

CITY OF YORKTON
REGULAR COUNCIL MEETING AGENDA
Monday, February 13, 2023 - 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 – January 30, 2023
5. **UNFINISHED BUSINESS**
6. **REPORTS OF COUNCIL COMMITTEES AND MATTERS REFERRED**
 - Protective Services Committee Meeting Minutes – September 13, 2022
 - Environmental Committee Meeting Minutes – December 20, 2022
7. **HEARING OF PETITIONS, PUBLIC NOTICES AND PRESENTATIONS**
8. **BUSINESS ARISING OUT OF PETITIONS, PUBLIC NOTICES AND PRESENTATIONS**
9. **CORRESPONDENCE**
10. **BYLAWS**
11. **ADMINISTRATIVE REPORTS**
 - Land Use Planner
 - Discretionary Use DU01-2023 Auto Wrecking/Junk Yard at 85 York Road West (MI-1 Light Industrial) – Council Decision
 - Manager of Capital Projects
 - Westland Arena Ice Plant & Machine Room Tender Award
 - Director of Finance
 - Adoption of 2023 Operating & 2023/2024 Capital Budgets
12. **GIVING NOTICE OF MOTION**
13. **IN CAMERA SESSION**
 - 2 Other Items
14. **ADJOURNMENT**

Protective Services Committee

MINUTES

13, September 2022

7:00 AM

In-Person

Attendees	Lauretta Ritchie-McInnes, Michelle Goulden, Staff Sgt. Burton Jones, Councillor Dustin Brears, Dale Hintz, Mayor Mitch Hipsley, Larry Pearen, Fire Chief Trevor Morrissey, Nicole Baptist, Andrew Sedley, CN Constable Hank Neumiller
Regrets	Donna Evans, Greg Klingspon, Terri-Ann Lepowick, Scott Robertson
Absent	EMS Kelly Prime
Recording	Jen Prysliak
Call to order	7:00 a.m.
Adjourn	8:13 a.m.

Agenda Topics

Approval of Agenda

Motion 22-19	Sedley That the agenda be approved as presented.
Motion 22-20	Sedley To amend the agenda by inserting new business. Carried. To approve the agenda as amended. Carried.

Minutes of the April 12, 2022 Meeting

Discussion	Minutes from the April 12, 2022 meeting of the Committee were circulated.
Motion 22-21	Mayor Hipsley That the minutes of April 12, 2022 be approved.
Motion 22-22	Mayor Hipsley That the minutes of April 12, 2022 be amended by removing department updates after quorum was lost. Carried. That the minutes of April 12, 2022 be approved as amended. Carried.

Minutes of the June 14, 2022 Meeting

Discussion	Minutes from the June 14, 2022 meeting of the Committee were circulated.
Motion 22-23	Councillor Brears The minutes of June 14, 2022 Committee meeting be approved as circulated. Carried.

Unfinished Business

Play and School Zone Review Update	• Verbal report from Baptist. Traffic Bylaw was approved by Council and school zone speed times are set at 8:00 a.m. – 10:00 p.m. and 30 km/h in elementary/play zones and 40 km/h in high school zones. • Approx. 200 new signs going up in June. • School Zone Campaign, extra enforcement in school zones and 30km/h to take effect in September. • Signs are up as of September, some need to be adjusted as they are too short. • RCMP presence in the school zones every day. • City sent out reminders to schools to add to their newsletters regarding speed limits.
Harm Reduction	• Meeting with SK Health June 14th, regarding more bins needed as there are higher needles in residences calls coming in. • At the SUMA convention, harm reduction and mental health was the top topic. • Currently working on the Harm Reduction project. • Looking for ways to normalize it with campaigns, meeting with senior centers, blood pressure clinics etc. • New looks for the bins, in the works.
Supporting Voyent Alert Marketing Plan	• The Voyent Alert App is on the City of Yorkton website for public. • Positive feedback on social media. • Hold quarterly meetings on Voyent for Administrators to discuss alerts and updates. • Looking into monthly Voyent Alert App setup programs at the library. • Fire Prevention Week (October 9-15) – plan to go to Senior Citizen Centers to setup the App for them. • Public Works notifications, to be just sent out to certain areas. • A presentation will be to advise the New Comers to Canada on setting up Voyent for them.

