of Yorkton**  
**Cemetery Monument Permit**

Date of Application: \_\_\_\_\_

Name of Monument Company: \_\_\_\_\_

\*The Applicant certifies that he or she is the current owner/licensee of the burial plot, or is the authorized decision-maker as per *The Funeral and Cremation Services Act*.

Applicant's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

To install a monument in Block: \_\_\_\_\_ Lot: \_\_\_\_\_ Plot: \_\_\_\_\_

Located within section: ☐ Hill ☐ Meadow ☐ Woodland Path

Plot Width: ☐ 36" (3') ☐ 48" (4')

Inscribed Name (s): \_\_\_\_\_

Monument Permit Fee \$ \_\_\_\_\_

Care & Maintenance Fee \$ \_\_\_\_\_

Total \$ \_\_\_\_\_

**Monument Type:**

- ☐ Double Plot Upright Monument
- ☐ Single 48" (4') Plot Upright Monument
- ☐ Single 36" (3') Plot Upright Monument
- ☐ Double Plot Pillow Monument
- ☐ Single 48" (4') Plot Pillow Monument
- ☐ Single 36" (3') Plot Pillow Monument
- ☐ Double Plot Flat Marker
- ☐ Single 48" (4') Plot Flat Marker
- ☐ Single 36" (3') Plot Flat Marker
- ☐ Single Woodland Path Post (no foundation)
- ☐ Double Woodland Path Post (no foundation)

**Monument/Plaque Dimensions:**

**Die Measurement**

\_\_\_\_\_ deep x \_\_\_\_\_ wide x \_\_\_\_\_ high

**Base Measurement**

\_\_\_\_\_ deep x \_\_\_\_\_ wide x \_\_\_\_\_ high

**Foundation**

\_\_\_\_\_ deep x \_\_\_\_\_ wide x \_\_\_\_\_ high

**Woodland Post**

\_\_\_\_\_ deep x \_\_\_\_\_ wide x \_\_\_\_\_ high

Monument Material for Die: \_\_\_\_\_ for Base: \_\_\_\_\_ for Foundation: \_\_\_\_\_

Is a rendering of the monument attached? ☐ Yes ☐ No

Does your monument/plaque meet the Monument Regulations? ☐ Yes ☐ No

**No monument or markers for the purpose of designating plots shall be installed in the Cemetery unless such monuments or markers have first been submitted to and approved by the Director and a permit issued for the installation of same.**

**As per the City of Yorkton Cemetery Bylaw, any monument company, its employees, contracted employees thereof and/or authorized individuals carrying out any monument work in the City Cemetery must present a copy of this permit to the caretaker upon arrival at the Cemetery and shall be responsible for the restoration and repair of any damages to the Cemetery grounds or fixtures resulting from their actions.**

**The City of Yorkton will not be held responsible for any monument damages or repairs required due to improper installation of the above noted monument.**

**Schedule "F"**  
**City of Yorkton**

**Buy Back Request Form**

Date of Request: \_\_\_\_\_

Applicant: \_\_\_\_\_

Address: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

**Site Information:**

☐ Hill      ☐ Meadow      ☐ Woodland Path

Block: \_\_\_\_\_ Lot: \_\_\_\_\_ Plot (s): \_\_\_\_\_

Original Fees Paid: \_\_\_\_\_ x 90% = \_\_\_\_\_

Current Fee of Plot: \_\_\_\_\_ x 30% = \_\_\_\_\_

*The City of Yorkton Cemetery will purchase the plot at the greater fee.*

Site Inspection comments/diagram:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Monument on site:    ☐ Yes    ☐ No

Monument relocation required:    ☐ Yes    ☐ No

If yes, monument relocation fee of \$100.00 will be implemented.

Buy Back Price: \_\_\_\_\_

Signature of Applicant: \_\_\_\_\_

**Schedule “G”  
City of Yorkton  
2022– 2021 Cemetery Proposed Fees and Charges**

Fee Type	2022 Proposed Rates	2023 Proposed Rates	2024 Proposed Rates
<b>Plots</b>			
<b>The Hill</b>			
Traditional - Hill 3'	\$ 1,375	\$ 1,420	\$ 1,465
Traditional - Hill 4'	\$ 2,380	\$ 2,450	\$ 2,525
Cremation - Hill	\$ 1,190	\$ 1,225	\$ 1,260
Child - Hill (Only in Hill)	\$ 900	\$ 930	\$ 960
<b>The Meadow</b>			
Traditional - Meadow 4' (incl. concrete runner)	\$ 2,565	\$ 2,640	\$ 2,720
Cremation - Meadow (incl. concrete runner)	\$ 1,650	\$ 1,700	\$ 1,750
Cremation - Woodland Path	\$ 1,875	\$ 1,930	\$ 1,990
<b>Columbarium</b>			
Niche	\$ 3,000	\$ 3,100	\$ 3,200
<b>Opening/Closing</b>			
Adult Traditional	\$ 1,600	\$ 1,650	\$ 1,700
Child Traditional	\$ 570	\$ 590	\$ 610
Cremation	\$ 570	\$ 590	\$ 610
Columbarium Open/Close	\$ 215	\$ 220	\$ 225
<b>Surcharges (in addition to Opening &amp; Closing Fees &amp; will be based on actual hourly rates)</b>			
Winter Open/Close Surcharge - Traditional <i>Effective November 1st to April 30th</i>	\$ 985	\$ 1,015	\$ 1,045
Winter Open/Close Surcharge - Cremation <i>Effective November 1st to April 30th</i>	\$ 410	\$ 425	\$ 440
Saturday Service - Casket	\$ 600	\$ 620	\$ 640
Saturday Service - Cremation	\$ 300	\$ 310	\$ 320
STAT Holiday	\$ 900	\$ 930	\$ 960
Multiple Service Fee	\$ 310	\$ 320	\$ 330
After 4pm Surcharge (per 1/2 Hr)	\$ 100	\$ 105	\$ 110
Admin Fee	\$ 105	\$ 110	\$ 115
<b>Disinterments</b>			
Regular	\$ 1,600	\$ 1,650	\$ 1,700
Cremation	\$ 570	\$ 590	\$ 610
<b>Permits</b>			
Monument Permits	\$ 210	\$ 215	\$ 220
<b>Perpetual Care included in each plot sale</b>			
Per Plot (Included in fee)	25%	25%	25%
<b>Annual Care &amp; Maintenance Charged to multiple interments in one plot</b>			
Annual Care & Maintenance Fee (additional fee to open & close)	25%	25%	25%

**Schedule "H"**  
**City of Yorkton**

**Declaration of Kinship**

In accordance with Section 52 of *The Cemeteries Act, 1999*.

I hereby certify that I am the \_\_\_\_\_ of \_\_\_\_\_  
(Relation) Plot Original Buyer/Buyer's Representative

\_\_\_\_\_ **I wish to retain the burial lots known as**

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

\_\_\_\_\_ **I wish to have the City of Yorkton buy back the burial lots known as**

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

Block \_\_\_\_\_ Lot \_\_\_\_\_ Plot \_\_\_\_\_ in the City of Yorkton Cemetery

I hereby certify that the above information is true and correct.

\_\_\_\_\_  
Print Name Signature

\_\_\_\_\_  
Address City, Province

\_\_\_\_\_  
Postal Code Phone Number

Declared before me at the City/Town of \_\_\_\_\_ in the province of \_\_\_\_\_,  
this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Commissioner for Oaths/Notary Public

For the Province of \_\_\_\_\_

My commission/appointment expires on \_\_\_\_\_



**Schedule "I"**  
**City of Yorkton**  
**Deferred Payment Plan Agreement**

**Customer Information**

Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

Cemetery License # \_\_\_\_\_ Amount \$ \_\_\_\_\_

*A down payment is required when the payment plan is established as follows:*

- a. Standard Cemetery Plot—25% of the total plot purchase price plus a \$50.00 non-refundable deposit per license.*
- b. Columbarium Niche—10% of the total plot purchase price plus a \$50.00 non-refundable deposit per license.*

Down payment \$ \_\_\_\_\_

Total \$ \_\_\_\_\_

Payment date \_\_\_\_\_ Monthly Payment Amount \$ \_\_\_\_\_

*The maximum length for the payment plan will be two years from the date of the down payment.*

**Conditions of Agreement**

I hereby authorize the City of Yorkton to take automatic payments from my credit card as indicated above

Credit Card Type	Credit Card Number	Expiry Date

for the cemetery License listed above. Payment for the first month is required at the time of the purchase, after which automatic payments will be processed on the last day of the month.

It is acknowledged that any request to withdraw from the signed License will be processed in accordance with the City of Yorkton Cemetery Bylaw. Any approved refunds will be equal to the total amount paid to date, less the non-refundable Administration Fee.

Payment rejected by the Credit Card Company due to expired card or exceeding credit card limits may result in termination of the agreement. All outstanding payments become due and payable immediately and subject to penalties.

In the event of a change in my credit card information, I/we will notify Community Development, Parks and Recreation at (306) 786-1750 at least 15 days prior to the next due date, for cancellation and to complete a new agreement form, providing the new credit card information.

The customer acknowledges the conditions of this agreement through receipt of a signed copy of this authorization.

Signature of Cardholder \_\_\_\_\_ Date: \_\_\_\_\_

*This personal information contained on this form will be used only for the purpose of registering, maintaining payment records, facilitation recreation programs and providing information on future recreation programs. If you have any questions about this collection, please contact Community Development, Parks and Recreation, City of Yorkton, Box 400, Yorkton Saskatchewan, S3N 2W3 or telephone (306) 786-1750.*

**Schedule "J"**  
**City of Yorkton**

**Columbarium Niche Engraving Form**

Applicants Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Province: \_\_\_\_\_

Postal Code: \_\_\_\_\_ Phone: \_\_\_\_\_

Email: \_\_\_\_\_

**Engraving:**

Family Name: \_\_\_\_\_

Family Name Placement: ☐ Top ☐ Middle ☐ Bottom

Given Name (s): \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Date of Death: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Date of Death: \_\_\_\_\_

Epitaph: \_\_\_\_\_

Approval for engraving is hereby given this \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_,  
for Columbarium Niche \_\_\_\_\_

\_\_\_\_\_  
Signature of Applicant

\_\_\_\_\_  
City of Yorkton Representative

## City of Yorkton

### 2021 Cemetery Fees & Charges Comparison

[illegible]

**City of Yorkton**  
**2022-2024 Cemetery Proposed Fees & Charges**

Fee Type	2022 Proposed Rates	2023 Proposed Rates	2024 Proposed Rates
<b>Plots</b>			
<b>The Hill</b>			
Traditional - Hill 3'	\$ 1,375	\$ 1,420	\$ 1,465
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Cremation - Meadow (incl. concrete runner)	\$ 1,650	\$ 1,700	\$ 1,750
Cremation - Woodland Path	\$ 1,875	\$ 1,930	\$ 1,990
<b>Columbarium</b>			
Niche	\$ 3,000	\$ 3,100	\$ 3,200
<b>Opening/Closing</b>			
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Child Traditional	\$ 570	\$ 590	\$ 610
Cremation	\$ 570	\$ 590	\$ 610
Columbarium Open/Close	\$ 215	\$ 220	\$ 225
<b>Surcharges (in addition to Opening &amp; Closing Fees &amp; will be based on actual hourly rates)</b>			
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Winter Open/Close Surcharge - Cremation <i>Effective November 1st to April 30th</i>	\$ 410	\$ 425	\$ 440
Saturday Service - Casket	\$ 600	\$ 620	\$ 640
Saturday Service - Cremation	\$ 300	\$ 310	\$ 320
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After 4pm Surcharge (per 1/2 Hr)	\$ 100	\$ 105	\$ 110
Admin Fee	\$ 105	\$ 110	\$ 115
<b>Disinterments</b>			
Regular	\$ 1,600	\$ 1,650	\$ 1,700
Cremation	\$ 570	\$ 590	\$ 610
<b>Permits</b>			
Monument Permits	\$ 210	\$ 215	\$ 220
<b>Perpetual Care included in each plot sale</b>			
Per Plot (Included in fee)	25%	25%	25%
<b>Annual Care &amp; Maintenance Charged to multiple interments in one plot</b>			
Annual Care & Maintenance Fee (additional fee to open & close)	25%	25%	25%

\* Please note, fees based on hourly rates, will be adjusted accordingly.







<b>TITLE: Bylaw Nos. 11/2021 &amp; 12/2021 – Amendments to Official Community Plan Bylaw No. 12/2014 and Zoning Bylaw No. 14/2003 – 105 Darlington Street West Change of OCP Future Land Use Concept Map from Commercial to Residential Rezone from C-4 Neighbourhood Commercial to R-5 Mixed Use Density Residential Council Report #1 – First Readings &amp; Public Notice Authorization</b>	<b>DATE OF MEETING: November 15, 2021</b>
<b>CLEARANCES:</b> Michael Eger - Director of Planning, Building & Development  <b>Michael Eger</b>	<b>REPORT DATE: November 9, 2021</b>  <b>ATTACHMENTS:</b> <ol style="list-style-type: none"> <li>1. Key Plan</li> <li>2. Aerial View &amp; Street View</li> <li>3. OCP Future Land Use Concept Map</li> <li>4. Zoning Bylaw - Area Zoning</li> <li>5. Bylaw No. 11/2021</li> <li>6. Bylaw No. 12/2021</li> <li>7. Public Notice</li> </ol>
Written by: Carleen Koroluk - Planner  <b>Carleen Koroluk</b>	
Reviewed by: Jessica Matsalla - City Clerk  <b>Jessica Matsalla</b>	
Approved by: Lonnie Kaal - City Manager  <b>Lonnie Kaal</b>	

**Summary of History/Discussion:**

This report is in response to a Zoning Bylaw Amendment Application submitted by the property owner affecting 105 Darlington Street West (see Attachment 1 and 2).

The subject property was originally developed in approximately 1948 and was used as a convenience store with an accessory residential space in the rear portion of the building where the operators lived. Over time the convenience store use was discontinued and the front area was used for various commercial uses leading up to the sale of the property to the current owner in 2006. Shortly after the purchase, the commercial space was converted to provide additional residential space and the building has been used solely for residential purposes ever since.

Currently the property is identified in the Official Community Plan Future Land Use Concept Map as Commercial (see Attachment 3) and is zoned C-4 Neighbourhood Commercial under the Zoning Bylaw (see Attachment 4). As such, the solely residential use that began in 2006 is a non-conforming use under the two bylaws and may continue. However, should the building be demolished or removed, the residential use cannot be re-established as the C-4 Neighbourhood Commercial zoning does not permit residential dwellings.



At this time, the property owner is requesting rezoning to protect his interest in the property and to preserve property value by making the residential use a conforming use. In order to achieve this, the following amendments are required:

1. OCP Amendment – Bylaw No. 11/2021 to change the Future Land Use Concept Map for 105 Darlington Street West from Commercial to Residential (see Attachment 5).
2. Zoning Bylaw Amendment – Bylaw No. 12/2021 to change the zoning for 105 Darlington Street West from C-4 Neighbourhood Commercial to R-5 Mixed Use Density Residential (see Attachment 6).

### **Administrative Review:**

The subject property is comprised of a single lot, zoned C-4 Neighbourhood Commercial and the surrounding area consists of residential dwellings, zoned R-5 Mixed Density Residential (see Attachment 4).

The C-4 Neighbourhood Commercial zoning district restricts residential uses to that of combined apartment buildings with main floor commercial use and commercial uses are limited in scope to low impact uses such as bakery, government services, personal services establishments, health/professional offices and retail convenience stores.

Being that the current use is a single detached dwelling and demand for commercial uses in the residential areas is very low, Administration is recommending that the property be rezoned to R-5 Mixed Density Residential to match that of the surrounding area and allow for the continued residential use.

In order to evaluate the merits of potential rezoning applications, Planning Services considers each request under eight criteria. This application was evaluated as follows:

1. Is the proposed use compatible with neighboring uses?

The surrounding area is zoned R-5 Mixed Density Residential and the proposed change to residential use is compatible. (see Attachment 4).

2. Are the building and property suitable to the proposed use?

The building continues to be used solely as a residential dwelling and the owner wishes to ensure conforming use as to not inhibit future sale of the property or the ability to rebuild in the event of a disaster.

3. Is there a need in the community for the proposed use?

Determining need can be very difficult – needs are things like the provision of essential public services, and access to affordable and safe housing, education, health care and food. The demand for low impact commercial uses within residential areas has diminished in recent years due to increased population mobility (more vehicle traffic/less foot traffic) and the availability of commercial spaces in the city. Consequently, typical convenience store

type uses have been integrated into higher traffic areas through combination with other businesses like service stations.

Preservation and use of existing structures and properties throughout the City is encouraged and rezoning of the subject property will allow for the residential use of the property to be a conforming and continuing use.

4. Is there a need for additional properties within the zoning sector?

Refer to answer for question #5.

5. Would the rezoning transplant an existing business in such a way that it will create a vacancy elsewhere in the City?

Not Applicable.

6. Will the proposed use enhance or revitalize the property and building(s)?

The existing dwelling is a well kept, fully functional residential space and no longer contains commercial space.

7. Has the applicant demonstrated their understanding of the potential financial constraints and opportunities that warrants consideration of a rezoning?

The applicant has been advised and understands that the amendments will restrict the subject property's use to residential and will eliminate commercial use.

8. Would the rezoning be perceived as a precedent for which other owners of similarly-zoned properties would expect similar treatment?

At this time, Administration is not aware of any other C-4 Neighbourhood Commercial zoned properties being used solely for residential purposes.

Based on the above criteria, Administration is confident that the application adequately satisfies the criteria and is supportive of the OCP and Zoning Bylaw amendments.

**Public Notice:**

At this time, Administration would like to initiate the public notice process for the required amendments including advertisement in the local newspaper, at City Hall and on the City website (see Attachment 7).

If authorization for Public Notice is granted, the proposed amendments will also be referred to the Planning and Infrastructure Commission for their input. The Commission's recommendations will be brought back to Council, for their review and decision, in conjunction with the Public Hearing.

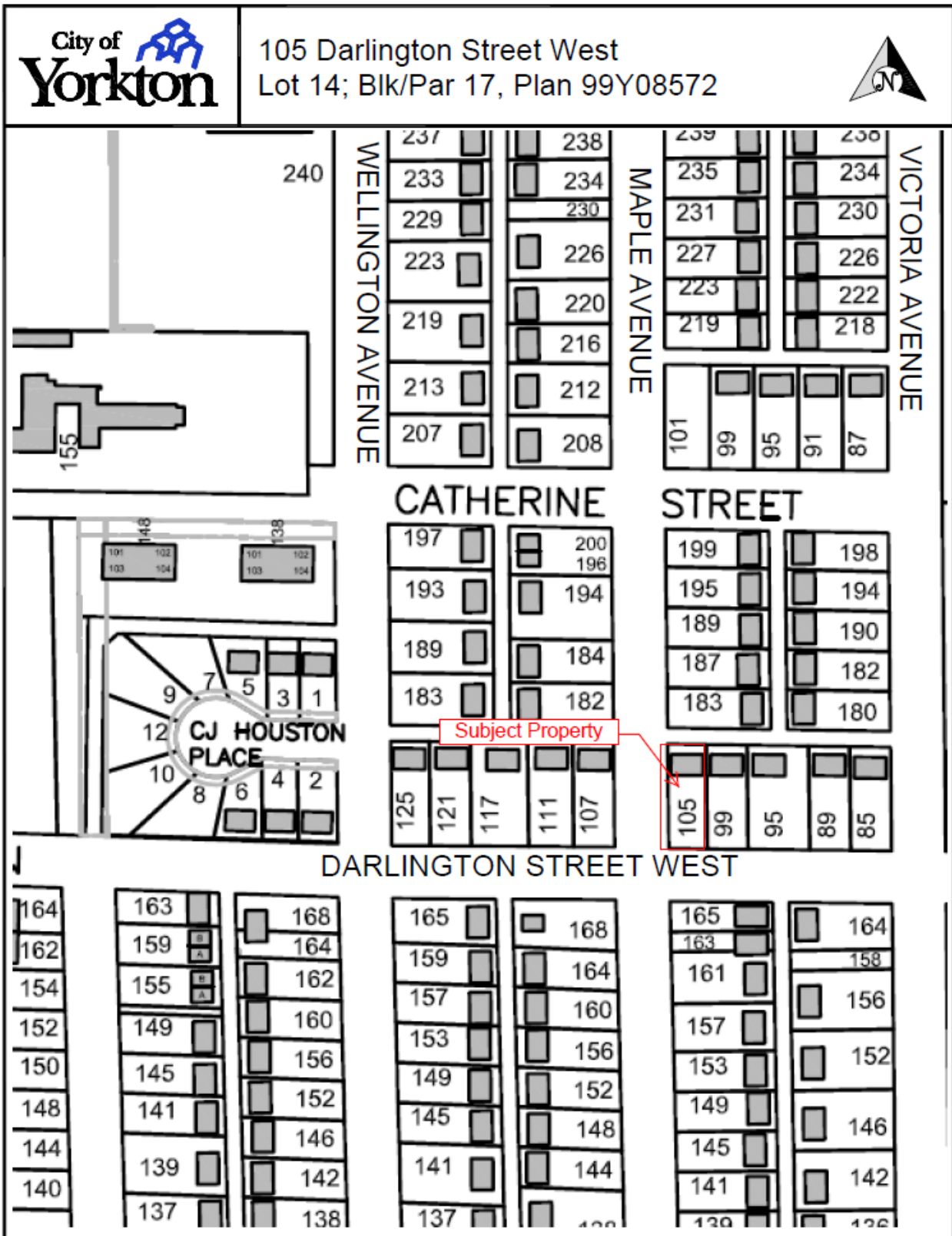
**Council's Options:**

1. That the proposed Official Community Plan and Zoning Bylaw amendments be approved for introduction and 1<sup>st</sup> Reading and furthermore that Administration be authorized to proceed with public notice;
2. That the proposed Official Community Plan and Zoning Bylaw amendments be denied for reasons as listed by Council;
3. That Administration be provided with alternative direction.

**Administration's Recommendation:**

1. That Bylaw No.11/2021, a bylaw of the City of Yorkton in the Province of Saskatchewan to Amend Bylaw No. 12/2014 by changing the Future Land Use Concept Map for Lot 14, Blk/Par 17, Plan No 99Y08572, civically known as 105 Darlington Street West, from Commercial to Residential, be introduced and given 1<sup>st</sup> Reading , and furthermore that Administration be authorized to proceed with the Public Notice process;  
and
2. That Bylaw No. 12/2021, a bylaw of the City of Yorkton in the Province of Saskatchewan to Amend Bylaw No. 14/2003 by rezoning Lot 14, Blk/Par 17, Plan No 99Y08572, civically known as 105 Darlington Street West, from C-4 Neighbourhood Commercial to R-5 Mixed Density Residential, be introduced and given 1<sup>st</sup> Reading , and furthermore that Administration be authorized to proceed with the Public Notice process.

# Attachment 1 – Key Plan



## Attachment 2 – Aerial View & Street View

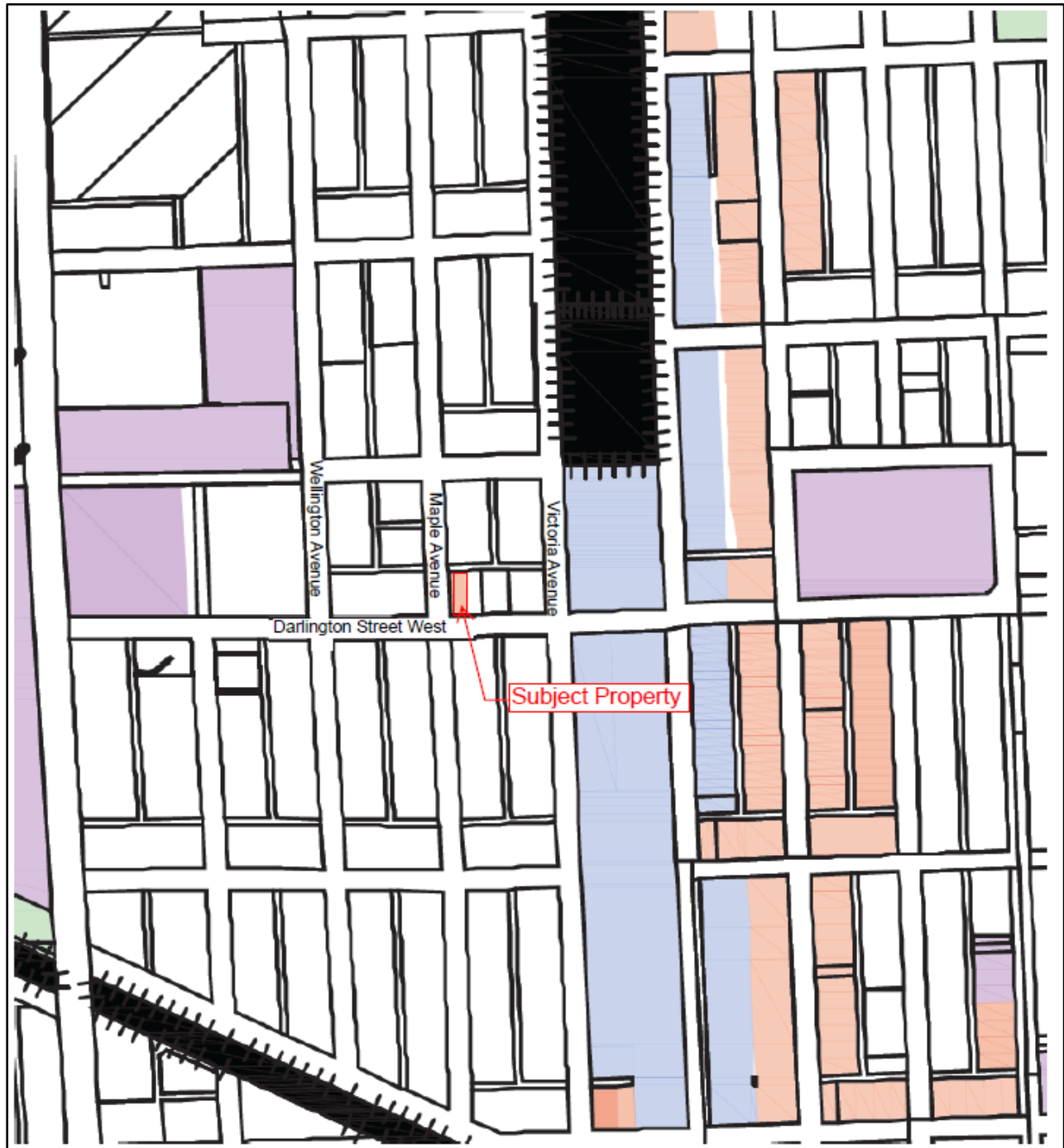
### Aerial View



### Street View



### Attachment 3 – OCP Future Land Use Concept Map



#### LEGEND

Existing	Future	Potential	
			Residential
			Commercial
			Industrial
			Community Services



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Attachment 5 – Bylaw No. 11/2021

City of Yorkton  
Saskatchewan

Bylaw No. 11/2021

**A Bylaw of the City of Yorkton in the Province of Saskatchewan to amend Official Community Plan Bylaw No. 12/2014 by changing the Future Land Use Concept Map for 105 Darlington Street West from Commercial to Residential.**

**WHEREAS**, pursuant to Section 29(2) and 39 of *The Planning and Development Act, 2007* the Council of the City of Yorkton in the Province of Saskatchewan in Council assembled hereby enacts as follows:

1. That Official Community Plan Bylaw No. 12/2014 is amended to change the Future Land Use Concept Map for Lot 14, Blk/Par 17, Plan 99Y08572, civically known as 105 Darlington Street West, as shown on Schedule 'A' attached hereto, from Commercial to Residential.

This bylaw shall come into force and take effect from the date on which it is approved by the Minister of Government Relations.

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CITY CLERK

Introduced and read a first time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a second time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a third time and adopted this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

# Attachment 5 Continued



Attachment 6 – Bylaw No. 12/2021

City of Yorkton  
Saskatchewan

Bylaw No. 12/2021

**A bylaw of the City of Yorkton in the Province of Saskatchewan to rezone Lot 14, Blk/Par 17, Plan 99Y08572, civically known as 105 Darlington Street West, from C-4 Neighbourhood Commercial to R-5 Mixed Density Residential and furthermore to amend the Zoning Map of Bylaw No. 14/2003 to reflect rezoning.**

**WHEREAS**, pursuant to Section 46(3) of *The Planning and Development Act, 2007*, the Council of the City of Yorkton in the Province of Saskatchewan in Council assembled hereby enacts as follows:

1. That Bylaw No. 14/2003 is amended by rezoning Lot 14, Blk/Par 17, Plan 99Y08572, civically known as 105 Darlington Street West as shown on Schedule 'A' attached hereto, from C-4 Neighbourhood Commercial to R-5 Mixed Density Residential and furthermore that 105 Darlington Street West is struck from Section 26.1.3 of the bylaw to reflect the rezoning;
2. That the Zoning Districts Map attached to and forming part of Bylaw No. 14/2003, is amended to change the zoning of Lot 14, Blk/Par 17, Plan 99Y08572, civically known as 105 Darlington Street West as shown on Schedule 'A' attached hereto, from C-4 Neighbourhood Commercial to R-5 Mixed Density Residential.

This bylaw shall come into force and take effect on the date on which Bylaw No. 11/2021 is approved by the minister of Government Relations.

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CITY CLERK

Introduced and read a first time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a second time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a third time and adopted this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

# Attachment 6 Continued

## Schedule 'A'

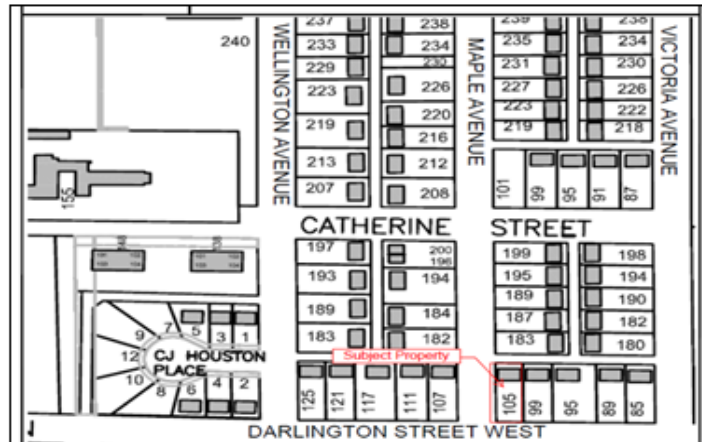


## Attachment 7 – Public Notice

### PUBLIC NOTICE

Proposed rezoning of 105 Darlington Street West to allow for residential use

1. Bylaw No. 11/2021 – Future Land Use Concept Map Amendment  
Amendment to Official Community Plan Bylaw No. 12/2014  
and
2. Bylaw No. 12/2021 – Rezoning to Allow for Residential Use  
Amendment to Zoning Bylaw No. 14/2003



Legal Description:	Lot 14, Blk/Par 17, Plan 99Y08572
Civic Address:	105 Darlington Street West
1. Current Land Use Concept:	Commercial
Proposed Land Use Concept:	Residential
2. Current Zoning:	C-4 Neighbourhood Residential
Proposed Zoning:	R-5 Mixed Density Residential

Details: The applicant proposes:

1. to amend the Official Community Plan Land Use Concept Map for 105 Darlington Street West from Commercial to Residential to accommodate an existing residential dwelling;
2. to amend the Zoning Bylaw by rezoning 105 Darlington Street West from C-4 Neighbourhood Commercial to R-5 Mixed Density Residential to accommodate an existing residential dwelling.

Information: You can view this notice online at [www.yorkton.ca](http://www.yorkton.ca) under the New and Notices section on the home page.

Questions regarding the application may be directed to:

Carleen Koroluk, Land Use Planner  
Phone: (306) 786-1727  
Email: [ckoroluk@yorkton.ca](mailto:ckoroluk@yorkton.ca)

**Public Hearing:** City Council will hear all persons who are present and wish to speak to the application and all written submissions will be read verbatim unless the submitter is in attendance to speak on the submission, on **Monday, December 6, 2021 at 5:00 pm in City Hall Council Chambers, Yorkton, SK.**

If you wish to provide written comments for Council's consideration, they must be submitted by 9:00 a.m. on Thursday, December 2, 2021. Written submissions must be directed to:

Jessica Matsalla, Director of Legislation & Procedures

In Person: 37 Third Avenue North, Yorkton, SK  
Via Mail: Box 400, Yorkton, SK S3N 2W3  
Via Email: [jmatsalla@yorkton.ca](mailto:jmatsalla@yorkton.ca)

Bylaws 11-2021 & 12-2021

105 Darlington Street West – OCP from Commercial to Residential, ZB from C-4 to R-5

Page 13 of 13

<b>TITLE: Bylaw Nos. 13/2021 &amp; 14/2021 – Amendments to Official Community Plan Bylaw No. 12/2014 and Zoning Bylaw No. 14/2003 – 139 Dominion Avenue</b> <b>Change of OCP Future Land Use Concept Map from Industrial to Commercial</b> <b>Rezone from MI-1 Light Industrial to CMI-1 Commercial Industrial Transitional</b> <b>Council Report #1 – First Readings &amp; Public Notice Authorization</b>	<b>DATE OF MEETING: November 15, 2021</b>
<b>CLEARANCES:</b> Michael Eger - Director of Planning, Building & Development <b>Michael Eger</b>	<b>REPORT DATE: November 9, 2021</b>  <b>ATTACHMENTS:</b> <ol style="list-style-type: none"> <li>1. Key Plan</li> <li>2. Aerial View &amp; Street View</li> <li>3. OCP Future Land Use Concept Map</li> <li>4. Zoning Bylaw - Area Zoning</li> <li>5. Area View</li> <li>6. Bylaw No. 11/2021</li> <li>7. Bylaw No. 12/2021</li> <li>8. Public Notice</li> </ol>
Written by: Carleen Koroluk - Planner <b>Carleen Koroluk</b>	
Reviewed by: Jessica Matsalla - City Clerk <b>Jessica Matsalla</b>	
Approved by: Lonnie Kaal - City Manager <b>Lonnie Kaal</b>	

**Summary of History/Discussion:**

This report is in response to a Zoning Bylaw Amendment Application submitted by the property owner affecting 139 Dominion Avenue (see Attachment 1 and 2).

Prairie Harvest Christian Life Centre Inc. (PHCLC) acquired the property, previously owned and operated by the Yorkton Friendship Centre, in March 2021. Since 2013, the Friendship Centre has utilized the building as a community facility and it has been a building connected to the local Indigenous community offering a location for holiday events, weddings, funerals and wakes, youth events and other community based activities.

PHCLC has been operating community based programming working to meet the need of vulnerable and “at risk” individuals and families in the city for more than 20 years and in acquiring the building their vision is to continue making it available as a centre for people to gather, connect and have access to available social services.

The property is designated in the Official Community Plan Future Land Use Concept Map as Industrial (see Attachment 3) and is zoned MI-1 Light Industrial under the Zoning Bylaw (see Attachment 4).



While the Friendship Centre had been operating from the location since 2013, Community Facilities are not a Permitted Use in the MI-1 zoning district and it appears that a Development Permit was never issued. As such, the Community Facility is a non-conforming use. At present, due to the significant length of time that the building was in use, the use may continue as it has been, however future expansion to include the emergency shelter would not be permitted. In addition, should the building be destroyed, demolished or removed, the use cannot be re-established.

At this time, PHCLC is requesting rezoning to:

1. Ensure that continued use of the Community Facility use is a conforming land use, and
2. To contemplate future expansion of services, including emergency shelter facilities for adults.

### **Administrative Review:**

The developed portion of Dominion Avenue runs from Smith Street to Darlington Street and is bordered on the west side by an active CN Rail line. Dominion continues from Darlington as an undeveloped road allowance, running parallel with the rail line north to York Road. Due to the proximity of the rail line and connectivity with York Road, under Zoning Bylaw No. 14/2003 the area was zoned MI-1 Light Industrial (see Attachment 5).

The purpose of the Light Industrial district is to establish and preserve areas for a wide range of industrial and manufacturing uses and it has become apparent that the limited access and deterioration of Dominion Avenue over the years hinders the heavy traffic required by many industrial uses.

In 2008 a new zoning district, CMI-1 Commercial – Industrial Transitional, was established to facilitate reinvestment in core commercial and light industrial areas of the city. The district encourages a wide range of commercial oriented developments as Permitted Uses within the zone, but also provides for light industrial uses as Discretionary Uses.

With regards to the applicant's request to ensure continued use of the Community Facility as a conforming land use and to contemplate future expansion of services including emergency shelter facilities for adults, amendments to both the Official Community Plan and the Zoning Bylaw are required as follows:

1. OCP Amendment – Bylaw No. 13/2021 to change the Future Land Use Concept Map for 139 Dominion Avenue from Institutional to Commercial (see Attachment 6).
2. Zoning Bylaw Amendment – Bylaw No. 14/2021 to change the zoning for 139 Dominion Avenue from MI-1 Light Industrial to CMI-1 Commercial – Industrial Transitional (see Attachment 7).



In order to evaluate the merits of potential rezoning applications, Planning Services considers each request under eight criteria. This application was evaluated as follows:

1. Is the proposed use compatible with neighboring uses?

Administration is satisfied that the proposed amendment for Commercial – Industrial Transitional use is compatible with the neighbouring CMI-1 district along Myrtle Avenue (see Attachment 4).

2. Are the building and property suitable to the proposed use?

The applicant proposes to continue to use the location as a Community Facility. Given the success of the location over the past years under the operation of the Friendship Centre, Administration is confident that the property is suitable for the proposed use. PHCLC is working with several agencies and committees including the Social Housing Committee, the RCMP, Mental Health and Addiction Services, SIGN and the Ministry of Social Services, to ensure that the building continues to be available to residents as a centre for people to gather, connect and have access to available social services.

3. Is there a need in the community for the proposed use?

Determining need can be very difficult – needs are things like the provision of essential public services, and access to affordable and safe housing, education, health care and food. The need for Community Facility services in our community has been identified in two reports, one commissioned by the City of Yorkton in 2015<sup>1</sup> and more recently, a Housing Needs Assessment Report<sup>2</sup> completed by SIGN and the Social Housing Committee in June 2021.

While the 2015 report focused on overall housing needs for Yorkton, the June 2021 report concludes that *“the data provided evidence that the hard-to-house and homelessness issue in Yorkton is worsening, and a solution is needed to correct the current path.”*<sup>2</sup> Furthermore, it states that *“based on consultations with Yorkton residents and organizations, the vision for Yorkton regarding its homeless and hard-to house-population in 5 to 10 years includes the establishment of a homeless shelter with support to help individuals get into social housing.”*<sup>3</sup>

<sup>1</sup>Preferred Choice: Yorkton Area Housing Need & Demand Assessment for Yorkton Housing Plan Update Project. September 2015.

<sup>2</sup>Praxis Consulting Ltd. for SIGN: Housing Assessment Final Report June 2021. Page 6.

<sup>3</sup>Praxis Consulting Ltd. for SIGN: Housing Assessment Final Report June 2021. Page 5.

Preservation and use of existing structures and properties throughout the city is encouraged and rezoning of the subject property will allow for the continued Community Facility use in addition to possible expansion to include a homeless shelter facility in the future.

4. Is there a need for additional properties within the zoning sector?

Refer to answer for question #5.

5. Would the rezoning transplant an existing business in such a way that it will create a vacancy elsewhere in the City?

Not Applicable.

6. Will the proposed use enhance or revitalize the property and building(s)?

Continued and expanded use of the property will insure that building is utilized and maintained. Since purchasing the property the applicant, who also organizes and operates the Yorkton Recycling Program, has done renovations to include storage of the curbside recycling program equipment including installation of an overhead door and increased fire rating as required under the Building Code.

7. Has the applicant demonstrated their understanding of the potential financial constraints and opportunities that warrants consideration of a rezoning?

The applicant is working with various agencies and has been in contact with Building Services to discuss building upgrades that may be required for an emergency shelter use.

8. Would the rezoning be perceived as a precedent for which other owners of similarly-zoned properties would expect similar treatment?

The goal of rezoning the property is to facilitate reinvestment in the core commercial and light industrial area. The CMI-1 mixed use zone encourages a wide range of commercial oriented developments as Permitted Uses but also provides for light industrial uses as Discretionary Uses.

If Council should proceed with the specific rezoning at this time, Administration suggests that, in the future, this area be reviewed in its entirety with the potential of additional rezoning to allow for a mixed use of commercial and light industrial development.

Based on the above criteria, Administration feels that the application adequately satisfies the criteria and is supportive of the OCP and Zoning Bylaw amendments.

**Public Notice:**

At this time, Administration would like to initiate the public notice process for the required amendments including advertisement in the local newspaper, at City Hall and on the City website (see Attachment 8).

If authorization for Public Notice is granted, the proposed amendments will also be referred to the Planning and Infrastructure Commission for their input. The Commission's recommendations will be brought back to Council, for their review and decision, in conjunction with the Public Hearing.

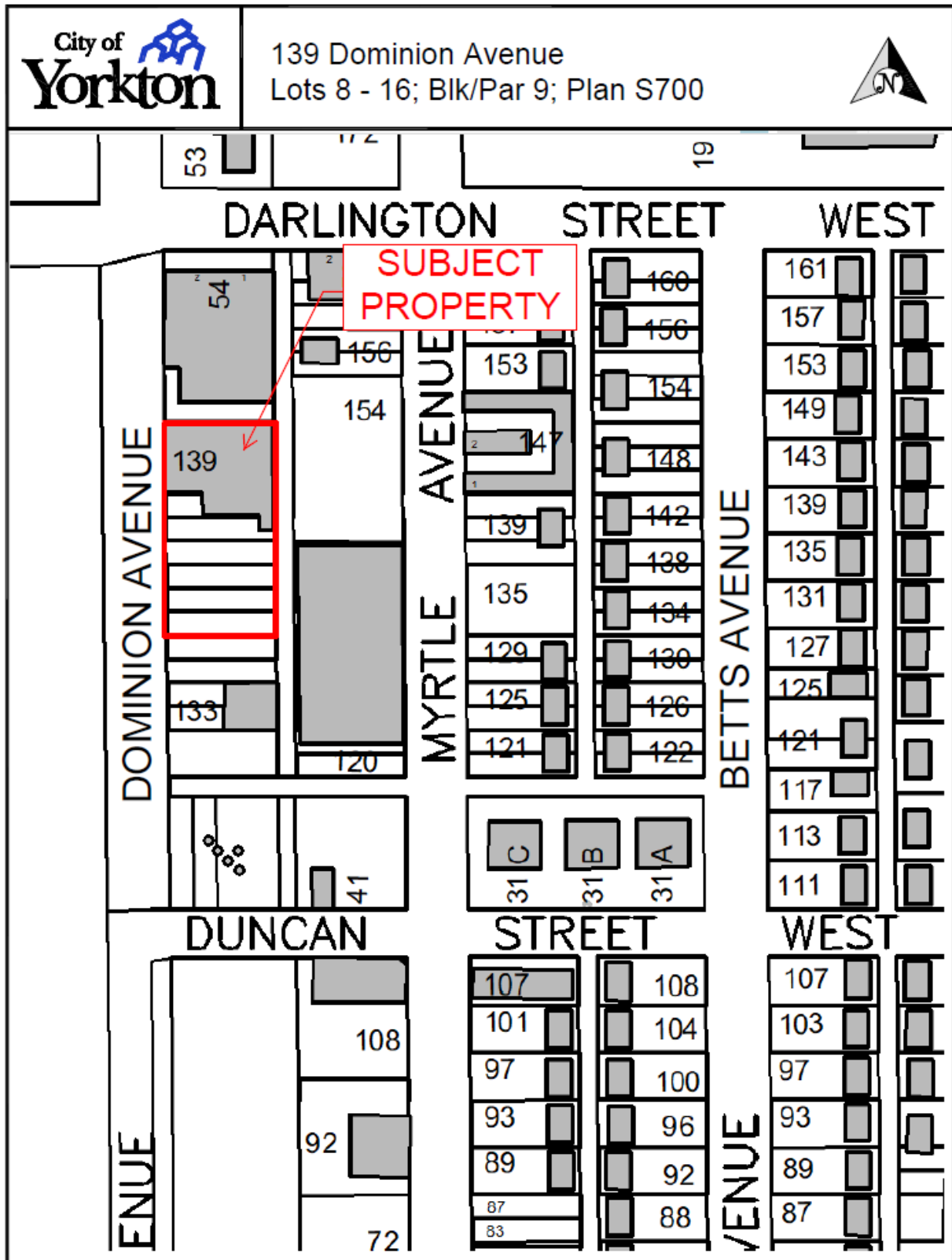
**Council's Options:**

1. That the proposed Official Community Plan and Zoning Bylaw amendments be approved for introduction and 1<sup>st</sup> Reading and furthermore that Administration be authorized to proceed with public notice;
2. That the proposed Official Community Plan and Zoning Bylaw amendments be denied for reasons as listed by Council;
3. That Administration be provided with alternative direction.

**Administration's Recommendation:**

1. That Bylaw No.13/2021, a bylaw of the City of Yorkton in the Province of Saskatchewan to Amend Bylaw No. 12/2014 by changing the Future Land Use Concept Map for Lots 8 - 16, Blk/Par 9, Plan No. S700, civically known as 139 Dominion Avenue, from Industrial to Commercial, be introduced and given 1<sup>st</sup> Reading , and furthermore that Administration be authorized to proceed with the Public Notice process;  
and
2. That Bylaw No. 14/2021, a bylaw of the City of Yorkton in the Province of Saskatchewan to Amend Bylaw No. 14/2003 by rezoning Lots 8 - 16, Blk/Par 9, Plan No. S700, civically known as 139 Dominion Avenue, from MI-1 Light Industrial to CMI-1 Commercial – Industrial Transitional, be introduced and given 1<sup>st</sup> Reading, and furthermore that Administration be authorized to proceed with the Public Notice process.

# Attachment 1 – Key Plan



Bylaws 13-2021 & 14-2021

139 Dominion Avenue - OCP from Industrial to Commercial, ZB from MI-1 to CMI-1

## Attachment 2 – Aerial View & Street View

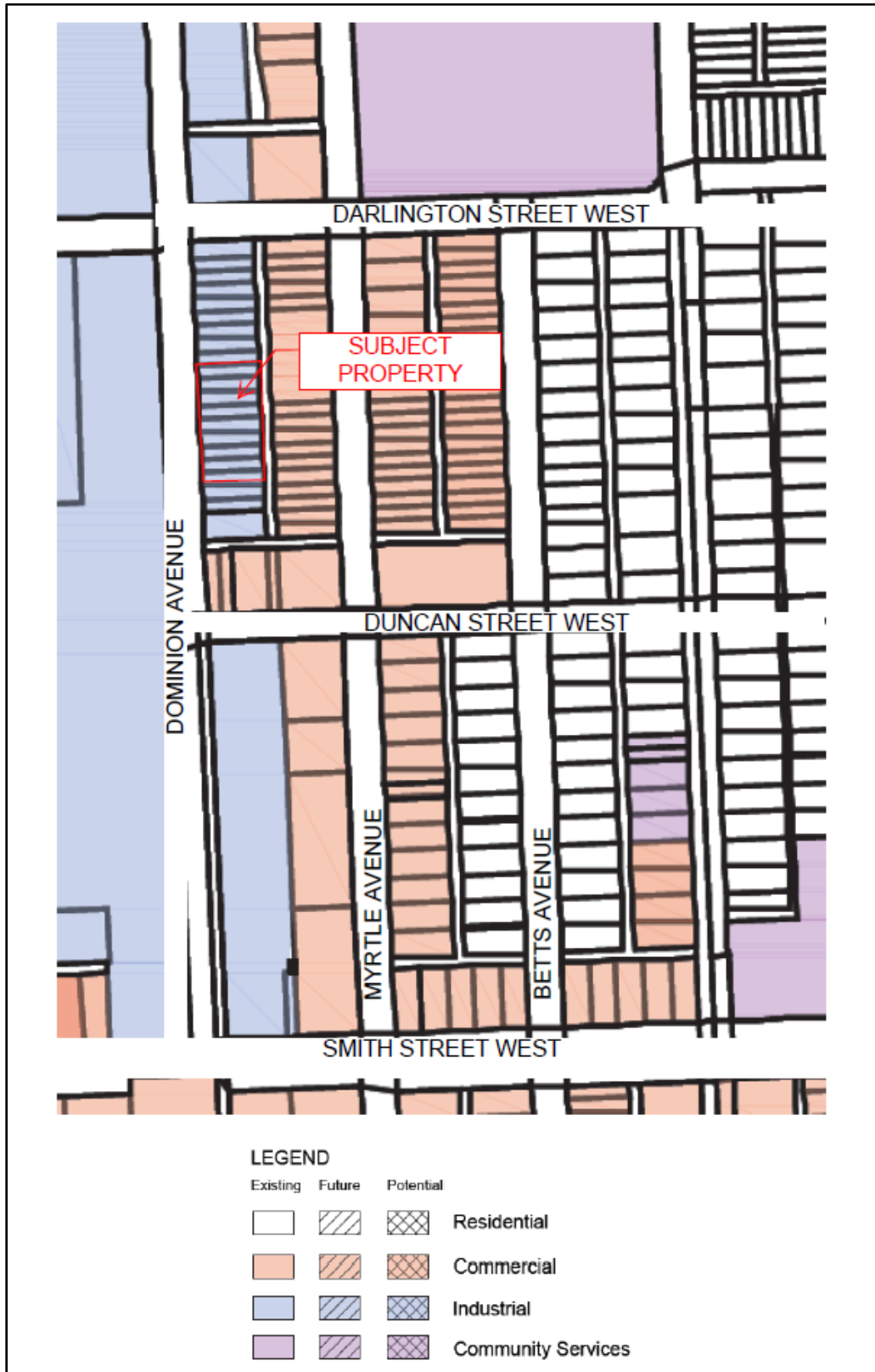
### Aerial View



### Street View



### Attachment 3 – OCP Future Land Use Concept Map





## Attachment 4 – Zoning Bylaw No. 14/2003 – Zoning Map



Bylaws 13-2021 & 14-2021

139 Dominion Avenue - OCP from Industrial to Commercial, ZB from MI-1 to CMI-1



## Attachment 5 – Area View

Aerial View



Zoning Overlay



Bylaws 13-2021 & 14-2021

139 Dominion Avenue - OCP from Industrial to Commercial, ZB from MI-1 to CMI-1

Attachment 6 – Bylaw No. 13/2021

City of Yorkton  
Saskatchewan

Bylaw No. 13/2021

**A Bylaw of the City of Yorkton in the Province of Saskatchewan to amend Official Community Plan Bylaw No. 12/2014 by changing the Future Land Use Concept Map for 139 Dominion Avenue from Industrial to Commercial.**

**WHEREAS**, pursuant to Section 29(2) and 39 of *The Planning and Development Act, 2007* the Council of the City of Yorkton in the Province of Saskatchewan in Council assembled hereby enacts as follows:

1. That Official Community Plan Bylaw No. 12/2014 is amended to change the Future Land Use Concept Map for Lots 8 - 16, Blk/Par 9, Plan S700, civically known as 139 Dominion Avenue, as shown on Schedule 'A' attached hereto, from Commercial to Residential.

This bylaw shall come into force and take effect from the date on which it is approved by the Minister of Government Relations.

\_\_\_\_\_  
MAYOR

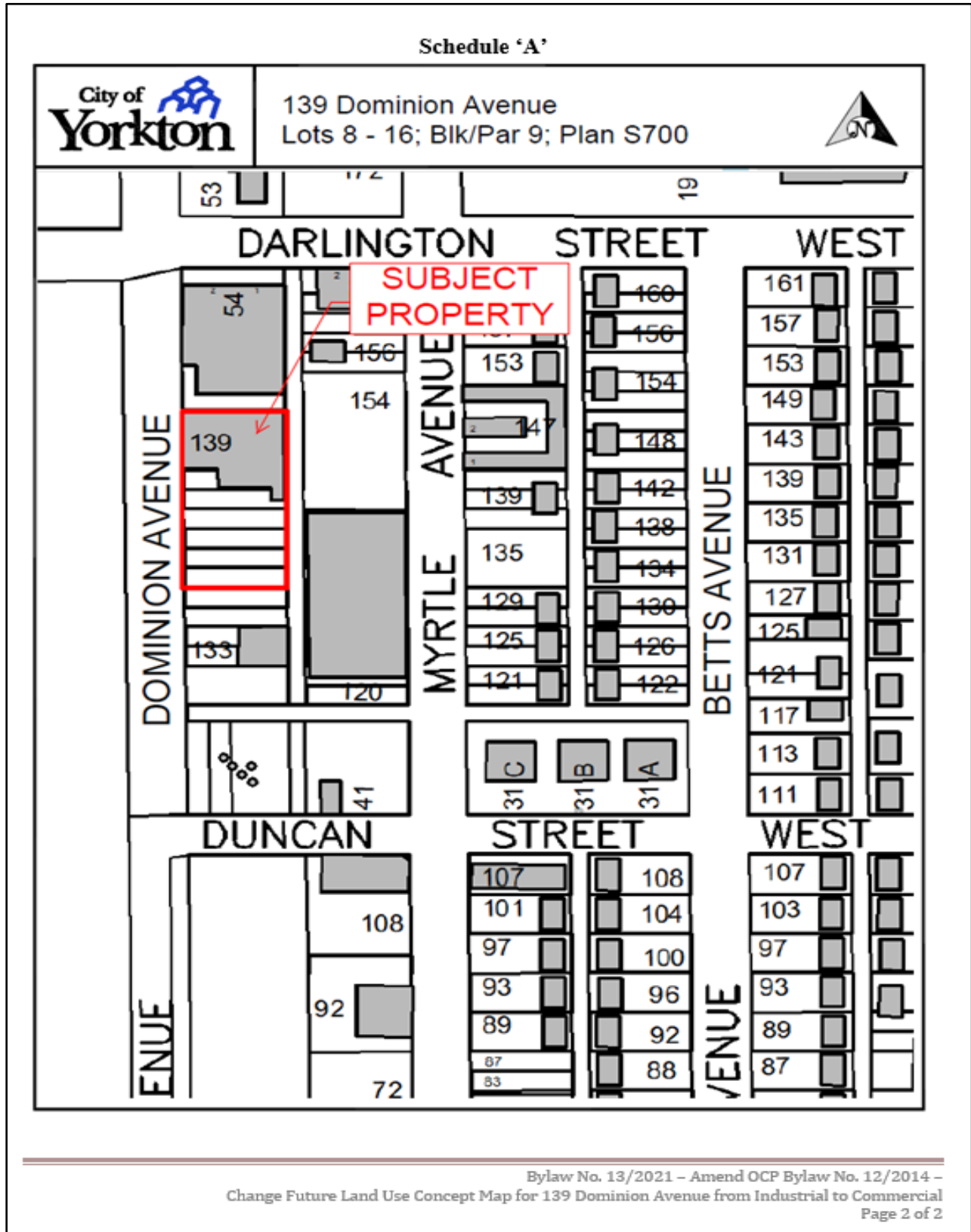
\_\_\_\_\_  
CITY CLERK

Introduced and read a first time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a second time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a third time and adopted this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Attachment 6 Continued



Attachment 7 – Bylaw No. 14/2021

City of Yorkton  
Saskatchewan

Bylaw No. 14/2021

**A bylaw of the City of Yorkton in the Province of Saskatchewan to rezone  
Lots 8 - 16, Blk/Par 9, Plan S700, civically known as 139 Dominion Avenue, from  
MI-1 Light Industrial to CMI-1 Commercial – Industrial Transitional and furthermore to  
amend the Zoning Map of Bylaw No. 14/2003 to reflect rezoning.**

**WHEREAS**, pursuant to Section 46(3) of *The Planning and Development Act, 2007*, the Council of the City of Yorkton in the Province of Saskatchewan in Council assembled hereby enacts as follows:

1. That Bylaw No. 14/2003 is amended by rezoning Lots 8 - 16, Blk/Par 9, Plan S700, civically known as 139 Dominion Avenue as shown on Schedule 'A' attached hereto, from MI-1 Light Industrial to CMI-1 Commercial – Industrial Transitional;
2. That the Zoning Districts Map attached to and forming part of Bylaw No. 14/2003, is amended to change the zoning of Lots 8 – 16, Blk/Par 9, Plan S700, civically known as 139 Dominion Avenue as shown on Schedule 'A' attached hereto, from MI-1 Light Industrial to CMI-1 Commercial – Industrial Transitional.

This bylaw shall come into force and take effect on the date on which Bylaw No. 13/2021 is approved by the minister of Government Relations.

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CITY CLERK

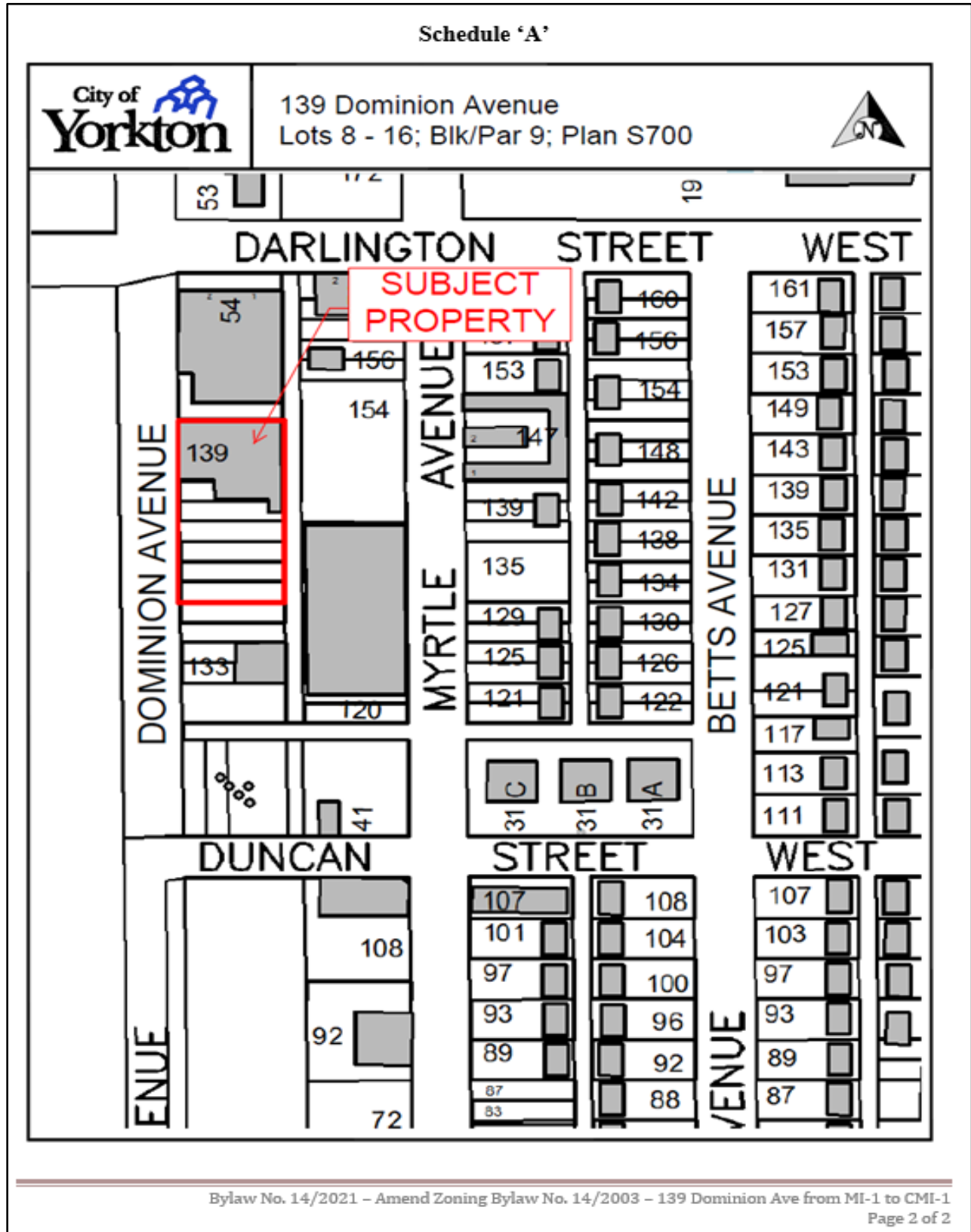
Introduced and read a first time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a second time this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.

Read a third time and adopted this \_\_\_\_ day of \_\_\_\_\_, A.D., 2021.



Attachment 7 Continued

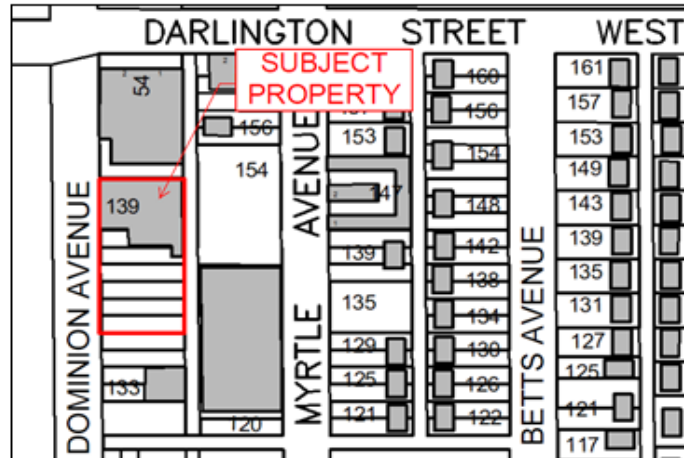


## Attachment 8 – Public Notice

### PUBLIC NOTICE

Proposed rezoning of 139 Dominion Avenue to allow for commercial use

1. **Bylaw No. 13/2021 – Future Land Use Concept Map Amendment**  
**Amendment to Official Community Plan Bylaw No. 12/2014**  
**and**
2. **Bylaw No. 14/2021 – Rezoning to Allow for Commercial Use**  
**Amendment to Zoning Bylaw No. 14/2003**



**Legal Description:**

Lots 8 - 16, Blk/Par 9, Plan S700

**Civic Address:**

139 Dominion Avenue

**1. Current Land Use Concept:**

Industrial

**Proposed Land Use Concept:**

Commercial

**2. Current Zoning:**

MI-1 Light Industrial

**Proposed Zoning:**

CMI-1 Commercial – Industrial Transitional

**Details:** The applicant proposes to amend the Official Community Plan Land Use Concept Map for 139 Dominion Avenue from Industrial to Commercial and to amend the Zoning Bylaw by rezoning from MI-1 Light Industrial to CMI-1 Commercial – Industrial Transitional, for the following reasons:

1. to make the existing Community Facility use a conforming land use and
2. to contemplate future expansion of services including emergency shelter facilities for adults.

**Information:** You can view this notice online at [www.yorkton.ca](http://www.yorkton.ca) under the New and Notices section on the home page.

Questions regarding the application may be directed to:

Carleen Koroluk, Land Use Planner

Phone: (306) 786-1727

Email: [ckoroluk@yorkton.ca](mailto:ckoroluk@yorkton.ca)

**Public Hearing:** City Council will hear all persons who are present and wish to speak to the application and all written submissions will be read verbatim unless the submitter is in attendance to speak on the submission, on **Monday, December 6, 2021 at 5:00 pm in City Hall Council Chambers, Yorkton, SK.**

If you wish to provide written comments for Council's consideration, they must be submitted by 9:00 a.m. on Thursday, December 2, 2021. Written submissions must be directed to:

Jessica Matsalla, Director of Legislation & Procedures

In Person: 37 Third Avenue North, Yorkton, SK

Via Mail: Box 400, Yorkton, SK S3N 2W3

Via Email: [jmatsalla@yorkton.ca](mailto:jmatsalla@yorkton.ca)

Bylaws 13-2021 & 14-2021

139 Dominion Avenue - OCP from Industrial to Commercial, ZB from MI-1 to CMI-1

Page 15 of 15



<b>TITLE: Proposed Bylaw No.15/2021 - A Bylaw to Amend Bylaw No. 20/2006 for 2022 Water &amp; Sewer Rates</b>	<b>DATE OF MEETING: November 15, 2021</b>
	<b>REPORT DATE: November 10, 2021, 9:52 AM</b>
<b>CLEARANCES:</b>  Michael Buchholzer – Director of Environmental Services & Capital Projects  Michael Buchholzer  Ashley Stradeski – Director of Finance  Ashley Stradeski	<b>ATTACHMENTS:</b>  <ol style="list-style-type: none"> <li>1. Bylaw No. 15/2021 Amend Water and Sewer Rates Bylaw No. 20/2006 and Repeal Bylaw No. 18/2020.</li> <li>2. Residential 2021 Water &amp; Sewer Rates brochure</li> </ol>
Written by: Aron Hershmiller – Assistant Director of Environmental Services  Aron Hershmiller	
Reviewed by: Jessica Matsalla - City Clerk  Jessica Matsalla	
Approved by: Lonnie Kaal - City Manager  Lonnie Kaal	

## **BACKGROUND**

The City is continually assessing our water utility assets with the forethought and need to manage our utility and replace aging water and sewer infrastructure. These rate reviews are completed annually and can vary significantly depending on the list of capital projects. \*\*\* Some future Capital projects consist of a Wastewater Plant System Renewal, the addition of new Water Meters, Water and Sewer pipe replacement, plus additional Water Investigation and Water Tower and Water Well Improvement projects. These capital projects dictate what future increases will be required in order to finance these projects.

## **DISCUSSION/ANALYSIS/IMPACT**

### **Proposed 2022 rate increases**

The 2022 proposed water consumption and sewer rate increase is 3.0%, and \$1.00 residential base rate increase which equates to a combined increase of 3.7%. These figures were identified to develop the 2022 Operational and Capital budgets. The increase equates to approximately \$300,000 of revenue to be used for water and sewer infrastructure projects.

Listed below are the historical residential consumption and base rate increases with the 2022 proposed increase.

Residential - Past, Current, and Proposed Rates + % revenue increase								
Consumption Rate (Increases)			Base Rate (Increases)			Residential - monthly water bill increase		Water Utility
Year	Consumption Rate / m3	Increase %	Base Rate \$/month	Increase \$	Increase %	Combined total ~ %	Combined total ~ \$/month	Annual revenue increase %
Jan 1, 2020	\$3.21 / m3	3.50%	\$14.25	\$3.00	26.67%	7.9%	\$4.43	5.6%
Jan 1, 2021	\$3.24 / m3	1.00%	\$17.25	\$3.00	21.05%	5.7%	\$3.39	3.1%
Jan 1, 2022	\$3.34 / m3	3.00%	\$18.25	\$1.00	5.8%	3.7%	\$2.30	3.7%

The Base Rate charge includes the cost to replace water meters, water and sewer pipe replacement, water meter services, water billing, and corporate service expenditures. With the increase of service connection breaks, and with increasing costs for replacement, it is essential to continue with increases to our base rate. We are proposing a \$1.00 / month increase to the residential base rate, with zero increases to commercial and industrial base rate for 2022. By increasing the base rates and increasing the water consumption rates for 2022, this added increase will help the City to continue to improve identified Capital and Operational infrastructure projects.

### **Linear Assets**

The Water and Sewer underground system is an extensive system made up of different age class, size, and type of piping from cast iron to PVC. There is over 280,000 linear meters of water and sewer pipe in the ground with a current replacement price tag of approximately \$700 million.

The following tables identify the water pipe only.

Length and size of water pipe		
Water Pipe (mm)	Water Pipe (inches)	Water Pipe (Meters)
50	2	200
100	4	4,500
150	6	86,600
200	8	26,700
250	10	8,900
300	12	7,200
400	16	8,000
450	18	800
500	20	12,000
	Total	154,900

Age of water pipe		
Age (years)	Water Pipe (Meters)	Percentage (%)
0-10	14,800	9.5%
11-21	31,700	20.5%
22-32	26,500	17%
33-43	30,600	19.75%
44-54	15,100	9.75%
55-65	11,900	7.70%
66-76	10,100	6.5%
77-98	1,200	.75%
99-109	4,400	2.85%
110-120	8,700	5.6%
Total	154,900	100%

With our current budget we are able to replace approximately 500 linear meters of water pipe per year. With that being said, we have approximately 14,000 linear meters of water pipe that is over 75 years old, and with a replacement program of about 500 m/year it will take nearly 30 years just to replace that infrastructure. For 2022, we have budgeted \$732,000 towards Water Breaks and \$994,000 towards Water Main & Sanitary Sewer Replacement. The cost of water line replacement, seems expensive, however, the cost to repair leaks are three to five times greater than planned replacement, when calculated on a price per meter basis. In addition, with the amount of breaks increasing on an annual basis, this problem is not going away.

### **Community Comparison**

For illustrative purposes, we looked at the City of Yorkton's proposed 2022 rates and compared them with ten (10) other Saskatchewan cities' 2021 rates. When comparing Yorkton's proposed base rate of \$18.25/month to the other cities, you can see that Yorkton's rate is significantly lower than the average base rate charge of \$45.98 / month. Yorkton's usage rate of \$3.34 per cubic meter (m<sup>3</sup>) is also below the average of \$3.77 /m<sup>3</sup> when compared with the other communities.

By taking Yorkton's average of 13 cubic meters (2,860 gallons) per household per month and using this figure, an average home in Yorkton can expect monthly cost of \$61.67 compared to \$59.37 in 2021. (\*\*\*) Some homeowners' charges will be lower or higher than this amount, depending on their usage, as we are using the actual averages for Yorkton.) When totaling the monthly usage with the base rate charges (total monthly charges), Yorkton is again well below the average with a monthly bill of \$61.67/month compared to the average of \$90.78 / month.

The following table illustrates the residential rates, base rate charges and total monthly bill charges using 13m<sup>3</sup>/month. \*Green highlight indicates highest cost.

<b>Monthly Water / Sewer BILL Comparison based on (13 m<sup>3</sup>/month) of consumption</b>							
<b>Community</b>	<b>Total Water Bill incl. base rate</b>	<b>Total Base Rate</b>	<b><u>Water</u> Base Rate</b>	<b><u>Sewer</u> Base Rate</b>	<b>Stormwater Base Rate</b>	<b>Utility Base Rate</b>	<b>Combined Water &amp; Sewer Rate (m/3)</b>
Melville	\$ 148.94	\$97.42	\$57.32	\$15.10	\$0.00	\$25.00	\$ 3.96
Humboldt	\$ 139.92	\$58.80	\$22.03	\$15.27	\$21.50	\$0.00	\$ 6.24
Martensville	\$ 99.69	\$39.50	\$12.00	\$27.50	\$0.00	\$0.00	\$ 4.63
Estevan	\$ 93.29	\$51.95	\$14.96	\$11.46	\$10.53	\$15.00	\$ 3.18
Moose Jaw	\$ 90.14	\$52.44	\$33.90	\$18.54	\$0.00	\$0.00	\$ 2.90
Warman	\$ 88.61	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$ 6.82
North Battleford	\$ 80.41	\$58.18	\$17.09	\$17.12	\$0.00	\$23.97	\$ 1.71
Swift Current	\$ 74.72	\$34.16	\$34.16	\$0.00	\$0.00	\$0.00	\$ 3.12
Lloydminster	\$ 67.08	\$19.37	\$19.37	\$0.00	\$0.00	\$0.00	\$ 3.67
Weyburn	\$ 54.06	\$29.75	\$17.50	\$12.25	\$0.00	\$0.00	\$ 1.87
Average	\$90.78	\$45.98	\$24.66	\$16.75	\$16.02	\$21.32	\$3.77
City of Yorkton	\$ 61.67	\$18.25	\$18.25	\$0.00	\$0.00	\$0.00	\$ 3.34

The proposed rates for 2022 are listed as follows:

### **WATER AND SEWER RATES**

		<b>January 1, 2021</b>	<b>January 1, 2022</b>
<b>1) Residential &amp; Residential Multi-Family</b>			
	Base Rate/Month	\$17.25	\$18.25
	Water Consumption & Sewer Discharge Rate /m <sup>3</sup>	\$3.24	\$3.34
<b>2) Commercial</b>			
	Base Rate/Month	\$48.00	\$48.00
	Water & Sewer Consumption Rate /m <sup>3</sup>	\$3.24	\$3.34
<b>3) Industrial – Inside City</b>			
	Base Rate/Month	\$48.00	\$48.00
	Water Consumption Rate /m <sup>3</sup>	\$1.62	\$1.67
	Sewer Metered Rate /m <sup>3</sup>	\$1.62	\$1.67
<b>4) Industrial – Outside City</b>			
	Base Rate/Month	\$72.00	\$72.00
	Water Consumption Rate /m <sup>3</sup>	\$2.43	\$2.50
	Sewer Metered Rate/m <sup>3</sup>	\$2.43	\$2.50
<b>5) Yorkville Public Utility Board – Outside City</b>			
	Sewer Metered Rate /m <sup>3</sup> – Yorkville Public Utility Board	\$1.78	\$1.83
<b>6) METER DEPOSIT</b>			
	All Meters – Non-owned Residential, Commercial & Industrial	\$160.00	\$160.00
<b>7) RESIDENTIAL SEPTAGE TRUCK DISPOSAL</b>			
	Inside City /m <sup>3</sup>	\$1.62	\$1.67
	Outside City /m <sup>3</sup>	\$2.43	\$2.50
<b>8) INDUSTRIAL SEPTAGE TRUCK DISPOSAL</b>			
	Inside City /m <sup>3</sup>	\$39.24	\$40.42
	Outside City /m <sup>3</sup>	\$39.24	\$60.62
<b>9) BULK WATER</b>			
	Water consumption /m <sup>3</sup>	\$4.02	\$4.14

### **FINANCIAL IMPLICATIONS**

The proposed increases are estimated to provide nearly \$300,000 of revenue to be used for water and sewer infrastructure projects. On average, a residential dwelling, may experience a 3.7% overall increase to their water bill or approximately \$2.30 / month.

## **COMMUNICATION PLAN/PUBLIC NOTICE**

In 2021, the city created a *Residential Water & Sewer Rates Brochure* that was posted to Facebook and our website. In addition, the brochure was inserted into each resident's water bill. We will update the brochure on the city's website and create a Facebook post to help explain and educate residents of the increases.

## **STRATEGIC PRIORITIES/OCP/COMMITTEE RECOMMENDATION(S)**

Water and Sewer rates are reviewed annually and provide revenue for operational and capital expenditures. Rates are discussed annually with the Environmental Committee and the committee understands the necessity of increases in order to maintain the water and sewer infrastructure within the city.

## **OPTIONS:**

1. That Council approve Bylaw No. 15/2021 to Amend Bylaw No. 20/2006 and Repeal the previous amending Water and Sewer Rates Bylaw No. 18/2020 by giving all three readings at tonight's meeting.
2. That Council defeat Bylaw No. 15/2021 to Amend Bylaw No. 20/2006.
3. That Council direct Administration as they deem appropriate.

## **RECOMMENDATIONS:**

1. **That Bylaw No. 15/2021, a Bylaw in the City of Yorkton in the Province of Saskatchewan to Amend Bylaw No. 20/2006 Establishing a Water and Sewer Rates Bylaw and Repeal Bylaw No. 18/2020 be introduced and given first reading this 15th day of November A.D. 2021.**
2. **That Bylaw No. 15/2021 be given second reading this 15<sup>th</sup> day of November, A.D., 2021.**
3. **That with the unanimous consent of Council, Bylaw No. 15/2021 proceed to third reading this 15th day of November, A.D., 2021.**
4. **That Bylaw No. 15/2021, a Bylaw in the City of Yorkton in the Province of Saskatchewan to Amend Bylaw No. 20/2006 Establishing a Water and Sewer Rates Bylaw and Repeal Bylaw No. 18/2020 be given third and final reading this 15th day of November, A.D., 2021, and be registered in the Bylaw Register of the City of Yorkton.**

**City of Yorkton  
Saskatchewan**

**Bylaw No. 15/2021**

**A Bylaw of the City of Yorkton in the Province of Saskatchewan to Amend  
Bylaw No. 20/2006 Establishing a Water and Sewer Rates Bylaw and Repeal Bylaw No. 18/2020**

**WHEREAS**, Council may provide for the regulation and operation of the Waterworks Utility of the City as a public utility service and establish the rates under which a public utility service may be supplied;

**NOW THEREFORE**, the Council of the City of Yorkton in Council assembled enacts as follows:

1. **SECTION 3. WATER AND SEWER RATES**

That Section 3. Water and Sewer Rates of Bylaw No. 20/2006 be struck in its entirety and replaced with the following:

**WATER AND SEWER RATES**

	<b>January 1, 2022</b>
<b>1) Residential &amp; Residential Multi-Family</b>	
Base Rate/Month	\$18.25
Water Consumption & Sewer Discharge Rate /m3	\$3.34
<b>2) Commercial</b>	
Base Rate/Month	\$48.00
Water & Sewer Consumption Rate /m3	\$3.34
<b>3) Industrial – Inside City</b>	
Base Rate/Month	\$48.00
Water Consumption Rate /m3	\$1.67
Sewer Metered Rate /m3	\$1.67
<b>4) Industrial – Outside City</b>	
Base Rate/Month	\$72.00
Water Consumption Rate /m3	\$2.50
Sewer Metered Rate/m3	\$2.50
<b>5) Yorkville Public Utility Board – Outside City</b>	
Sewer Metered Rate /m3 – Yorkville Public Utility Board	\$1.83
<b>6) METER DEPOSIT</b>	
All Meters - Residential, Commercial & Industrial	\$160.00
<b>7) RESIDENTIAL SEPTAGE TRUCK DISPOSAL</b>	
Inside City /m3	\$1.67
Outside City /m3	\$2.50
<b>8) INDUSTRIAL SEPTAGE TRUCK DISPOSAL</b>	
Inside City /m3	\$40.42
Outside City /m3	\$60.62
<b>9) Bulk Water</b>	
Water Consumption /m3	\$4.14



2. REPEALING BYLAW

That Bylaw No. 18/2020 passed on the 14<sup>th</sup> day of December, 2020 be hereby repealed.

3. EFFECTIVE DATE OF BYLAW

This bylaw shall come into force and take effect on January 1<sup>st</sup>, 2022.

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CITY CLERK

Introduced and read a first time this \_\_\_ day of November, A.D. 2021.

Read a second time this \_\_\_ day of \_\_\_\_\_, A.D. 2021.

Read a third time and adopted this \_\_\_ day of \_\_\_\_\_, A.D. 2021.

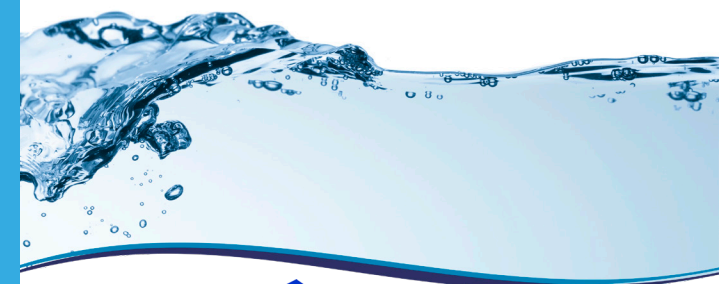


# Residential Water & Sewer Rates

2021 Information

## Information Inside This Brochure:

- Rate Changes
- Water Rates
- Base Rate
- Payment Information
- Water System
- Water Meters



City of  
**Yorkton**  
Environmental Services

## Water Meter Replacement Program

In 2021, the City of Yorkton will begin the transformation of our current water meters to the new Advanced Metering Infrastructure (AMI).

With AMI, the new system will improve the efficiency of the meter reading process through the installation of the new AMI meters.

### Benefits of the new system:

- Improve monthly billing
- No more estimates, bills are based on actual usage
- Actual meter reads each month will allow you to adjust your water consumption habits and see how it affects your bills
- You can be notified if you have a water leak
- Meters are read automatically and therefore meter readers will no longer visit your property

## Water Bill

A water bill is sent out every two months as a portion of your utility bill. Charges on your utility bill are broken down into the following sections:

- Basic minimum monthly charge for all active utility accounts
- Monthly fees for garbage collection
- Monthly fees for residential recycling
- Metered water consumption in cubic meters

## Payment Method Information

There are several convenient payment options available to you:

- At City Hall, payment can be made using cash, cheque, money orders or debit card
- Payments can be made at your financial institution
- From the comfort of your home, payments can be made through telephone or online banking with your financial institution - Payee Name is Yorkton (City of)
- By mail - please enclose payment stub with your cheque

## Operations

The City of Yorkton's water system utility is operated and managed by both the Environmental Services and Public Works Departments.

### Environmental Services Operations

- The raw water system (wells / raw water piping)
- Bulk Water Fill Station
- Water Treatment Plant
- Water Tower
- Pumping Station
- Wastewater Treatment Plant and Lift Station

### Public Works Water/Sewer Systems Operations

- Emergency repairs including water main breaks and service connection leaks
- Water and Sewer pipe replacement
- Asset management - inspections and pipe assessments
- Repair and replace valves, hydrants and curb stops
- Water meter services

For more information on each of these services, please refer to our City website: [www.yorkton.ca](http://www.yorkton.ca)



Questions about your Water and Sewer Billing?  
Contact the Utility Billing Division  
Monday - Friday 8 a.m. - 4 p.m.  
306-786-1726  
[www.yorkton.ca](http://www.yorkton.ca)

## Why are rate increases required?

Water Rates are reviewed annually and are calculated to develop our annual budgets. Water is metered then calculated and added to the utility invoice (water bill). The funds collected are used to repair and replace the water and sewer infrastructure.

We've increased the consumption rate by 1% and the residential base rate by \$3 for 2021. Our current consumption rate is \$3.24/m<sup>3</sup> (one cubic meter = 220 gallons). The Base Rate charges include the cost to replace meters, replace water and sewer service connections, meter services, water billing, and corporate service expenditures.

Rates from 2019-2021			
Date	Rate/Cubic Meter	% Increase	Residential Base Rate/ Month
Jan 1, 2019	\$3.10	3.50%	\$11.25
Jan 1, 2020	\$3.21	3.50%	\$14.25
Jan 1, 2021	\$3.24	1.00%	\$17.25

## Water System

Our Water and Sewer Services encompass all topics related to potable water treatment and infrastructure, wastewater treatment and infrastructure, water distribution system, utility billing and water service disruptions.

Raw water is drawn from 13 production wells surrounding the City and is pumped to the Water Treatment Plant. The wells are located in various aquifers at different depths ranging from 23-60 meters (75-200 ft) and vary in age from 1 to 53 years old. Aquifers are pockets of renewable and sustainable ground water, which we monitor closely.

## Consumption Rate Comparisons

**Our current consumption water rate is below the average and the base rate is well below the average of other communities in the comparison table.**

A Yorkton resident that uses the residential average (13m<sup>3</sup>/month) currently has the lowest monthly charge when compared to the other ten communities in the comparison table.

Monthly Water/Sewer Bill Comparison based on 13m <sup>3</sup> /month of water consumption			
Municipality	Total Water Bill including base rate	Total Base Rate	Rate m/3
Melville	\$143.15	\$93.45	\$3.82
Humboldt	\$122.74	\$57.35	\$5.03
Martensville	\$94.36	\$39.50	\$4.22
Estevan	\$93.28	\$51.94	\$3.18
Warman	\$88.61	\$0.00	\$6.82
North Battleford	\$81.27	\$59.17	\$1.70
Swift Current	\$73.26	\$33.49	\$3.06
Moose Jaw	\$69.49	\$51.42	\$1.39
Lloydminster	\$65.79	\$18.99	\$3.60
Weyburn	\$49.11	\$28.05	\$1.62
<b>Average</b>	<b>\$85.49</b>	<b>\$40.96</b>	<b>\$3.42</b>
<b>Yorkton</b>	<b>\$59.37</b>	<b>\$17.25</b>	<b>\$3.24</b>



## Aging Infrastructure

We continue to experience a significant amount of water main breaks and residential water service connection leaks each year. The majority of service leaks occurring are in subdivisions that are less than 50 years old.

In 2021, the City will invest \$990,000 in water and sewer main replacement and \$700,000 in emergency service connection leaks and water main breaks. With our current rates and budgets, it will take approximately **100 years** to replace our oldest water lines. This is a gap we are trying to reduce and is the basis for this increase.

Age of Water Main		
Age (Years)	Water Main (Meters)	Percentage (%)
0-10	14,800	9.50%
11-21	31,700	20.50%
22-32	26,500	17.00%
33-43	30,600	19.75%
44-54	15,100	9.75%
55-65	11,900	7.70%
66-76	10,100	6.50%
77-98	1,200	.75%
99-109	4,400	2.85%
110-120	8,700	5.60%
<b>Total</b>	<b>154,900</b>	<b>100%</b>

## Did You Know?

23% of our water mains are over 55 years old



TITLE: <b>Budget Plan 2022+</b>	DATE OF MEETING: <b>November 15, 2021</b>
	REPORT DATE: November 8, 2021
CLEARANCES:	ATTACHMENTS: 1. Budget Plan Presentation
Written by: Ashley Stradeski - Director of Finance	<b>Ashley Stradeski</b>
Reviewed by: Jessica Matsalla - City Clerk	<b>Jessica Matsalla</b>
Approved by: Lonnie Kaal - City Manager	<b>Lonnie Kaal</b>

## **BACKGROUND**

At the end of April this year, Council resolved to take a bigger look at a multi-year budget plan that would encompass the next three years, or the remainder of the Council term.

The consensus at the time was that having a plan and giving direction as early as possible would allow us to work towards that plan, and more importantly to make progress in closing the gap on our infrastructure deficit by putting as much of any possible tax increases towards this cause as we can.

## **DISCUSSION**

With this, I set about gathering and putting together information. While the purpose of this was a general plan, when proceeding it became clear that this process would be intricately tied to our budget process. As such, I would like to consider this as starting point prior to our upcoming preliminary budget discussions for 2022 as well as future years.

In this report, we will go over the following:

- Budget Process
- Budget History
- Budget – Current Goals
- Operating Budget – Challenges
- Capital Budget – Investing in Our Community
- Budget - Future

To facilitate the discussion on these items and make it more digestible, I've prepared the information as a presentation which we will go over.

## **OPTIONS**

1. That Council receive and file this report and presentation.
2. Other direction as Council sees fit

## **RECOMMENDATION**

That Council receive and file this report delivered by the Director of Finance, in response to Council direction to from April 26, 2021 for Administration to report on implications of a conceptual 3-year tax plan, titled “Budget Plan 2022+” and accompanying slide presentation as presented.

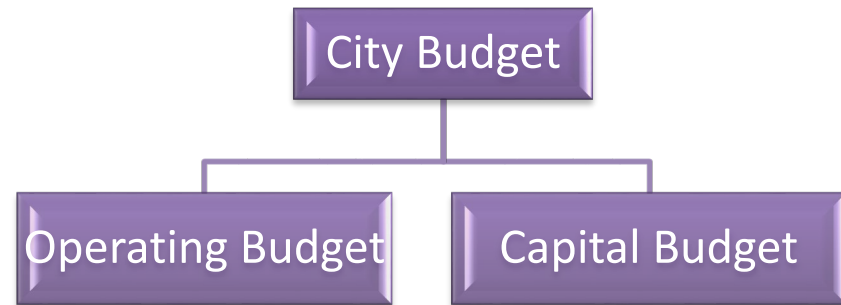




# Past, Present and Future



# The Budget Process



## Step 1 Each Dept

- Running “status-quo” – same level of service
- Does anything need to be done differently?
- Prepare operating budget
- Prepare capital budget (priorities)

## Step 2 Finance

- Aggregate information (operating)
- Analyze information (5 year averages, compare to actuals and prior budgets, research trends and gov’t changes)
- Inquiries to departments

# The Budget Process (continued)

## Step 3 Finance

- Aggregate information for capital budget
- Analyze funding options (new capital dollars, reserve, other sources such as grants/loans)

## Step 4 All Directors

- Review aggregated capital budget
- Review capital priorities (there are often much more capital projects than funding allows)
- Rate and rank projects (compete for available funds)

# The Budget Process (continued)

## Step 5 Finance

- Prepare compiled info for Council
- Initial strategic planning session with Council (closed)
- Allow for questions and gather queries, take additional direction and feedback from Council
- Investigation and responses with Department Heads

## Step 6 Public (Committee of the Whole)

- Report on analysis, findings and responses to Council queries
- Revised budget report per Council direction
- Repeat until Council decides to vote on budget

## Step 7 Public (Council Meeting)

- Budget presented to public
- Public feedback solicited and compiled
- 2<sup>nd</sup> Council Meeting – vote on budget

# Budget History

Key considerations when looking at past budgets:

## Impact to Taxpayers

- What have we asked in the past?
- Comparisons with other cities

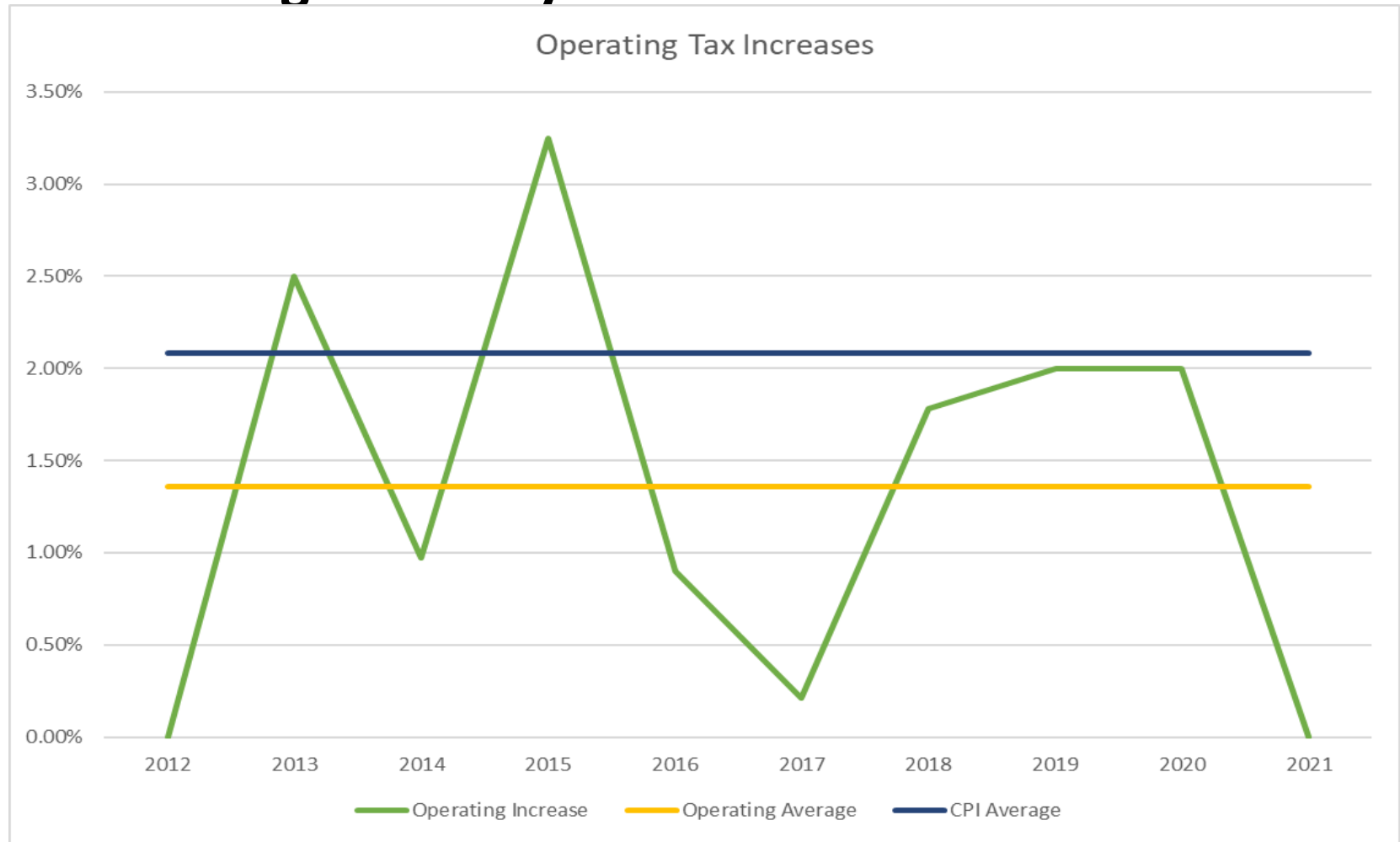
## Long-term vs. Short-term

- What are the trends?