	• Discussion was had to incorporate Voyent ads into construction sign messaging for community to sign up and approach the hospital staff and school divisions.
Regionalized Fire	• Working with departments/province to look for ways for the province to help. • Meeting with R.M.'s on training to enhance resources, expanding out to Canora. • Everything is moving along very well, good progress. • Volunteer fire departments having hard time accessing the training to have certified Firefighters. • Yorkton Fire Dept. plans to create a training plan program to qualify and certify anyone who would like to make a future in Firefighting.
CAA School Safety Patrollers Presentation	• The presentation was presented to Council by students. • Discussion continues on having the Emergency Services visit each school, to support and acknowledge their contribution to the community. • New School Zone Campaign – Incorporate the Safety Patrollers. • Discussion on having an Induction Ceremony to reward every child involved with specialized merch for recognition. • Laretta Ritchie-McInnes and Nicole Baptist to take charge and work out details within the next 3 weeks.
Motion 22-24	Councillor Brears To proceed with the details for an Induction Ceremony for recognition of the Safety Patrollers and to set an annual event week to recognize their efforts. Carried.

New Business

Drainage Steward Program	• Baptist reports the idea of an “adopt a storm drain program” for the City of Yorkton. • Discussion on the safety guidelines and tips to clean storm drains. Promote proper PPE to the public. • Promote to the community, helping clean the environment. • Need to explore details on making an online program that public can sign onto and view welcome packages and safety guidelines. • Design a campaign around it and have Mayor Hipsley promote on the radio ads.
Motion 22-25	Sedley To move forward and proceed to explore details on how this idea can be implemented to the City of Yorkton. Carried.

Department Updates

Fire Department	• No update provided.
RCMP	• Down 11 members in the summer months, brought in more RCMP members from around the province.
Bylaw	• Winding down from the busy summer months. • Downtown parking enforcement will be ramping up.

	• Neighbor disputes are up. 6 active open files on disputes currently, which are taking up a lot of resources.
CN Police	• CN Rail Safety Week – September 19-25, 2022. • Educate the public on safety around grain elevators. • Speaking with drivers and giving a safety reminder, with harvest in full swing and commercial grain hauling semi's being a high hazard for railway crossing incidents.
EMS	• No update was provided.
Parkland Search & Rescue	• Hug-A-Tree coloring book rolled out in SK. • Yorkton Fair Child Find Booth was a success, 144 person volunteer hours. • Members assisted with traffic control at Flour Mill Event. • PSAR truck is ready. • Busy planning the 2022 MJSE Event Sept 16, 17 & 18th at Good Spirit Lake. Big event, many registered and tons of volunteers.
Motion 22-26	Mayor Hipsley To receive and file department updates. Carried.

Next Meeting

November 15, 2022 @ 7 a.m.

Adjournment

Motion 22-27	Pearen That the Protective Services Committee meeting be adjourned at 8:13 a.m. Carried.
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X **Lauretta Ritchie-McInnes**

Lauretta Ritchie-McInnes
Chairperson

X **Jen Prysliak**

Jen Prysliak
Secretary

Environmental Committee

MINUTES

**TUE, DECEMBER 20,
2022 7:30 A.M.**

**STAFF ROOM, QUEEN ST
WATER TREATMENT PLANT**

Members Present	Chair Shannon Erickson, Matt Poier, Dustin Brears, Jason Signarowski, Malena Vroom, Darcy Zaharia
Absent	Michael Buchholzer, Stefan Bymak , Sandra Bilan
City Staff	Aron Hershmiller, Lyndon Hicks
Presentation	
Recording	Val Fatteicher
Call to order	7:35 a.m.
Adjourn	8:51 a.m.
1. Declaration of Conflict of Interest	
Declaration	No declaration of conflict of interest was made.
2. Approval of Agenda	
Discussion	Review of agenda items for discussion.
Motion 35-22	Darcy Zaharia That the agenda be approved as presented.
Motion 36-22	Darcy Zaharia To amend the agenda by inserting new discussion Item #7 Curbside Organics Pilot Program, with Contaminated Recycling (medical waste) Update moved to discussion Item #8. CARRIED.
3. Minutes of the November 22, 2022 Meeting	
Discussion	Minutes from the November 22, 2022 Meeting of the Committee were circulated.
Motion 37-22	Malena Vroom That the minutes of November 22, 2022 be approved. CARRIED.
4. Strategic Plan Review	
Discussion	- Review of Strategic Plan action items - Communication: - Updates have been made to Communication items, with Shape Your City platform, City webpage, Voyant Alert app, along with other social media information. We still continue to utilize the traditional media platforms such as radio, newspaper and Facebook. Growth Media will be utilized for

social media content until the end of that contract. In house promotional work will continue with both City and Sask Abilities collaborating resources.