## Compare with Inflation (CPI)

- Is there a baseline cost increase for providing the same services?

# Budget History – Where We Have Been



- 10 year operating tax increase average – 1.36%
- 10 year CPI Average – 2.08%
- Note 2017 – Grants in Lieu cuts – 6.25% (not included)

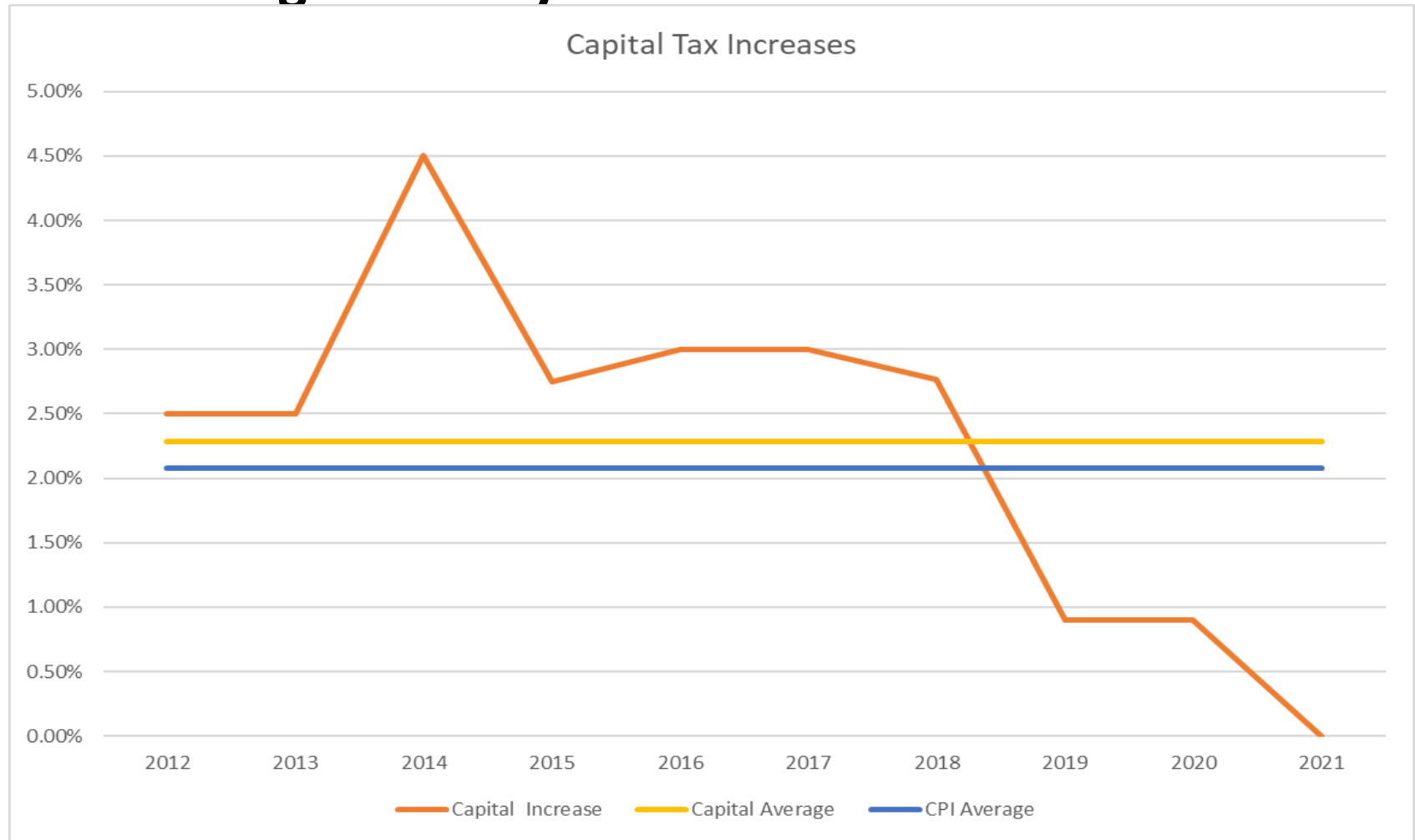
# Budget History – Where We Have Been

## Operating Budget

- 10 year average increase was 1.36%
  - CPI average for the same period was 2.08%
  - This means the City has held firm on operational expenditure increases over this time period, coming in at less than inflation, on average, for ten years
- More recently, the 5-year operating increase on average was 1.20% per year, whereas CPI was 2.46%
- Performing same level of services for less than the year before
  - “status-quo budget”



# Budget History – Where We Have Been



- 10 year capital increase average – 2.28%
- 10 year CPI Average – 2.08%

# Budget History – Where We Have Been

## Capital Budget

- 10 year average increase was 2.28%
  - CPI average for the same period was 2.08%
  - This means the City has increased its spending on capital at a higher rate than inflation
  - This would help “close the gap” on our infrastructure deficit
- More recently, the 5-year capital increase per year on average was 1.51%, with CPI being 2.46%
- Capital budget is still lacking compared to what we ought to be spending on infrastructure

# Budget – Current Goals

- Maintain service levels to current standards
- Find efficiencies
- Keep tax increase as low as possible

## Operating Goals



- Close the “infrastructure deficit”
- Replace aging infrastructure
- Plan large scale projects (Drainage, York Road, Broadway)

## Capital Goals

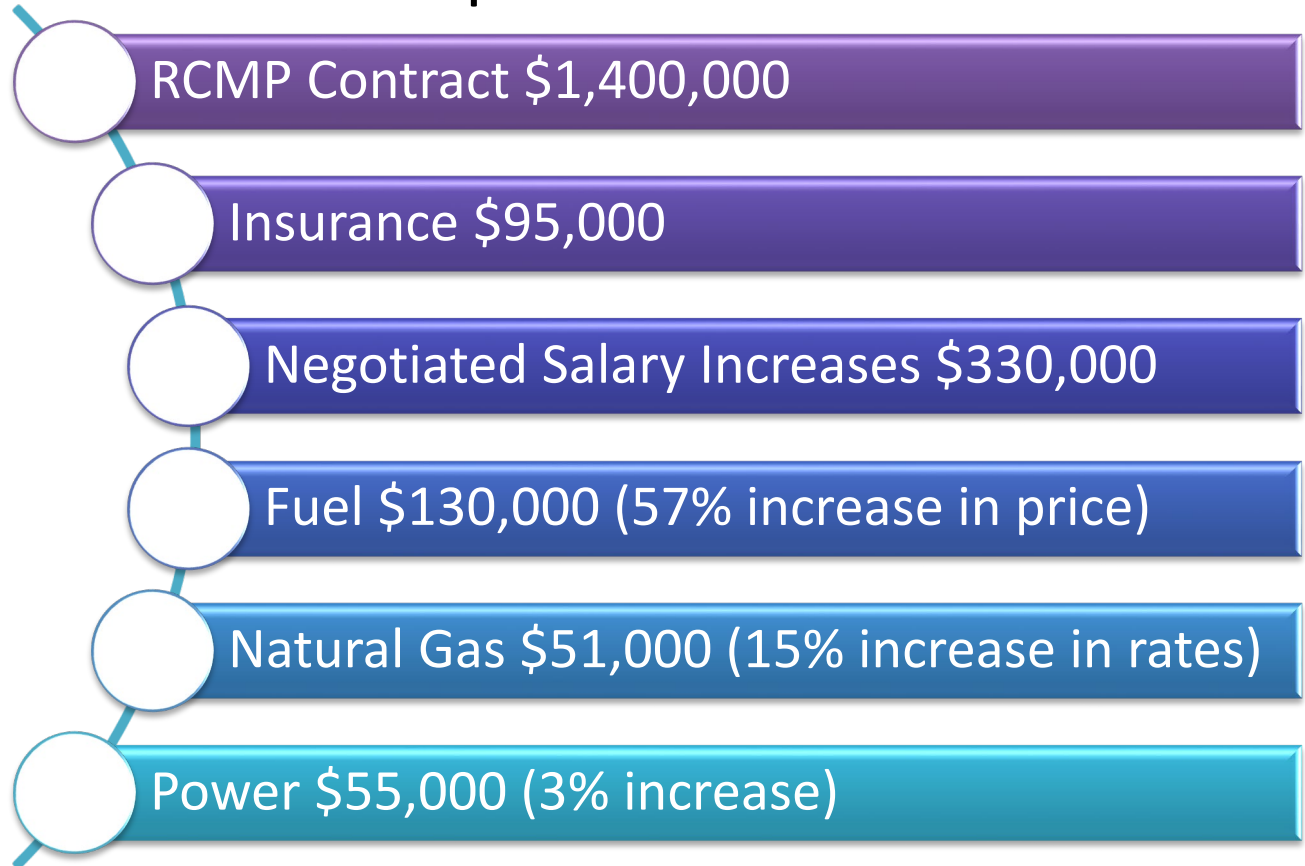


# Budget – Operating Goals

## Anticipated Increases:

### Goal 1: Maintaining service levels to current standards

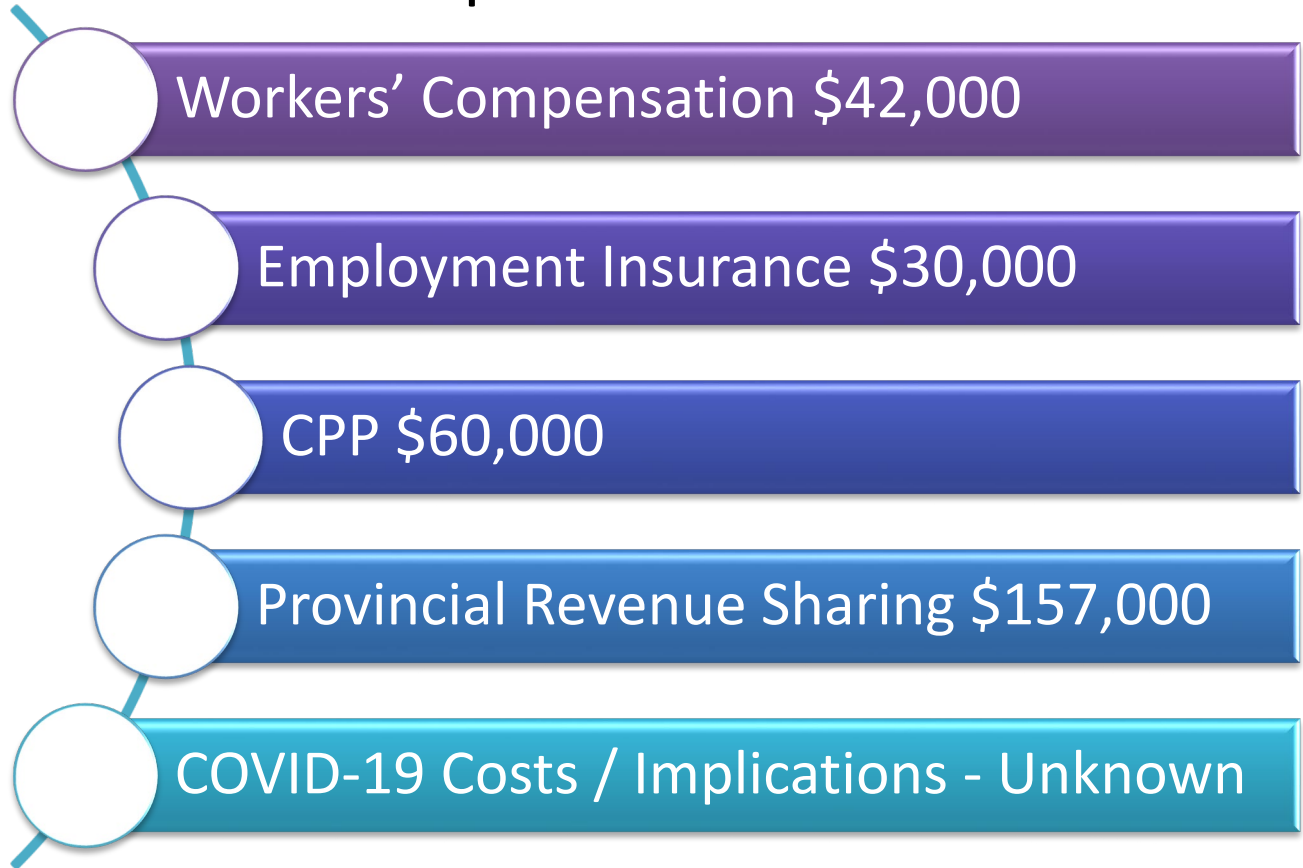
Every year costs go up. This is a result of inflation, external markets, contracted increases, etc.



# Budget – Operating Goals

## Anticipated Increases:

**Goal 1:  
Maintaining  
service  
levels to  
current  
standards  
(continued)**



Total estimated increase based on known items,  
with no service change = approx. \$2,350,000

# Budget – Operating Goals

## Goal 2: Find efficiencies

### Finding the “right” kind

- Not all efficiencies are cost savings, not all cost savings are efficiencies
- Eg. Time gets spent doing something the hard way, but could invest in technology to be more efficient and use extra time to accomplish more tasks

### Department specific

- Each department head looks at operations to find the best way to do things
- Cost control and resources are always considered





# Budget – Operating Goals

## Goal 2: Find efficiencies (continued)

### 2021 Department Operational Reviews

#### Gallagher Centre



Completed  
Service  
Model  
Modified

#### I.T.



In Progress  
(external)

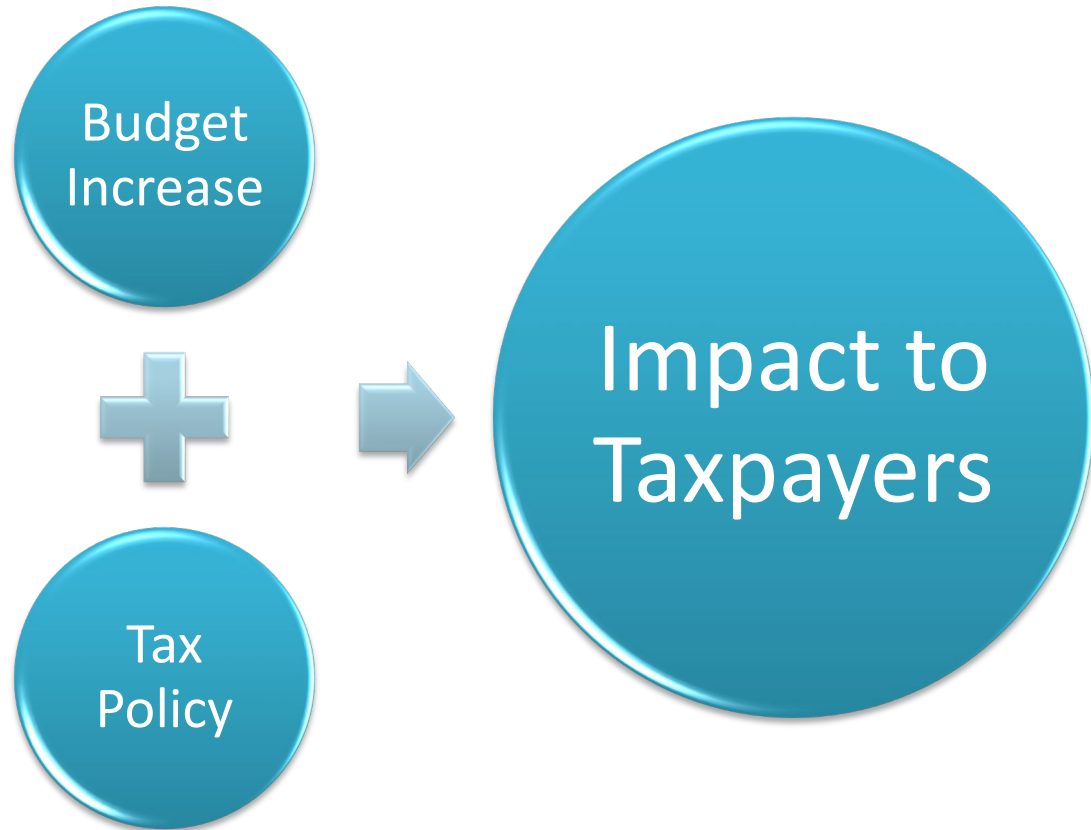
#### Fleet



In  
Progress  
(internal)

# Budget – Operating Goals

**Goal 3:  
Keep  
operating  
increase as  
low as  
possible**



1% budget increase = \$1.67/mo for average resident  
or approx. \$8/mo for average commercial

# Budget – Operating Goals

## Goal 3: Keep operating increase as low as possible (continued)

Canadian Taxpayers Federation Report  
*“Municipal Spending in Saskatchewan” – March 2021*



Report compares municipal spending as a measure of total expenses divided by population = spending per person.

This is useful for comparison purposes.

# Budget – Operating Goals

## Goal 3: Keep operating increase as low as possible (continued)

Across municipalities,  
average spending is  
reasonably consistent

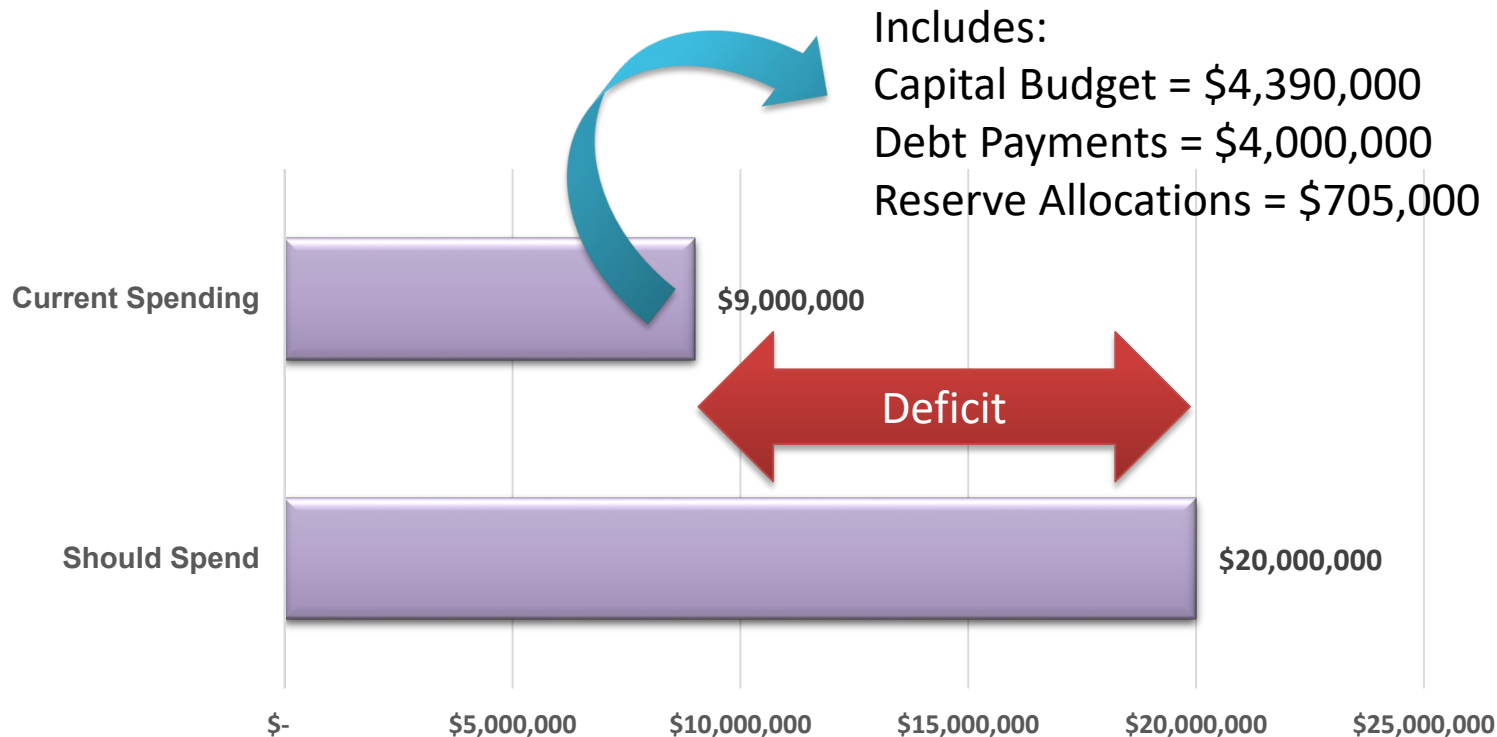
Canadian Taxpayers Federation Report  
*“Municipal Spending in Saskatchewan” – March 2021*

City	Population	Spending per Person
Swift Current	16,604	\$3,718
Saskatoon	275,242	\$2,978
Regina	239,989	\$2,766
<b>Yorkton</b>	<b>16,343</b>	<b>\$2,765</b>
Estevan	11,483	\$2,746
North Battleford	14,315	\$2,732
Weyburn	10,870	\$2,727

\*\*Note: Based on 2019 Data

# Budget – Capital Goals

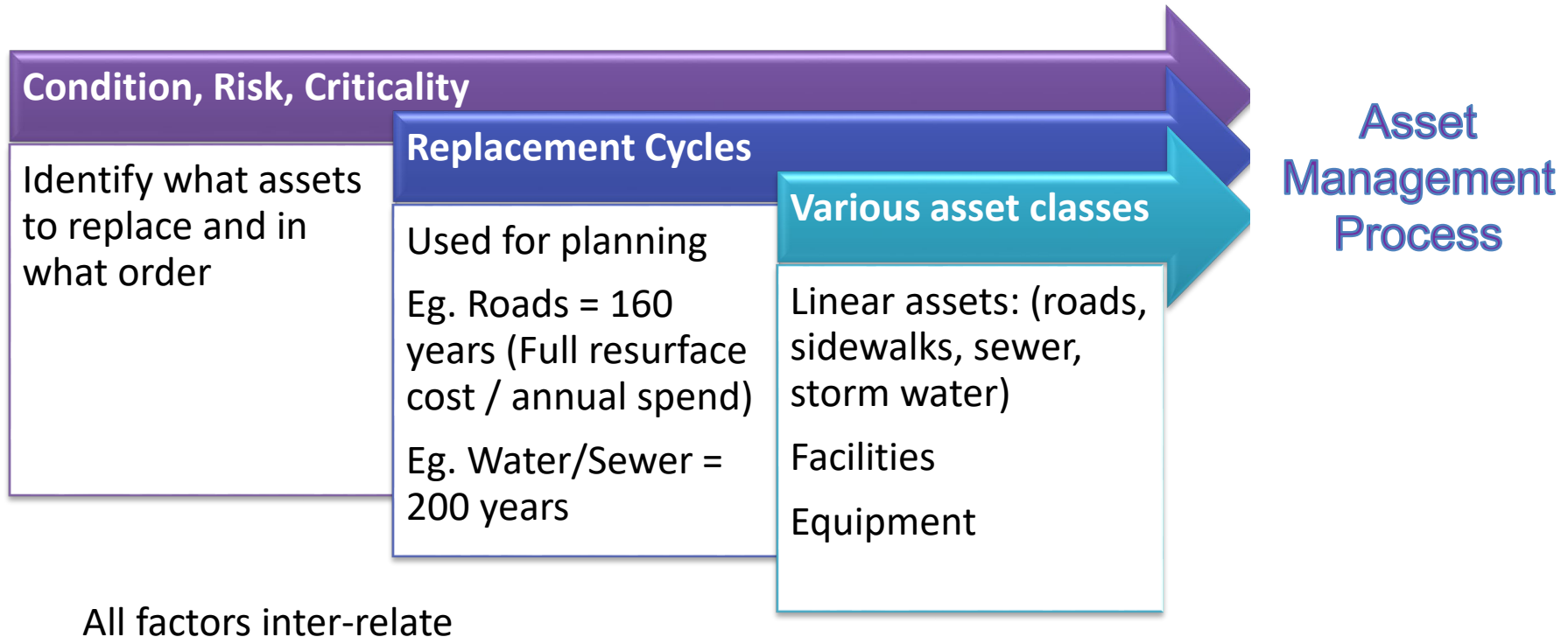
## Goal 1: Close the “Infrastructure Deficit”



Every 1% budget increase adds \$250,000 to capital;  
1% per year adds **\$13.75 million** spent over 10 years

# Budget – Capital Goals

## Goal 2: Replace aging infrastructure





# Budget – Capital Goals

## Goal 3: Plan large scale projects

Several projects that have been considered impossible without Provincial/Federal support, due to cost

### Broadway Reconstruction

- \$50 million

### York Road Reconstruction

- \$30 million

### Drainage/Flood Mitigation

- \$40 million

### Waste Water Treatment Plant

- \$60 million

**New Philosophy** – advanced financial planning allowing to chip away at large projects:

- Drainage - \$15 million spent to date
- York Road – Costs reduced to \$17 million, multi-year plan in place starting 2023

## Resolution – April 26, 2021 – Councillor Brears Investigate 3-Year Tax Plan

*“That Council supports the **long term objective of a combined 3% increase in taxes over the next 3 years** (2022, 2023, 2024), on the premise that additional dollars are put towards the capital budget on an annual basis to address the significant infrastructure deficit; and operating increases are reduced as able; such that a combined 5% increase in tax dollars would be directed towards capital projects by the year 2024. Council further directs Administration to provide a report noting the **implication of the conceptual 3-year tax plan** as described (while recognizing that a more detailed analysis will transpire each year during budget deliberations).”*

## Budget Response – The Future

# How can we plan budgets for the next three years?

### Capital

Keep adding to it, minimum 1% per year

- Impact on taxpayers
- Risk of infrastructure failures
- Long term impact of not spending now
- Avoid “kicking can down the road”
- This can be decided annually (2 year capital budget cycle)
- Council can make a resolution on capital budget independent of operating

## Budget Response – The Future

# How can we plan budgets for the next three years?

### Operating Revenues

Tax revenue is reliable (once rates set)

- Grants tend to be stable, but not always guaranteed
- User fees still down due to lasting implications of COVID-19

### Operating Expenses

Costs to do the same typically increase

- Some of our costs can be estimated:
  - Typical contracted increases (salaries, benefits, power, energy, gas)
  - Grants and incentives paid
  - Snow removal, grass cutting, other services – budget 5 year averages

# Summary

- **Next Step: Present “status-quo” budget to Council**
  - Already includes a % increase due to forecasted cost increases
  - Discuss potential new capital projects:
    - Gallagher Renewal/Kinsmen arena
    - Drainage
    - Major Roadwork (post York-road)
    - Water Pollution Control Plant

# Summary

- **Can we do a sliding plan to decrease operating and increase capital? (3% target)**
  - Ideally, this is a great start
  - Inflation/Costs have seen an unusually sharp increase this year
  - Discussions can branch out from the initial “status-quo budget”, regarding changing levels of service or ideas for cost savings



<b>TITLE: Discretionary Use - DU05-2021</b> <b>Veterinary Service, Type 1 in C-1 City Centre Commercial Zoning District – 38 Smith St W</b> <b>Council Report #1 – Public Notice Authorization</b>	<b>DATE OF MEETING: November 15, 2021</b>
<b>CLEARANCES:</b> Michael Eger - Director of Planning, Building & Development  <b>Michael Eger</b>	<b>REPORT DATE: November 10, 2021</b>  <b>ATTACHMENTS:</b> 1. Key Plan 2. Site Plan 3. Street Views 4. Summary of Discretionary Use Process 5. Description of Use Letter 6. Public Notice
Written by: Carleen Koroluk - Planner <b>Carleen Koroluk</b>	
Reviewed by: Jessica Matsalla - City Clerk <b>Jessica Matsalla</b>	
Approved by: Lonnie Kaal - City Manager <b>Lonnie Kaal</b>	

**Summary of History/Discussion:**

This report is in response to a Development Permit application for a Veterinary Service, Type 1 use at 38 Smith Street West (see Attachments 1, 2 & 3).

Under Zoning Bylaw No. 14/2003, Veterinary Service, Type 1 is defined as:

*Veterinary Service – a facility for the care and treatment of animals involving outpatient care and medical procedures involving hospitalization.*

*Veterinary Service, Type 1 – a veterinary service for small animals, including indoor, overnight accommodation and the sale of products related to veterinary services, but not including the keeping of animals in outdoor pens.*

Veterinary Service, Type 1 is listed as a Discretionary Use in the C-1 City Centre Commercial zoning district and, under *The Planning and Development Act, 2007*, requires Council authorization to proceed (see Attachment 4).

### **Administrative Review:**

The applicant began providing Yorkton and area with mix animal ambulatory services in the fall of 2019, meaning that the operators travel to the patient, whether it be large or small. Currently, their home-based business provides adequate office space for clerical operations, but with their growing clientele there is a need for expansion and a desire to build a new clinic within the next 1 – 2 years.

In the interim, the applicant is proposing to utilize 38 Smith Street West as an office and location for small animal medical treatment, including sales space for medications and small animal food. The proposed use does not include any outdoor housing/kennelling and large animal patients will still be attended to on-farm.

Section 7 of the Zoning Bylaw includes special use provisions for specific discretionary uses and when considering an application for Veterinary Service uses (Section 7.12), the application shall be more favourable considered where it can be demonstrated that:

- A) the location of the veterinary service is appropriate to the site and that it will have a minimal impact on the surrounding adjacent areas, including, but not limited to:
- the anticipated levels of noise and odours created by the use;
  - the anticipated increased level or types of vehicle traffic, unsafe conditions or situations for vehicles, cyclists or pedestrians (ie, loading and unloading of animals);
  - the use will have a minimal impact on the amenity of the surrounding zoning district and adjacent areas and that these areas will not be reasonably compromised;
  - the character of adjacent residential uses, if applicable, shall be protected and maintained through the provision of buffer areas, separation distances and screening;

The proposed location, 38 Smith Street West, is the middle unit of an existing multi-unit building. The applicant proposes minor interior renovations to the space to suit the veterinary use including the addition of a treatment room, a surgery room and minor plumbing, electrical and cosmetic upgrades.

The building's multi-tenant units include a medical clinic to the east that is operated by the building owner, and a massage therapy office, operated by a separate tenant, to the west. The anticipated levels of noise created by the use may have an impact on neighbouring tenants, more specifically the neighbouring massage therapy business which is based on relaxation and rehabilitation.

To address potential noise concerns with regards to barking dogs, the applicant has provided a mitigation plan (see Attachment 5 – point 3) including:

- making the main focus of the business feline patients rather than canine patients;
- screening canine patients prior to acceptance;
- separate recovery location for canines.

The site includes sufficient on-site parking space for all units and the veterinary use has three dedicated parking spaces located on the south side of the building (see Attachment 3). One of these spaces will be reserved for the loading and unloading of small animals.

### **Conclusion:**

At this time, Administration would like to initiate the public notice process, including advertisement in the local newspaper, at City Hall and on the City website, and circulation to property owners within 75 m of the subject property. The proposed public notice is attached (see Attachment 6) for Council's consideration.

If authorization to proceed is granted, the application will also be referred to the Planning and Infrastructure Commission for their review and comments before it is brought back to Council for its review and final decision in conjunction with the Public Hearing.

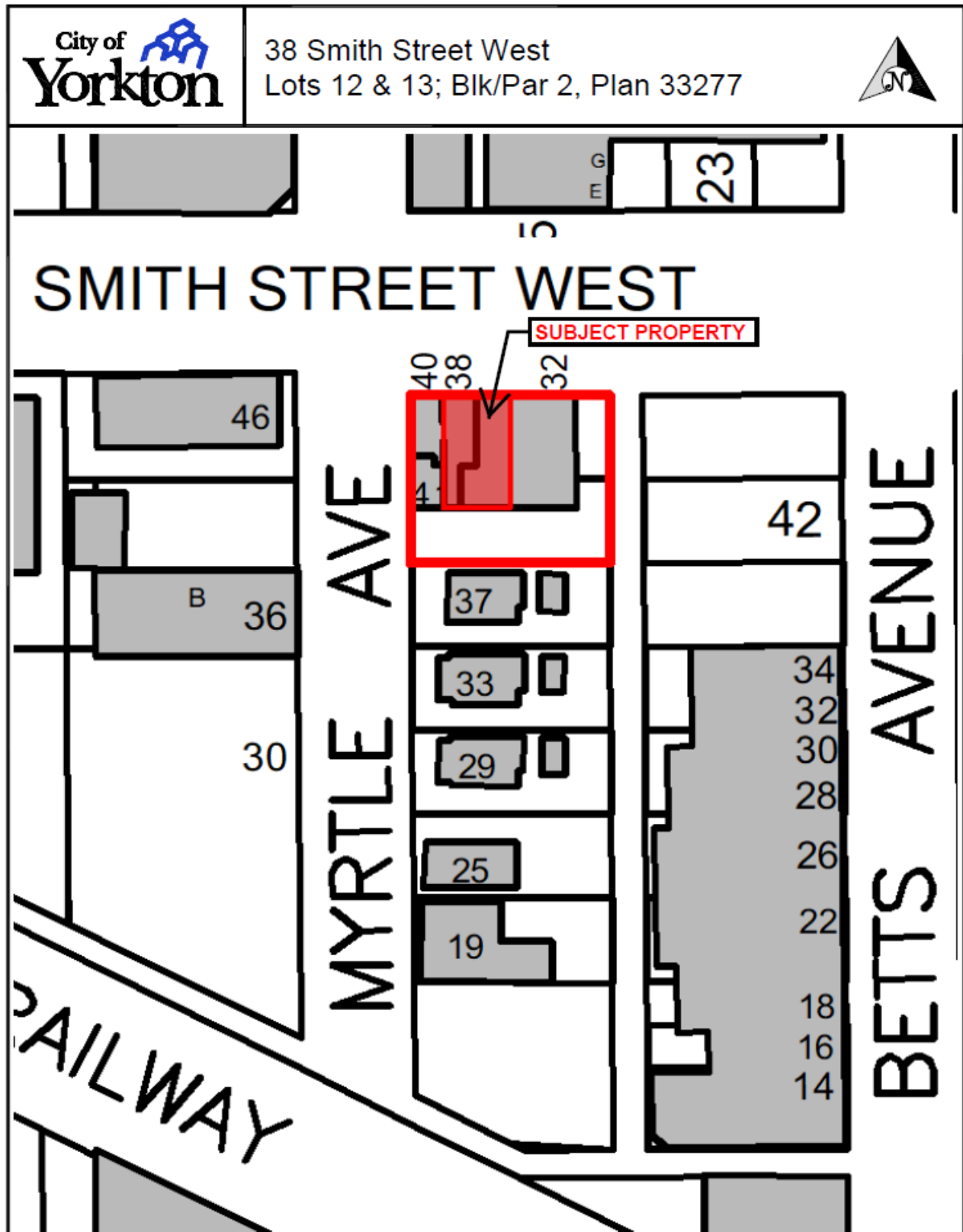
### **Council's Options:**

1. That Administration be authorized to proceed with Public Notification for Discretionary Use application DU05-2021 which proposes a Veterinary Services, Type 1 use as defined in City of Yorkton Zoning Bylaw No 14/2003, at 38 Smith Street West, legally described as Lots 12 and 13, Blk/Par 2, Plan 33277, and that the application be brought back to Council for its review and decision.
2. That Public Notification for Discretionary Use application DU05-2021 which proposes a Veterinary Services, Type 1 use as defined in City of Yorkton Zoning Bylaw No 14/2003, at 38 Smith Street West, legally described as Lots 12 and 13, Blk/Par 2, Plan 33277, be denied for reasons as listed by Council;
3. That Administration be provided with alternative direction.

### **Administration's Recommendation:**

1. That Administration be authorized to proceed with Public Notification for Discretionary Use application DU05-2021 which proposes a Veterinary Services, Type 1 use as defined in City of Yorkton Zoning Bylaw No 14/2003, at 38 Smith Street West, legally described as Lots 12 and 13, Blk/Par 2, Plan 33277, and that the application be brought back to Council for its review and decision.

Attachment 1 – Key Plan

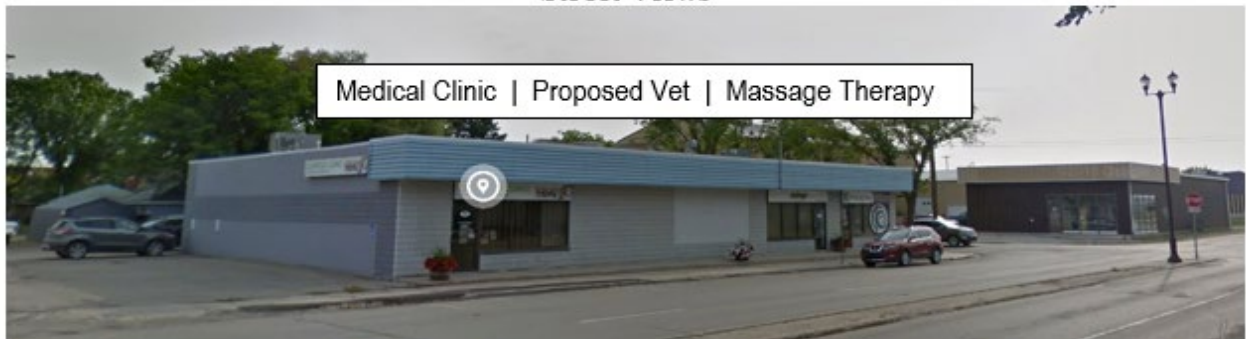


## Attachment 2 – Aerial & Street View

### Aerial View



### Street Views





### Attachment 3 – Site Plan with Parking





## Attachment 4 – Summary of Discretionary Use Process

### Summary of Discretionary Use Application Process:

*The Planning and Development Act, 2007 ('The Act')* allows a zoning bylaw to contain provisions for "Permitted Uses" and "Discretionary Uses" within specified land use zones. Any use that is not listed as "Permitted" or "Discretionary" is considered prohibited. *The Act* allows "Permitted Uses" to be approved by Administration, however, "Discretionary Use" applications require the approval of a council and must follow *The Act's* prescribed process. The process includes the requirement of giving Public Notice to property owners within 75 metres (250 feet) of the subject property, as well as the provision of a Public Hearing.

Pursuant to *The Act*, a council shall exercise its discretion respecting a Discretionary Use application to:

- (a) Reject the application;
- (b) Approve the discretionary use in accordance with the provisions of the zoning bylaw;
- (c) Approve the discretionary use subject to development standards or conditions in accordance with the zoning bylaw; or
- (d) Approve the discretionary use for a limited time, if a time limit is authorized in the bylaw.

A council may approve a discretionary use if the facts presented establish that the proposed discretionary use will:

- (a) Comply with provisions of the zoning bylaw respecting the use and intensity of use of land for the discretionary use;
- (b) Be consistent with the criteria in the zoning bylaw respecting the use and intensity of use of land for the discretionary use;
- (c) In the opinion of the council, be compatible with development in the district in the immediate area of the proposal; and
- (d) Be consistent with provincial land use policies and statements of provincial interest.

In approving a discretionary use, a council may prescribe specific development standards or conditions with respect to that use, but only if those standards or conditions:

- (a) Are based on and are consistent with general development standards or conditions made applicable to discretionary uses by the zoning bylaw; and
- (b) Are, in the opinion of the council, necessary to secure the objectives of the zoning bylaw with respect to:
  - (i) The nature of the proposed site, including its size and shape and the proposed size, shape and arrangement of buildings;
  - (ii) The accessibility and traffic patterns for persons and vehicles, the type and volume of that traffic and the adequacy of proposed off-street parking and loading;
  - (iii) The safeguards afforded to minimize noxious or offensive emissions including noise, glare, dust and odour; or
  - (iv) Any treatment given, as determined by the council, to aspects including landscaping, screening, open spaces, parking and loading areas, lighting and signs, but not including the colour, texture or type of materials and architectural detail.

If an application for a discretionary use has been approved by a council with prescribed standards or conditions, the applicant may appeal to the Development Appeals Board, however a Discretionary Use application that is denied by a council may not be appealed.

## Attachment 5 – Description of Use Submission

Vitality Veterinary Services P.C. LTD began servicing Yorkton and area in the fall of 2019. We are a mixed animal ambulatory practice, meaning we travel to the patient, whether it be large or small. Currently we have a home-based office, but with our growing clientele we are experiencing a need for expansion. Our plan is to build a new veterinary clinic within the next 1-2 years. In the interim we have temporarily rented a 980 ft<sup>2</sup> property located at 38 Smith St. W that would allow for our *small* animal patients to be brought to us, while our *large animal patients will still be attended to on farm*. The space would also be used for office work, as well as distribution of both small and large animal vaccinations and medications, and small animal food.

Proposed leasehold improvements (all to be completed by journeymen carpenters, electricians, and plumbers):

1. Add/remove select *non-structural* walls:
  - a. Remove walls immediately around front entrance door to open area for reception and waiting room
  - b. Add a wall in hallway, with a doorway, to separate front reception from back treatment area
  - c. Push wall in office back to make office smaller and treatment area larger
  - d. Add wall into current treatment area to make a surgery room
2. Flooring:
  - a. Install linoleum into treatment area and surgery room
  - b. Add linoleum to front entrance area, or replace with the vinyl plank removed from hallway/office
3. Where needed, walls will be painted, trim replaced, and doors hung
4. Electrical:
  - a. Install extra plug-ins on inside walls (not shared with neighboring businesses)
  - b. Move emergency exit sign to on top of front entrance doorway
  - c. Relocate light switch in front reception area (as the wall it is currently on will be removed)
5. Plumbing:
  - a. Install sink and vanity in exam and treatment rooms
  - b. Install drain for washing machine

For consideration:

1. Parking
  - a. Our unit has three dedicated parking spaces, all located on the South side of the building. One of the three spots will specifically be for client loading/unloading.
  - b. The whole building (5,800 ft<sup>2</sup>) has a total of 13 spots allocated for it (on the East and South - not including street parking).
  - c. There are four parking spots on the street to the North of the building.
  - d. There is also a City of Yorkton parking lot to the immediate East of the property which has 41 metered/permit stalls.
2. There will *not* be any outdoor housing (i.e. kennels) for animals.

## Attachment 5 Continued

### 3. Anticipated level of noise

- a. In our experience working in previous veterinary clinics the area where noise typically stems from is when dogs are away from their owners i.e barking dogs awaiting or recovering from surgery. Dogs coming in for surgery are admitted first thing in the morning and sometimes have to wait to be pre-medicated (sedated) for their procedure(s), depending on the day and where they are in the queue . Upon waking from the surgical procedure, they are in recovery initially. Some animals wake up delirious or painful after surgery and may bark for a short period of time until they either come out of it on their own, or are given medications to help with pain relief and/or anxiety. After recovery they are taken to a kennel room to await pick up which often is not until the end of the day (after owners are finished work). Some dogs we deal with have never before been in a kennel or are extremely anxious, both which tend to lead to barking. Other dogs, even though anxious, do not make a sound.

Ways in which we will minimize this area of possible concern:

- i. Our main focus for surgical patients will be on the feline species (i.e. cats), where barking is simply not possible
- ii. Owners of dogs that are wanting to book for surgery will be asked more questions in regard to their dogs and anticipated barking (i.e. is said dog used to being kenneled during the day? Are you, a spouse/child/friend available throughout the day to pick dog up early if barking is looking to be a problem?). If owners openly admit that barking is an issue, surgery will be refused at our clinic.
- iii. If dogs are going to bark they typically do it when isolated in a kennel. We plan to have an area in our treatment room where we can tie a dog while in recovery or awaiting pickup so that they are less likely to bark.

### 4. Anticipated odor

- a. This is an area that should not be an issue. As a hospital we must have an extremely clean and sanitary workspace both inside and outside. As stated previously, we will only be working on small animals from this location, so odors will be minimal or non-existent. We will have a garbage dumpster in the back alley for garbage.

## Public Notice

**Discretionary Use Application for Veterinary Service, Type I  
in C-1 City Centre Commercial Zoning District  
38 Smith Street West**



**Legal Description:** Lots 12 & 13, Blk/Par 2, Plan 33277

**Civic Address:** 38 Smith Street West

**Proposed Use:** Veterinary Service, Type I

**Details:** The applicant proposes to provide on-site veterinary services to small animals, including the sale of products related to veterinary services, but not including the keeping of animals in outdoor pens.

Veterinary Service, Type I uses are Discretionary Uses in the C-1 City Centre Commercial zoning district and all Discretionary Uses must be publicly advertised before Council can make a decision on the application.

**Information:** You can view this notice online at [www.yorkton.ca](http://www.yorkton.ca). There is a link to Public Notices on the home page. Questions regarding the application may be directed to:

Carleen Koroluk, Land Use Planner  
Phone: (306) 786-1727  
Email: [ckoroluk@yorkton.ca](mailto:ckoroluk@yorkton.ca)

**Public Hearing:** City Council will hear all persons who are present and wish to speak to the application and all written submissions will be read verbatim unless the submitter is in attendance to speak on the submission, on **Monday, December 6, 2021 at 5:00 pm in City Hall Council Chambers, Yorkton, SK.**

If you wish to provide written comments for Council's consideration, they must be submitted by 9:00 a.m. on Thursday, December 2, 2021. Written submissions must be directed to:

Jessica Matsalla, Director of Legislation & Procedures  
In Person: 37 Third Avenue North, Yorkton, SK  
Via Mail: Box 400, Yorkton, SK S3N 2W3  
Via Email: [jmatsalla@yorkton.ca](mailto:jmatsalla@yorkton.ca)

<b>TITLE:</b> <b>Kinsmen Arena Ice Systems Review &amp; Cost Estimate</b>	<b>DATE OF MEETING: November 15, 2021</b> <b>REPORT DATE: November 8, 2021</b>
<b>CLEARANCES:</b> Ashley Stradeski, Director of Finance Ashley Stradeski	<b>ATTACHMENTS:</b> <ol style="list-style-type: none"> <li>1. Summary of Ice System Costs</li> <li>2. Strong Refrigeration Inc. Kinsmen Arena Refrigeration Review</li> <li>3. Strong Refrigeration Inc. Gallagher Centre Refrigeration Review</li> <li>4. BST Consulting Kinsmen Refrigeration Slab Review</li> <li>5. Global Sport Resources Quote</li> <li>6. R.J. Consulting Kinsmen Dehumidification Review</li> <li>7. History of Kinsmen Arena Studies &amp; Gallagher Centre Renewal Project Timelines.</li> </ol>
Written by: Darcy McLeod – Director of Community Development, Parks & Recreation Darcy McLeod	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Lonnie Kaal - City Manager Lonnie Kaal	

## **PURPOSE**

The purpose of this presentation is to report back to Council on the consultant review, requested by Council, associated to the ice-related systems required to support the provision of ice activities at the Kinsmen Arena. Further, administration was also to provide related cost estimates for any work that might be required to ensure that the Kinsmen Arena could continue to be used as an ice arena for at least the next 15 years. No work, separate from that which would be required for the provision of ice, was considered as part of this review.

## **BACKGROUND**

The Gallagher Centre Renewal Project cost estimate was provided to Council at their September 14, 2020 Council meeting. The estimated cost was \$22,000,000 and included an addition of a second ice surface at the Gallagher Centre along with other improvements to the Gallagher Centre, including upgrading dressing rooms for the Westland Arena and a new ice plant to serve 3 surfaces. Council passed the following resolution at this meeting:

**That Council refer the Gallagher Centre Renewal Project discussions to a future strategic planning session of Council to revisit, and clarify, the scope of the project, and further direct Administration to allocate funding in the 2021 capital budget to engage a consultant to assist with re-defining the scope, and further that these recommendations be brought forward to an open Council meeting in 2021 in conjunction with high level budget estimates.**

This item was further discussed at the April 19, 2021 Council Committee of the Whole meeting where, before proceeding with a decision on the Gallagher Centre Renewal Project, Council was interested in receiving more information about what it would take to have the Kinsmen Arena continue to operate as an ice arena for an additional 15 years. The intent was to review the existing ice making equipment and systems that are required to support ice activities, to inform that discussion.

A Committee recommendation was made for Council consideration at the April 26<sup>th</sup>, 2021 Regular Meeting of Council, which was subsequently approved, and provided Administration with direction. This motion reads:

**That Council accept recommendation C00023-2021 as contained in the Committee of the Whole Council meeting minutes of April 19, 2021 to:**

**“Proceed with more detailed assessment and costing on repairing mechanical/building systems for the Kinsmen Arena with a ‘consulting’ budget of up to \$50,000 to come out of the Recreation Facility Reserve account, and further report back to Council in the fourth quarter of 2021 with this information for further contemplation on the future of the Kinsmen Arena.”**

Previous reviews of the Kinsmen Arena were not exhaustive, and did not include a detailed systems review, as the intent of those recent reviews were to determine if the Kinsmen Arena could be re-purposed as something other than an arena. The decision to plan the relocation of the community’s second ice surface to the Gallagher Centre was based on a number of factors, including:

1. The age and condition of the entire Kinsmen Arena facility.
2. The amount of resources required to improve the rest of the Kinsmen Arena facility in order to modernize it.
3. At a minimum, if minimal building improvements were to occur, significant cost would be required to correct any code deficiencies in the other parts of the building.

Attached to this report is a more detailed timeline, which provides a more detailed history of the studies and direction related to the future of the Kinsmen Arena, and subsequent 33% design for improvements to the Gallagher Centre, referred to as the Gallagher Centre Renewal Project, including the provision of a second ice arena that would replace the Kinsmen Arena.

## **THE REVIEW**

It should be noted that staff are not experts in these areas, and three separate consultants were used to generate the info requested by Council, and they will not be in attendance to offer clarification. Therefore, administration has used information, excerpts and wording from their reports to help summarize their findings. More detailed and specific information can be found in the Consultant reports attached.

The Kinsmen Arena at 227 Prystai Way was originally constructed in 1972. There have been a couple of additions to the non-rink areas, as well as the ancillary areas of the building since that time.

The rink area of the building is approximately 20,000 square feet, with approximately 1,800 square feet of this designated as spectator area.

The original building and successive additions were presumably constructed to the code requirements of the day through the Authority Having Jurisdiction (City/code authority). This makes the facility “legally non-conforming”, which means that while it may not meet the requirement of the current codes, it did meet the requirements of the codes in place when it was built.

Codes are generally enforced to put into place minimum life safety standards. Codes evolve as the needs of the day evolves, and as understanding of technologies and building sciences increase. The current overall



code in Saskatchewan is the *Uniform Building and Accessibility Standards Regulations*, which adopts the National Building Code of Canada 2015 (NBCC).

Please note that in all cases where estimates have been provided, the consultant has recommended and/or carried a minimum 30% contingency. This was done due to the extensive unknown's that may become exposed during the construction process (more than one concrete slab found, mould, asbestos, contaminated soils, unknown condition of brine lines, etc.), which can be costly. Further, engineering fees have been provided at 10% of the cost, for budget purposes, although it is estimated that they could range between 9 -13.6%. The 6% P.S.T. has not been added to costs in this report but has been added to the summary of cost spreadsheet attached to this report.

## **1. Kinsmen Arena Refrigeration System Review – Strong Refrigeration - Saskatoon, SK**

This report focused on the age and condition of the refrigeration equipment and provided high level budgets to replace equipment that will reach the end of its typical service life over the next 15 years. The consultants identified the typical life of the equipment, however can't make any guarantees about the remaining life of any equipment or piping. The actual equipment lifespan can vary widely based on many factors that we cannot quantify including but not limited to:

1. Manufacturing quality,
2. Material quality /defects,
3. How the equipment was installed and
4. The operating conditions the equipment was subjected to during its life.

The consultant inspections were purely visual, and did not complete any non-destructive examination or remove any insulation to inspect the condition of equipment or piping that was not outwardly visible. The consultant also identified issues related to the refrigeration system's code compliance. Engineering will be required to determine the scope of work for any corrective actions for many of the code deficiencies.

The Kinsmen Arena has a critical charge ammonia refrigeration system that includes the use of 2 reciprocating compressors that were installed in 2008 along with a new chiller. Each compressor receives an overhaul every 10,000 hours and since the current compressors are still being produced and sold, parts are expected to be readily available for the foreseeable future. These costs are included in the annual operating budget for the Kinsmen Arena.

The following non-code related refrigeration items will likely need to be addressed over a 15-year horizon, remembering that there is no guarantee that anything would specifically fail or remain operating.

- a. In the first 5 years – \$100,000 – The Chiller and 2 oil separators.
- b. Years 6-10 - \$180,000 – Condenser, desuperheater for snow-melt pit, underfloor brine heater, hockey brine pump, underfloor heat pump, condenser water pump.

Codes and interpretations have evolved over time and therefore best practices have evolved with them. Further, in the wake of major safety incidents in arenas recently, the Authorities having Jurisdiction have significantly increased inspection and enforcement of codes and standard requirements related to ammonia refrigeration plants. The following list summarizes code and safety-related issues that should be addressed to ensure the safe operation of the Kinsmen Arena for the next 15 years.

- c. The pressure relief system that is used in the brine flow system, needs to be modified to comply with current codes. Some valves are over-sized and some need to be added to ensure appropriate relief is available when required.

- d. The plant room ventilation system should be completely re-designed and replaced to ensure that ammonia is directed away from the rink in the event of an ammonia leak. It is also required to sufficiently cool the plant room. The ammonia detection system should be modified when the ventilation system is changed so that the sensor is near the ceiling and near the intake fan.
- e. The plant room needs to be sealed and 1-hour fire rated to ensure that ammonia can't escape into the arena in the case of an ammonia leak. There are currently holes and gaps that would allow ammonia to leak into the building.
- f. The interior plant room door swings the wrong way. Therefore, a vestibule is required for the door opening into the building from the plant room or access to the plant room only permitted from the outside. This will prevent ammonia from entering the arena in the event of a leak.
- g. OH&S requires that there be a safety shower and eyewash station available for workers that could be exposed to a harmful substance, such as ammonia.
- h. All valves, piping and major equipment in the refrigeration plant needs to be labeled. As-built drawings should be developed and tags used to help first responders determine what valves need to be closed in the case of an ammonia leak.
- i. Emergency stop switches need to be added outside the machine room doors.
- j. Pipe supports should be added for many of the pipes as they are being supported by the major equipment nozzles.

The estimated refrigeration cost is anticipated at \$441,000 plus 10% engineering fees of \$44,100 and a recommended 30% contingency of \$132,300, plus P.S.T. of \$37,000 for a total budget of \$654,400. This does not include a cost for the vestibule indicated above as it will depend on whether interior access to the plant room is maintained or exterior access is provided. Some minor work will be required to enclose the door if it was determined to access the plant room from the outside. Please note that an architect may be required to determine this.

## **2. Westland Arena Refrigeration System Review – Strong Refrigeration – Saskatoon, SK**

A review of the Westland Arena Refrigeration system was also completed to inform Council's direction related to ice arenas. This review was completed as the Westland Arena refrigeration system is also in need of significant improvements, regardless of Council's decision on arena locations. The following is a summary of that review.

The Gallagher Centre has an ammonia refrigeration system complete with two screw compressors and two separate chillers, 1 for the curling rink, and 1 for the Westland Arena. The majority of the equipment in the plant will likely need to be replaced within the next 10 years.

Both screw compressors require an overhaul immediately. Rather than overhauling the screw compressors, the City of Yorkton may want to consider replacing the existing screw compressor package with two or more reciprocating compressors. Replacing the screw compressors with reciprocating compressors would be more costly than overhauling the screw compressor (Approximately \$190,000.00 vs. \$155,000.00 for the overhauls). However, the reciprocating compressors will be more efficient, and would simplify the refrigeration system and its controls. The following non-code related refrigeration items will likely need to be addressed over the same 15 year horizon, remembering that there is no guarantee that anything would specifically fail or remain operating.

- a. In the first 5 years – \$350,000 – \$395,000 (depends on which compressor option is selected). Screw compressor overhauls/replacement, controls system, curling chiller, hockey chiller and underfloor brine heater, which allows for the heating of the slab to more easily remove ice.
- b. Years 6-10 - \$170,000 – Condenser, 2 hockey brine pumps and 2 curling brine pumps
- c. Years 11-15 – \$30,000 - 2 condenser water pumps, underfloor brine heat pump.

The following list summarizes code and safety-related issues that should be addressed to ensure the safe operation of the Gallagher Centre refrigeration system for the next 15 years.

- a. The pressure relief system needs to be redesigned and completely replaced to comply with current codes. Relief valves are required where there are none and some that are oversized need to be right-sized. Further, the vent stack is inappropriately located and needs to be above the tallest roofline of the building.
- b. The ventilation system should be completely re-designed and replaced. There is no dedicated “continuous” exhaust fan and the existing fan discharge horizontally, about 10 feet above the ground in a corner adjacent to the main entrance, a sidewalk and parking stalls nearby.
- c. The machine room needs to be sealed and 1-hour fire rated. There are many penetrations and gaps that need to be sealed and the ceiling is not 1-hour fire-rated.
- d. The current vestibule is also used as a condenser water tank room. In the event of a condenser tube leak or rupture, water contaminated with ammonia will return to the condenser water tank. The condenser tank should ideally be installed in the ammonia machine room where there are ammonia detectors and ventilation to address any ammonia that could be released.
- e. OH&S requires that there be a safety shower and eyewash station available for workers that could be exposed to a harmful substance, such as ammonia.
- f. All valves, piping and major equipment in the refrigeration plant needs to be labeled. As-built drawings should be developed and tags used to help first responders determine what valves need to be closed in the case of an ammonia leak.
- g. The ammonia detection system should be modified when the ventilation system is changed. The ammonia detectors should be relocated so that they are close to the ceiling, and near the fan intake.

The estimated code-related refrigeration cost is anticipated at \$136,000. Additional costs will be required if the condenser tank can't be relocated into the plant room and an additional vestibule is required.

The total required investment to ensure that the Gallagher Centre refrigeration system remains viable for the next 15 years is approximately \$731,000 plus 10% engineering fees of \$73,100 and a 30% recommended contingency of \$219,300 plus P.S.T. of \$61,400 for a total budget of \$1,084,400. Please note that the costs of a vestibule have not been provided as an architect will be required to determine this.

### **3. Kinsmen Arena Ice Slab & Header Trench Review - BST Consultants – Edmonton, AB**

BST Consultants were engaged to inspect the arena slab, header pipe, and associated trench at the Kinsmen Arena. The purpose was to assess the overall condition of the slab, and to provide any suggestions regarding preventive maintenance or possible removal and reconstruction of the slab.

Information was gathered by performing a visual walk through of the arena and recording a slab survey on approximate 20ft. gridlines. A rough mapping of the larger cracks in the floor was also completed. No testing was carried out to the refrigerated floor assembly to determine under slab conditions.

The slab was built in 1972 using conventional LDPE (low density polyethylene) rink pipe clamped to steel headers which were replaced approximately 20 years ago with PVC headers. Substantial heaving, mostly on the north side of the rink has resulted in cracking in all axis of travel. The differential heaving in the slab has resulted in inconsistent ice and increased maintenance costs.

The life expectancy of refrigerated concrete floors is 35 years on average with few lasting to approximately 40 years (though not without signs of strain). This floor was built approximately 49 years ago and has long surpassed its intended life cycle.

The consultant has indicated that this facility is 49 years old and it is of utmost importance to recognize the fragile state of the arena pipe. It is very likely the pipe walls are extremely thin due to wear from constant flow of brine solution through them, and they know from historical precedence that it is only a matter of time before leaks are inevitable. At this age, the floor could experience many leaks in the same season, enough to cause loss of ice and loss of facility use for the remaining season. The consultant further indicates that not many floors last this long and it is surprising that failure has not yet been realized. One circuit on the north end of the rink has already been compromised and shut off. Should an adjacent circuit be lost then the cooling may not be able to bridge that area.

There are numerous thin cracks in the concrete that are typical in the cement curing process, however there is also a significant number of large cracks, which is indicative of heaving. The consultant indicates that there are more cracks of a diagonal nature in this slab than in similar aged slabs that they have seen. These diagonal cracks are indicative of tremendous pressure in the substrate.

Frost penetration is almost assured without a fully functioning heat floor system present and relies on the seasonal shut down to allow that frost to thaw, thereby minimizing the heaving effect and resulting cracking. Given that the heat floor system is only partially intact, the condition of this floor will continue to deteriorate.

These floors have typically lasted approximately 35-40 years with average use. At roughly 49 years, this slab has surpassed its life expectancy and plans to replace it as soon as possible should be taken. Of significant concern is the partially failed heat floor system and the resulting heaving which will likely lead to additional cracking, inconsistent ice, increased liability, maintenance staff time/costs, and possible failure. The concrete elevation differences requiring more water than average cause increased power consumption in the plant room due to thermal inefficiencies experienced in the slab thereby increasing operational costs as well.

As there is evidence of frost lensing, future re-construction will need to consider how much frost is present in the sub-base and how much time may be required to remove it prior to new construction. This can be minimal if only 4ft or less is present or very costly and time consuming if 20ft or more is present. Therefore, the choice to thaw the material or remove/replace can be made depending on time and financial constraints.

What lies beneath the old slab (in the sub-base) is also of importance as this can have a significant impact on new construction cost and schedule; the consultant has unearthed everything from 2nd and 3<sup>rd</sup> slabs beneath the top one, car sized boulders, unsuitable soils, 20+ ft of frost and more. Therefore, a significant contingency fund must be allocated to deal with these unknowns in case any or several of the above are present. The consultant has indicated that in most cases, the contingency fund is not used, however in others it is completely consumed. Council would need to decide what risk they are comfortable with, if they proceed. The consultant has included a \$200,000 amount for new arena boards (dasher system), however administration has chosen to show this separately below, as a quote has been received from an arena board supplier.

The estimated cost to replace the refrigerated floor system at the Kinsmen Arena is \$835,000 plus a contingency of \$300,000 (36%) for unexpected conditions as previously described. Engineering fees

have been included in the consultant's estimated cost. Add 6% P.S.T. \$68,100 and the expected budget for this portion of the project is \$1,203,100.

#### **4. Dehumidification Review and Recommendation – R.J. England Consulting – Regina, SK**

R.J. Consulting conducted a site review of the Kinsmen Arena rink area and Zamboni room ventilation systems in order to provide a report that addresses any upgrades that are required to:

- a. Ensure the Arena and Zamboni Room ventilation systems will comply with code.
- b. Ensure the arena is safe to ensure that there is adequate ventilation to prevent people from falling ill due to poor indoor air quality due to high levels of carbon monoxide (CO), carbon Dioxide (CO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), etc.
- c. Ensure efficient and effective dehumidification.
- d. Ensure appropriate pressurization of spaces to counteract leaks in the existing building envelope.
- e. Complete sizing and preliminary selection of the required dehumidifiers.
- f. Provide an estimated cost for installation of dehumidifier(s), including natural gas connections.

After a comprehensive review of the existing ventilation systems combined with obtaining an understanding of the operating conditions and spectator loads, the consultant is recommending the following:

- a. That a desiccant dehumidifier be installed in the rink. This will serve to:
  - i. Make the rink more comfortable for spectators and skaters by decreasing the space humidity and increasing the air temperature.
  - ii. Prolong the life of the structure by decreasing the humidity.
  - iii. Increase the quality and consistency of the ice surface.
- b. A simple supply duct distribution system be installed to assist in the effectiveness of the dehumidifier.
- c. The existing exhaust fans can be retained for a purge cycle.
- d. A dew point sensor be installed to replace the non-functioning humidistat.
- e. A simple direct digital control system be installed to coordinate the operation of the Zamboni Room exhaust and dampers, the new dehumidifier, and the existing exhaust fans.

The estimated costs for the dehumidification upgrades to the Kinsmen Arena is \$610,000 (which includes a \$105,000 contingency allocated by the consultant), plus 10% engineering fees of \$61,000 and P.S.T. of \$40,260 establish a total budget of \$711,260. This assumes the following:

- a. The existing natural gas service is adequate to accommodate the additional natural gas requirements for the new equipment.
- b. The existing electrical service is adequate to accommodate the additional electrical load for the new equipment.
- c. No code upgrades, other than ventilation requirements, will need to be undertaken during the installation.
- d. These costs do not reflect any costs related to asbestos, mould, or other hazardous materials.

#### **5. Arena Boards/Glass – Global Sports Resources – Leduc, AB**

A quote was received from Global Sports Resources to replace the arena boards and glass at the Kinsmen Arena. The estimated cost is \$195,000 plus P.S.T. of \$11,700 for a total of \$206,700. This includes removal and disposal of the existing boards and glass, new player's boxes with flooring and benches, including those required in the penalty box along with a scorekeeper's table.

## **CONSIDERATIONS**

The following considerations are provided to ensure a full picture of other needs if the decision is made to proceed with ice systems upgrades at the Kinsmen Arena.

1. The ice plant at the Gallagher Centre requires significant “immediate” work, as recommended by the refrigeration consultant. A new refrigeration plant for the Westland Arena is included in the estimated budget for the Gallagher Centre Renewal project at \$1.6 million.
2. The Kinsmen Arena dressing rooms and common areas will not be modernized. Significant investment is anticipated to complete this work, given the requirement to upgrade from legal, non-conforming to modern code compliance. What that means and what it might cost would require further work.
3. If upgrading the remainder of the facility is not completed, code-related and life-safety systems concerns previously identified, which are currently considered “legal, non-conforming” (grandfathered until the building is modernized), will remain.

## **FINANCIAL IMPLICATIONS**

The value of recommended work required to ensure that the Kinsmen Arena can support ice activities for the next 15 years is estimated at \$2,775,460. Immediate work is also recommended for the Gallagher Centre refrigeration system by the refrigeration consultant. This amount has been estimated at \$1,084,260. Therefore, in order to ensure that both arenas are able to function as effectively and efficiently as possible as well as ensure reliable service to the community, a total estimated \$3,860,260 would be required.

Note: If the Gallagher Centre renewal project were to proceed, \$1.6 million has been allocated to a new refrigeration system that would support all three ice surfaces. This would result in the ongoing maintenance of one system rather than two.

## **COMMUNICATION PLAN/PUBLIC NOTICE**

The public is aware of these reviews and updates will continue to be provided as direction is received from Council. A timeline for work would be provided, as the estimated timeframe to complete work at the Kinsmen is approximately 6 months. Planning will be crucial to ensure that improvements are scheduled once we can confirm that all required equipment will be delivered. This could result in early closure of the Kinsmen in the spring and possible late opening in the fall, in order to accommodate the work required.

## **STRATEGIC PRIORITIES/OCP/COMMITTEE RECOMMENDATION(S)**

This is a direct result of Council’s priority related to improved recreation facilities, and more specifically is one of Council’s 2021 priorities.

## **OPTIONS**

1. That Council opt to consider proceeding with the Gallagher Centre Renewal project, which had a 2020 estimated budget of \$22,000,000.
2. Upgrade the Kinsmen Arena with a new refrigeration system, refrigerated slab floor, new arena boards and a dehumidification system, with an estimated budget of \$2,775,460.
3. Upgrade the Kinsmen Arena with a new refrigeration system, refrigerated slab floor, new arena boards and a dehumidification system at an estimated budget of \$2,775,460, and also upgrade the refrigeration system at the Gallagher Centre with an estimated budget of \$1,023,400 for a total budget of \$3,860,260.
4. Upgrade the Kinsmen Arena with a new refrigeration system, refrigerated slab floor, new arena boards and a dehumidification system, and upgrade the refrigeration system at the Gallagher Centre with an estimated budget of \$3,860,260.
  - a. Further, that the cost to provide a detailed structural review of the Kinsmen Arena, as well as code-related and user improvements to the remainder of the building, be investigated and reported back to Council, effectively ending the Gallagher Centre renewal project.



- b. That administration revisit the east side expansion of the Westland Arena to improve dressing rooms at the Westland Arena.
5. That a decision be deferred to the 2022 budget process, where Administration would provide funding options and scenarios for Council consideration as part of the 2022 budget process.

### **RECOMMENDATION**

Administration understands that these are difficult decisions, however, if money was no object, Administration believes that operating one refrigeration system is the ideal situation, so would recommend consideration of the Gallagher Centre Renewal project (Option 1) for the following reasons:

1. The Gallagher Centre refrigeration system needs immediate attention, as was outlined in the Strong Refrigeration review and assessment of the Gallagher Centre refrigeration system. The cost of a new ice plant has been included in the Gallagher Centre Renewal Project at an estimated value of \$1.6 million.
2. There is an opportunity to reduce the number of ice plants that the City maintains. As is indicated in this report, refrigeration systems are very expensive to replace, but also require significant investment to maintain the various components, over their lifetime. Keeping two, doubles that cost.
3. If the Kinsmen is retained, there is still significant improvements required at both facilities to update code issues and modernize the facility.
4. There would be two facilities to maintain and modernize over the life of the buildings.

However, if a comprehensive Gallagher Centre Renewal project is not a high priority, consideration should be given to ensure that both ice surfaces can remain viable until such time as funding becomes available to complete the Gallagher Center Renewal Project. Funding scenarios, and options can be provided and discussed as part of the 2022 capital budget process, and in that case Administration would recommend that Council defer a decision to further discuss the funding implications and options during the 2022 capital budget process, which is Option 5.

**Summary of Anticipated Arena Costs  
Over a 15 year horizon  
1-Nov-21**

	<b>Kinsmen Arena</b>	<b>If Kinsmen Retained Gallagher Centre</b>	
<b><u>Ice Plants</u></b>			
Replace compressor		\$ 395,000	
includes controls, hockey & curling chillers, brine heater			
Brine Chiller & Oil Separator	\$ 100,000		
Condenser, Desuperheater & Various Pumps	\$ 180,000	\$ 200,000	
<b><u>Code Upgrades</u></b>			
Amonia Relief System	\$ 30,000	\$ 30,000	
Replace Exiting Ventilation System	\$ 75,000	\$ 75,000	
Seal & Fireproof Machine room	\$ 20,000	\$ 20,000	
Safety Shower & Eyewash	\$ 5,000	\$ 5,000	
Labelling & Tagging	\$ 6,000	\$ 6,000	
Ammonia Detection, stops and pipe supports	\$ 25,000		
<b>Sub-total</b>	<b>\$ 441,000</b>	<b>\$ 731,000</b>	
Engineering fees @ 10%	\$ 44,100	\$ 73,100	
Contingency of 30%	\$ 132,300	\$ 219,300	
P.S.T. 6%	\$ 37,000	\$ 61,400	
<b>TOTAL Ice Plants</b>	<b>\$ 654,400</b>	<b>\$ 1,084,800</b>	
<b><u>New Rink Slab &amp; Header Trench</u></b>			
Demo Slab	\$ 150,000		
Excavate, Remove, Dispose & Grade Soils to spec	\$ 50,000		
Replace existing soils to design grade	\$ 100,000		
Provide Weeping Tile System	\$ 25,000		
Provide New Refrigerated Slab	\$ 475,000		
GeoTech & Testing	\$ 15,000		
Structural Engineering	\$ 20,000		
<b>Sub-total</b>	<b>\$ 835,000</b>		
Chromate Contingency (due to extensive brine leaks over time)	\$ 50,000		
Contingency (Unknown substrate conditions, etc.)	\$ 250,000		
P.S.T. 6%	\$ 68,100		
<b>TOTAL New Rink Slab</b>	<b>\$ 1,203,100</b>		
<b><u>Dehumidification</u></b>			
Ventilation, heating & air conditioning	\$ 285,000		
Plumbing, electrical, mechanical	\$ 220,000		
Contingency (mould, asbestos, other unknown)	\$ 105,000		
<b>Sub-total</b>	<b>\$ 610,000</b>		
Engineering	\$ 61,000		
P.S.T. 6%	\$ 40,260		
<b>TOTAL Dehumidification</b>	<b>\$ 711,260</b>		
<b><u>New Arena Boards</u></b>			
Remove, dispose old & install new boards/glass	\$ 195,000		
P.S.T. 6%	\$ 11,700		
<b>TOTAL Arena Boards</b>	<b>\$ 206,700</b>		
<b>Total Estimated Costs for Arena Improvements</b>	<b>\$ 2,775,460</b>	<b>\$ 1,084,800</b>	<b>\$ 3,860,260</b>

**Chromates**

old rust inhibiting additive no longer used in brine solutions and  
considered carcinogenic

If high volumes present in the soil, removal & fill required



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October 18<sup>th</sup>, 2021

**Attn:** Kurt Stechyshyn

Facilities Manager – Recreation & Community Services – City of Yorkton, SK

**Re: Kinsmen Arena – Ice Plant Inspection (Rev.2)**

Kurt,

SRCI visually inspected the Kinsmen Arena ice plant on August 12<sup>th</sup>, 2021.

The following pages outline SRCI's observations and recommendations following the inspection.

Please NOTE: As per the scope of work, which was outlined in the proposal, this report focuses on the age and condition of the refrigeration equipment and Class D budgets to replace equipment that will reach the end of its typical service life over the next 15 years. SRCI has identified the typical life of the equipment. However, we make no guarantees about the remaining life of any equipment or piping. The actual equipment lifespan can vary widely based on many factors that we cannot quantify including but not limited to:

1. Manufacturing quality,
2. Material quality /defects,
3. How the equipment was installed and
4. The operating conditions the equipment was subjected to during its life.

SRCI's inspections were purely visual, and we did not complete any non-destructive examination or remove any insulation to inspect the condition of equipment or piping that was not outwardly visible.

SRCI has also identified issues related to the refrigeration system's code compliance. Please note that the list of code issues is not intended to be a list of corrective actions. Engineering is required to determine the scope of work / corrective actions for many of the code deficiencies. SRCI would be happy to assist with the required mechanical / refrigeration engineering required to correct the code deficiencies, and we can provide a proposal to do so at your request.

Please advise if you have any questions regarding this report or if we can be of further assistance implementing the recommendations.

Review completed for Strong Refrigeration Consultants Inc., by

**Alex Repski, M. Sc, P.Eng.**

PJ706 – City of Yorkton – Kinsmen Arena

**Description of Ice Plant**

The Kinsmen Arena has a critical charge ammonia refrigeration system. Table 1 below summarizes the defining characteristics of the ice plant:

Table 1 – Kinsmen Arena ice plant characteristics

<b>Refrigerant:</b>	R717 (Ammonia)
<b>Rink Operating Season:</b>	7 Months (September 1 <sup>st</sup> , to March 31 <sup>st</sup> )
<b>Capacity:</b>	70 TR
<b>Classification:</b>	Indirect
<b>Year Installed:</b>	The ice plant was constructed in phases, starting with a new chiller in 2006, and replacement of the compressors and controls in 2008.
<b>Installed By:</b>	Stevenson Industrial
<b>Refrigeration System Type:</b>	Critical charge
<b>Compressor(s):</b>	1 - Vilter 456XL, 1 – 454XL
<b>Chiller(s):</b>	Flooded Shell and tube, QTY: 1
<b>Condenser Type:</b>	Evaporative condenser
<b>Ammonia Charge:</b>	700 lbs (Based on Door Tag.)
<b>Prime Movers:</b>	1 @ 100 HP, 1 @ 75 HP (112 kW)
<b>Low Side Test Pressure:</b>	163 psig
<b>High Side Test Pressure:</b>	275 psig.
<b>Oil Charge and Type:</b>	Not posted.

**Recommendations for Equipment Replacement / Cost to Replace:**

Appendix A includes a detailed equipment list with the age and estimated remaining useful life for each piece of major equipment. Predicting the useful life of equipment is not an exact science, as the life of equipment is heavily influenced by:

- Quality of materials, and manufacturing,
- Installation,
- System design,
- System operating history,
- Maintenance and
- System cleanliness, or contamination.

As such table 2 below lists the equipment that may need to be replaced in each 5-year interval (1-5 years, 6-10 years, and 11-15 years, etc.)

Budget costs for replacement are based on past experience with similar equipment and budget estimates obtained through discussions with local contractors.

Table 2 – Budget cost of equipment replacement over next 15 years.

<b>YEARS:</b>	<b>EQUIPMENT POTENTIALLY REQUIRING REPLACEMENT OR MAJOR SERVICE.</b>	<b>EQUIPMENT REPLACEMENT BUDGET COST</b>
1-5 (inclusive)	<ul style="list-style-type: none"> <li>• Brine Chiller</li> <li>• C-1 Oil Separator</li> <li>• C-2 Oil Separator</li> </ul>	\$100,000.00
6-10 (inclusive)	<ul style="list-style-type: none"> <li>• Condenser Replacement</li> <li>• Desuperheater (for ice melt pit)</li> <li>• Underfloor brine heater</li> <li>• Hockey Pump</li> <li>• Underfloor Heat Pump</li> <li>• Condenser Water Pump</li> </ul>	\$180,000.00
11-15	None	\$0.00

**Compressor Overhauls**

In an ammonia ice rink application, Vilter reciprocating compressors need to be overhauled after approximately 10,000 hours of run time.

- The manufacturer (Vilter) recommends tear down inspections every 5,000 hours and the replacement of components found to be worn during the inspection.
- Stevenson Industrial has found that in a typical ice rink application, the compressors need to be overhauled after about 10,000 hours of run time.

Based on past overhaul history, the Kinsmen compressors run for approximately 2,500 hours / year (each). Therefore, the compressors need to be overhauled every 4 years on average.

C-1 (The 456XL) is due for an overhaul immediately. Its last overhaul was in 2016 at 10,000 hours. Currently the compressor has ~21,000 hours on it. The budget cost for a compressor overhaul is approximately \$8,000.00.

C-2 will need an overhaul within the next two years. Its last overhaul was in 2019 at approximately 12,000 hours and currently it has approximately 17,300 hours on it.

Typically, compressors can be rebuilt indefinitely if:

1. Parts are readily available (and are affordable),
2. There is no damage to the compressor casing itself.

Given these compressors are both “current models” meaning that they are still being produced and sold, it is very likely that parts will be readily available for 15 + years.

**CODE ISSUES / SAFETY CONCERNS:**

SRCI identified several code compliance problems with the existing refrigeration plant that need to be addressed. Appendix B contains a detailed checklist, developed by SRCI, that lists all applicable code requirements, applicable legislation, good practice, and any observed issues. Generally, the major code issues are:

- **The pressure relief system needs to be modified to comply with current codes:**
  - Replacing some oversized relief valves should allow the existing relief header and piping to be re-used,
  - A pressure relief valve needs to be added to the glycol side of the snow melt desuperheater (relief valves are required on both sides of ASME heat exchangers),
  - The diffuser on the relief stack discharges down, towards the ground. This should be replaced with a rain cap which allows the relief piping to discharge directly upwards.
  - There are several valves in the brine system that should be locked / car-sealed open. These valves must remain open to provide an open path to the atmospheric expansion tanks. Without these valves being open, there is no overpressure protection on the brine side of the chiller or underfloor heat exchanger.
- **The ventilation system should be completely re-designed and replaced:**
  - The existing fan does not provide enough airflow to meet code requirements for

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an ammonia leak / rupture event, or provide sufficient cooling of the machine room,

- There is no intake louver,
- There is no “continuous” exhaust fan.
- The existing fan discharges towards the ground. SRCI strongly recommends that the replacement exhaust fan discharges upwards at 2500 ft/min. This will help to ensure that in the event of an ammonia leak, ammonia is not discharged in a manner that could create a hazard for anyone on the vicinity of the ice rink. The current fan could blow exhaust air, contaminated with ammonia, towards anyone in the parking lot on the side of the rink.



Figure 1 – Fan discharges towards the ground.

- The existing fan switches are not code compliant.
- **The machine room needs to be sealed and 1-hour fire rated**
  - There are many openings and holes that are not sealed and would allow ammonia to leak into the arena if there was an ammonia release in the machine room. This is a hazardous issue that should be addressed as soon as possible. The openings include a large gap under the machine room door. ALL penetrations need to be sealed and fire-rated including the header trench. A structural engineer or architect should be engaged to design / specify the methods for sealing and fire

rating the walls and ceiling.

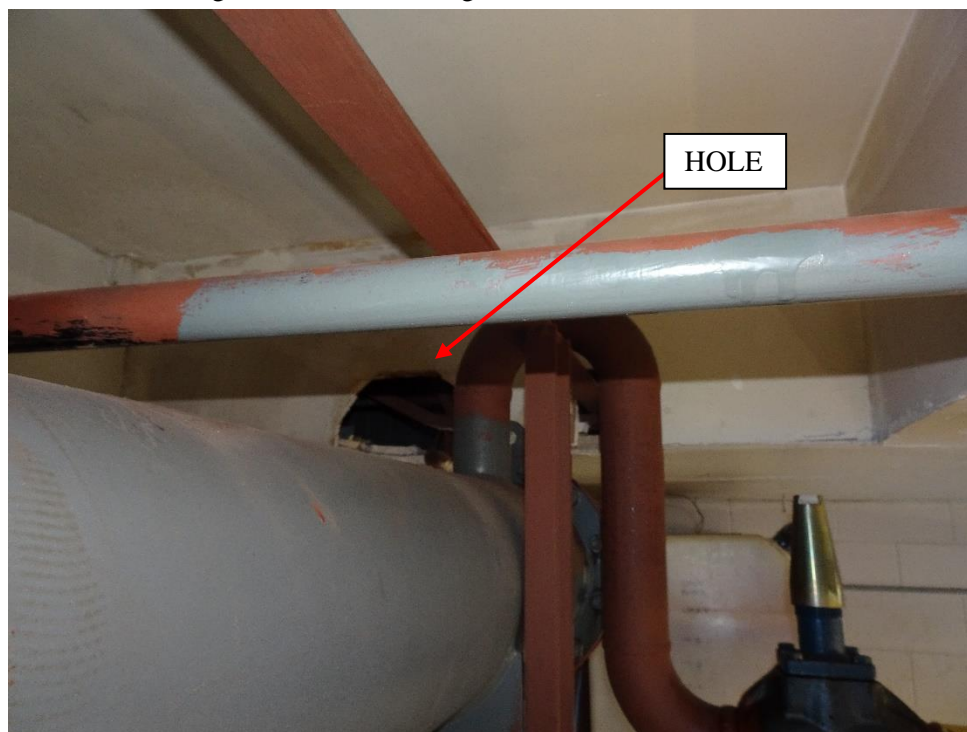


Figure 2 – Example of hole in roof / drywall



Figure 3 – Example of holes in walls





Figure 4 – Brine lines not sealed.

- The room is not 1-hour fire rated due to several openings, holes in the drywall on the ceiling, etc.
- **There is no vestibule for the door opening into the arena and the door opens into the machine room.**
  - CSA B52 requires that machine room doors open outwards, and any doors that open directly into the rink have a vestibule. This door can either be replaced, and a vestibule added, or it could be sealed off so that the machine room can only be accessed from outside.



Figure 5 – Machine room door without vestibule.

- **Safety Shower + Eyewash Station: OH&S requires that there be a safety shower / eyewash station available for workers that could be exposed to a harmful substance, such as ammonia.**
  - SRCI recommends that a permanent safety shower be installed that meets the requirements of ANSI Z358.1.
- **All valves, piping and major equipment in the refrigeration plant needs to be labeled.**
  - Along with labelling the valves, piping and equipment, SRCI recommends that an As-built P&ID drawing of the plant should be developed. The drawing would include valve tags and could be used by emergency responders to determine what valves need to be closed in response to an ammonia release or emergency.
- **The ammonia detection system should be modified when the ventilation system is changed:**
  - The ammonia detector should be relocated so that it is close to the ceiling, and near the fan intake,
  - Provisions should be added for the ammonia detection system to dial out (via the alarm system or other similar means) and remotely alert city personnel in the event of an ammonia leak.
- **Emergency stop switches need to be added outside the machine room doors,**
- **Pipe supports should be added for many of the pipes.** Currently, all the piping is being supported by the major equipment nozzles. While this does not appear to have caused any issues to-date it is not good practice to fully support the piping using the major equipment nozzles.

Table 3 – Budget Costs to Correct Code Deficiencies

<b>CODE DEFICIENCY</b>	<b>BUDGET COST</b>
<b>Ammonia Relief System changes</b>	\$30,000.00
<b>Replace Existing Ventilation System</b>	\$75,000.00
<b>Sealing, Fireproofing Machine room</b>	\$20,000.00
<b>Vestibule addition or door removal</b>	\$TBD structural / architectural.
<b>Safety Shower + Eyewash</b> (Assuming a supply of hot + cold water is readily available and drainage is readily available).	\$5,000.00
<b>Labelling, Tagging, As-built P&amp;ID development</b>	\$6,000.00
<b>Add pipe supports, add E-stops, modify ammonia detection system, etc.</b>	\$25,000.00



**SRCI COMMENTS RE: CODE CHANGES:**

The codes, standards, and legislation in-force and applicable to refrigeration systems in Saskatchewan include:

1. CSA B52-2018: The Mechanical Refrigeration Code,
2. ASME Section VIII: The Boiler and Pressure Vessel Code,
3. ASME B31.5: Refrigeration Piping and Heat Transfer Components,
4. The Saskatchewan Boiler and Pressure Vessel Regulations (2017),
5. The Occupational Health and Safety Regulations and
6. The National Building Code NBCC-2015.

a. NOTE: The national building code, largely defers to CSA B52.

The applicable codes and standards have remained largely unchanged for many years. The most significant changes have been:

- In 2013, clause 7.3.6.5 was added to CSA B52 which states: “*Discharge piping shall be designed with consideration for discharge forces and backpressure (See clause H.1) and shall be constructed as per clause 5.4.1.*”
- Most pressure relief systems build prior to 2013 do not comply with clause 7.3.6.5 when they are analyzed to determine how much back pressure is generated by all relief devices discharging simultaneously.
- In 2018, CSA B52 removed the requirement for an emergency discharge line (Fire line) on ammonia refrigeration systems, unless it is required by the Authority Having Jurisdiction (AHJ), TSASK in this case.

Over the years, interpretation of codes and standards has changed significantly. For example, in the past wall exhaust fans discharging horizontally were the norm. However, it is now recognized that this is not the best practice. Furthermore, in the wake of major safety incidents, the Authorities having Jurisdiction have significantly increased inspection and enforcement of codes / standard requirements related to ammonia refrigeration plants. For example, TSASK has

**NOTES ON COST ESTIAMTES:**

1. *The costs listed above are for budget purposes only. SRCI has not completed any engineering or developed a detailed scope of work as such, these should only be considered a Class D (+/- 30%) estimate. These are based on project costs (from jobs of similar nature) or budgetary estimates obtained from contractors. NOTE: Equipment and material prices are fluctuating changing rapidly due to global supply chain problems. The budget estimates above do not account for inflation and the recent changes in material / equipment costs. To factor inflation into the estimates, a detailed scope of work, complete with design information will be required to obtain quotes from suppliers / manufacturers.*

**APPENDICES / ATTACHMENTS**

- Appendix A: Kinsmen Arena – Equipment Inventory, Equipment Life
- Appendix B: Kinsmen Arena – Code Checklist



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October 8<sup>th</sup>, 2021

**Attn:** Kurt Stechyshyn

Facilities Manager – Recreation & Community Services – City of Yorkton, SK

**Re: Gallagher Centre – Ice Plant Inspection**

Kurt,

SRCI visually inspected the Gallagher Centre ice plant on August 12<sup>th</sup>, 2021.

The following pages outline SRCI's observations and recommendations following the inspection.

Please NOTE: As per the scope of work, which was outlined in the proposal, this report focuses on the age and condition of the refrigeration equipment and Class D budgets to replace equipment that will reach the end of its typical service life over the next 15 years. SRCI has identified the typical life of the equipment. However, we make no guarantees about the remaining life of any equipment or piping. The actual equipment lifespan can vary widely based on many factors that we cannot quantify including but not limited to:

1. Manufacturing quality,
2. Material quality /defects,
3. How the equipment was installed, and
4. The operating conditions the equipment was subjected to during its life.

SRCI's inspections were purely visual, and we did not complete any non-destructive examination or remove any insulation to inspect the condition of equipment or piping that was not outwardly visible.

SRCI has also identified issues related to the refrigeration system's code compliance. Please note that the list of code issues is not intended to be a list of corrective actions. Engineering is required to determine the scope of work / corrective actions for many of the code deficiencies. SRCI would be happy to assist with the required mechanical / refrigeration engineering required to correct the code deficiencies, and we can provide a proposal to do so at your request.

Please advise if you have any questions regarding this report or if we can be of further assistance implementing the recommendations.

Review completed for Strong Refrigeration Consultants Inc., by

**Alex Repski, M. Sc, P.Eng.**

PJ706 – City of Yorkton – Gallagher Centre

**Description of Ice Plant**

The Gallagher Centre has an ammonia refrigeration system complete with two separate chillers (1 for the curling rink, and 1 for the hockey rink). Table 1 below summarizes the defining characteristics of the ice plant:

Table 1 – Kinsmen Arena ice plant characteristics

<b>Refrigerant:</b>	R717 (Ammonia)
<b>Rink Operating Season:</b>	10 Months (July 7 <sup>th</sup> , to April 30 <sup>th</sup> )
<b>Capacity:</b>	150 TR
<b>Classification:</b>	Indirect
<b>Year Installed:</b>	The ice plant was constructed in phases, the compressor is the oldest component and was installed in 1998. The chillers were replaced in 2007
<b>Installed By:</b>	Stevenson Industrial
<b>Refrigeration System Type:</b>	Flooded, w / high pressure receiver.
<b>Compressor(s):</b>	2 – Howden Screws (XRV 127 R3, 100 hp)
<b>Chiller(s):</b>	Flooded Shell and tube, QTY: 2 (1 Hockey, 1 curling)
<b>Condenser Type:</b>	Evaporative condenser
<b>Ammonia Charge:</b>	1800 lbs (Based on Door Tag.)
<b>Prime Movers:</b>	2 @ 100 HP (75 kW) = 150 kW TOTAL.
<b>Low Side Test Pressure:</b>	163 psig
<b>High Side Test Pressure:</b>	275 psig.
<b>Oil Charge and Type:</b>	Not posted.

**Recommendations for Equipment Replacement / Cost to Replace:**

Appendix A includes a detailed equipment list with the age and estimated remaining useful life for each piece of major equipment. Predicting the useful life of equipment is not an exact science, as the life of equipment is heavily influenced by:

- Quality of materials, and manufacturing,
- Installation,
- System design,
- System operating history,
- Maintenance and
- System cleanliness, or contamination.

As such table 2 below lists the equipment that may need to be replaced in each 5-year interval (1-5 years, 6-10 years, and 11-15 years, etc.)

Budget costs for replacement are based on past experience with similar equipment and budget estimates obtained through discussions with local contractors.

As table 2 shows, the majority of the equipment in the plant will likely need to be replaced within the next 10 years.

Both screw compressors require an overhaul immediately. Rather than overhauling the screw compressors, the City of Yorkton may want to consider replacing the existing screw compressor package with two or more reciprocating compressors. Replacing the screw compressors with reciprocating compressors would be more costly than overhauling the screw compressor (Approximately \$190,000.00 vs. \$155,000.00 for the overhauls). However, the reciprocating compressors will be more efficient, and would simplify the refrigeration system and its controls.

Table 2 – Budget cost of equipment replacement over next 15 years.

YEARS:	EQUIPMENT POTENTIALLY REQUIRING REPLACEMENT OR MAJOR SERVICE.	EQUIPMENT REPLACEMENT BUDGET COST
1-5 (inclusive)	<ul style="list-style-type: none"> <li>• Screw compressor overhauls.</li> <li>• Control system.</li> <li>• Curling chiller.</li> <li>• Hockey chiller.</li> <li>• Underfloor brine heater.</li> </ul>	\$350,000.00
6-10 (inclusive)	<ul style="list-style-type: none"> <li>• Condenser</li> <li>• QTY: 2 – Hockey brine pumps</li> <li>• QTY: 2 – Curling brine pumps</li> </ul>	\$170,000.00
11-15	<ul style="list-style-type: none"> <li>• QTY: 2- Condenser water pumps</li> <li>• Underfloor heat pump.</li> </ul>	\$30,000.00

**CODE ISSUES / SAFETY CONCERNS:**

SRCI identified several code compliance problems with the existing refrigeration plant that need to be addressed. Appendix B contains a detailed checklist, developed by SRCI, that includes all applicable code requirements, applicable legislation, good practice, and any observed issues. The following is a summary of the primary code compliance issues.

- **The pressure relief system needs to be redesigned and completely replaced to comply with current codes:**
  - The oil filters on the screw compressor require hydrostatic relief valves.
  - Several PSVs are oversized and should be re-selected.
  - Both relief headers and all the branch lines need to be re-sized / redesigned as they are undersized.
  - The diffuser on the relief stack discharges downwards towards the ground. This should be replaced with a rain cap which allows the relief piping to discharge directly upwards.





Figure 1 – Relief stack discharges towards ground.

- The stack discharges below the highest roof level of the Gallagher Centre. SRCI recommends installing a relief stack tall enough that it discharges above the tallest building roofline. Depending on the wind direction, air currents from the building roof will push any ammonia leaving the stack back towards the ground. A stack taller than the building rooflines will discharge any ammonia above any recirculating air currents from the building's higher roofs. For facilities like the Gallagher Centre, in the SRCI has used a 40-foot light pole mounted on a 10-foot-tall screw pile so the top of the stack is 50 feet above the ground.



Figure 2 – Example 40-foot relief stack.

- There are several valves in the brine system that should be locked / car-sealed open. These valves must remain open to provide an open path to the atmospheric brine expansion tanks. If these valves are closed, there is no overpressure protection on the brine side of the chillers or the underfloor heat exchanger.
- **The ventilation system should be completely re-designed and replaced:**
  - There is no dedicated “continuous” exhaust fan, which forces the larger ventilation fans to be used when the room is occupied. This requires more heating energy than necessary in the winter.
  - The existing fan discharge horizontally, about 10 feet above the ground in a corner adjacent to:
    - One of the main rink entrances.
    - A sidewalk leading to one of the main rink entrances.
    - Parking stalls along the sidewalk.

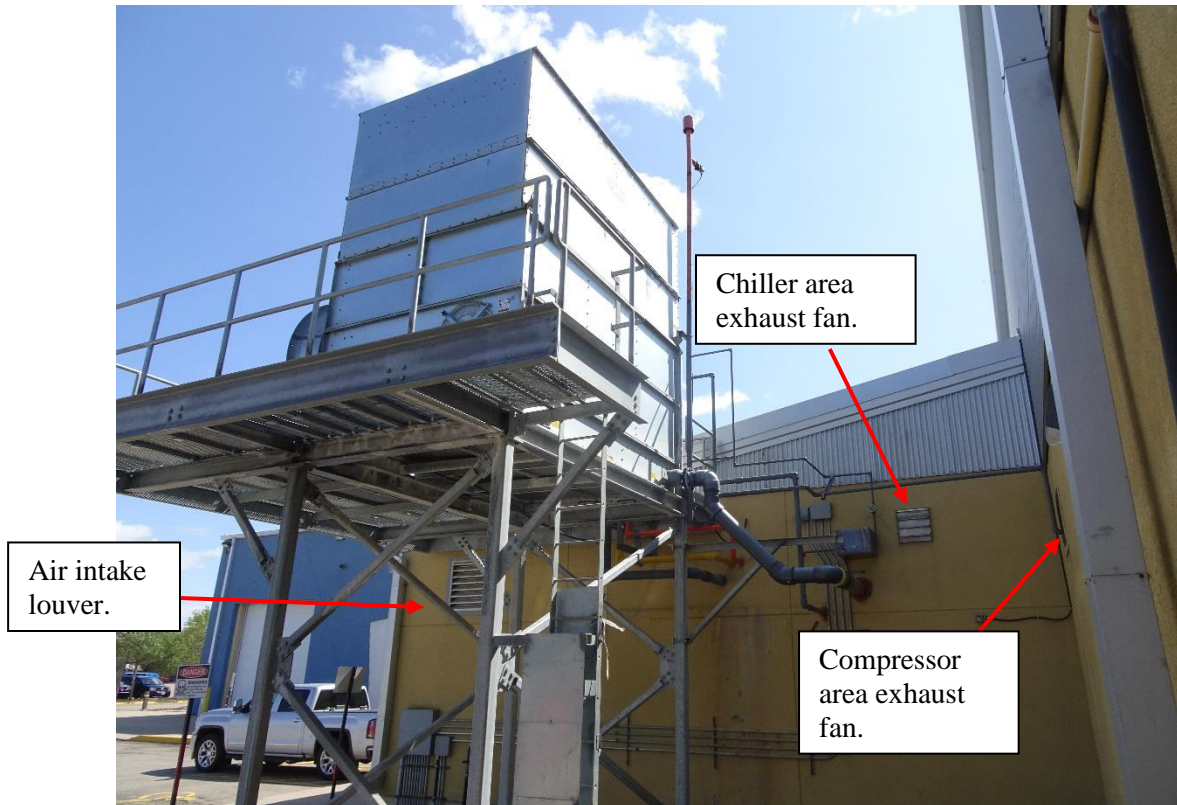


Figure 3 – Exhaust Fans

- In the event of an ammonia release, there is a significant risk that patrons in the area would be exposed to exhaust from the machine room contaminated with ammonia vapor.
  - SRCI strongly recommends replacing the existing ventilation system with one designed to discharge above the highest building roofline to ensure anyone entering the rink would not be exposed to ammonia vapor in the event of an ammonia release in the machine room.





Figure 4 – Example of Ammonia Rink Ventilation system designed by SRCI to discharge above the building's roof.

- The existing fan switches are not code compliant and need to be replaced when the ventilation system is replaced.
- **The machine room needs to be sealed and 1-hour fire rated**
  - There are many openings and holes that are not sealed. ALL penetrations need to be sealed and fire-rated including the header trench. A structural engineer or architect should be engaged to design / specify the methods for sealing and fire rating the walls and ceiling.
  - The machine room ceiling above the screw compressor is not 1-hour fire rated.
- **The current “vestibule” is also used as a condenser water tank room.**
  - In the event of a condenser tube leak or rupture, water contaminated with ammonia will return to the condenser water tank. The condenser tank should ideally be installed in the ammonia machine room where there are ammonia detectors and ventilation to address any ammonia that could be released. SRCI recommends that the City of Yorkton considers adding a secondary vestibule so that the existing door and wall could potentially be demolished which would then allow the water tank to become a part of the machine room.

- **Safety Shower + Eyewash Station: OH&S requires that there be a safety shower / eyewash station available for workers that could be exposed to a harmful substance, such as ammonia.**
  - SRCI recommends that a permanent safety shower be installed that meets the requirements of ANSI Z358.1.
- **All valves, piping and major equipment in the refrigeration plant needs to be labeled.**
  - Along with labelling the valves, piping and equipment, SRCI recommends that along with tagging and labelling all piping and equipment, an As-built P&ID drawing of the plant should be developed. The drawing would include valve tags and could be used by emergency responders to determine what valve needs to be closed in response to an ammonia release or emergency.
- **The ammonia detection system should be modified when the ventilation system is changed:**
  - The ammonia detectors should be relocated so that they are close to the ceiling, and near the fan intake.

**Table 3 – Budget Costs to Correct Main Code Deficiencies**

<b>CODE DEFICIENCY</b>	<b>BUDGET COST</b>
<b>Ammonia Relief System changes</b>	\$30,000.00
<b>Replace Existing Ventilation System</b>	\$75,000.00
<b>Sealing, Fireproofing Machine room</b>	\$20,000.00
<b>Vestibule Changes</b>	\$TBD structural / architectural
<b>Safety Shower + Eyewash</b> (Assuming a supply of hot + cold water is readily available, and drainage is readily available).	\$5,000.00
<b>Labelling, Tagging, As-built P&amp;ID development</b>	\$6,000.00

**SRCI COMMENTS RE: CODE CHANGES:**

The codes, standards, and legislation in-force and applicable to refrigeration systems in Saskatchewan include:

1. CSA B52-2018: The Mechanical Refrigeration Code,
2. ASME Section VIII: The Boiler and Pressure Vessel Code,
3. ASME B31.5: Refrigeration Piping and Heat Transfer Components,
4. The Saskatchewan Boiler and Pressure Vessel Regulations (2017),
5. The Occupational Health and Safety Regulations.
6. The National Building Code NBCC-2015.

a. NOTE: The national building code, largely defers to CSA B52.

The applicable codes and standards have remained largely unchanged for many years. The most significant changes have been:

- In 2013, clause 7.3.6.5 was added to CSA B52 which states: “*Discharge piping shall be designed with consideration for discharge forces and backpressure (See clause H.1) and shall be constructed as per clause 5.4.1.*”
- Most pressure relief systems build prior to 2013 do not comply with clause 7.3.6.5 when they are analyzed to determine how much back pressure is generated by all relief devices discharging simultaneously.
- In 2018, CSA B52 removed the requirement for an emergency discharge line (Fire line) on ammonia refrigeration systems, unless it is required by the Authority Having Jurisdiction (AHJ), which is SASK in this case.

Over the years, interpretation of codes and standards has changed significantly. For example, in the past wall exhaust fans discharging horizontally were the norm. However, it is now recognized that this is not the best practice. Furthermore, in the wake of major safety incidents, the AHJs have significantly increased inspection and enforcement of codes / standard requirements related to ammonia refrigeration plants. For example, TSASK has started inspecting ammonia machines for code compliance, and to SRCI’s understanding, TSASK will only give owners a limited period of time to correct compliance problems.

**NOTES ON COST ESTIMATES:**

1. *The costs listed above are for budget purposes only. SRCI has not completed any engineering or developed a detailed scope of work as such, these should only be considered a Class D (+/- 30%) estimate. These are based on project costs (from jobs of similar nature) or budgetary estimates obtained from contractors. NOTE: Equipment and material prices are fluctuating changing rapidly due to global supply chain problems. The budget estimates above do not account for inflation and the recent changes in material / equipment costs. To factor inflation into the estimates, a detailed scope of work, complete with design information will be required to obtain quotes from suppliers / manufacturers.*



**APPENDICES / ATTACHMENTS**

**Appendix A:** Gallagher Centre – Refrigeration Equipment Inventory, Equipment Life

**Appendix B:** Gallagher Centre – Code Checklist

## APPENDIX A - EQUIPMENT INVENTORY, EQUIPMENT LIFE

**Project:** 706 - City of Yorkton, Gallagher Centre  
**Document:** Equipment Data  
**Date:** 18-Aug-21  
**Rev.** 1

TAG	DESCRIPTION	MAKE	MODEL	YEAR	AGE	HOURS	TYPICAL LIFESPAN	ESTIMATED REMAINING LIFE	Comments
C-1	Screw Compressor	Howden	XRV 127 R3, 100 HP	1998 (Assumed)	23	40,000 +	30,0000 - 40,000 hours (Between Overhauls)	0 Overhaul is required .	To achieve 30,000 - 40,000 hour lifespan, regular vibration and oil analysis is required. Vibration analysis from Stevenson has indicated that the compressors need to be replaced or rebuilt.
C-2	Screw Compressor	Howden	XRV 127 R3, 100 HP	1998 (Assumed)	23	40,000 +	30,0000 - 40,000 hours (Between Overhauls)		
Refrigeration Controls	Control Panel	Stevenson		2007	14	Stevenson has observed some faults in the control system's hardware. The components are obsolete, so repair may not be feasible, and a complete control system replacement may be required.			
OS	Oil Separator	M&M Refrigeration	None.	1998	23		Indefinite if there is no corrosion and the coalescer elements are replaced regularly.	n/a	
CH-1	Curling Chiller (Shell and Tube w/surge drum)	HENRY Technologies	FA-20144-210 (Chiller) RA-18096-509 (Surge Drum)	2007	14		15-20 years (Outliers on Low end ~ 10 years) (Outliers on High End ~ 20 years)	1-6	It is difficult to predict the life of a heat exchanger. Manufacturing / material defects (Tube quality issues, defective tube sheet rolls, etc. are a common source of failure). Corrosion will also affect the chiller if brine quality is poor or if there is air in the system. The only practical / reliable method of detecting chiller failure is brine sampling.
CH-2	Hockey Chiller (Shell and Tube w/surge drum)	HENRY Technologies	FA-18132-210 (Chiller) RA-16096-509 (Surge Drum)	2007	14			1-6	
Underfloor HX	Underfloor Heat Exchanger (Shell and tube)	CHIL-CON	CBH-06042-100	2010	11			1-6	
V-1	High Pressure Receiver	Henry	RA-36120-500	2007	14		Indefinite with no Corrosion.	n/a	
P-1	Condenser Water Centrifugal Pump	Bell & Gossett	5x4x8 - 4280 385 USGPM @ 40 ft. 7.5 hp, 1800 RPM	2021	0		15 years	15 years	
P-2	Condenser Water Centrifugal Pump	Bell & Gossett	e1510 SST, 4 AD 600 USGPM @ 30 ft. 7.5 HP, 1800 RPM	2018	3		15 years	12 years	
P-3	<b>Hockey Pump 1</b> Centrifugal Pump	Bell & Gossett	5BC (?) Nameplate Damaged 920 USGPM, 20 hp.	2013	8		15 years	7 years	
P-4	<b>Hockey Pump 2</b> Centrifugal Pump	Bell & Gossett	5BC (?) Nameplate Damaged 920 USGPM, 20 hp.	2013	8		15 years	7 years	
P-5	<b>Curling Pump 1</b> Centrifugal Pump	Bell & Gossett	4BC 650 GPM @ 50 ft. 15 hp, 1700 RPM	2013	8		15 years	7 years	
P-6	<b>Curling Pump 2</b> Centrifugal Pump	Bell & Gossett	4BC 650 GPM @ 50 ft. 15 hp, 1700 RPM	2013	8		15 years	7 years	
P-7	<b>Underfloor Heat</b> Centrifugal Pump	Bell & Gossett	E1510 SSF, 3AD 7.0 325 USGPM @ 40 ft., 7.5 hp 1800 RPM	2021	0		15 years	15 years	Pump replaced in 2021 Motor appears to be original (2007)
EC-1	Evaporative Condenser	Vilter / BAC	No Nameplate	Circa 2007	14		20 years	6 years.	Condenser has several water leaks and some minor scaling.

**AMMONIA REFRIGERATION PLANT - SAFETY CHECKLIST (SASKATCHEWAN)**

<b>Project:</b>	City of Yorkton Arena Inspections	<b>Prepared by:</b> Alex Repski
<b>Owner:</b>	City of Yorkton, SK	<b>Date:</b>
<b>Location:</b>	Gallagher Centre	<b>LEGEND</b> ✓ = Requirement Met ✗ = Requirement Not Met ! = Requirement partially met. N/A = Not applicable to this plant. ? = Could not be verified
<b>Refrigerant:</b>	Ammonia (R717)	
<b>Machine Room Gros</b>	750 ft <sup>2</sup>	
<b>Refrigerant Charge:</b>	1800 lbs	
<b>Prime Movers:</b>	200 hp	
<b>Occupancy:</b>	Public	
<b>Leakage Probability:</b>	Low	

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
<b>MANDATORY - CODE / REGULATORY REQUIREMENTS</b>				
✗	Machine RM. has restricted access sign outside all entrances.	6.2.1		Add a restricted access sign outside the machine room.
!	All equipment easily accessible, with adequate space for proper service, maintenance, and operation	6.2.1		The brine pumps are congested.
!	Permanent sign, secured, accessible and legible indicating - Name and address of the installer ✓ - Refrigerant Type ✓ - Lubrication type and amount ✗ - Refrigerant charge ✓ - Field Test Pressures Applied ✓ - Design Refrigeration Capacity ✓ - Prime Movers (kW) ✓	5.11.1		Add lubricant type and amount of oil to the sign.
!	Design / field test pressure are correct for type of condenser: - Low Side Min. Test = 151 psig - High Side (Evap. Cond) Min. Test = 235 psig - High Side (Air Cond.) Min. Test = 322 psig	5.5.1		** Low side test pressure appears to be 165 psig on the door tag. This is Code compliant. However, the PSV setpoints may need to be reduced to 150 psig during the relief system re-design to align with the test pressure.
✗	For prime movers > 125 kW (168 hp) Emergency Response plans posted with: - Contact number for first response organization ✗ - Instructions for emergency shut down ✗ - Day and night contact numbers for: -> Service Provider ✓ -> Regulatory Authority ✗ -> Regulatory Authority Incident Report Number ✗	5.11.5		Update emergency response plans to include all the information listed.
✓	Remote control Switches are Labelled	5.11.3		
N/A	Pressure Limiting Devices are Labelled	5.11.3		M&M panels incorporate pressure limitations for compressors.
✗	Each pressure Vessel is Labelled	5.11.3		Label all pressure vessels.
✗	The main "shutoff valve" for each vessel is labelled	5.11.3		Label shutoff valve for each vessel.
✓	Vessls have their own support and are anchored		ASME	

## APPENDIX B - CODE CHECKLIST

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
!	Piping is adequately supported		ASME	Pipe support should be added for some pipes so that they are not supported by the pressure vessels.
X	Piping is identified for services and has flow directions	5.11.3		Label all piping in accordance with IIAR Bulletin 114.
!	A vestibule is present to avoid direct communication of machine room to building as per class T machine room requirements	6.3-b		The vestibule also houses other equipment. It is not purely a vestibule. The condenser water tank is also installed in the "vestibule" there is a risk that in the event of a condenser tube leak, ammonia laden water could be present in the water tank.
X	There shall be two ventilation switches:., 1 - At least one <u>immediately outside</u> the machine room 2 - At least one <u>inside</u> the machine room. Switch(es) outside the machine room shall start but NOT stop the fans. Fans must be permitted to run as long as power is available	6.2.5.4 6.3		City of Yorkton to ensure there is a fan "start" switch inside of the machine room.  Fan "over-ride" switch appears to allow the fans to be stopped from outside the machine room.
X	There are NO passages that permit the passage of escaping refrigerant to other parts of the building.	6.2.2		There are several holes that need to be sealed, including the header trench.
X	Pipes piercing interior walls, ceiling, floor are tightly sealed (1 hour fire rated seal)	6.3		There are many small penetrations that need to be sealed and fire-proofed. The header trench needs to be sealed and fire-proofed to a 1 hour rating.
X	Machine Room Envelope, including the vestibule, is of tight construction	6.3-c		There are several openings that need to be sealed inside of the machine room and the vestibule.
X	Machine room walls, ceiling and floor are 1 hour Fire Rated	6.3-d		Several penetrations need to be fire rated. The ceiling above the screw compressor is NOT 1 hour fire rated.
X	Vestibule walls, ceiling and floor (Separating machine room from occupied parts of the building) are 1 hour Fire Rated	6.3-d		There are holes that need to be sealed. Vestibule ceiling is NOT 1 hour fire rated.
✓	Emergency shutdown switch immediately outside machine room.	6.3-h		There is 1 switch in the vestibule, and 1 in a locked box immediately outside the machine room.
✓	Emergency shutdown switch located in Fire Box.	Annex B		
✓	Emergency Discharge System (Fire Line / Valve) - Is connected to the receiver or other liquid storage vessel - Slopes towards the vessel - Has no valve between the emergency valve and vessel - Has a properly sized emergency line - Has an emergency valve the same size as the fire line.	6.10 and Annex B		
!	Emergency Discharge Box (Fire Box) to be: - Glass fronted ✓ - Painted bright red X - Located where it cannot be accessed by anyone other than an emergency responder or plant operator - Located at least 2.3m (7' - 7") above grade ✓	6.10 and Annex B		
✓	Machine room doors must: - Open outward - Self Close - Be tightly sealed	6.2.2		
✓	Machine room must have one exit door directly to outer air.	6.3-b		

## APPENDIX B - CODE CHECKLIST

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
✓	Ammonia Detectors installed that: - Activate <u>audible and visible</u> alarms at concentrations $\leq 300$ ppm - Activate rupture ventilation system at concentration $\leq 300$ ppm. - Activate a supervisory alarm.	6.3-i 8.4.2		
X	Ammonia detector located "where leak is most likely to concentrate"	6.2.3		Ammonia is lighter than air. Therefore, it rises. Ammonia detectors should be installed near ceiling, and near fan intakes.
✓	Eye Wash Station(s) are provided		OH&S Code	
X	Emergency Shower(s) are provided		OH&S Code	
✓	No flame producing device or hot surface over 427°C (800°F)	6.3-a		
X	Machine room has a continous ventilation system that runs: - Whenever the machine room is occupied - Whenever mechanical equipment is running or - Constantly if the machine room is in a basement	6.3-i		Fans appear to be activated by a switch outside the machine room, by ammonia detector, or by a thermostat. Fans should be interlocked with the brine pumps to run whenever the plant is running and either a light switch or occupancy sensor.
	Continuous ventilation rate is $\geq$ 375 CFM	6.2.5.5.2		
✓	Ventilation system can prevent a temperature rise greater than 10°C (18°F) above ambient.	6.2.5.5.2		
✓	Machine room has an emergency ventilation system Emergency Ventilation Flow Rate $\geq$ 4243 CFM	6.2.5.5.1		1 Fan @ 2000 CFM 1 Fan @ 3000 CFM TOTAL = 5000 CFM
✓	Machine room walls, floor and ceiling are non-combustible construction	6.3-d		
✓	Exterior openings are not under under fire escapes or open stairways	6.3-e		
N/A	All ducts which pass through machine room shall be of tight construction and have no openings in such room.	6.3-g		There are no ventilation ducts passing through the machine room.
X	Exhaust fans discharge in a manner that does not cause danger or inconvenience.	6.2.5.3		Exhaust fans discharge "horizontally" approximately 10 feet above the ground. The fans discharge into a "corner" near one of the main arena entrances.
✓	Exhaust fans are positioned where refrigerant leak is most likely to concentrate.	6.2.5.3		
✓	Supplementary Heating is Provided to Maintian Minimum Machine Room Tempeprature of 5°C (40°F)	6.2.5.7		
X	Air Intakes are positioned to avoid the intake of discharge air	6.2.5.3		Air intake is in a "corner". It is likely that exhaust air will recirculate back into the intake.
✓	Machine room air supply ducts and exhaust ducts serve no other area.	6.2.5.3		
X	ASME PSVs are present on all ASME pressure vessels	7.1.1		The oil filters on the compressor are designed and registered as ASME vessels. These do not have PSVs. PSVs are required on all ASME vessels.

## APPENDIX B - CODE CHECKLIST

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
✓	PSVs are connected as directly to the vessels as possible	7.3.2.2		
✓	There are no stop valves in the path of any PSVs	7.3.1.2		
!	PSVs are set at a pressure not exceeding the protected equipment / piping's design pressure.	7.3.3.1		Relief system needs to be re-designed. During re-design low side test pressures need to be verified. It appears that PSVs are set higher than the low side test pressure. Reliefs need to be set at 90% of the test pressure.
X	PSVs are Sized correctly as per ASME and CSA B52.	7.3.4.1		Several PSVs are oversized.
✓	PD compressors are equipped with pressure relief valves Sized according to CSA B52 - Appendix C	7.2.3.1		
X	Relief Header is sized correctly as per ASME CSA B52. Dual reliefs are installed on vessels over 10 ft <sup>3</sup> (Vessels larger than ~ Ø16" x 96" or Ø20" x 60") > 10 ft <sup>3</sup>	7.3.6.3, 7.3.6.5		Relief header and branch pipes are undersized. Relief system needs to be re-designed.
X	Relief Stack Discharges at least: - 15 feet above adjoining ground level, - 15 feet above accessible roof level - 25 ft. from any building opening.	7.3.6.1.2		Relief stack does not discharge 15 feet above the highest roof level.
X	Relief discharge prevents spray of refrigerant on personnel in the vicinity, and prevents foreign material from entering the piping	7.3.6.1.1		Relief stack discharges downwards. Its location is close to one of the building's major entrances.
X	Relief Stack is: - Adequately braced X - Provided with a rain cap ✓ - Designed to allow water to drain X	7.3.6.1.1		Stack does not appear to be braced sufficiently.  There is no drain hole.
✓	Minimum System Maintenance Requirements: <ul style="list-style-type: none"> <li>• PSVs are replaced every 5 years</li> <li>• Pressure limiting devices are tested every 12 months</li> <li>• All other safeties tested every 12 months</li> <li>• Ammonia detectors tested every 12 months</li> <li>• Manufacturer safety-related maintenance recommendations followed</li> <li>• Power and control terminations checked every 12 months</li> <li>• Components are tagged after testing</li> <li>• Piping inspected quarterly for vibration damage</li> <li>• Vent lines inspected quarterly for blockages or damage</li> <li>• Periodic Leak Inspection is carried out</li> <li>• Cooling towers, cooling tower water systems, air unit fans, etc. inspected before initial startup, before annual startup, and monthly thereafter.</li> </ul>	8.4		City of Yorkton to ensure all requirements are met.  Pressure limits in Compressor panels are used as the "pressure limiting devices". These should be tested annually.  PSVs are current (Tags indicate they were replaced in 2018)  Ammonia detectors have tags showing they were tested in 2020.
✓	Means of egress comply with Occupational health and safety Regulations, and building codes Sask - Min. 900mm (35.4"), Travelway in good working order.	4.5.2	Saskatchewan OH&S	
!	Owner supplies and maintains PPE for employees	9.1.1		There was PPE in the visit. Ensure each plant operator has their own PPE.
✓	The refrigeration system is equipped with pressure limiting devices. Set at no more than 90% of PSV setpoints. - High discharge pressure cutouts	7.2.1		The M&M Control panels have pressure limiting settings.  UNLOAD @ 190 psi ALARM @ 195 psi FAIL @ 200 psi
	Refrigerant containing vessels are inspected at intervals not exceeding 2 years.		SASK - Boiler and Pressure Vessel Regs. 60	City of Yorkton to Ensure there is an integrity management system in-place to inspect pressure vessels .



REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
✓	Piping materials of construction are suitable for conveying ammonia	5.4.1		
	Piping meets the requirements of ASME B31.5	5.4.1		No obvious issues.
N/A	Pressure piping systems over 0.5m <sup>3</sup> (17.7 ft <sup>3</sup> ) have had their design registered		TSASK	
✓	Non-Critical charge systems with separation vessel > Ø12" have high level cutout	5.6.3.1		
✓	Stop / Isolation valves are provided: - At each compressor inlet / outlet - ✓ - At each condenser inlet / outlet - ✓ - At each receiver inlet / outlet - ✓ - At each refrigerant pump inlet / outlet - N/A	5.9.2.1		
✓	Condenser / Compressor Stands are structurally sound and made of noncombustible materials	6.1.1		
✓	Moving machinery complies with workplace regulations	6.1.2		
!	Sufficient clearance is provided around floor mounted equipment Ladders / platforms / man lifts are available for elevated equipment Equip. is min 10 ft. from roof or mezzanine edge.	6.1.3		Ideally, more clearance should be provided around the brine pumps for service.
!	Electrical wiring complies with the Canadian Electrical Code	6.6		Unferfloor pump motor junction box is missing it's cover. Replace the cover.
N/A	Refrigerant piping is located such that it cannot be struck by forklifts, etc.	6.8.1		
✓	No service containers connected to System	8.1		
✓	Refrigerant containers stored in machinery room.	8.3		QTY:2 - 100 lb. ammonia bottles in the room.
X	All pressurized equipment is protected from overpressurization	ASME		Oil filters require PSVs.  Brine tank valves need to be locked and Car Sealed Open.
<b>OPERATOR REQUIREMENTS</b>				
	Plants must be under the "general supervision" of an operator with the appropriate liscence: Scope of Authority for Liscences: - Refrigeration Operator < 100 TR - Refrigeration Engineer (Any Capacity) - 1st Class Power Engineer (Any Capacity) - 2nd Class Power Engineer (Any Capacity) - 3rd Class Power Eneineer (Any Capacity) - 4th Class Power Engineer < 500 TR - 5th Class Power Engineer < 200 TR Note: Plants < 45 TR (No Liscence Required)		The Boiler and Pressure Vessel Reguations (2017) SK	Kurt is aware of these requirements and is working to ensure that Yorkton has operators with the required training / liscences.
	"general supervision": (b) with respect to a refrigeration plant, means that a person holding a licence of the appropriate class to operate the refrigeration plant: (i) manually starts the refrigeration plant whenever the refrigeration plant is not under automatic control and restarting is required; and (ii) does not leave the premises without ensuring that the refrigeration plant is operating under automatic control;		The Boiler and Pressure Vessel Reguations (2017) SK	

## APPENDIX B - CODE CHECKLIST

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
<b>GOOD PRACTICE - STRONG RECCOMENDATIONS FOR SAFETY</b>				
<b>X</b>	Up to date plant PID drawing posted in machine room showing: <ul style="list-style-type: none"> <li>• All valve with unique numbered tags,</li> <li>• All major equipment</li> <li>• All refrigerant piping</li> <li>• Critical safety devices.</li> </ul>			Recommend having as built P&ID drawings developed by a qualified engineer complete with valve numbers. A copy of the P&ID drawings should be posted in the vestibule to assist with emergency response.
<b>X</b>	Wind Sock is provided on site.			
✓	Ammonia Detector is Present in Relief Stack			
✓	Machine room doors are equipped with panic hardware			
✓	Low Level Alarm at 35 ppm Activate Emergency ventilation at 150 ppm.		OH&S IIAR-2-2014 (6.13)	
✓	Audible and Visible Ammonia alarm INSIDE Machine Room		IIAR-2-2014 (6.13)	
✓	Audible and Visible Ammonia OUTSIDE inside Machine Room		IIAR-2-2014 (6.13)	
<b>X</b>	Relief stack terminates: <ul style="list-style-type: none"> <li>- 7.5 feet above the nearest walkway</li> <li>- 7.5 feet above the tallest roof.</li> <li>- Directly upward</li> </ul>		IIAR-2-2014	Stack does not terminate 7.5 feet above tallest roof.
✓	Safety Switches: <ul style="list-style-type: none"> <li>- Low suction pressure cutout</li> <li>- High Discharge pressure cutout</li> <li>- Oil failure switch</li> </ul>			M&M panels incorporate pressure Limitations for compressors.
<b>X</b>	Safety showers and eye wash stations are within 55 feet of the hazard, and NOT obstructed (Doors are considered an obstruction!)		ANSI/ISEA Z358.1-2014	No safety shower provided.

### NOTES

- ANSI / ISEA Z358.1-2014 sets the Standard for Eye Wash / Emergency Showers. However, it is NON-MANDATORY in Canada.
- PSV = Pressure Safety Valve



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**September 13<sup>th</sup> 2021**

Kinsmen Arena  
Yorkton, SK  
Canada

Attn: Kurt Stechyshyn  
Facilities Manager  
Recreation & Community Services

Re: **Kinsmen Arena Refrigerated Slab**  
Concrete Arena Floor and Header/Return System Assessment

## **Introduction**

On Wednesday August 25<sup>th</sup> 2021, a site visit to the Kinsmen Arena was made by Stephane Dube of BST Consulting Inc. to inspect the arena slab, header pipe, and associated trench. The purpose of the visit was to assess the overall condition of the slab, and to provide any suggestions regarding preventive maintenance or possible removal and reconstruction of said slab.

## **Methodology**

Information was gathered by performing a visual walk through of the arena and recording a slab survey on approximate 20ft. gridlines. A rough mapping of the larger cracks in the floor was also completed. A copy of each (survey and map) is included at the end of this report. No destructive or non-destructive testing was carried out to the refrigerated floor assembly for under slab observation of in-situ conditions.

## **Disclaimer**

Opinions in this report are based on visual inspection of the refrigerated floor and header trench. BST Consulting Inc. claims no responsibility for property damage or personal injury that may result from any omission of a non-compliant building code or safety item.

## **Project/Historical Information**

The slab was built in 1972 using conventional LDPE (low density polyethylene) rink pipe clamped to steel headers which were replaced approximately 20 years ago with PVC headers. Substantial heaving, mostly on the north side of the rink has resulted in cracking in all axis of travel. The differential heaving in the slab has resulted in inconsistent ice and increased maintenance costs. The slab is slightly undersized and was measured on site as being 85ft wide x 187ft long.



## Visual Observations



Picture #1 - Spliced rink pipe into 20 year old PVC headers in rough trench



Picture #2 - Heavily rusted hose clamps are indicative of leaks and will fail over time.





Picture #3 - Cracked walkway on north side.



Picture #4 - Substantial cracking at pilaster locations on north side.





Picture #5 - Elevation variance on either side of ice resurfacer apron crossing.

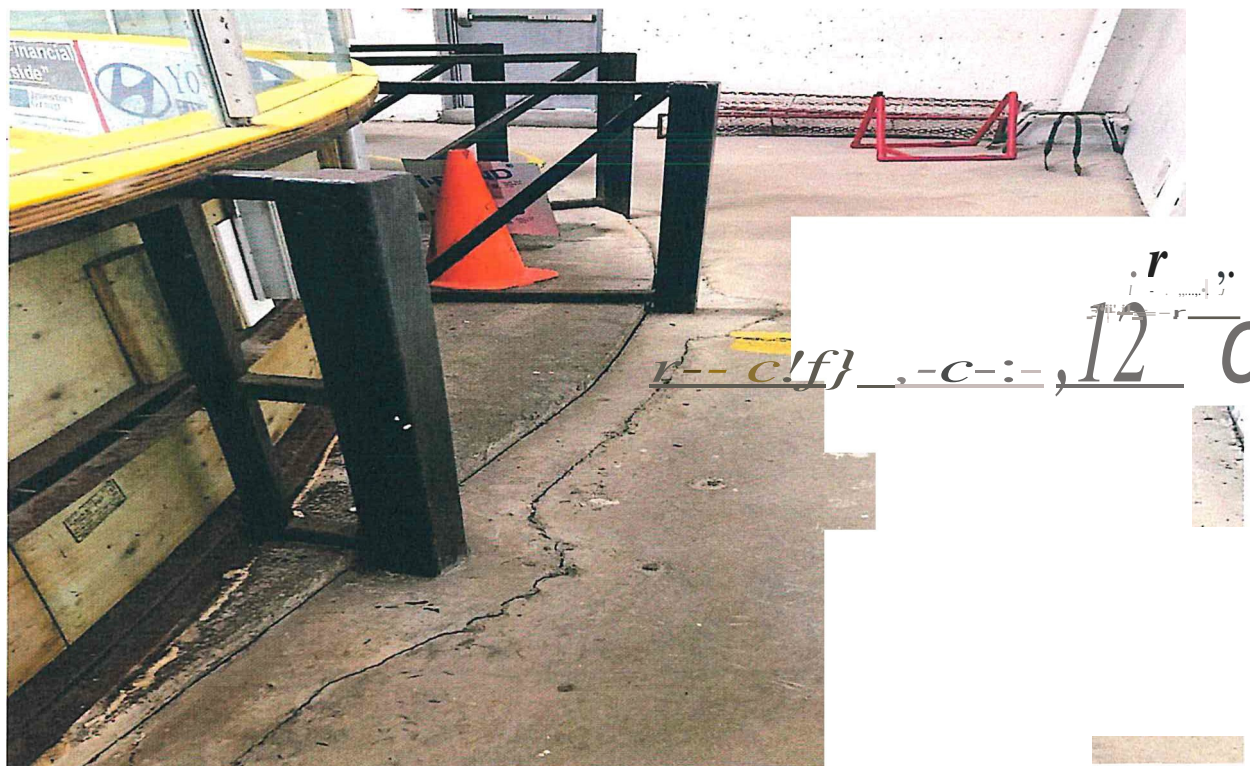


Picture #6 - Concrete topping represents a trip hazard.





Picture #7 - Past modification to radii.

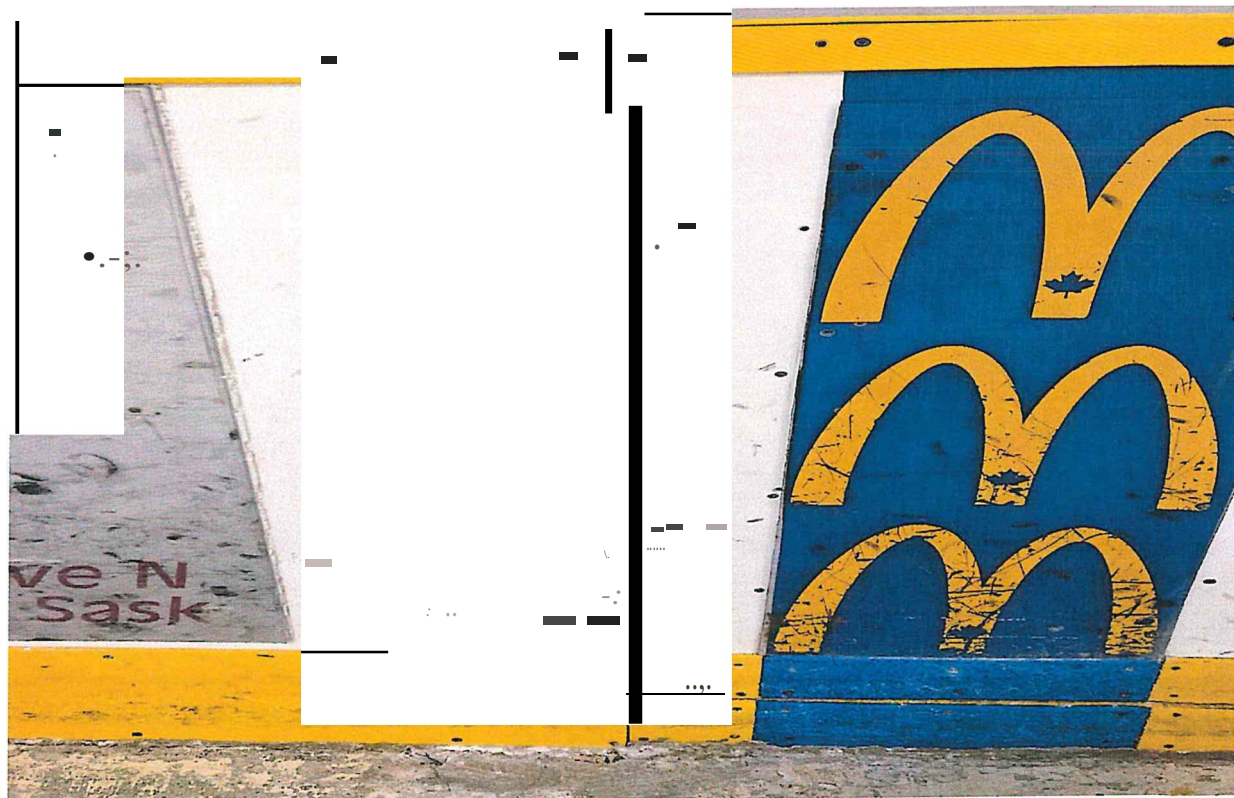


Picture #8 - The dasher boards are mounted to a grade beam around the perimeter.





Picture #9 - On the north side the dasher board gates are not in line with the rest of the system and must be constantly adjusted to minimize risk to players.

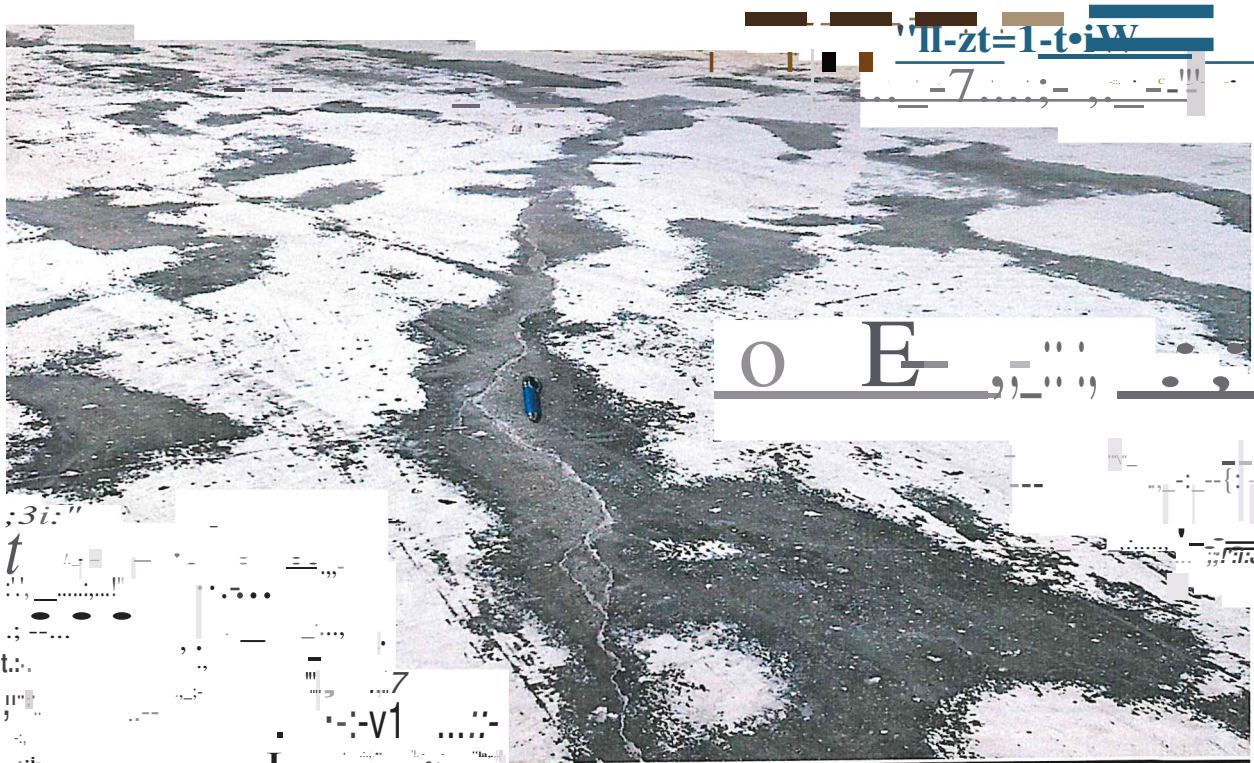


Picture #10 - Gaps between the gates and the boards are creating substantial player safety issues.



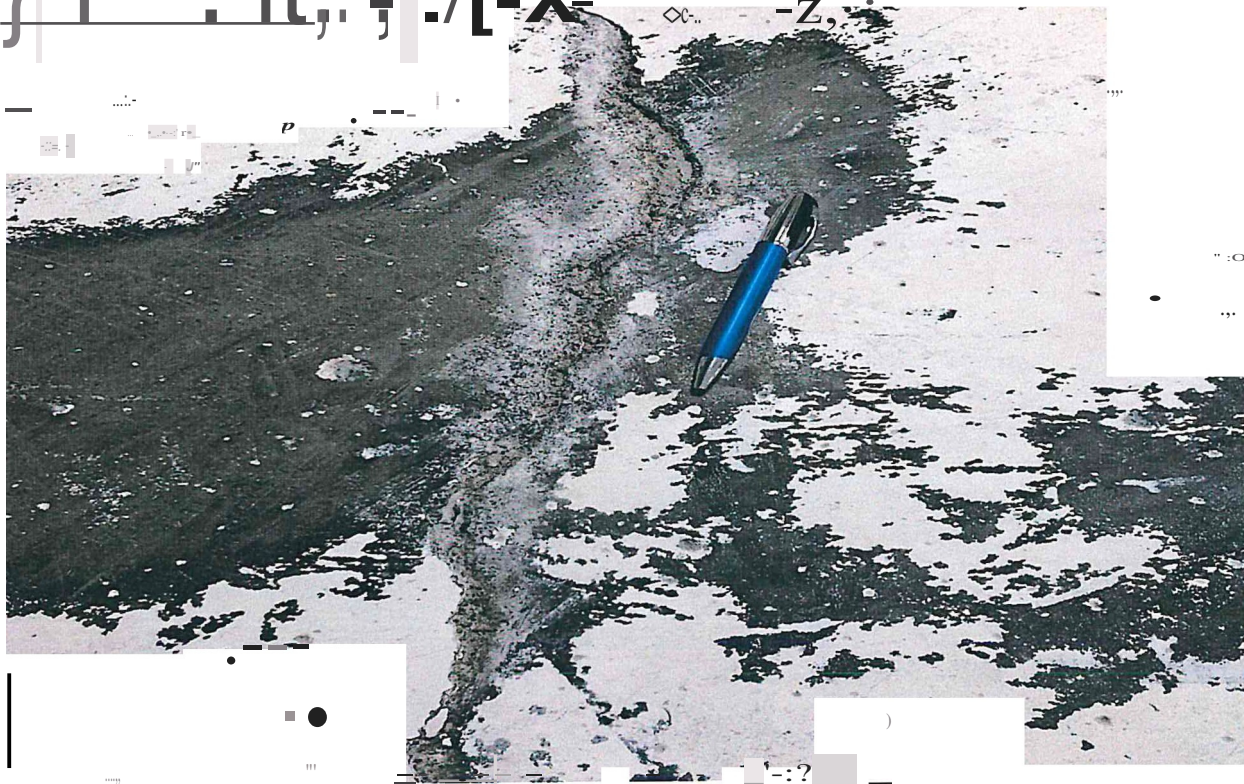


Picture #11 - The gap between the dasher boards and the concrete floor can become pronounced through heaving cycles and caulking requirements become more substantive to prevent water migration beyond the boards. This caulking bead is at least twice the size it should be for water/ice containment.



Picture #12 - Substantial cracking throughout the slab, even diagonally which is evidence of severe differential heaving pressures.





Picture #13 - Wide cracks have developed due to continuous movement through heaving from year to year. These will continue to worsen until failure.

## Analysis

The life expectancy of refrigerated concrete floors has been found to be 35 years on average with a few lasting to approximately 40 years (though not without signs of strain). As this floor was built approximately 49 years ago, it has long surpassed its intended life cycle. There are several signs of strain indicative of floors this old with resulting failures at some level. The following paragraphs address issues present with the floor in relation to the condition of the heating & cooling headers, periphery slabs, sink pipe & clamps, dasher board design/placement, and of the concrete slab itself.

BST Consulting Inc. performed a rough survey of the slab on an approximately 20' grid and confirmed there is approximately 35mm (1-3/8") elevation variance from the highest to the lowest point on the slab. New slab construction aims for a total variance of only 6mm (1/4"), so this slab is out of tolerance by nearly 6 times that standard at the time of this report and as tested during the offseason. Consequently, it is suspected that during the operating season these elevation variances worsen due to frost lensing (which is explained in greater detail below). A copy of the survey is included at the end of this report for reference. Unfortunately there is no easy remedy for this as grinding the floor is impractical and the cost impact of this action will likely outweigh the savings in the plant room (on power consumption). Additionally, the heaving experienced by the floor is greater than what grinding could provide to moderate this result and given the age of the floor and the costs of grinding is not a practical solution.

The slab includes goal post anchors, one (at least) of which has several cracks emanating to/from it. Any inserts in the floor pose a potential crack feature and are avoided on the vast majority of

new slab installations unless they host high end hockey (U-18 AAA or higher). Goal post anchors are also inevitably nestled next to cooling pipe within the floor, and as the anchors are drilled out (to remove ice build-up) the anchor sidewalls thin with age. Eventually the drilling process wears through the anchor sidewall and the drill bit hits a newly exposed brine line thereby causing a leak. This is a common feature and all slabs with these share this potential; it is simply something to monitor annually. Should a leak occur the floor can be patched, though at significant cost and lost time. We recommend against these if possible for future design and construction.

The rink pipe attached to the headers have been spliced once already as shown in **pictures #1 & #2**. It is assumed this was done when the headers were replaced. Some of the hose clamps show signs of significant rust which is indicative of leaks. These should be monitored bi-annually at the start and end of each operating season to ensure no further leaks develop. If any rust or liquid is present, then the refrigeration service contractor should be contacted for an inspection and recommendation; likely the hose clamps should be replaced. The u-bends are cast into the concrete and as a result are unobservable, but there is no indication that any of these are leaking yet. However, thinning of the pipe wall over time is an issue that plagues older slabs which, even if the concrete is still in good condition, requires complete replacement (usually) after the 40 year mark. Again, as this facility is 49 years old it is of utmost importance to recognize the fragile state of the rink pipe. It is very likely the pipe walls are extremely thin due to wear from constant flow of brine solution through them, and we know from historical precedence that it is only a matter of time before leaks are inevitable. At this age, the floor could experience many leaks in the same season, enough to cause loss of ice and loss of facility use for the remaining season. Not many floors last this long and it is surprising that failure has not yet been realized. One circuit on the north end of the rink has already been compromised and shut off. Should an adjacent circuit be lost then the cooling may not be able to bridge that area and player safety concerns (due to soft or thin ice) would likely result in a permanent closure.

The heat floor system is mostly operational though several circuits failed over 15 years ago. The remaining circuits are not enough to prevent frost penetration as evidenced by the heaving experienced through the operating season. I was informed that at some point in the past, the slab experienced a loss of up to 5 barrels/day of brine for a period of several weeks. This represents a massive loss of brine into the substrate and will likely require a geotechnical investigation prior to new construction to confirm the subsoils are suitable for slab on grade construction. If any chromates are present in the soil (chromates are an old rust inhibiting additive no longer used in brine solutions) then a significant soils removal/replacement program will need to be actioned. The brine reports from the time of these leaks need to be examined to confirm if chromates were present or not.

There are some thin cracks in the floor, most of which look to be primarily due to the original concrete curing process (shrinkage cracks) and are not of significant concern. The usual guide for crack severity is measured by using the thickness of a dime; anything thinner is not typically an issue and can simply be monitored to ensure it does not expand, while anything thicker should be addressed as soon as possible. In addition to the shrinkage cracking, there is substantial cracking in various locations on the slab which is indicative of frost heave or frost "lensing." Frost lensing is the result of the cooling process penetrating the substrate below the slab and freezing the moisture within the soils, which then swell causing frost lensing. Evidence of this is demonstrated by numerous cracks converging at one location, very long cracks that span from one end/edge to another and most importantly cracks that develop diagonally across the floor. The reinforcing grid within the concrete is at "end to end" and "side to side" orientations in the slab at right angles to

each other, so developing cracks that move across or along the floor are not unusual. However, cracks that develop on a diagonal are indicators of tremendous pressure within the substrate. There are several cracks on this floor that have developed on a "diagonal," more so than most slabs of any age that we've seen; see picture #12. Many of these cracks are quite wide, some of which seem to be the result of annual movement causing them to widen over time; see picture #13. Wider cracks can be filled with a hydraulic cementitious product in combination with a bonding agent, or injected with a rubberized epoxy, or filled with a polyurethane based caulking. However, the movement of the slab must be restricted for these patches to hold. Any further movement will lead to the patches failing and requiring annual maintenance/replacement. The major cracks in the floor have been mapped out, a copy of which is included at the end of this report. Unfortunately, frost penetration is almost assured without a fully functioning heat floor system present and relies on the seasonal shut down to allow that frost to thaw, thereby minimizing the heaving effect and resulting cracking. Unfortunately, given the heat floor is only partially intact, the condition of this floor will continue to deteriorate. We were informed that the difference in ice thickness can vary as much as 76mm (3") indicating a minimum movement of at least +/-38mm (1-1/2"). Frost lensing leads to the following issues in detail:

- 1) Heaves the slab causing elevation variances which result in having to use more water to achieve a level ice surface. This takes more time from the maintenance staff, uses more water than necessary, results in inconsistent ice (some areas brittle and others soft) and uses more power from the refrigeration plant as it must work harder to freeze the thicker layer of water. This also increases the time before water freezes between floods, making ice maintenance and quality consistency during back-to-back games challenging.
- 2) Opens the cracks in the slab every season due to the frost-thaw cycle and resulting heaving/settling. These cracks continuously worsen over the years thereby deteriorating the slab at an accelerated rate. Large cracks can present a safety issue for players as they can pose trip hazards or can lead to jammed hockey or lacrosse sticks during dry land use. This can be mitigated by filling the cracks with caulking or patch material, and the product monitored annually for deterioration. However, this is only temporary and can be costly until the slab is replaced.
- 3) Should the cracks lead to any shear forces, the cooling pipe can become compromised and leaks are likely to form. These leaks can be sealed with substantial effort and cost, but the same problem is often re-visited within a few or less years. Often times, the pipe are so thin that a splice won't even work, and the season is lost regardless.
- 4) When the time comes to replace the slab, any frost in the ground must be dealt with; any year-round use will push the frost lower and can increase the costs and extend the timeline of new construction substantially.
- 5) The heaving can adversely affect the dasher boards and cause uneven closures at the gate locations, or glass panels to fall out from their secured place between the stanchions, or cause gaps to enlarge thereby creating a safety issue to players from jammed hockey/ringette/lacrosse sticks.

Heaving and the resulting cracking of concrete is also evidenced in the north side periphery concrete. **Picture #3** shows cracks in the north side periphery concrete and **picture #4** shows several cracks around one of the structural pilasters. The concrete in these locations should not be cast around the pilaster as shown but should be separated by a compression zone. Should the arena slab be replaced, the periphery concrete (at least on the north side) should also be replaced and the adjacent grade beam insulated to help prevent frost penetration from outside. It is possible the heaving of the periphery slab is affecting the structure and causing some of the cracking in the



masonry block wall, though a structural engineer should be consulted to confirm this. Any outside water or snow build up on the north side of the rink should be addressed to minimize any water migration under the building. We were informed that the grading on the north side was re-done to flow away from the building less than 10 years ago, but this may not be enough to mitigate the potential moisture ... a weeping tile system under the new slab should be incorporated in the new design. Also of note is the elevation differences in some perimeter walkways as shown in **picture #5** near the mechanical room. Hopefully this tripping hazard can be eliminated with careful design for the new floor. The last perimeter item we noticed was the concrete overlay shown in **picture #6**; this is a tripping hazard and its purpose is a bit of a mystery. We would recommend the removal of this overlay during new construction.

At some point the dashers were either replaced or the radii reduced to be friendlier for the ice resurfacing machine equipment and to adhere to the player safety standards of today; you can see this in **picture #7**. Although this solution is fine, it does mean that the plant is working harder than needed to cool a portion of the slab which is now outside the play surface area. A poly-fusion system would remedy this issue, and is discussed a bit more in the conclusion of this report.

Finally, the dasher boards are sitting on a grade beam (**see picture #8**) and are cantilevered over top, rather than sitting on the refrigerated slab itself. However, these two design elements are sometimes tied together through reinforcement. Either way this is non-typical and provides a route for water to migrate below the slab as it pulls away from the grade beam under refrigerated load. If this water gets to the insulation layer, it can reduce the R-value (insulation value) which would allow more cold to penetrate the sub-surface soils. This same water is adding moisture to the soils thereby also increasing the frost lensing potential. The heaving experienced by the slab is causing differential movement of the dasher board system resulting in constant maintenance requirements to adjust the gates. **Picture #9** shows elevation variances at the top of boards which presents a hazard to players upper bodies, while **picture #10** shows a large gap between the gate and board which can lead to hockey/ringette/lacrosse sticks being caught and lead to unintentional "spearing." Both of these represent significant player safety concerns and in some jurisdictions would cause the facility to be temporarily closed until these were resolved. The heaving of the slab also causes gapping below the dasher boards and additional caulking requirements around the perimeter to prevent water migration beyond the play area; see **picture #11** showing large caulking bead on north side of rink. Finally, these dasher are built with the puck board secured to a wood backer; this wood has dried out and rotted over time resulting in the maintenance staff unable to secure the puck board when screws pop out as there is nothing left to secure to. New dasher board systems use thicker puck board screwed directly to the steel or aluminum frame, thereby eliminating this issue altogether. Future construction should consider installing the dasher boards directly on the slab if possible as per standard designs. The gap behind the dashers between the refrigerated slab and structural elements is then caulked for the same purpose as discussed above. The combination of dasher boards mounted directly on the refrigerated floor and the caulking seal behind them greatly limits any water migration to the sub-base, thereby limiting frost lensing potential and insulation compromise.

The facility does not have any dehumidifiers; the result is moisture condensing on the ceiling which results in the following:

- 1) The water collects on the underside of the steel structure and accelerates rust development.
- 2) The water drips down onto the low-E ceiling and flows downwards to the outer walls:
  - a. This potentially causes mold to grow on the top of the low-E ceiling

- b. The water picks up the yellowish/brownish color on the backside of the low-E ceiling which runs down the walls and must be mopped up and cleaned to prevent staining.
- 3) Some water drips onto the ice surface causing yellow-brown stalactites to form on the ice. This consumes maintenance time to scrape/remove as well as leaves unsightly blemishes and rough patches on the ice. If any are missed, new player safety issues arise.

Future construction should allow for at least one (but two at kitty-corners to each other 1s preferable) dehumidifier in the design to mitigate these issues.

## Conclusion

These floors have typically lasted approximately 35-40 years with average use. At roughly 49 years, this slab has surpassed its life expectancy and plans to replace it as soon as possible should be actioned. Of significant concern is the partially failed heat floor system and the resulting heaving which will likely lead to additional cracking, inconsistent ice, increased Owner liability, maintenance staff time/costs, and possible failure. The concrete elevation differences requiring more water than average cause increased power consumption in the plant room due to thermal inefficiencies experienced in the slab thereby increasing operational costs as well.

As there is evidence of frost lensing, future re-construction will need to consider how much frost is present in the sub-base and how much time may be required to remove it prior to new construction. This can be minimal if only 4ft or less is present or very costly and time consuming if 20ft or more is present. Therefore, the choice to thaw the material or remove/replace can be made depending on time and financial constraints.

What lies beneath the old slab (in the sub-base) is also of importance as this can have a significant impact on new construction cost and schedule; we have unearthed everything from 2<sup>nd</sup> AND 3<sup>rd</sup> slabs beneath the top one, car sized boulders, burial grounds, aquifers, unsuitable soils, 20+ ft of frost, structural cross ties, abandoned missile defense bunkers, etc... Therefore, a contingency fund must be allocated to deal with these unknowns in case any or several are present. In most cases, the contingency fund is not used, however in others it is completely consumed. The Ownership group will have to decide what risk it is comfortable with and assign a value to this fund.

Using historical precedence, the following budget costs can be reasonably forecasted;

Demolition Cost of existing rink slab .....	\$150,000.00 + GST
Excavation, removal & disposal of existing soils to <u>design grade</u> .....	\$50,000.00 + GST
Thaw existing soils beneath design grade .....	\$25,000.00 + GST
Replace existing soils beneath design grade (in lieu of thawing) .....	\$100,000.00 + GST
Chromates Contingency (only if chromates were present during time of leak) .....	\$50,000.00 + GST
Weeping Tile System .....	\$25,000.00 + GST
New Refrigerated Slab .....	\$475,000.00 + GST
Geotechnical Engineering/Testing .....	\$15,000.00 + GST
Structural Engineering .....	\$20,000.00 + GST
New Dasher Board System .....	\$200,000.00 + GST
Contingency (recommended) .....	\$250,000.00 + GST

As for the schedule for this work, we would advise that a time frame of 6 months be allotted to complete the full renovation of this arena floor.

### **The Future...**

There exists in today's market the option to install a new system which further limits Owner liability, improves plant power efficiency and minimizes maintenance requirements. It is known as an "HDPE (high density poly ethylene) fusion system" and has replaced the conventional clamped header trench system as the new way to build refrigerated slabs. This system completely eliminates the need for header and return trenches as the headers and u-bends are completely cast into the refrigerated floor. The connection points are fused rather than clamped and are not subject to fail in the same fashion as the old clamped systems. We are proponents of this system and support it for all the added benefits it provides.

With today's construction practices, we anticipate new floors to last beyond 50 years with proper maintenance. HDPE fusion systems are expected to outlive the building/slab.

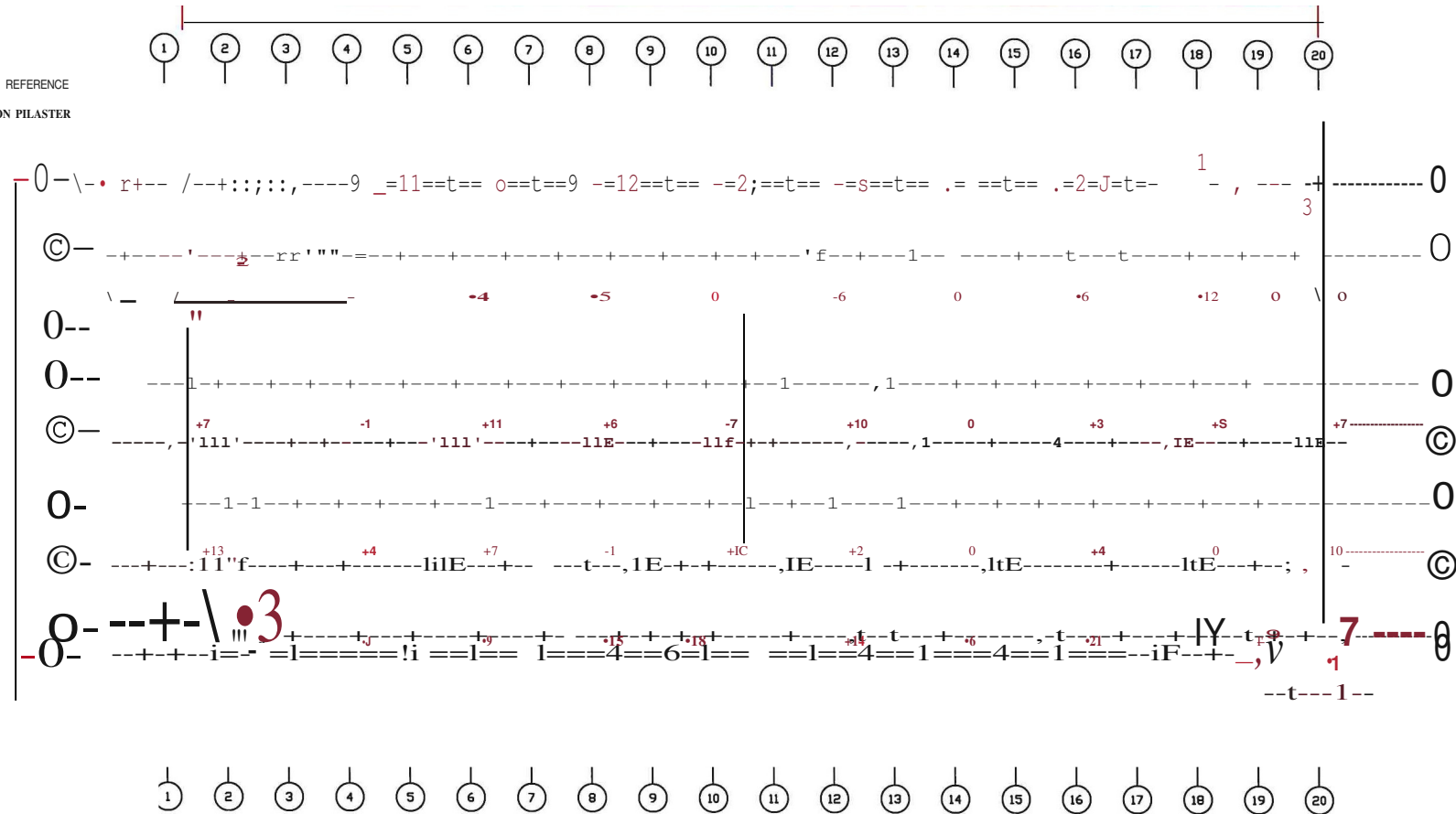
### **Closing**

I trust this report is satisfactory in its response to the concerns brought to our attention about the state of the Kinsmen arena. Should any more questions arise, please feel free to contact our office and speak to myself, or any one of our associates. We would be happy to spend time "face to face" to clarify anything within the report and offer this as an open invitation for further discussion anytime in the future.

Yours truly,

Stephane Dube,  
BST Consulting Inc.

REFERENCE  
ON PILASTER



**BST CONSULTING**  
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2021-09-02  
N.T.S.  
S. DUBE  
L. PORTAS

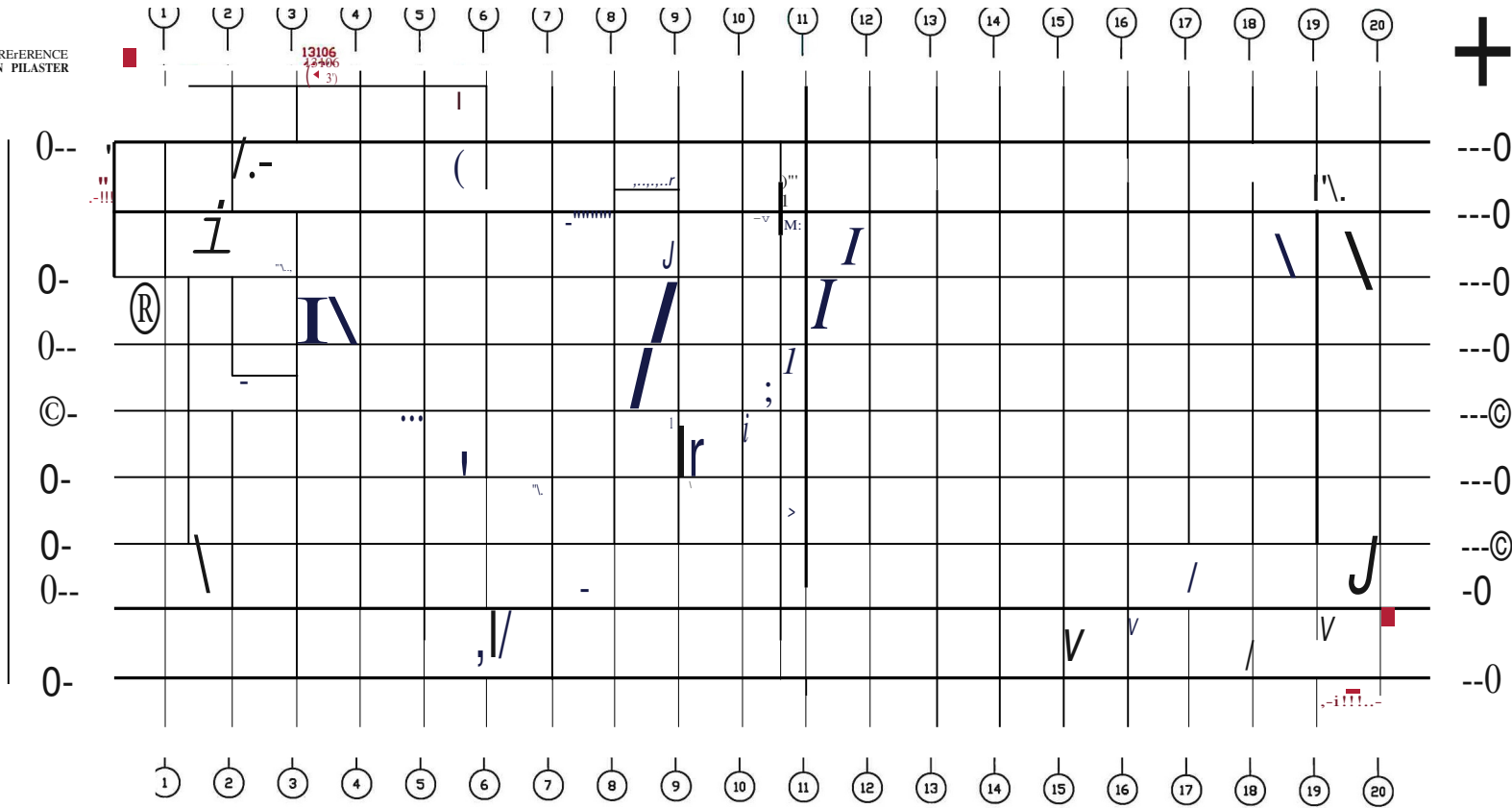
YORKTON  
KINSMEN ARENA

FLOOR  
SURVEY

B-2.0

56998 (187' - 0')

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ON PILASTER



**BST**  
CONSULTING  
INC.

REVISION	
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PROJECT MGR	2021-09-02
CHECKED BY	N.T.S.
DRAWN BY	RYLANDICE ARENA
DATE PLOTTED	

YORKTON  
KINSMEN ARENA

FLOOR CRACK  
MAPPING

8-2.1





Global Sport Resources  
 50523 HWY 21 Leduc County, AB  
 Phone: 780469-7980 Fax: 780-463-7988 Tollfree: 877-477-8007  
[Nick@globalsportresources.com](mailto:Nick@globalsportresources.com)

## LEGACY SERIES STEEL DASHER BOARD OFFER YORKTON SK – KINSMEN ARENA

May 5, 2021

Kurt Stechyshyn  
[kstechyshyn@yorkton.ca](mailto:kstechyshyn@yorkton.ca)  
 306-828-2451

Dear Kurt,  
 We wish to submit our pricing for this project as listed below,

Demolition and Disposal of Existing + Supply and Install new dasher board system

**Seamless Glass: \$195,000.00 + Taxes**

### MODEL

**GSR Legacy Series:** ***As manufactured by Global Sport Resources – Leduc County, AB***  
 Fully Engineered (2021), Demountable or permanent galvanized steel frames, constructed using .100 wall HSS steel and 6" wide, laser cut, formed endplates. Frames are of welded construction. Typical board sections are 96" long

### DIMENSIONS

**Playing Surface:** 187' x 84' x 42" tall with a 28' radius  
**Players' Boxes:** 30' +/- long x 6' +/- wide **QTY: 2**  
**Drink Racks:** Supply/install of 3/8" white puck board to mid-height of ice dasher board frames in the player and penalty boxes which will create a water bottle ledge (excluding gate doors).  
**Penalty Boxes:** 5' +/- long x 6' +/- wide **QTY: 2** – side access via 28" access gate (see drawing)  
**Benches:** Supply 11.5" x 1.75" colored Enduraplank™ with floor mounted pedestal supports  
 2 Benches @ 24' = Players Boxes & 2 Benches @ 5' = Penalty Boxes  
**Time Keeper's Box:** 4' +/- long x 6' +/- wide **QTY: 1** – side access via 2 x 28" gates (see drawing)  
**Scorekeepers Table:** Supply/install of a 1" x 16" score table constructed from 1" Sanalite. Table is to be anchored to the ice side boards and divider walls. Table to be approx. 5' wide and includes lockable storage area.



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[Nick@globalsportresources.com](mailto:Nick@globalsportresources.com)

### **FLOORING**

Players, Penalty and Timekeepers boxes to be fitted with premium ½" black skate tile. All flooring is to be loose laid in boxes.

### **GATES & HARDWARE**

**Access Gates:** 36" access - Qty. 5 (4 x player's boxes, 2 x penalty boxes + 2 x ice access with ice side release buttons)

**Access Gates:** 28" access - Qty. 2 (straight sections/returns– 2 x players boxes + 2 x timekeeper's boxes– with ice side release button)

**Access Gate Hardware:** Hinges and latch assemblies are heavy duty zinc plated steel. Hinges to have incorporated grease ports. All hardware mechanically fastened for ease of maintenance

**Machine Gates:** 120" access. Double 60" leaf - Qty. 1 (straight section) – C/W heavy duty spring loaded castor wheels

**Machine Gate Hardware:** Hinges are heavy duty plated steel; manufactured in a way that allows for easy adjustability of the gate leafs

**Assembly Hardware:** Bolts, nuts, and washers to be plated steel

### **CLADDING**

**Material:** High density polyethylene (HDPE)

**Playing Surface:** **Cladding** = ½" White  
**Top Plate** = ½" Blue HDPE - - - **Kick Strip** = ½" Yellow HDPE (**Height of 8"**)

**Thresholds:** **Access Gates** = 1" White HDPE on 1 ½" tall steel frame  
**Machine Gates** = 2" Laminated Stress Relieved HDPE

**Fasteners:** HDPE attached with ¼" – 20 machine screws with locking nuts. Zinc plated and color matched to puck board

**Official Lines:** Official lines installed flush in the vertical surfaces of dasher board cladding

**Spectator Side Sheeting:** 332 lineal feet of 3/8" white Virgin HDPE spectator side sheeting included. (see drawing)

### **ANCHORS**

**Custom Plate:** ¾" diameter weld anchors to be placed at predetermined points as per requirements. Anchors are supplied with 3/8" thick, laser cut, galvanized anchor plates. Anchors to be welded to epoxied 3/8" galvanized steel plate that will be set on cold slab. Radius corners to be laser cut to ensure proper fit of board. This proven system will allow board to be anchored as per engineered requirements and all for proper flex upon impact. This system will also eliminate the need for any supports/gussets on the spectator side of the boards.



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[Nick@globalsportresources.com](mailto:Nick@globalsportresources.com)

### **SHIELDING**

<b>Ends (Straight Section) -</b>	5/8" x 6' tall ANSI rated tempered glass – Seamless
<b>Radius Corners -</b>	½" x 6' tall ANSI rated – laminated/bent glass at 28'3" arc
<b>Spectators Side -</b>	1/2" x 4' tall ANSI rated tempered glass – Seamless (reuse existing glass)
<b>Penalty Box Side -</b>	1/2" x 4' tall ANSI rated tempered glass – Seamless (reuse existing glass)
<b>Box Dividers -</b>	1/2" x 4' tall ANSI rated tempered glass - Seamless (reuse existing glass)
<b>Speaker Hole -</b>	3 ¼" diameter = <b>Qty. 1</b> (1 at front of time keepers' box)
<b>Aluminum Supports -</b>	T6 clear anodized aluminum posts at all terminations
<b>Padding -</b>	36" heavy duty protective pads placed at shielding termination points = <b>Qty. 4</b>
<b>Netting -</b>	Reattach existing netting to board system

### **PRICING**

<b>Shipping:</b>	F.O.B Yorkton SK
<b>Note:</b>	Federal, Provincial, and local sales taxes excluded
<b>Payment:</b>	40% due on contract acceptance and 60% due at substantial completion

### **OPTIONS – Please add to base price as required**

<b><u>A: Advertising Kits:</u></b>	Includes ¼" x 48" x 96" white HDPE Backer, 3/16" x 48" x 96" clear polycarbonate, and overhung sill to accommodate a 1/16" x 37.5" x 96" styrene ad. Ads inserted by others <b>Price = \$225.00 + TAX/8 lineal feet of advertising space</b>
<b><u>B: Hockey Goals:</u></b>	One pair of "professional" style hockey nets. Includes pre-laced 6mm resin coated mesh, and net protector belt. <b>(goal inserts, pegs, and fenders are not included)</b> <b>Price = \$1,750.00 + TAX</b>

### **TERMS/CONDITIONS/EXCLUSIONS/INCLUSIONS/QUALIFICATIONS**

- Pricing valid for 30 days
  - Notwithstanding the foregoing, should Global Sport Resources be delayed in the commencement, prosecution or completion of the work by any cause beyond Global Sport Resources' control and not due to any fault, neglect, act or omission on its part, then Global Sport Resources shall be entitled to an extension of time as agreed upon by the parties hereto in writing and shall not be held liable for any costs incurred for any delays brought upon by the owner or general contractor
- This quotation is subject to Global Sport Resources 2 - year standard warranty on craftsmanship and materials. This quotation also includes our **limited lifetime warranty** on our galvanized steel frames
- This quotation may be withdrawn at any time before contract execution without penalty. Pricing described is subject to change, withdrawal, or cancellation until accepted the purchaser



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[Nick@globalsportresources.com](mailto:Nick@globalsportresources.com)

- All work offered in this document has pricing based on an installation of consecutive days on site. Additional travel costs and living expenses will be required and invoiced if projects occur in separate phases.

***Exclusions:***

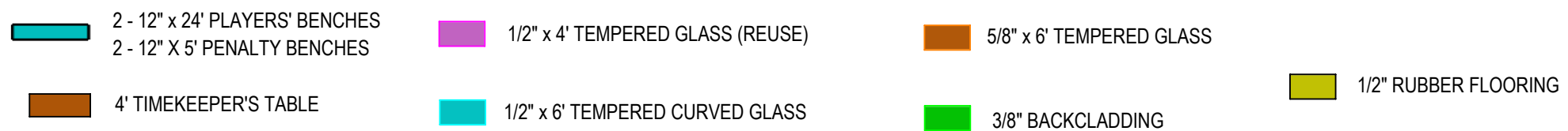
- Mechanical, electrical, painting, paving, and landscaping work
- All licenses, taxes and fees related to project
- Fees, taxes and tariffs imposed by province of Saskatchewan for out of province workers/companies
- Electrical termination of the lift gate, score clocks, time clocks or any other component
- Removal of electrical services from existing board system
- Installation of electrical services to new board system
- Cost increases or changes in scope resulting from errors or omissions in plans, specifications, or design
- Soil or concrete testing and survey layout
- Temporary or permanent power, lights, winter heat, heat and hoarding
- Fees associated with subscriptions to 3rd party safety auditing programs and the maintenance costs as required if mandated by the client
- Costs incurred due to inadequate work completed or schedule not being followed by the client or other subcontractors regarding scheduling
- Any exclusions listed elsewhere in this quote

**Global Sport Resources is COR certified**

We thank you for the opportunity to bid on this project. We look forward to being able to provide a superior product, which will give the community many years of trouble-free service. Should you wish to discuss further ways and means to make this project as efficient and cost effective as possible, we would be glad to provide our input.

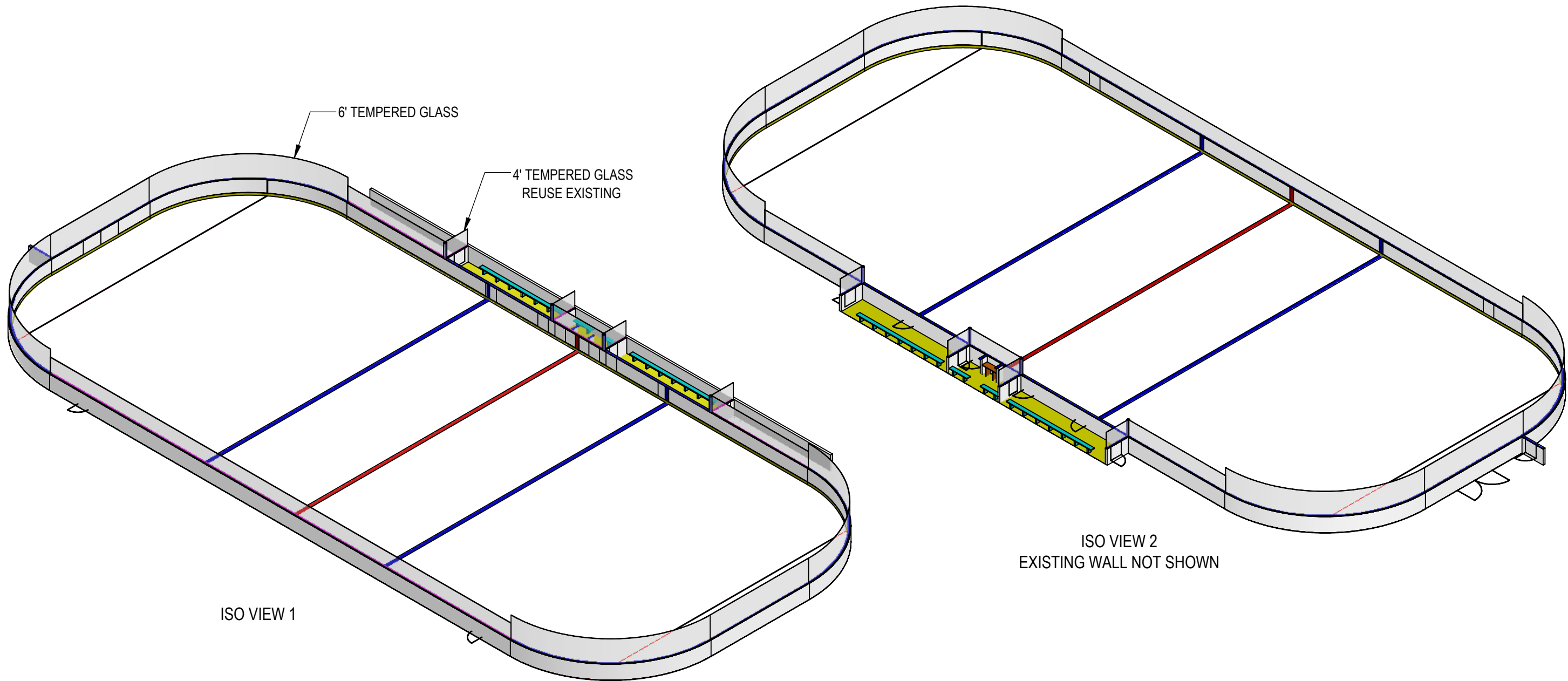
Nick Etchells  
Director – Dasherboard Systems  
Global Sport Resources Ltd.  
Tel: (780) 469 7980 Cell: (780) 242 4417






REV. A





A	05/05/21	ISSUED FOR REVIEW	CJA	
REV.	DATE	DESCRIPTION	BY	



GLOBAL SPORT RESOURCES  
50523 HWY 21  
LEDUC COUNTY, ALBERTA T0B 3M1

UNLESS OTHERWISE SPECIFIED:  
DIMENSIONS ARE IN INCHES  
TOLERANCES:  
FRACTIONAL  $\pm 1/8"$   
ANGULAR  $\pm 1^\circ$   
.X  $\pm 1/32$   
.XX  $\pm .030$   
.XXX  $\pm .005$

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DRAWN	CJA	05/05/21
CHECKED		
VERIFIED		
APPROVED		

PROJECT:

KINSMEN ARENA YORKTON SK  
LEGACY SEAMLESS SYSTEM  
84' X 187' X 42" W/28' R  
RINK LAYOUT - ISO VIEWS

SCALE: 1:384	DO NOT SCALE DRAWING	SHEET 1 OF 1
DWG. NO. KINSMEN ARENA LAYOUT ISO		REV. A



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## Global Sport Resources Seamless Dasher Board Specifications

### PART 1 – GENERAL

#### 1-a1 GENERAL REQUIREMENTS

A) To supply factory-prefabricated, engineered dasher board system and accessories, 42" (1067mm) or 48" (1220mm) nominal height or custom manufactured heights reflecting individual needs of system purchaser's requested layout.

B) To install dasher board system and accessories as per layout given by purchaser, meeting and/o exceeding all local, provincial or federal guidelines for safety standards and codes.

#### 1-a2 INTENT

*A) Work included in this section is as follows:*

1. Anchors set into concrete slab by Canadian Arena Products
2. Prefabricated structural steel dasher board frames
3. UV stabilized high density polyethylene cladding
4. Extruded aluminum glazing stanchions
5. ANSI rated tempered glass and/or acrylic shielding

*B) Related work specified elsewhere is as follows:*

1. Painting
2. Electrical work
3. Flooring
4. Bleachers
5. Glazing
6. Benches and seating
7. Subfloors
8. Dressing room accessories
9. Energy efficient arena ceiling membranes
10. Mechanical Lift Gate

#### 1-a3 QUALITY ASSURANCES

*A) Qualifications:*

1. Dasher board supplier will employ persons that are skilled in this trade and proficient in the use of specified materials.





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2. All work will be performed within strict accordance to local, provincial and federal codes and safety practices.
3. Dasher board manufacturer shall have a minimum of 5 years' experience in the manufacturing, design and installation of dasher board projects.
4. Manufacturer shall hold valid membership and certification for **COR safety program**.

#### **1-a4 SUBMITTALS**

##### *A) Samples:*

1. Dasher Board supplier will submit samples, when requested, or material thickness and colors for architect to review.

##### *B) Shop drawings:*

1. Drawings will be submitted to the architect for review and approval
2. Drawings are to show the following:
  - a. Sizes and locations of doors, lift gates, machine gates, removable sections
  - b. Modular board system layout – **a.** plan view **b.** Isometric View
  - c. Detail on players' boxes, penalty boxes and time keeper's box  
typical manufacturing details
  - d. Drawings shall bear the seal of an Alberta Engineer in good standing and not be more than 5 years of age

#### **1-a5 PRODUCT DELIVERY, STORAGE AND HANDLING**

- A) Deliver onsite in a safe manner.
- B) Deliver and store materials packaged in protective wrapping to prevent damage to finishes and surfaces.
- C) Materials to be offloaded by experienced operator using proper equipment.
- D) Materials to be stored inside facility always.

#### **1-a6 SITE CONDITIONS**

- A) Permanent lighting and power shall be installed and functional.
- B) Perimeter surface and freezing surface are to be in place and cured prior to commencement of work.
- C) Either surface is to have a minimum of ¼" (6mm) variance in height over length of arena.
- D) All overhead painting is to be complete prior to commencement of work.
- E) All subcontractors in area are responsible for the protection of the dasher boards if dasher boards may be damaged by their work.





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## 1-a7 GUARANTEE

- A) Submit a written guarantee against defects of materials, and workmanship for a period of no less than two years and include a limited lifetime warranty on galvanized steel frames. Warranty shall commence on date of substantial completion signed off by purchaser/representative and dasher board supplier.

## PART 2 – PRODUCT

### 2-a1 ACCEPTABLE MANUFACTURERS

- A) Dasher boards, glazing and two-piece aluminum glazing stanchions as manufactured and distributed by Global Sport Resources Ltd. **50523 HWY 21, Leduc County AB 780-469-7980**

### MATERIALS

- A) Dasher panels shall be fabricated in demountable sections of nominal 8' lengths. Frames are to be of welded construction. All other dasher board sections including access gates, radius frames and custom lengths shall be fabricated in the same manner

- B) Steel sections and plates shall be CAN/CSA – G40.20/G40.21 and as follows:

1-HSS: grade 300w class C

2-Plate: grade 44w

3-Angle: grade 44w

- C) On steel frames, all material is to be:

1-Horizontal top front and back stringer: 3" x 3" x .100" H.S.S.(75mm x 75mm x 2.5mm)

2-Horizontal middle stringer: 1.5" x 3.0" x .100" H.S.S (37mm x 75mm x 2.5mm)

3-Horizontal bottom stringers: 1.5": X 1.5" X 3/16" angle (38mmx38mmx2.5mm)

4-Vertical end plates: 1.5" x 6" x 1.5" x .135" (37mm x 153mm x 37mm x 3.42mm) formed channel plates drilled with three 7/8" diameter holes with 3/4" (19mm) diameter through bolts

5-Vertical center post: 1.5" x 6" x 3" x .135" formed "Z" plate (38mm x 150mm x 75mm x 4.5mm)

6-All welds are to be complete around all dimensional edges - incomplete welds are unacceptable

7-3/8" x 4.5" x 5" (9mm x 100mm x 127mm) anchor plates with 1" (25mm) holes drilled in center to be used between the two bottom angles to allow lateral movement for anchor positioning

8-All steel frames are hot dip galvanized after fabrication to meet CSA-G-164-M1981

- D) Where specified, aluminum is to be 6061-T6 or 6063-T5 alloy and must meet ASTM B221/ FED SPEC QQA200-9.

### 2-a3 ANCHORING

- A) **NEW:** Anchors are 4" x 4" x 1/4" (127mm x 127 mm x 12 mm) mild steel plate with 3/4" threaded rod welded to the plate, which are embedded in concrete during pour of slab by others. Anchor height to be the thickness of the concrete slab less 1/16".

- B) **RETROFIT:** Existing anchors may be reused for all retrofit dasher board installations.





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**C)ADHESIVE ANCHORS:** Custom fabricated adhesive anchors may be used in circumstances where traditional anchors are not ideal for installation of dasher boards.

## **2-a4 DASHER BOARD CLADDING**

A) Puck board shall be polyethylene in the specified thickness, of consistent color and density.

B) All official line markings shall be 12" wide (300 mm) x .50" thick (red, blue) and shall be fully inset vertically and flush into the main board surface. 2" (50 mm) thick red lines shall also be inset fully into the puck board surface. All lines are continuous from the ice surface to the sill.

C) Top sills are 6 1/2" x .500" thick high-density polyethylene from manufacturer's colors. All edges shall have a radius of 3/8" (9mm).

D) Kick strips are nominal 8" (200 mm) high and manufactured from .500" colored puck board from the manufacturer's standard color range. The top edge will have a radius of 3/8" (9mm).

E) All puck board used will be treated with a Hindered Amine Light Stabilizer to prevent degradation of puck board.

F) Fasteners for board cladding are to be ¼-20 color-matched, Robertson flat head floorboard screws. Fasteners that are inset to angle will be secured with a ¼" nyloc nut. All fasteners will beset flush to the exposed surface of the dasher boards by way of countersinking.

## **2-a5 THRESHOLDS AND ICE DAMS**

A) Gate thresholds shall be manufactured from high-density stress relieved, polyethylene. Thickness shall be 1" x 6" wide, in accordance with specifications. Thresholds cover the entire width of the gate opening. Fasteners are countersunk ½" (13 mm) deep and the front edge of the threshold has a radius of 3/8" (9mm). Heights will depend on design and needs of rink and gate location.

B) Ice dams are 2" (50 mm) tall x the width of the dasher board system. Allows for proper sledge heights dependent upon rink design and circumstances. Custom heights available upon request

## **2-a6 HARDWARE**

A) Fasteners are zinc plated ¼" x 20 color-matched to the board surface.

B) All steel hardware is hot dip galvanized or electroplated as required

C)Access gate latches are fabricated from 3/8" x 2" (9mmx 50mm) strap steel, easily opened by a player's gloved hand with downward movement.

D)Access gate hinges are engineered strap hinges with grease ports





- E) Machine gate hinges are zinc plated or galvanized heavy-duty adjustable type.
- F) Ice side opener devices shall be installed at all locations where glazing is present
- G) Heavy duty spring loaded castor wheels of the phenolic or pneumatic type are to be installed at all gate locations exceeding 48" (1220 mm) in width.
- H) Closure bars are to be sliding type manufactured from 2" solid round bar (50mm) secured to one leaf of the machine gate. This slide bar will slide into custom brackets located on opposite leaf. Two closure bars per gate will be used.
- I) All hardware shall be mechanically fastened for easy of change out due to natural wear. Welding of hardware is an unacceptable practice

#### **2-a7 GLAZING SUPPORTS – for use at shielding terminations**

- A) Glazing supports are constructed of extruded aluminum alloy 6063-T6, which is a one-piece support with removable, mechanically fastened clamp bar. Extrusions to come with gasket for securing of shielding
- B) All necessary gaskets and fasteners are provided.
- C) "TC" style stanchions to be installed at all 90 degree turns and terminations
- D) Vinyl covered urethane foam bumper pads to be provided at all exposed ice side terminations.

- E) All vertical edges of glass to have Polycarbonate - 2 piece shield installed full height of glass panel

#### **2-a8 SPECTATOR SHIELDING -**

- A) Shielding may be tempered glass or acrylic, dependent upon the specifications. Tempered glass shielding will conform to CAN2-12.1-M79 Type
- 2. Acrylic shielding will conform to ASTM D 4802-88.
- B) End glazing shall be not less than 72" total height (1828 mm) X48" (1220 mm) x 5/8 (15 mm) thick.
- B1. – Seamless in Radius corners of rink to be standardized curved tempered laminated glass ½" (13MM) thick and bent to 28'3" (8310mm) arc
- C) Side glazing shall be not less than 48" (1220 mm) total height x 48" (1220 mm) x ½" (12 mm) thick
- D) Custom glazing in small widths is acceptable for specialty areas such as access gates.
- E) All edges are ground to standard "arena" specifications.

F) Shielding shall have standard finished sizes of 48", 60", 72" and not be specialty cut to lock end users into long term glass replacement commitments

## **2-a9 PLAYERS', PENALTY AND TIME KEEPER'S BOXES**

A) Interior of boxes are to be of similar construction as ice-side of dasher boards, utilizing 3/8" (9mm) HDPE. Framing is to be of similar construction as the dasher boards.

B) HDPE, high impact, matching in color 3/8" (9mm) thick shall be installed on the back side of ice side dasher boards in penalty and players' boxes to form a water bottle shelf. This shelf is to be equal in height to the middle stringer of the dasher board frames.

C) Players' boxes are to be 30' long by 5' deep (9145mmx1525mm). Access will be through two gates per box on ice side. Top half of players' boxes to be clad in 1/2" (12mm) acrylic shielding for ease of viewing for sledge hockey players.

D) Penalty boxes are to be 8' long by 5' deep (2438mmx1525mm). Access will be through one gate per box on ice side. Top half of penalty boxes to be clad in 1/2" (12mm) acrylic shielding for ease of viewing for sledge hockey players.

E) Time keeper's box to be 6' long by 5' deep (2438mmx1525mm). Access will be through one gate located either on spectator side or through penalty box. Time keeper's box to include time keeper's table constructed of wall mounted brackets and 1" HDPE

1) Players' and penalty bench construction will be as follows: 1-Benches are should be laid out to maximize seating area

2-Benches are to be a nominal 9 1/2" (241 mm) deep, and 20" (508 mm) above finished floor.

3-Bench supports will be constructed with 3"x1 1/2"x1/8" (76mmx38mmx2.5mm) HSS galvanized tube.

4-Bench supports will not exceed 6'8" (2032mm) on center and will be attached to benchtops with 3/8" lag bolts (4 per plate).

5-Bench tops shall be 1.75" (44mm) x 11.75" (298mm) contoured Enduraplank

6-Bench supports will be fastened to PWF subfloor with 3/8" lag bolts, and to concrete slab with 3/8" wedge anchors.

7-All hardware will be zinc plated or galvanized.

B) Time keeper's table will be constructed with 1" (25mm) thick white Sanilite ® supported by removable angle brackets.

## **2-a11 FLOORING FOR PLAYERS', PENALTY AND TIMEKEEPER'S BOXES**

A) Raised PWF subfloors are constructed using 2"x4" (50mmx200mm) lumber and 3/4" (19mm) sheathing will be furnished in all required players', penalty and time keeper's boxes, floor to be covered in 1/4" (7mm) HDPE for ease of use for sledge hockey

B) Loose laid 1/2" (38mm) recycled rubber matting will be fitted and placed into all players', penalty and time keeper's boxes.



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## **PART 3 - EXECUTION**

### **3-a1 Delivery and Installation**

A) Manufacturer shall construct, fabricate and deliver all materials to the job site as per plans and specifications. Installations shall be in strict conformance with manufacturer's requirements and instructions.

B) Installation of the dasher board system shall be completed in one of three following ways:

- Complete installation by the manufacturer,
- On-site supervision by the manufacturer,
- By an experienced dasher board contractor who is approved,
- By the manufacturer.

C) We are committed to safety, innovation and value and we reserve the right to change specifications at any time. Please call us before you send your project out to bid to ensure that you have up to date specifications.





LEGACY  
SERIES™

Global Sport Resources specializes in providing the highest quality dasher board systems for indoor facilities. All our arena systems are engineered and manufactured to the highest quality, operational, and safety standards and are designed to the specific needs of every facility.



### INDOOR RINK SYSTEMS

Fabricated from durable galvanized steel or aluminum tubing and formed end plates, our boards are can be customized to best suit you. We build our indoor rink systems with the highest quality and best overall experience in mind.



- Specialty advertising packages
- Custom or standard heights and sizes
- Quick release or Mechanically fastened glazing stanchions
- ANSI rated Tempered or Acrylic shielding
- Custom Seamless Glass Systems for increased sight lines



### INDOOR SOCCER SYSTEMS

The Legacy Series™ systems are perfect for soccer and inline hockey, lacrosse, and many other sports. We offer a variety of cladding options, ranging from 0.25" to 0.5" thick HDPE or clear panels cladded in ANSI rated tempered glass, to allow for a modern look with perfect site lines and maximized safety.



Our sturdy Steel or Aluminum frames can be powder coated, prime painted, galvanized or anodized depending on your needs and budget.





LEGACY  
SERIES™

GSR specializes in custom retrofitting of existing facilities. With over 100 rinks designed we can accommodate the needs of any facility. GSR also has a specialized non destructive system that allows us to permanently epoxy an entire board system to your existing cooled slab without drilling a single hole!



### CUSTOM PROJECTS

Custom projects are not a problem for Global Sport Resources. We can custom build a system to suit your facility's unique needs, such as:

- **Indoor Facilities:** Hockey, Lacrosse, Soccer
- **Custom Retrofit Rinks**
- **Residential Use:** Basement or Backyard!
- **Retail Centers or Store Fronts**
- **Synthetic Ice**
- **Low Emissivity Ceilings**
- **Sport Tile Surfaces**
- **Seating**
- **Dressing Rooms**
- **Flooring**

### NETTING

Safety netting is an important feature of any arena design. Global Sport Resources carries a range of different netting options:

**Monofilament:** Clear white plastic netting

**Resin Coated Nylon:** Various break strengths and sizes depending on facility type and usage

**Kevlar®:** The strongest netting on the market for the protection of your spectators and facility

### LIFT GATES

Our lightweight, fully engineered aluminum lift gate system can be fully tailored to your specifications. Manual and electrical lift gates are available. These gates are great for ease of access, contact us today to learn more!



# Review of the Rink Ventilation System at the Kinsmen Arena

227 Prystai Way  
Yorkton, Saskatchewan

Prepared for :



**STRONG**  
REFRIGERATION  
CONSULTANTS INC.

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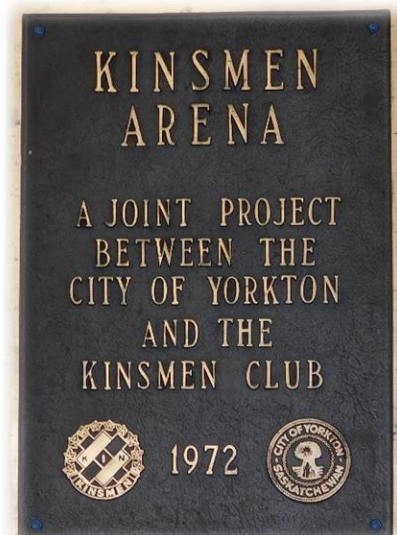
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## 1. INTRODUCTION

In September of 2021, R. J. England Consulting Ltd. was engaged by Strong Refrigeration Consultants Inc. to undertake a review of the rink area ventilation systems at the Kinsmen Arena in Yorkton, Saskatchewan.

The scope of work for the review was identified as:

- Conduct a site review of the existing Kinsmen Arena rink area and Zamboni room ventilation systems. Provide a report that addresses any upgrades that are required to:
  - Ensure the Arena and Zamboni Room ventilation systems comply with code, either:
    - Current code (assuming the changes being made would trigger the need to comply with current code); or,
    - The code that was in force when the arena was built.
  - Ensure the arena is safe. If the existing system is inadequate, then the City may want to upgrade it to ensure that there is adequate ventilation to prevent people from falling ill due to poor indoor air quality due to high levels of carbon monoxide (CO), carbon Dioxide (CO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), etc.
  - Ensure that the dehumidifiers will be effective and efficient. Throughout a good portion of the year it is anticipated that the makeup air (if it is properly heated) can take care of dehumidification. However, during the summer and fall, the current system is likely going to be a burden on to the dehumidification system.
  - Provide some pressurization to counteract leaks in the existing building envelope.
  - Complete sizing and preliminary selection of the required dehumidifiers. Strong Refrigeration Consultants had completed initial sizing calculations for the dehumidifiers, however, given the dehumidifier sizing will be integral to the ventilation system, it was thought best to include both the ventilation and dehumidification together in the ventilation portion of the report.



- Provide an estimated cost for installation of dehumidifier(s), including natural gas connections.

## 2. THE BUILDING

The Kinsmen Arena at 227 Prystai Way was originally constructed in 1972. There have been a couple of additions to the non-rink areas, as well as the ancillary areas of the building since that time.

The rink area of the building is approximately 20,000 square feet, with approximately 1,800 square feet of this designated as spectator area.



Kinsmen Area

### A. Code Requirements

The original building and successive additions were presumably constructed to the then current requirements of the Authority Having Jurisdiction (code authority), and hence met the code requirements of the day. This then makes the facility "legally non-conforming", which means that while it does not meet the requirement of the current codes, it did meet the requirements of the codes in place when it was built.

Codes are generally enforced so as to put into place to set a minimum life safety standards. Codes evolve as the needs of the day evolves, and as understanding of technologies and building sciences increase.

The current overall code in Saskatchewan is the Uniform Building and Accessibility Standards Regulations, which adopts the National Building Code of Canada 2015 (NBCC).

### 3. ZAMBONI ROOM

#### A. Existing Zamboni Room Systems

The Zamboni room is ventilated by a cabinet exhaust fan mounted vertically on the interior face of the west exterior wall, drawing air from low level in the Zamboni room and exhausting it to the outdoors. The Zamboni room exhaust fan is estimated to be rated at about 520 LPS<sup>1</sup> (1,100 CFM<sup>2</sup>).

Make-up air to offset air exhausted from the Zamboni Room is brought into the room via a dampered opening in the east wall of the Zamboni Room which is a common wall with the rink.

The exhaust fan is automatically energized by a carbon monoxide sensor on the north wall of the Zamboni Room or by a manual timer switch. The exhaust fan has a set-and-forget speed controller mounted directly on the fan to tune the fan air flow. The intake damper is interlocked with the exhaust fan.



Zamboni Room

The Zamboni Room is heated by a tube-type low temperature radiant heater, located on the south wall of the Zamboni Room.

#### B. Code and Design Requirements – Zamboni Room

##### i. Zamboni Room Ventilation Requirements

The NBCC directly establishes the requirements of ventilation for the Zamboni Room in that it sets the maximum level of carbon monoxide and nitrogen dioxide that can be present in the room, or, alternatively, sets the minimum continuous room volumetric air flow rate of outdoor air at that 3.9 LPS/m<sup>2</sup> (0.75 CFM/ft<sup>2</sup>).

<sup>1</sup> LPS = volumetric flow rate of air : litres per second. Metric units.

<sup>2</sup> CFM = volumetric flow rate of air : cubic feet per minute. Imperial units.



## ii. **Zamboni Room Temperature Requirements**

There is no code-mandated minimum or maximum thermal comfort temperature requirements for a rink.

ASHRAE Standard 55 "Thermal Environmental Conditions for Thermal Occupancy" is not specifically called up by the National Building Code of Canada but is considered good engineering practice. This Standard establishes comfort conditions for many types of occupied spaces, but not for rinks.

## C. **Zamboni Room Ventilation and Dehumidification**

The minimum required exhaust ventilation rate for the Zamboni Room was calculated to be 205 LPS (435 CFM).

Minimum make-up air would be required at a rate of 185 LPS (390 CFM). This value is lower than the exhaust ventilation rate to keep the room under a slight negative pressure.

If heated make-up air is used and the supply air temperature matches that of the rink 12.7°C (55°F), the heating rate would be 37.9 MBTUH<sup>3</sup> output, with an indirect fired heater gas load of 47.4 MBTUH.



**Zamboni Room Carbon  
Dioxide Sensor Unit**

## D. **Zamboni Room Observations**

The products of combustion of the propane burning Zamboni are largely carbon monoxide, with water and sulfur dioxide also being produced. Carbon monoxide and air have the same relative weight and will therefore mix fairly well.

There is a carbon monoxide sensor in the Zamboni Room which measures the amount of carbon monoxide in the air. On reaching a certain level of carbon monoxide in the room (likely between 50 and 100 parts per million), the exhaust fan energizes and the inlet and outlet dampers will open.

The Zamboni room exhaust fan is estimated to be rated at about 520 LPS (1,100 CFM). The ventilation requirements for the room were calculated to

<sup>3</sup> MBTUH = thousands of British Thermal Units per Hour. This unit is used rather than the metrified unit of kilowatts (kW), as the metrified unit is rarely used in the HVAC industry.

be 205 LPS (435 CFM). The rated air volume of the fan therefore exceeds the required minimum and should be acceptable.

It was noted that the suction side of the fan pulls air from the room near the floor. As the air enters the room through an opening at high level on the opposite wall, this is an appropriate configuration. A preferred configuration would have the air being exhausted from the breathing zone (1200 mm to 1,800 mm above floor level), but the current configuration would be considered an acceptable alternative.

A sticker on the carbon dioxide sensor indicates the sensor was last calibrated in January 2021 and is due for recalibration in 2022. It is assumed the operation of the sensor in energizing the ventilation system was checked when the unit was calibrated, as is normally the case.

There is no humidity sensor in the Zamboni Room to keep the humidity level down in this room. After ice resurfacing, the ice scrapings are emptied into a heated pit in the room to melt and drain. This will leave the Zamboni Room very humid until such time as the ice is melted. As the Zamboni room is connected to the rink by an overhead garage type door, the humidity in the Zamboni Room will add to the humidity level in the rink.



**Zamboni Room Exhaust**

#### **E. Zamboni Room Recommendations**

It is recommended that the air volume of the exhaust fan be checked by a qualified air balancer.

Adding a humidistat or dew point sensor to turn on the exhaust fan when humidity level in the Zamboni Room is high would help reduce humidity levels in the Zamboni room as well as in the rink.

#### 4. RINK

##### A. Existing Rink Systems

The ventilation/dehumidification system for the rink consists of two exhaust fans at the east end of the arena. The two exhaust fans are of different sizes: one is rated to move air at a rate of between 2,360 and 4,000 LPS (5,000 and 8,500 CFM), and the other is rated between 1,225 and 2,360 LPS (2,600 and 5,000 CFM) between<sup>4</sup>.

Make-up air to offset air exhausted from the rink area is unheated and enters the rink via three dampered openings at the west end of the rink. The dampers are interlocked with the exhaust fans. Air is drawn in directly from the outdoors via these openings.



Rink

The fans and dampers are controlled either manually by a building operator (via hand-off-auto switches in the electrical room), or by a humidistat located at the west end of the rink. The humidistat is apparently not currently functional.

The rink has overhead tube-type low temperature radiant heaters to keep the spectators warm via radiant (indirect) heat. The rink itself is not heated.

##### B. Rink Code and Design Requirements

###### i. Rink Ventilation Requirements

The NBCC references ASHRAE Standard 62.1 "Ventilation for Acceptable Indoor Air Quality" when it comes to establishing the minimum outdoor air ventilation rates for the rink area. This Standard establishes the basic ventilation rates based on occupancy and floor area with several adjustments to be made based on ventilation system effectiveness, among other items. In its most basic form, the ventilation rates for the rink area are determined by adding the CFM

<sup>4</sup> The actual air flow depends on the pulley sizes on the motor and the fan, which control the speed of the fan and hence the volume of air moved.

per person values to the CFM per square foot values from the following table:

ASHRAE Standard 62.1 Requirements		
<b>Sports Arena</b>	10 LPS/person (20 CFM per person)	0.9 LPS per square metre (0.18 CFM per square foot)
<b>Spectator Area</b>	3.8 LPS/person (7.5 CFM per person)	0.3 LPS per square metre (0.06 CFM per square foot)

## ii. Rink Temperature Requirements

There is no code, standards, or regulations established that govern the temperature or humidity levels in a rink. Industry standards suggest a temperature of between 13°C and 18°C (55°F to 65°F), with a dewpoint temperature<sup>5</sup> of around 1.7°C (35°F).

## iii. Rink Dehumidification

Traditional methods of ventilation for rinks do not deal effectively with the high moisture loads typically found in ice arenas. High humidity in rinks is problematic, both from a maintenance and a cost perspective:



**Rink Outdoor Air Intake**

- Excess moisture can condense on the surface of the ice and on the roof which can cause moisture to drip on the ice surface and the spectators.
- Condensation on and within the building envelope structure can create corrosion and will develop an environment that accelerates mold growth. Build-up on the ice surface is a risk for skates.

<sup>5</sup> Dewpoint temperature is the temperature of air at which the relative humidity is 100%. For example, using the Design Requirements noted above, air with a dry bulb temperature of 18.3°C (65°F) and dewpoint of 1.7°C (35°F) has a relative humidity of 33%. Air with a dry bulb temperature of 12.8°C (55°F) and dewpoint of 1.7°C (35°F) has a relative humidity of 70%.

- When spectators are present, humidity issues are exacerbated, and humidity levels will rise.
- When humidity in the rink is very high, fog will form over the surface of the ice, causing visibility problems and increasing the possibility of injury to the skaters due to the reduced visibility.

Dehumidifiers reduce the humidity of the air in the rink low and ideally keep the air's dew point close to the ice surface temperature.

## C. Rink Ventilation and Dehumidification Loads

### i. Basis of Estimates

The following information was provided by the City of Yorkton, and forms the basis for the estimate of the ventilation and dehumidification loads:

Arena First Day of Operation in the Fall	September 1
Arena Last Day of Operation in the Spring	March 31
Arena Open Hours :	
Time Arena Opens to Skaters	3:00 PM
Time Arena Closes to Skaters	11:00 PM
This gives 8 hours of operation per typical day.	
Estimated Maximum Number of People in Rink :	
Skaters, Referees, and Players not on the Ice	46
Spectators	200
Number of Times Zamboni Runs per Day	9
Zamboni Water Storage Temperature	160°F (71°C)
Minimum Rink Temperature	unheated <sup>6</sup>
Rink Dimensions :	
Length	190 feet
Width	85 feet
Corner Radius	15 feet
Rink Surface Area	15,957 ft <sup>2</sup>

<sup>6</sup> With the rink being effectively unheated, a temperature of 12.7°C (55°F) is used for the calculations.



Note that we understand the hours of operation are extended when tournaments are on in the arena, however the above provides data for typical operation of the arena.

## ii. Rink Ventilation, Heating, and Dehumidification Loads

### a. Rink Ventilation

The ventilation requirements for the rink were calculated to be 2,740 LPS (5,800 CFM) to accommodate the anticipated maximum occupant load of 246 people. Positively pressurizing the rink is recommended to reduce the dehumidification loads.

If this outdoor air is tempered using an indirect fired make-up air unit, a gas load of 710 MBTUH can be anticipated based on a heating output of 565 MBTUH.



One of the Rink Exhaust Fan  
Openings  
Exhaust Fan is on Roof Above

### b. Rink Dehumidification

There are three outdoor air criteria that could be used for calculating the dehumidification loads for the rink:

- The design cooling outdoor air temperatures based on the NBCC. These temperatures are the 99% percentile values for determining cooling load calculations in a building, and typically might occur in July or August when most rinks are not operating. For Yorkton, the NBCC values are 29°C (84.2°F) dry bulb and 21°C (69.8°F) wet bulb.

Dehumidification load using these outdoor conditions was determined to be 284 pounds of moisture to be removed from the air per hour (lbw/hr).

- An hourly calculation based on an average year obtained from Environment Canada Weather. The worst-case temperatures are the highest anticipated temperatures outdoors when the rink is open and is based on outdoor conditions occurring at 5:00 p.m. on September 9 of 23.7°C (74.7°F) dry bulb and 20.6°C (69.0°F) wet bulb.

Dehumidification load using these outdoor conditions was determined to be 323 lbw/hr.

If a dehumidifier of this capacity would be installed, it is anticipated that there would be near zero (0) hours per year when the dehumidifier would be unable to meet the total moisture removal requirements from the rink.



**Rink Humidistat  
Existing Ventilation Control**

- An hourly calculation similar to that noted above but using a 90% percentile value results in a dehumidifier sized so that the moisture removal load is met all but 2.5% of the time.

The dehumidification load using this method was determined to be 97 lbw/hr.

This results in an anticipated 43 hours per year when the dehumidifier is potentially<sup>7</sup> unable to meet the total moisture removal requirements from the rink.

Alternate percentile values could be used, including 99% (2 hours when loads potentially not met), 97.5 (30 hours when loads potentially not met), 75 (94 hours when loads potentially not met).

We have used the latter of these three values to determine the minimum size for the proposed dehumidification, as this gives a good compromise between installation costs, operational costs, and maintenance costs.

The value noted above of 97 lbw/hr moisture removal can be broken down as follows:

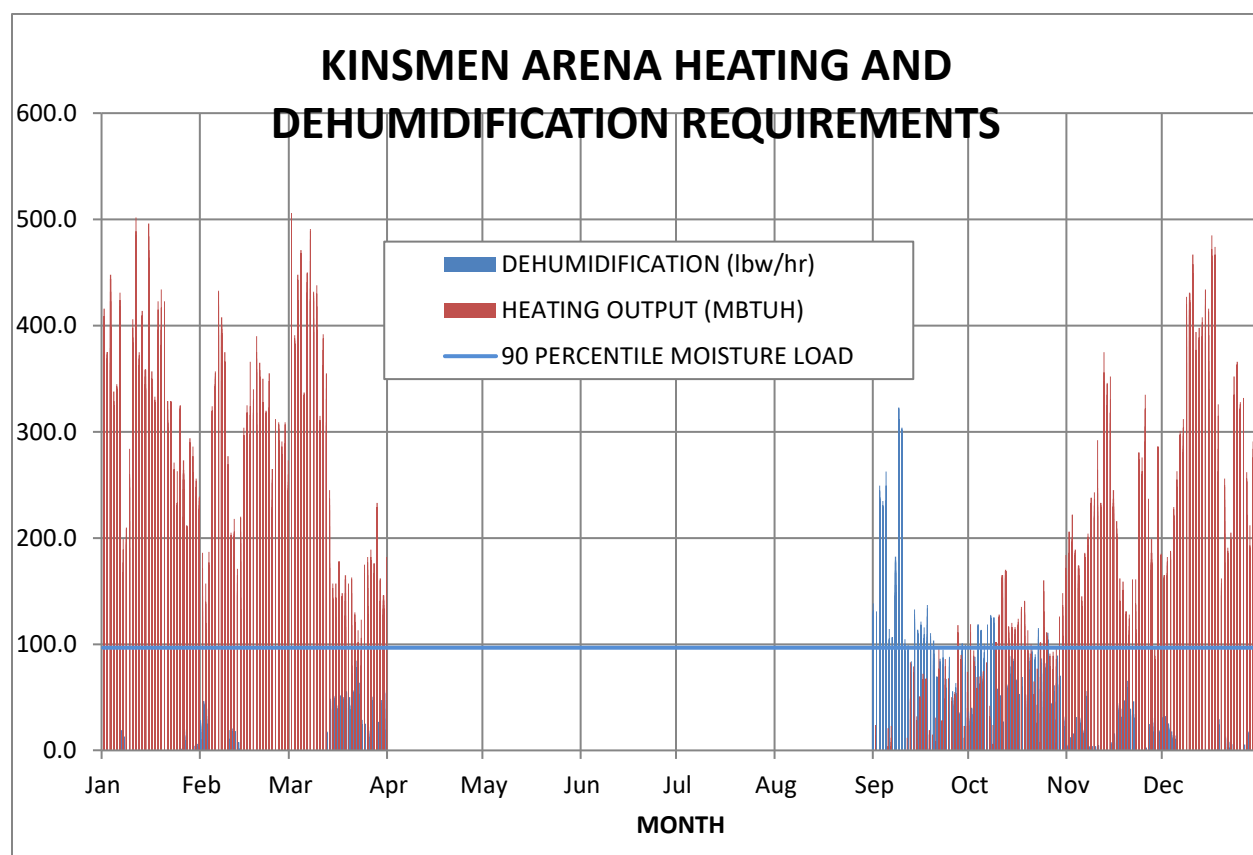
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<sup>7</sup> “potentially” is used as the calculations assume worst case with 200 spectators in place and 46 skaters on the ice or on the benches. The percentile mitigation of the worst-case load is used based on the probability of this worst case developing.

Moisture Load	Calculated Moisture Removal Required (lbw/hr)
Ventilation and Infiltration	32.6
People	33.3
Ice Resurfacing Load	30.7
<b>TOTAL</b>	<b>96.6</b>

### iii. Rink Annual Heating and Dehumidification Requirements

The dehumidification loads noted above and ventilation related heating loads can be illustrated in chart form on an annual basis as follows:



The red vertical bars indicate when heating is used, and the heating requirements for the rink.

The blue vertical bars indicate the times when dehumidification is required to meet the design criteria, and the magnitude of

dehumidification required. It is to be noted that the dehumidification load is very low during the coldest winter months: this is due to the ability of the outdoor air to dehumidify the rink.

The blue horizontal bar represents the recommended dehumidifier sizing. Where the blue vertical bars are above the blue horizontal bar, the dehumidifier will remove some, but not all the humidity in the air, and the humidity level in the rink will rise.

#### **D. Observations**

The existing ventilation in the rink meets the current code requirements. Humidity levels are high, and although this is not a life safety issue, high humidity levels reduce comfort conditions, leads to a shorter building life, and reduces ice quality.

The rink is unheated except for some tube-type radiant heaters above the spectator area. This rink will be very cold in winter, as the only means of ventilation is untempered outdoor air.

The rink humidistat is reportedly not working so the rink ventilation is accommodated by manually energizing the exhaust fans. This should be carefully monitored to ensure there is no build-up of carbon monoxide when the Zamboni is operational, and there is adequate ventilation for skaters and spectators.

We were advised carbon monoxide readings were taken during the operation of the Zamboni as a test to ensure that there was no buildup of Zamboni exhaust in the rink. Reading showed levels did not exceed maximum levels.

We are also advised that the rink stays relatively comfortable in the coldest months of the year, and the rink does not get unacceptably cold.

It was noted that the wood in the outside wall of the rink (as seen on the north side of the rink) was showing some signs of deterioration. Although some if this can be attributed to its exposure to the outdoor environment,



**Picture of Zamboni Room with Rink in the Background**

the rot is exacerbated by the high humidity level in the rink migrating through the wall when the exhaust fans are off.

## **E. Primary Recommendations**

It is recommended that a desiccant dehumidifier be installed in the rink.

This will serve to:

- Make the rink more comfortable for spectators and skaters by decreasing the space humidity and increasing the air temperature.
- Prolong the life of the structure by decreasing the humidity.
- Increase the quality and consistency of the ice surface.

A short and relatively simple supply duct distribution system could be installed to assist in the effectiveness of the dehumidifier.

The existing exhaust fans can be retained for a purge cycle.

A dew point sensor could be installed to replace the non-functioning humidistat. A simple direct digital control system could be installed to coordinate the operation of the Zamboni Room exhaust and dampers, the new dehumidifier, and the existing exhaust fans.

The photos shown at right are of an installation of a dehumidification unit sized similarly to the unit proposed for the Kinsmen Arena.

**Photos of Dehumidifier on Rink Near Sudbury, Ont.**



**Dehumidifier**



**Dehumidifier Ductwork Inside Rink**



## **F. Alternate Recommendations**

A less costly approach than noted above would be available if a new desiccant type dehumidifier were installed at the Gallagher Centre. This would free up the existing DX type dehumidifiers for use at the Kinsmen Arena.

Although the DX dehumidifiers are not as effective as desiccant humidifiers, they will provide some level of dehumidification to the space.

This option would not provide additional heating to the rink, as would the desiccant type dehumidifiers. If heating is also desired for the rink an indirect fired make-up air unit could be provided.

## **5. OPINION OF PROBABLE CONSTRUCTION COSTS**

We have developed an opinion of probable costs for the recommendations noted above as follows:

### **A. Primary Recommendations**

Plumbing	\$10,000	Natural gas piping.
Heating	\$0	
Ventilation and Air Conditioning	\$285,000	
Fire Protection	\$0	
Controls	\$55,000	Simple DDC system.
Insulation	\$10,000	Exterior duct insulation.
Balancing	\$5,000	
Mechanical General Conditions	\$35,000	
<b>SUBTOTAL MECHANICAL</b>	<b>\$395,000</b>	
Electrical Allowance	\$25,000	Power to new unit.
Structural Allowance	\$20,000	Fence for unit and openings in wall.
Architectural	\$10,000	Closing existing damper openings in west and north walls.
General Contractor Mark-Up	\$55,000	
CONTINGENCY	\$105,000	
<b>TOTAL</b>	<b>\$610,000</b>	

The following assumptions were made when preparing the above:

- The existing natural gas service is adequate to accommodate the additional natural gas requirements for the new equipment.
- The existing electrical service is adequate to accommodate the additional electrical load for the new equipment.
- No code upgrades, other than ventilation requirements, will need to be undertaken during the installation.

Taxes and engineering fees are in addition to the above figures. Engineering fees would be in the range of 9% to 13.6% of the total cost of construction, and current taxes (where applicable) would be 5% for GST and 6% for PST.

## **B. Alternate Recommendations**

It is anticipated the alternate recommendation, as an opinion of probable cost, will result in a lower cost, likely close to half the cost of the Primary Recommendation.

If heating is desired in the rink, this would add approximately \$100,000 to the alternate recommendation cost.



**One of the two Gallagher Centre Dehumidifiers  
Alternate Recommendation**

## **6. ACKNOWLEDGEMENTS**

We would like to thank Mr. Kurt Stechyshyn, Facilities Manager with the City of Yorkton Department of Recreation and Community Services for his invaluable description of the existing building, the ventilation systems, and arena operations. We would also like to thank Mr. Alex Repski of Strong Refrigeration Consultants Inc. for his insights into the facility and background ventilation issues.

## 7. CONTEXT

The cost estimates and opinion of probable costs included in this report represent R. J. England Consulting Ltd.'s best judgement based on its experience and current market conditions. The cost estimates and schedules are subject to change and are dependent upon factors over which R. J. England Consulting Ltd. has no control, including such items as market conditions, materials availability, contractor availability, bidding practices, cost of labour, cost of materials, and cost of equipment, among others.

This report was prepared by R. J. England Consulting Ltd. for Strong Refrigeration Consultants Inc. The material in this report reflects the R. J. England Consulting Ltd.'s best judgement in light of the information made available at the time the report was prepared. Any use which a third party makes of this report, or any reliance on or decisions to be made based on this report, are the responsibility of such third parties. The R. J. England Consulting Ltd. accepts no liability or responsibility for damages, if any, suffered by any third party as a result of decision made or actions based on this report.

This report does not cover the review of asbestos, mould, or other hazardous materials issues.

**History of Kinsmen Arena Progression towards Gallagher Centre Renewal Project  
Summary of Project Process  
November 1, 2021**

The following is a summary of the studies and direction related to the Kinsmen Arena's progression toward replacement and decision to relocate it to the Gallagher Centre. Numerous other community and Council discussions and project team meetings took place but have not been included here.

**March 2010**

Stantec Consulting completed a conceptual plan for improvements to the Kinsmen Arena which included a new lobby, renovated dressing rooms and other minor upgrades. The estimated budget was \$3.5 million. Council deferred any decision until the completion of the 2020 strategic plan.

**August 17, 2011**

Concerns regarding high levels of humidity and early ice bookings triggered an investigation into the building envelope and mechanical systems within the arena at the Kinsmen Arena. Associated Engineering conducted preliminary inspections and assessments related to mechanical systems and humidity impacts on the building.

**April 20, 2012**

Canadian Indoor Air Quality conducted an Asbestos Survey of the Kinsmen Arena. Areas identified as containing asbestos were appropriately marked to ensure that if they were ever required to be disturbed, it would be done appropriately safe. Asbestos was also identified in the exterior wall insulation.

**June 6, 2012**

Associated Engineering completed an in-depth, visual and physical assessment of building systems in the arena (arena only). Recommendations totaling \$1.14 million were provided to address the negative impact of the humidity in the arena proper.

**June 2012**

Council directed Administration to plan for the replacement of the Kinsmen Arena so that it would be available to the public in 10 years-time and to bring forward capital projects that would ensure its use until that time.

**November 27, 2012**

Associated Engineering was asked to continue their assessment and completed a multi-discipline visual inspection of the remainder of the building. The conclusion was "that the arena could be left as is, and still function as it does, however the deterioration will continue, resulting in the facility becoming sub-standard and possibly unusable." The total estimated improvement costs (including items from June 6, 2012 above) was set at \$3.1 million.

**February 14, 2013**

Canadian Indoor Air Quality conducted an Environmental Mould Assessment of the Kinsmen Arena, which showed no air quality issues, however some areas had significant contamination which required remediation. Their conclusion was that dehumidification and improvement to the exterior envelope of the building should be addressed in order to control mould growth.

**2013**

Roof vents were sealed at the Kinsmen Arena to reduce mix of warm, humid air with cold dry air, which creates humidity concerns, as per Associated Engineering recommendation, and Council direction from 2012.

**2014**

New doors installed in the arena envelope at the Kinsmen arena to reduce mix of warm, humid air with cold dry air, which creates humidity concerns, as per Associated Engineering recommendation, and Council direction, from 2012.

**2015**

Gable end walls, which were wet and mouldy, were removed at the Kinsmen Arena and replaced and seal, as per Associated Engineering recommendation, and Council direction, from 2012.

**This was the end of the work required to meet Council's direction from 2012 which was to plan for new facility to ready in 2022 and ensure the Kinsmen Arena could be maintained sufficiently until a new facility was ready.**

**Additional significant resources were required beyond these minor improvements, however investing these resources into a deteriorating facility, and for which direction for the planning had been provided, was not a priority.**

**Focus then shifted to the Farrell Agencies Arena due to a request by the Yorkton Terriers to modernize their dressing room facilities. This, combined with the previous direction to plan for the replacement of the Kinsmen Arena, triggered consideration of locating the Kinsmen Arena at the Gallagher Centre.**

**April 20, 2015**

Through a public RFP process, aodbt architecture + interior design were engaged to complete a feasibility study for an addition and modernization of the Farrell Agencies Arena. Part of this was to address the request by the Yorkton Terriers to modernize their dressing room and team facilities to assist with player recruitment, however any improvements to the facility needed to benefit all users.

**June 24, 2015**

aodbt architecture + interior design completed their feasibility study process, which included stakeholder and public consultation to determine program requirements, and a preliminary structural review of the Farrell Agencies Arena. Three (3) options were presented as follows:



1. Only develop new space on the ground floor that would include addition of space to the east side for expanded dressing rooms as well as improving dressing rooms on the west side, at an estimated cost of \$3.59 million.
2. Develop ground floor as in option 1 but also partially develop the 2<sup>nd</sup> floor with a fitness space and small meeting room and move the press box to behind the seating, at an estimated cost of \$4 million.
3. Develop as in option 1 and 2 above, but fully develop the 2<sup>nd</sup> floor addition with box seating and provide space for spectator travel along the length of the seating, at an estimated cost of \$4.42 million.
4. A canopy design over the east entrance was also developed as the east side is essentially the main entry point to the facility. The canopy would mitigate rain, leaves, snow and ice build-up at the east entrance, and also improve the aesthetics of the main entrance by offering a more welcoming entry by protruding in front of the mechanical systems rooms that currently exist there.

**NOTE: This study was specific to spacial improvements and did not address any refrigeration/mechanical/electrical/other building operating system needs.**

More information was obtained to optimize various facility operations as part of improvements to the Gallagher Centre, which were included with the Gallagher Centre feasibility study. This information was shared with Council at their September 28, 2015 Council Meeting and referred to the 2016 capital budget process.

### **June 27, 2016**

The opportunity to apply for a Canada 150 Community Infrastructure Program for the expansion of the Gallagher Centre (Farrell Agencies Arena) was presented to Council. The City decided not to pursue the grant application as the project was not a current priority for the required City's portion of funding.

### **September 17, 2018**

At the September 17, 2018 Council meeting, Council directed Administration to engage aodbt architecture + interior design to review options for replacement of the Kinsmen Arena. A full architectural and engineering review of the Kinsmen Arena was later approved to determine the current state of the facility as well as what would be required to transform the building into an all-season use facility.

### **March, 2019**

In March, 2019 the scope of work was expanded to include identification of indoor recreation infrastructure compared to intended uses. A user feedback process was also completed to determine possible uses for future indoor recreation infrastructure, which would turn into an Indoor Recreation facility Master Plan. A data gathering process to predict future costs and revenue requirements was then completed in order to determine required usage to support future infrastructure.

### **April 23, 2019**

Aodbt architecture + interior design completed "a visual assessment of the Kinsmen Arena to determine if there were any significant visual concerns with the building in its current state, if the building could be reasonably repurposed for a function other than an ice arena". "Based on the

results of the assessment the building is in adequate condition to be re-purposed and reused if desired, but there would be some mechanical costs to use the building as a conditioned facility during the winter months.” (heating) Further, some upgrades would be required in order for the facility to become code compliant. Costing was not included as part of this review.

### **October 21, 2019**

Aodbt presented the findings of the Indoor Recreation Facility Master Plan at the October 21, 2019 Council meeting where they provided a recommendation to relocate the Kinsmen Arena by adding a second ice surface at the Gallagher Center. **Council then authorized Administration to engage aodbt to:**

1. **Continue working on a plan to replace the Kinsmen Arena at the Gallagher Centre,** including presenting findings of the study to the June user group participants, and
2. Conduct a come-and-go public open house to obtain comments on the conceptual plan as presented, and
3. Proceed with the completion of a schematic design and partial design development to help refine cost estimates for future Council consideration, and
4. Assist Administration with a public procurement process to hire a contractor for pre-construction services only, in order to assist Administration with oversight of the design and maintaining cost certainty. *(It should be noted that this is not a request to proceed to construction, but rather a request to hire an advisor to ensure a complete design that results in minimal change orders in the event Council provides future approval to proceed with construction. There will be further reports back to Council before Council is asked to consider approval to proceed with construction)*

### **November 27, 2019**

On November 27, 2019 the project team, presented to the public at an Open House, a conceptual plan for a second ice surface at the Gallagher Center. This evening session allowed the community to provide initial feedback on the concept and the project team set into more detailed planning.

1. Direction from community stakeholders was that there needs to be some benefit to the community in the co-location of arenas, or else why replace the Kinsmen at all.
  - a. 12 Change rooms, all in a single corridor for ease of wayfinding and to share between both ice surfaces
  - b. Ease of facility usage
  - c. Leisure Ice
  - d. Viewing Areas
  - e. Farrell Agencies Arena enhancements

### **January 8, 2020**

Pre-construction service interviews were conducted by the Project team.

### **January 14, 2020**

PCL Construction retained on January 14, 2020 as a construction/cost advisor to the Project team.

### **January 28, 2020**

On January 28, 2020 the first full project team meeting was held, including

1. Meeting with the Planning, Building and Development Department to identify potential site requirements.
2. General building systems discussion and direction – build it right to prevent ongoing maintenance issues in the long run.
  - a. Future planning for summer ice usage – dehumidification system
  - b. New ice plant in a location away from the public

### **March 4, 2020**

The second project meeting was held on March 4, 2020. During this meeting, a conceptual plan was provided to user groups for comment. Meetings included:

1. Yorkton Minor Hockey
2. Recreational Hockey
3. Yorkton AAA Midget Maulers
4. Yorkton Terriers
5. Officials
6. Figure Skating Club was invited, but could not attend

Part of this session included a walk-through of the new dressing room, created in the Flexi-hall with masking tape on the floor. Adjustments were requested by the group, asking for the rooms to be more squared.

### **March 26, 2020**

A third project meeting was slated for late March, which was to be more public in nature. However, the COVID 19 pandemic forced the team to reassess the project and how it would be released to the community. Virtual Project meetings were co-ordinated using the platform Zoom, a video conferencing application for computers and portable devices.

### **May 11, 2020**

Administration, along with the consultant team consisting of Mitch Strocen from aodbt architecture + interior design and Darren Mountenay from PCL Construction, presented their design to date and invited feedback and direction from Yorkton City Council. Direction was given to continue with the design and engagement process as originally planned to ensure the final design will meet the community's needs.

### **June 3, 2020**

A virtual re-engagement session was held with the user groups that participated in the initial user group input sessions. The purpose of the meeting was to review more detailed concepts that resulted from the previous user group input sessions.

### **June 8 through July 3<sup>rd</sup>**

A virtual Open House was developed by the consultant team which consisted of 5 videos. Four of the videos walked people through the proposed design of the various components of the proposed development. The 5<sup>th</sup> video provided a representation on what the construction timeline could look like through a 4D modelling video that showed how the work would be completed.

The videos were placed on the City's YouTube channel with promotion completed on the City's social media platforms along with traditional paper promotions to encourage people to view the videos and provide feedback to a feedback email address. Further, A Q&A was developed from the feedback and placed on the City's website through the entire virtual Open House timeline.

#### **June 19, 2020**

A virtual input session was held with Gallagher Centre and Kinsmen Arena staff to receive input and feedback on the design to date.

#### **August 24, 2020**

The final 33% design was presented to Yorkton City Council for feedback and input with direction given to Administration to bring the final 33% design and estimated cost to the open portion of the September 14, 2020 Council meeting.

#### **September 14, 2020**

The final 33% design and estimated cost is presented to City Council to provide further direction on the project. The estimated cost was \$22,000,000. Council referred the Gallagher Centre Renewal Project discussions to a future strategic planning session of Council. The purpose of that discussion will be to revisit and clarify the scope of the project and bring options forward to an open Council meeting in 2021 in conjunction with high level budget estimates.

#### **April 19, 2021**

Mitch Strocen of aodbt architecture + interior design attended a Council Committee of the Whole meeting to inform discussions considering the Gallagher Centre Renewal Project. Before proceeding with a decision for the Gallagher Centre Renewal Project, Council was interested in receiving more information about what it would take to have the Kinsmen Arena continue to operate as an ice arena for an additional 15 years. A review of the existing ice making equipment and systems was required to inform that discussion. This was not previously completed as the decision to relocate the community's second ice surface to the Gallagher Centre was based on the age and condition of the entire facility.

#### **April 26, 2021**

Council formally passed a motion to proceed to get more detailed assessment and costing on repairing the mechanical/building systems for the Kinsmen Arena. The intent was to obtain a consultant opinion of the condition and cost estimates to ensure that the ice plant and related mechanical/building systems could support ice for the next 15 years. Council approved a budget of \$50,000 for Administration to hire specialized consultants to provide this info back to Council.

#### **Summer/Fall 2021**

Administration engaged the following consultants to complete an assessment of the various components that support ice making and maintenance at the Kinsmen Arena:

1. Strong Refrigeration – to conduct an assessment of the refrigeration plant and related components, and provide recommendations for improvements to ensure continued use of the Kinsmen Arena, as an ice arena.

2. BST Consulting – to conduct an assessment of the arena slab floor, header pipe and trench to assess the overall condition of the slab, and to provide recommendations on repairs or replacement.
3. Strong Refrigeration – to determine the ventilation and dehumidification requirements needed to ensure both human safety and facility structure sustainability.

**November 15, 2021**

Administration reported the findings of the Kinsmen refrigeration, slab and dehumidification consultant reports to Council.

The value of recommended work required to ensure that the Kinsmen Arena can support ice activities for the next 15 years is estimated at \$2,775,460. Immediate work is also recommended for the Gallagher Centre refrigeration system by the refrigeration consultant. This amount has been estimated at \$1,084,260. Therefore, in order to ensure that both arenas are able to function as effectively and efficiently as possible as well as ensure reliable service to the community, a total estimated \$3,860,260 would be required. If the Gallagher Centre renewal project were to proceed, \$1.6 million has been allocated to a new refrigeration system that would support all three ice surfaces. This would result in the ongoing maintenance of one system rather than two.



<b>TITLE:</b> <b>Pump Bike Park Development Review</b>	<b>DATE OF MEETING: November 15, 2021</b> <b>REPORT DATE: November 8, 2021</b>
<b>CLEARANCES:</b>	<b>ATTACHMENTS:</b> <ol style="list-style-type: none"> <li>1. Pump Bike March 26, 2021 Council Presentation</li> <li>2. Park Amenity Location Map</li> <li>3. BMX Park Aerial View</li> <li>4. Martensville Pump Bike Park Concept</li> </ol>
Written by: Darcy McLeod – Director of Recreation & Community Services <div style="text-align: right;"><b>Darcy McLeod</b></div>	
Reviewed by: Jessica Matsalla - City Clerk <div style="text-align: right;"><b>Jessica Matsalla</b></div>	
Approved by: Lonnie Kaal - City Manager <div style="text-align: right;"><b>Lonnie Kaal</b></div>	

## **PURPOSE**

The purpose of this report is to provide information related to the review of park development to house a pump bike park and possibly the recently approved basketball court(s), as a result of Council’s direction related to a pump bike park proposal at their March 26, 2021 Council meeting. Specifically at the May 17, 2021 Council Meeting, Council directed administration to “Investigate possible locations and scope of a pump track, get community feedback and bring a report back to a future Council meeting.”

## **BACKGROUND**

Outdoor basketball courts have been approved in the capital budget, however locations have been difficult to determine given the space requirement and trying to balance man-made structures with provision of natural spaces in existing parks. A request for a pump bike park has also been submitted to Council who then asked Administration to review possible locations for consideration. Further, other outdoor activities have become popular in recent years, especially as a result of the Covid-19 pandemic, therefore increased focus has been placed on enhancing outdoor recreation opportunities. Although the City has an abundance of parks and green spaces, not all green spaces are appropriate for all uses. Therefore a review of existing park spaces was conducted to assist with determining possible locations for consideration of new amenities.

## **Benefits of Parks**

There are many specific benefits to parks, but here are a few of the more general benefits that a community sees from its parks.

1. Parks provide play spaces for children and families to be active and healthy.
2. Parks and green spaces reduce stress and keep people happy and healthy by providing space to relax, exercise, spend time with family and friends.
3. Parks provide an opportunity for people to connect with nature, which is proven to be a stress reducer.
4. Parks decrease the impact of extreme weather events by absorbing excessive moisture.
5. Parks act as an air filter for fine particles and some pollutants.

6. Parks attract business and visitors and boost property taxes.
7. Parks provide a social gathering place to build community and reduce the sense of loneliness.
8. Parks are a part of our community fabric and civic identity.

### **Park Considerations**

Best practice indicates that you have excellent access to a park space if you can walk or roll there within approximately 5 minutes; you have medium access if you can walk or roll to a park in 20 minutes; and you have low access if you need to drive to get there. Given the size of Yorkton, people can walk or roll almost anywhere, however highways and main arterial roads are barriers to access. This access is further impacted when a person's access to transportation is limited (no car or limited transit services).

It is not feasible to include every amenity in every park while ensuring that meaningful green space is also maintained for community access. Therefore when planning parks and amenities, it is important to consider resident access to them. Some people will be required, and most will be willing, to drive in order to access specific amenities in other parks as it is not feasible to provide an amenity in every neighbourhood park. When these special amenities are provided in one park, they are not only neighbourhood parks, but also become destination parks, as the amenities service people from outside the neighbourhood as well. Examples of this are the wheelchair accessible play structure in Weinmaster Park, the Skatepark as well as the three spray parks located in different neighbourhoods across the City.

Most neighborhood parks are within walking or rolling distance, so the impact to on-street vehicle parking is limited. However, when a neighbourhood park provides amenities that people from outside the neighborhood use, the park could now be considered a destination park. In these cases parking considerations are required to support the increase in vehicle traffic as people drive across the City to access the amenity. Appropriate planning is required when planning for these types of parks, which the pump bike park and basketball court(s) will become.

Although most outdoor rinks are multi-purpose, and include basketball nets, they are not conducive to playing a game of basketball or 3 on 3, as the nets are located outside the surface and arena boards. This makes retrieving the basketball awkward and frustrating as the time it takes to retrieve the ball takes momentum away from the game being played, negatively impacting the player experience. Fencing is being tried behind a few of these nets to improve play, however, specific basketball courts are planned in areas where an outdoor rink is not in place, to better provide this opportunity for the public. These courts will become a destination for basketball players across the city and one is currently planned for the southwest portion of the City and a second one possibly in the northeast of the City, to ensure medium access (walk or roll in 20 minutes) to these courts (as other courts are available in the neighbourhood parks in outdoor rinks).

### **Park Inventory**

Yorkton has a number of parks and green spaces that support access to the natural environment. Some of these are neighborhood parks with a number of amenities, small pocket parks or linear parks that only provide green space to enjoy the outdoors. Other spaces are special purpose including sport fields, Deer Park Golf Course, the Ravine Ecological Preserve, Logan Green and the City Cemetery.

A listing of parks and amenities is attached to this report for ease of reference. A brief assessment of park types and their main purpose compared to the practicality for hosting increased amenities balanced with resident access, is provided below.

### Pocket Parks, Linear Parks

These park spaces are typically too small or too narrow, to provide any amenities beyond a pathway and benches. They provide access to a natural/green area so that people in the area have somewhere to go outside and enjoy the outdoors in a green space. Although typically not large enough or intended to host permanent, outdoor recreation facilities, they are not exempt from hosting physical activities or events. Pocket Parks and similar green spaces, include or are located at: Erichsen Park, Shaw Park, Langrill Park, Centennial Drive, Elizabeth Avenue, Manitoba Avenue, Henderson and Collacott Drives, Franko Drive and Whitesand Drive. Examples of linear Parks include: Riverside Drive Park, Morrison Park.

### Neighbourhood Parks (Could also Include Destination Parks designation)

These parks are larger and provide for man-made amenities for public use and enjoyment. These spaces also include green space that allows for non-structured enjoyment of the outdoors. They could host play structures, outdoor rinks/multi-purpose courts, toboggan hills, tennis/pickle ball, basketball, open area for free play/unorganized games and sports. Examples of this type of park are Knights of Columbus Park, Silver Heights Park, Heritage Heights Park and Weinmaster Park. More recently amenities were added to Ukrainian Pioneer Park/Drake Field to create a neighborhood park that would serve the north central residents.

Some parks only house a play structure such as Jackson Park, Waterloo Park and North St. Park. Tupper Park recently received a play structure to address the lack of amenities in the south central part of the City. However other parks and recreation opportunities are still lacking in this area.

### Other Park or Open Spaces

There are other parks where the main purpose of the park is to enjoy nature, go for a walk or celebrate our culture. This doesn't mean that activities can't occur in them, however we would not prioritize man-made recreation structures in these parks. Some have pathways, house natural environments to enjoy nature or the terrain is not suitable. These park spaces include Logan Green Park, Patrick Park, Rodney Ridge and Shaw Park.

### **Park Options**

The delegation that requested Council consideration of a pump bike park provided 3 examples of spaces where a pump bike park could be located. All three locations are in the north east area of the City that has numerous park amenities in a relatively small area. The first location was Heritage Heights Park, which already has multiple man-made recreation infrastructure including a lighted outdoor rink and multi-purpose hard court, lighted tennis courts, a play structure as well as a baseball backstop. This park also houses a large green space that allows free play to occur or a quiet place to enjoy the outdoors. This area of the City is currently well-serviced from a park amenity perspective.

The second location was Weinmaster Park, which also has a number of man-made outdoor recreation infrastructure. This includes a lighted outdoor rink and multi-purpose hard court with basketball nets, a spray park and an accessible play structure. Further it houses a toboggan hill and large green space for free play and simple enjoyment of the outdoors. People travel from all over the city to access these amenities and parking is already an issue. Adding a basketball court or pump bike park would further intensify the current parking issue as more people will travel to use these amenities.

The third location was in an outdoor space adjacent to the Gloria Hayden Community Centre. This is a small green area with no other amenities other than a parking lot, which is close to the street that could also be used to support parking. Although this is a grassed area, it really isn't considered a park. Further, adding features to this space would further increase the outdoor recreation amenities in an area of the City that is already well-serviced.

One area not referenced in the existing park inventory is the space behind Columbia school where a small dirt BMX track is in place. This space has not seen any development and receives minimal maintenance, and therefore it is sometimes forgotten that it is zoned as Parks and Recreation land as per the Municipal Zoning Bylaw No. 14/2003. This space is currently under-utilized and offers an option to further develop outdoor recreation amenities in an area of the City that is currently under-served from a parks and recreation perspective. People in this area have minimal access to parks and recreation services (as defined above and indicated in the attached Park Amenity Location Map) and would be required to use alternate modes of transportation to access most parks and recreation amenities in other neighborhoods. Creating a park space in this area would increase resident's connection to their community and each other. Creating community connections in a neighborhood leads to a safer neighborhood no matter which neighborhood is being discussed. More people visiting a space lessens the likelihood of negative activity.

Further, the pump bike track and/or basketball courts will be amenities that will attract people from across the City, therefore parking should also be considered when planning for these amenities. The space behind Columbia School could accommodate parking to support these amenities as the back lanes are already used to service parking for the apartment buildings located there. A small parking lot could be provided as part of this development.

### **FINANCIAL IMPLICATIONS**

The City of Regina and the Town of Martensville both completed the construction of a pump bike park in 2021. There are BMX parks located in various municipalities, however these are the only asphalt pump bike parks that I'm aware of in Saskatchewan. The City of Regina's pump bike park was initiated by a local community association, that fundraised \$150,000 for their pump bike park. The approximate cost for Martensville's pump bike park was \$305,000. This included the artificial turf infield, however did not include the exterior landscaping. Lights were not included, however are planned for the future. The full area of the pump bike park is approximately 950 sq m with approximately 636 sq m of asphalt. The track is 489 feet in length. This size of this park would be between option B and C as proposed to City Council in the attached copy of the March 26, 2021 presentation.

Currently, the City of Yorkton has allocated \$100,000 toward the construction of basketball courts in their 2021 capital budget. The funding required for a pump bike park would be required before proceeding. If there is a desire to provide this amenity, the pump bike park could be referred to the 2022/23 capital budget discussions of Council.

### **COMMUNICATION PLAN/PUBLIC NOTICE**

Regardless of the recommended location for a basketball court(s) and/or pump bike park, community engagement would proceed in the immediate area selected to create awareness, inform the residents and ask for feedback to be incorporated into a Council decision to proceed.

Further, if a pump bike park is approved by Council, an online virtual open house could be used by the selected consultant/park builder, to obtain feedback on the design of a pump a bike park.

### **STRATEGIC PRIORITIES/OCP/COMMITTEE RECOMMENDATION(S)**

This review is in response to Council's direction to administration on March 26, 2021. This meets the strategic direction Recreation and Community Services to ensure services are available that provide opportunities for youth and families to provide positive healthy lifestyle choices. Further, the community identified priority area that indicates the Yorkton will be "A community with a comprehensive, integrated and sustainable infrastructure plan and programs that meet current and future needs...that include walking trails, bike paths, facilities."

The Recreation and Community Services Committee reviewed possible locations for a basketball court(s) and possibly a pump bike park at their October 5, 2021 Committee Mtg. The intent was to advise Administration & Council on the appropriate location for basketball courts and possibly a pump bike park, if they believe a pump bike park is something Council should consider providing in future budgets.

This review was presented and discussed at the October 5, 2021 Recreation and Community Services Committee. The following questions were asked specifically of the Committee:

1. Where would it be appropriate to place a permanent hard court basketball court(s). Two are being considered pending available funding.
2. Should the City invest in a pump bike park? If so, what is the appropriate location that should be considered?
3. Should the basketball courts and the pump bike park be located in one development, or should they be located in different areas? If different areas, what area is the most appropriate?

After considering this review and the amenity location map attached to it, the Committee indicated that there appears to be a service gap in the south central portion of the City with a higher concentration of amenities in the east and northeast portion of the City. Developing a park in this area of the City would provide another great destination park in a different neighborhood. It would spread out the amenities and ensure a more equitable access to parks and recreation opportunities across the City.

#### **OPTIONS**

1. That a further park development of Heritage Heights Park be considered.
2. That a development be considered on the greenspace adjacent to the Gloria Hayden entrance on Morrison Drive.
3. That further development of Weinmaster Park be considered.
4. That development of new park space at the BMX Park behind Columbia School be considered.

#### **RECOMMENDATION**

**That a park be developed in the BMX Park located behind Columbia School that would see two basketball courts along with a pump bike park, replacing the existing BMX track. Further, that a parking area be established for the park and lights be considered for all amenities as funding becomes available. Further, that the pump bike park and parking area be referred to budget discussions.**



# YORKTON PUMP TRACK





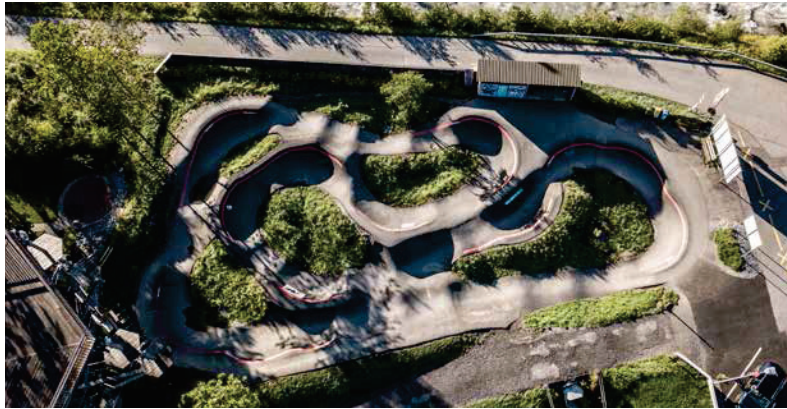


A pump track is a 1-3 metre wide track that can be used for bicycle, skateboard, in-line skates and scooter riders to practice skills on a series of features, such as berms and rollers placed in quick succession. Essentially they are scaled down BMX tracks which do not require pedaling. 'Pump' refers to the action made by riders pushing down with their arms and legs to manoeuvre the bike or board over features to maintain momentum without pedaling or pushing-off the ground. Typically, tracks can be ridden continuously, and different combinations of features can be linked to provide a varied challenge. Bike handling skills can be transferred to other mountain bike tracks. Well designed pump tracks cater for all abilities, with all features being roll-able for beginners, and allowing for progression to pumping, and even jumping for more advanced riders. Riding a pump track is easy and children are typically comfortable using them within 10-20 minutes.



A well designed pump track provides enough challenges to stay attractive for years, because the rollers and berms can be combined and transitioned in different directions, creating opportunity for skilled riders to do jumps and maneuvers. Pump tracks can be made from natural soil, hardened surfaces, wood, fibreglass, concrete or asphalt. Historically pump tracks were constructed from natural soil blends and required significant ongoing maintenance. More recently, world's best practice is tending toward lower maintenance surfacing techniques and materials, such as asphalt, which are inclusive for a larger user base of wheeled-sports including skateboarding, scooters, in-line skates and non-off road bikes.









Young one on a balance bike



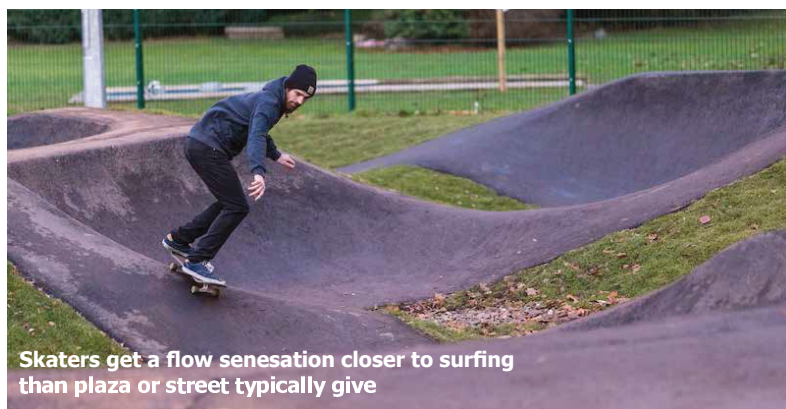
Inline skaters



Mum and son on BMX bikes



Scooters



Skaters get a flow sensation closer to surfing than plaza or street typically give



Mountain bikes

Pump Tracks appeal to all wheeled sports and when design well provide features for the beginner through to the advanced. They are a lot of fun and promote fitness through having a good time.

Wheel sport users would include balance bikes, scooters, bmx bikes, mountain bikes, skateboarders and inline skaters.

The approach to a successful pump track design have all of the users and abilities in mind:

For the beginners section this would include having the beginner loop be small in loop distance, small vertical sized features, be adjacent a track platform to allow supervisors to be close by, make entry and exit from the beginner loop be at a highly visible spot and allow the beginner area to be adjacent intermediate and advanced feature for the 'watch and learn' factor.

The intermediate will include a series of larger features on a longer loop than that of the beginner loop, however it still needs to accommodate progression. This loop can be ridden without the rubber leaving asphalt, but as soon as the user is ready then the features will accommodate that bit more speed and some air time

The advanced features are are larger in scale and often require a higher level of speed to correctly ride them. Features become more complex and may offer differing approaches or landings. Progression is still paramount.

Typically a pump track will have transfer lines which may only be evident to an experienced user. These often make up the most advanced features for very competent users.







Roller



Timber and steel features



Tabletop



Pump bowl / flower berm



Berm and berm roller



Berm to berm

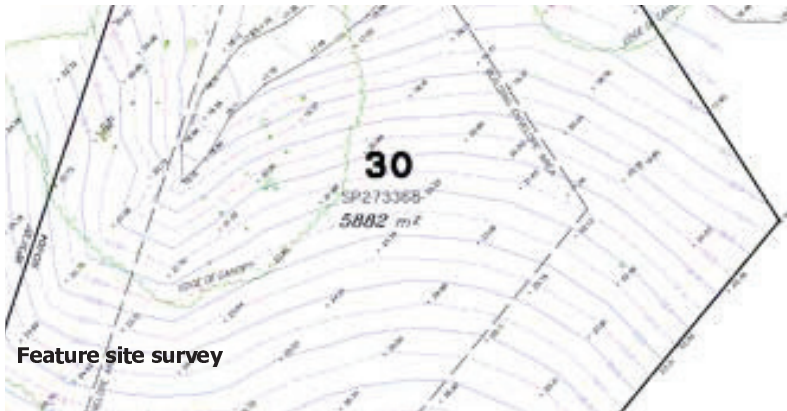




Geotechnical analysis



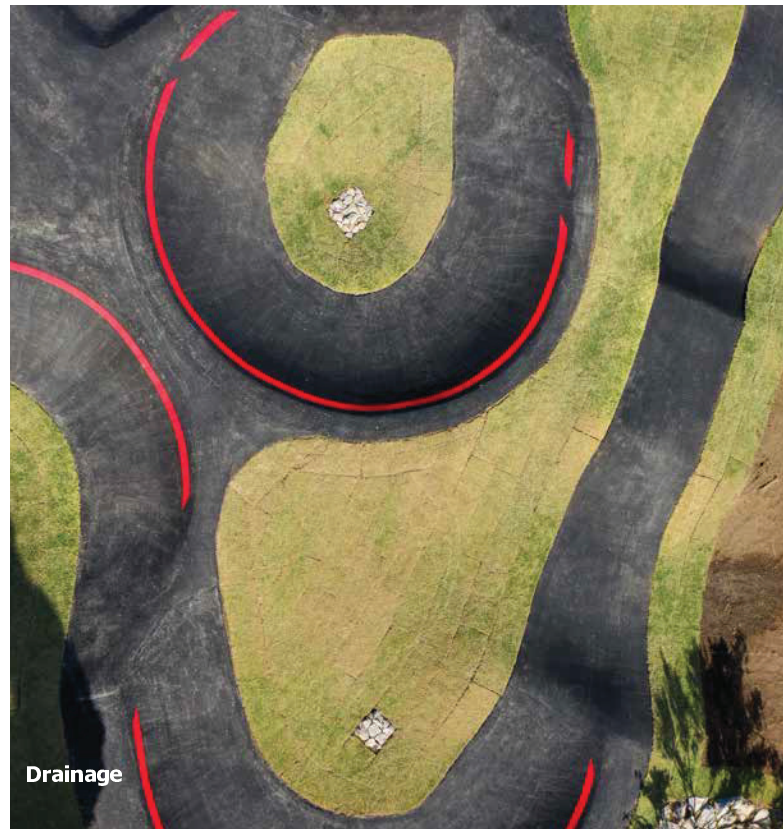
Suitably finished landscape surfaces



Feature site survey



Consult with all key stakeholders



Drainage

There is a series of items to get correct in the design and construction of a pump track to ensure a long lasting and low maintenance asset.

Geotechnical study is required to allow custom and adequate civil analysis is achieved which determines compaction rates of all sub-materials of the track

Yorkton is flat, however a feature survey of the site is required so water gets pushed in the correct direction and connect to a system if required to have no detrimental effects

A drainage system with civil engineer certification to ensure water does not sit around the site or create erosion issues to the track or surrounding landscape

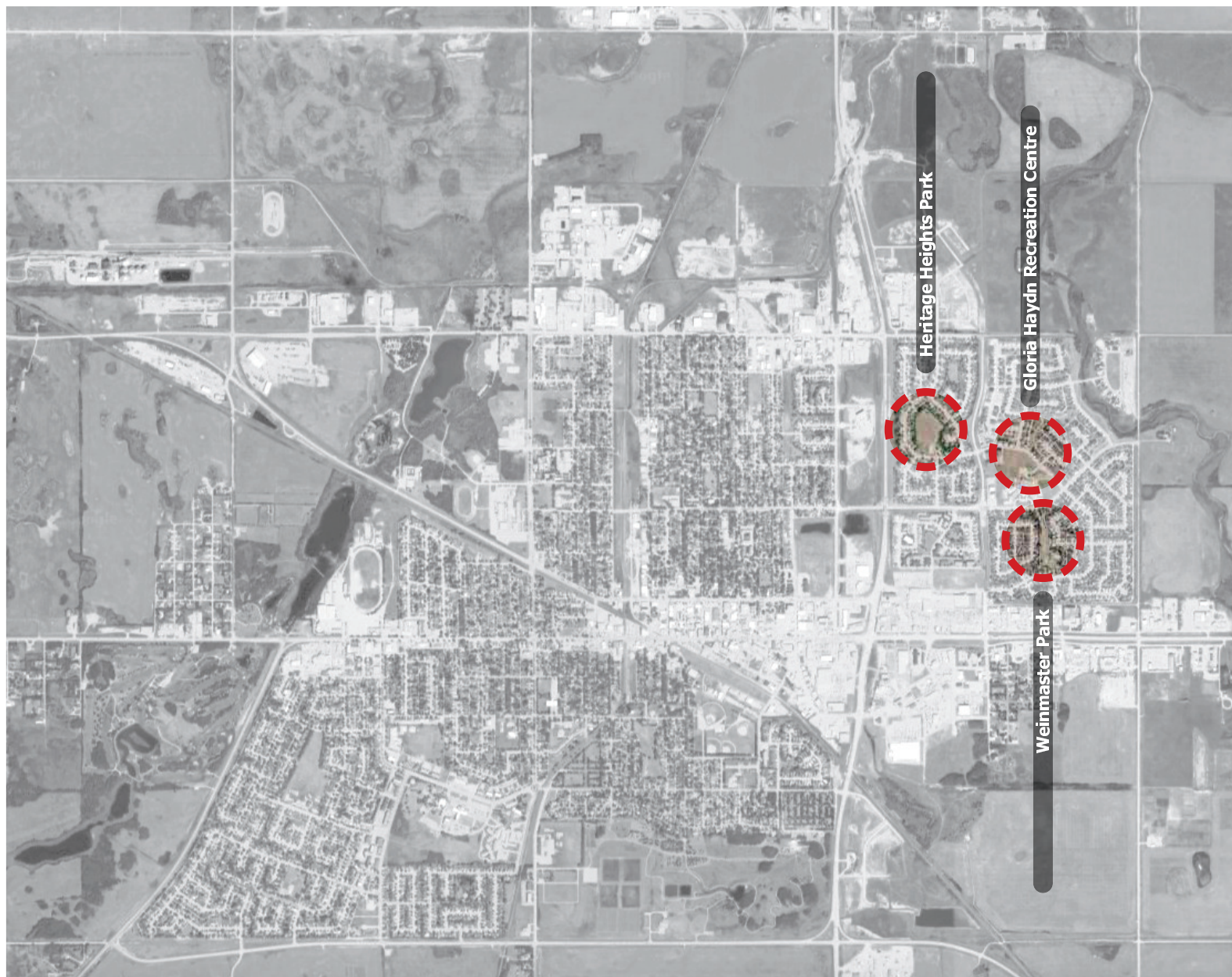
Fit for purpose adjacent landscape finish which will be required to provide erosion control of the shapes created by the track shapes and not generate any wash over the track which a finish like wood chip mulch may create. And of course to look good

The asset owner is involved with the design process to ensure maintenance requirements are met for ongoing ease of maintenance. This may include standard grades of grass for machine mowing etc

Maintenance of an asphalt pump track is a minimal affair. The track itself will require inspections for failures, but no require maintenance besides the occasional sweep or blow. Asphalt pump tracks are fairly new so the life span is a little unknown however there are plenty of examples at 6 years old with no signs of severe degradation. Drainage pits will require regular inspection/clearing and the grass will need a mow. Much easier than most outdoor public facilities







Three sites have been selected for the purposes of demonstrating pump track possibilities within the City of Yorkton only.

Heritage Heights Park has an enormous amount of grass area and would easily accommodate a pump track of a variety of size and shape. This site will accommodate future expansions of the pump track or additional bike park facilities like jump lines, bike playgrounds, skill courses, learn to ride courses etc.

Gloria Haydn Recreation Centre has existing carparking and a large amount of unused grass in front of it that would easily accommodate a pump track. Services will be easily connected to with both the street and Gloria Haydn on adjacent boundaries. Facilities and shelter are available at the Gloria Haydn.

Weinmaster Park is a hive of activity that is well connected to adjacent neighbourhoods with a high ratio of young families. The site identified is to the north of the toboggan hill in a long slim section of the park. A smaller track could be accommodated but will be a very popular location given the visitation the park already gets





## LEGEND

- ① EXISTING PARK FACILITIES
- ② EXISTING PATH
- ③ PROPOSED PATH TO MATCH EXISTING
- ④ EXTENT OF EARTH FORM BATTERS
- ⑤ PRIMARY PLATFORM AND ACCESS PATH
- ⑥ SECONDARY PLATFORM AND ACCESS PATH
- ⑦ PUMP BOWL
- ⑧ TYPICAL ROLLER
- ⑨ DOUBLE ROLLER
- ⑩ OVER ROLLER
- ⑪ ROLL-ABLE DOUBLE JUMP
- ⑫ BERM TO BERM
- ⑬ HIPPED ROLLER
- ⑭ HIPPED JUMP

- GRASS TO ALL DISTURBED AREAS
- ASPHALT PUMP TRACK (VARYING SHAPES)
- ASPHALT PUMP TRACK PLATFORMS (FLAT)

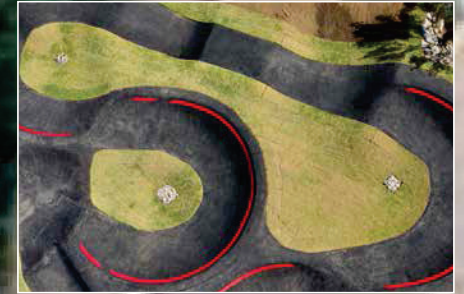
- BEGINNER FEATURES
- INTERMEDIATE FEATURES
- ADVANCED TRANSFER FEATURES
- JUMP LINE
- TRANSFER OPTIONS

## DESIGN NOTES

- THE TRACK IS SET ON NGS TO BEST ACCOMMODATE DRAINAGE
- BATTERS SHOWN AT 1:5 GRADE SUITABLE FOR MACHINE MOWING OF GRASS
- TWO ENTRY POINTS
- PRIMARY PLATFORM COULD COMFORTABLY ACCOMMODATE A SHELTER AND FURNITURE IF REQUIRED

0m 20m

SCALE 1:400 @A3



YORKTON PUMP TRACK



CONCEPT LAYOUT A  
LOCATION: HERITAGE HEIGHTS PARK  
SCALE: 1,250<sub>SSM</sub>



## LEGEND

- ① GLORIA HAYDEN CARPARK
- ② EXTENT OF EARTH FORM BATTERS
- ③ PRIMARY PLATFORM AND ACCESS PATH
- ④ TYPICAL ROLLER
- ⑤ DOUBLE ROLLER
- ⑥ HIPPED ROLLER
- ⑦ ROLL-ABLE TABLETOP
- ⑧ STEP-UP JUMP
- ⑨ FALLING BERM
- ⑩ BERM TO BERM

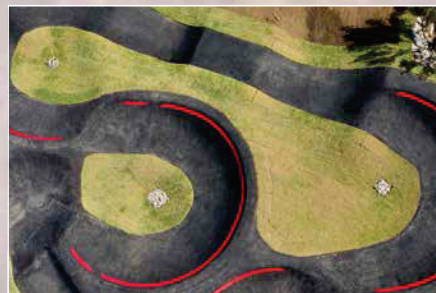
- GRASS TO ALL DISTURBED AREAS
- ASPHALT PUMP TRACK (VARYING SHAPES)
- ASPHALT PUMP TRACK PLATFORMS (FLAT)

- BEGINNER FEATURES
- INTERMEDIATE FEATURES
- ADVANCED TRANSFER FEATURES
- TRANSFER OPTIONS

## DESIGN NOTES

- THE TRACK IS SET ON NGS TO BEST ACCOMMODATE DRAINAGE
- BATTERS SHOWN AT 1:5 GRADE SUITABLE FOR MACHINE MOWING OF GRASS
- PRIMARY PLATFORM COULD COMFORTABLY ACCOMMODATE A SHELTER AND FURNITURE IF REQUIRED

0m 20m  
SCALE 1:400 @A3



YORKTON PUMP TRACK



CONCEPT LAYOUT B  
LOCATION: GLORIA HAYDEN REC CENTRE  
SCALE: 520sqm



## LEGEND

- ① TOP OF WEINMASTER PARK HILL
- ② BOTTOM OF WEINMASTER PARK HILL
- ③ EXISTING PATH
- ④ EXTENSION OF PATH TO MATCH EXISTING
- ⑤ EXTENT OF EARTH FORM BATTERS
- ⑥ PRIMARY PLATFORM AND ACCESS PATH
- ⑦ SECONDARY PLATFORM AND OPTIONAL ENTRY PATH
- ⑧ TYPICAL ROLLER
- ⑨ DOUBLE ROLLER
- ⑩ ROLL-ABLE TABLETOP
- ⑪ S - BERMS
- ⑫ FALLING BERM
- ⑬ CENTRAL DYNAMIC COMPLEX

- GRASS TO ALL DISTURBED AREAS
- ASPHALT PUMP TRACK (VARYING SHAPES)
- ASPHALT PUMP TRACK PLATFORMS (FLAT)

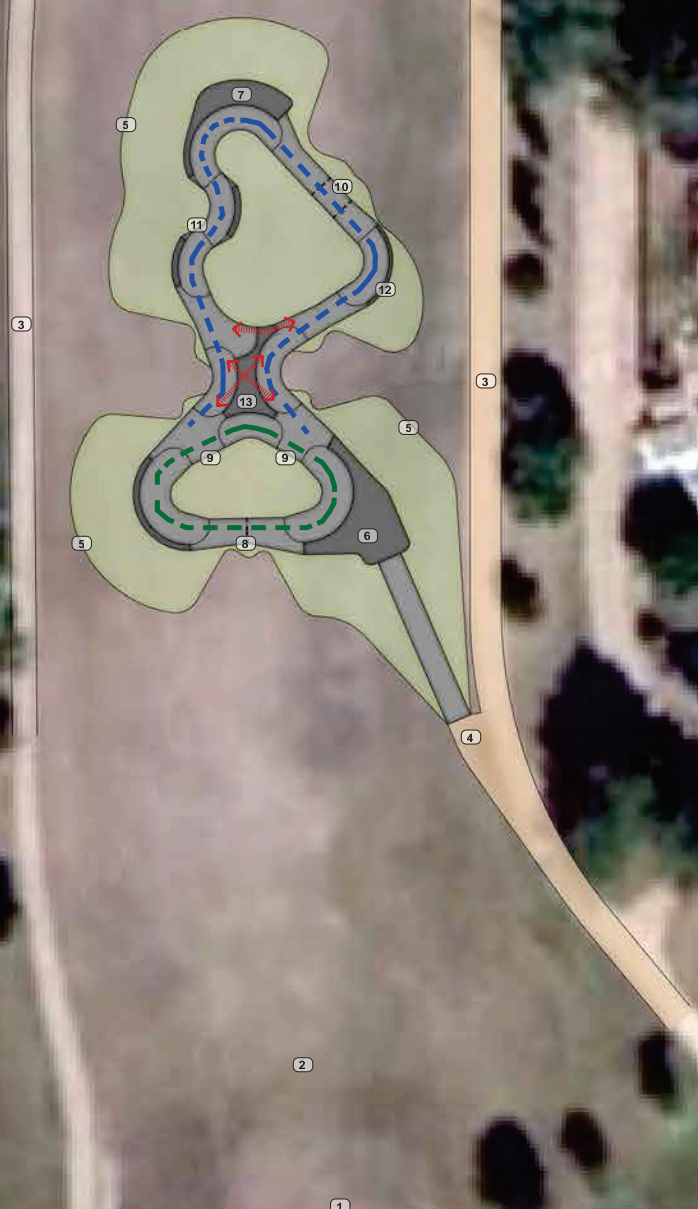
- BEGINNER FEATURES
- INTERMEDIATE FEATURES
- TRANSFER OPTIONS

## DESIGN NOTES

- THE TRACK IS SET ON NGS TO BEST ACCOMMODATE DRAINAGE
- BATTERS SHOWN AT 1:5 GRADE SUITABLE FOR MACHINE MOWING OF GRASS
- PRIMARY PLATFORM COULD COMFORTABLY ACCOMMODATE A SHELTER AND FURNITURE IF REQUIRED
- AN ADDITIONAL ACCES PATH AT THE NORTHERN END COULD BE ACCOMMODATED IF DESIREABLE
- TRANSFER OPTIONS ARE TYPICALLY ADVANCED FEATURES IN NATURE

0m 20m

SCALE 1:400 @A3



YORKTON PUMP TRACK



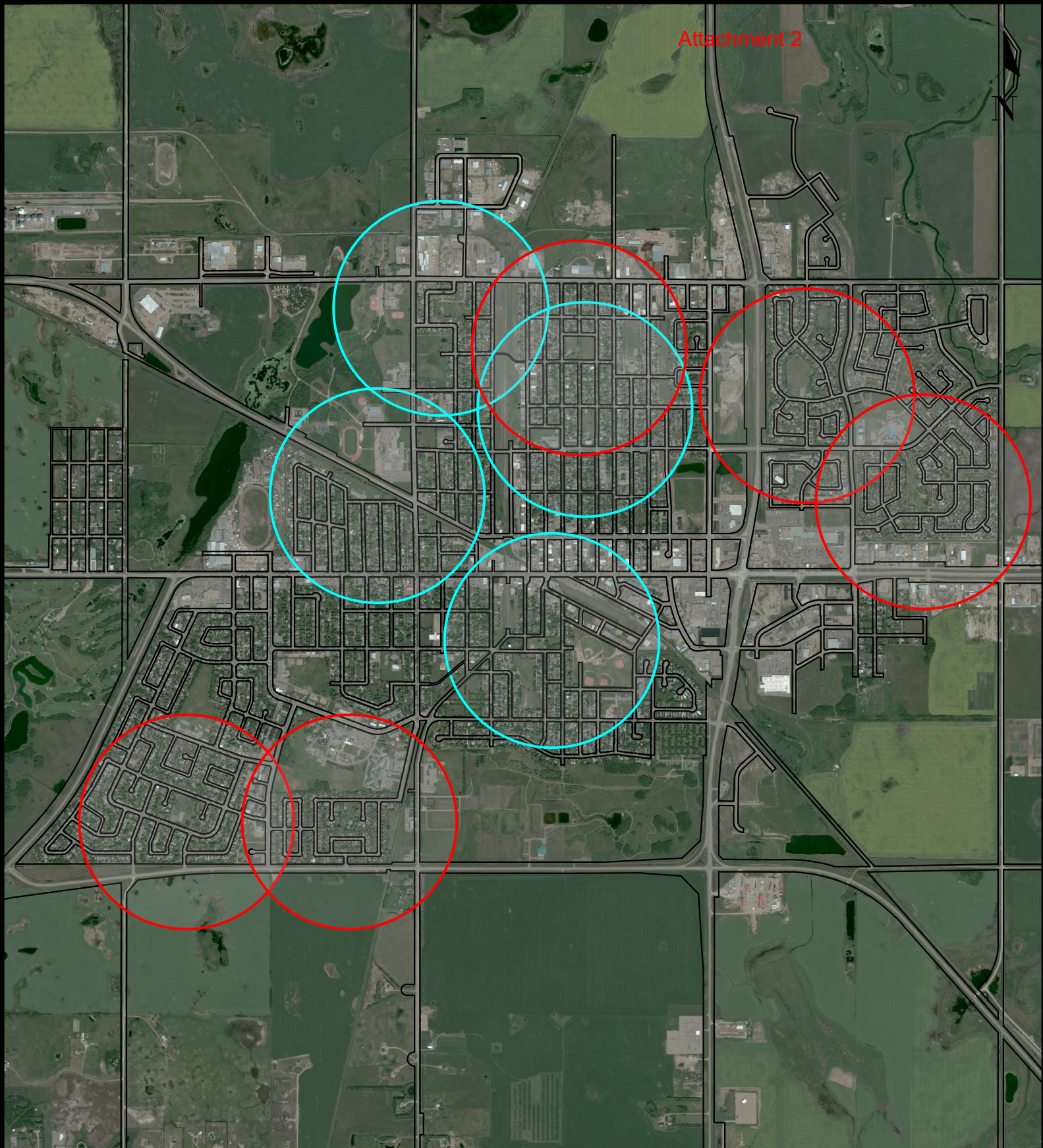
CONCEPT LAYOUT C  
LOCATION: WEINMASTER PARK  
SCALE: 350sqm



THANK YOU







SHEET	OF
DRAWING NUMBER	2021-003-RCS
SCALE	NTS
DRAWN	BC
DESIGNED	
CHECKED	
DATE - (YYYY-MM-DD)	2021-09-30

### Park Amenity Location Map

### 600m Radius

NOTES:

Play Structure Only
  Multiple Amenities

City of



**Yorkton**

FILE NAME  
2021-003-rs-playground coverage.dwg






SHEET	OF
DRAWING NUMBER	
SCALE	NTS
DRAWN	BC
DESIGNED	
CHECKED	
DATE - (YYYY-MM-DD)	2021-11-05

BMX Park

NOTES:

City of

  
Yorkton

FILE NAME  
proposed pump track & basketball locations.dwg

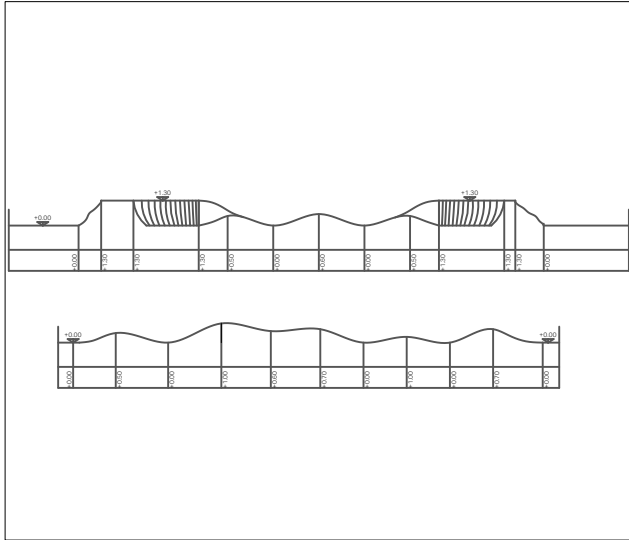


Legend:

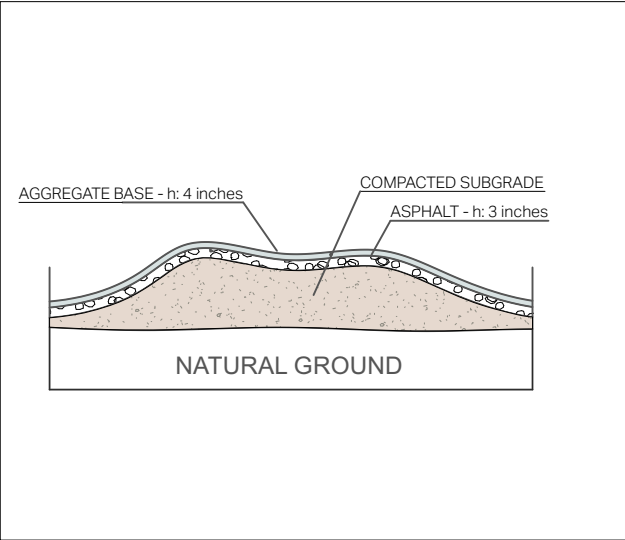
- Total area
- Slopes
- Pump Track
- Platforms
- Connections
- Safety line
- Drainage hole
- Access path

Specification:

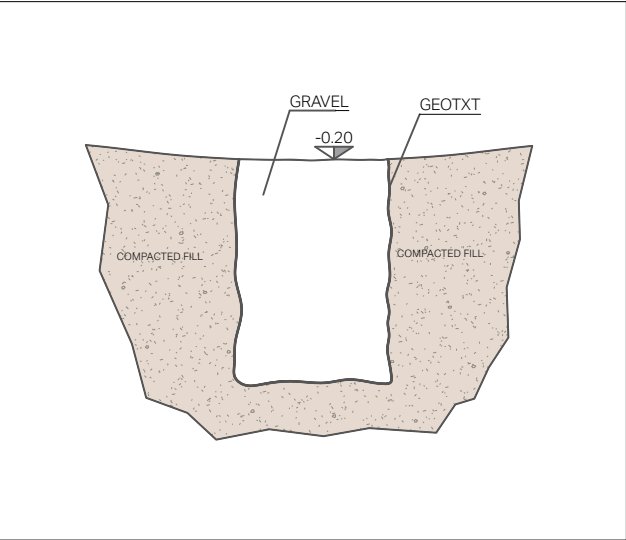
Total Area:	0 m2
Asphalt Surface:	636 m2
Green Area:	-636 m2
Pump Track Length:	149 m
Kids Track Length:	0 m
Jump Track Length:	0 m
Safety Line Length (Total):	115 m
Number of Drainage Holes:	4
Number of Sewers:	0
Length of Drainage Pipes:	0 m



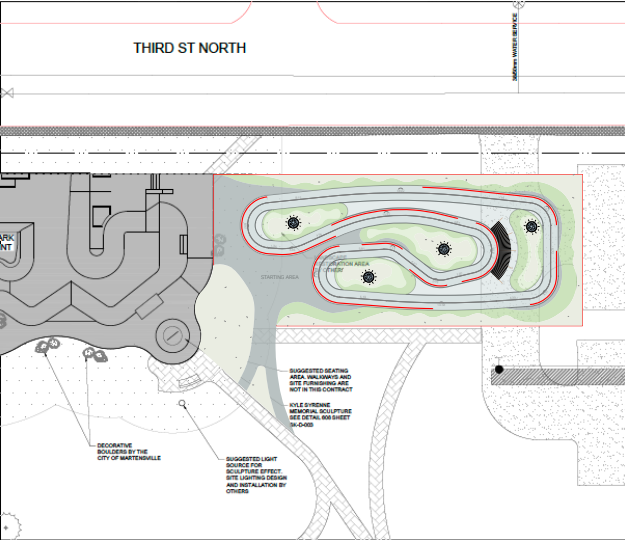
TYP. X-SECTION DETAILS



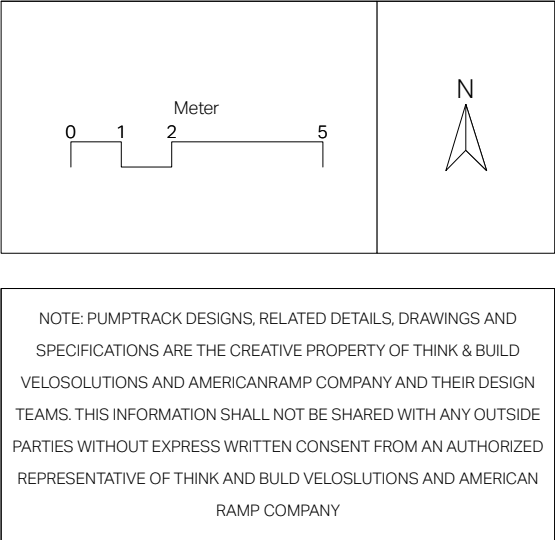
TYP. DETAIL - MATERIALS



TYP. DETAIL - FRENCH DRAIN



SITUATIONPLAN



NOTE: PUMPTACK DESIGNS, RELATED DETAILS, DRAWINGS AND SPECIFICATIONS ARE THE CREATIVE PROPERTY OF THINK & BUILD VELOSOLUTIONS AND AMERICANRAMP COMPANY AND THEIR DESIGN TEAMS. THIS INFORMATION SHALL NOT BE SHARED WITH ANY OUTSIDE PARTIES WITHOUT EXPRESS WRITTEN CONSENT FROM AN AUTHORIZED REPRESENTATIVE OF THINK AND BULD VELOSOLUTIONS AND AMERICAN RAMP COMPANY

Kinsmen Park Pumptrack

SITE ADDRESS	Project ID#	DATE	Client:	City of Martensville
			Tech. Drawer:	Amedeo Gadotti
	ID#119228	04-06-2021	Track Design:	Claudio Caluori