- Recycle Coach app is another useful platform that we could be updating with other relevant department operations. Keeping regular content updated keeps app fresh and residents engaged.
- Resident surveys will be done through new platform.
- Stickers have been produced for residential drop off bins but will be placed in the springtime.
- Optimizing City Resources:
 - Solid Waste Management Bylaw is almost complete and will be finalized this winter.
 - Green Policy for internal City Departments has been created and have met with all but one department. Will be summarizing into final report and schedule annual update meetings. Expect to finalize the report early in 2023. Report will lay out initiatives and measure successes annually.
- Strategic Partnerships:
 - Ongoing communication and joint projects with Sask Abilities. Currently working on the new residential HHW collection program.
 - Circular Cities workshop on Jan 17th will be the focused Yorkton workshop. City Department representatives will be meeting with nationwide contacts. These sessions provide valuable networking opportunities.
 - Light the Tower project has involved research from other centers that have this form of lighting in place. Another subcommittee meeting is scheduled for January 11th. Coordinating any project plans with previously scheduled tower maintenance in 2023. Idea initiated by local resident representatives.
 - EV Charging Stations proposal coordinated with Economic Development Committee, contact with both the Chamber and YBID. Stations are in place at both Peavey Mart and Royal Ford but they are not the fast chargers which cost considerably more. Federal funding information was shared with the Chamber and YBID.
- Program Efficiency:
 - Expired produce from one local grocery chain has been incoming to the landfill and blended into compost material.
- Research:
 - Completion of waste audits at the landfill.
 - Setup the weigh scale at Recyclability Enterprises for easy access to material volumes.
 - Performed a recycling participation audit during summer of 2022.
 - PHEP hoping to expand on this audit spring of 2023.
 - Green Initiative Strategy could include incorporating and updating the current Strategic Plan.

	○ U of R wastewater study to monitor covid levels in Yorkton continue with weekly wastewater sampling.
5. Household Hazardous Waste Collection at Recyclability Enterprises - Update	
Discussion	• Household Hazardous Waste Collection event held at the end of October. 105 vehicles with 2925 kg of products collected. Comparably last year there were 115 vehicles with 3897 kg of products collected. 2020 event was cancelled due to covid but 2019 had 85 vehicles with 2945 kg of products collected. • New permanent site to be setup at Recyclability Enterprises. Final details are expected to be completed this winter with startup to be scheduled in coordination with Earth Day 2023 (April 22nd).
6. Organics Program at Recyclability Enterprises	
Discussion	• 2022 volumes collected at the Recyclability Enterprises site were not available for this meeting. • Landfill organic volumes for 2019: 57.28 tonnes of grass and leaves, with 160.76 tonnes in 2022. These volumes include products that were collected and brought to the landfill from Recyclability Enterprises. • Waste audits still shows the presence of organics in waste but have made progress.
7. Curbside Organics Program	
Discussion	• Curbside organics program has been presented to Council and was approved, with pilot program initiation planned for this coming spring. Summer students will be involved in product evaluation from the organics carts, with follow up communication to residents. Compost material produced will be used in the capping of the old landfill. Pilot program will provide the data on incoming materials to evaluate volumes of contamination. Part of this planned program has included the evaluation of other cities with these programs in place.
8. Contaminated Recycling (medical waste) Update	
Discussion	• Recyclability Enterprises have had significant volumes of needles incorporated with incoming recycling materials from primarily outside communities. • Letter correspondence on behalf of this committee has been directed to Mayor Hipsley respecting this serious safety concern. With participation on other relevant focus groups, the Mayor can channel this information. Sask Public Health has also been alerted.
9. Next Meeting Date	
Next meeting date pending results of poll.	
10. Next Meeting Agenda Items	
○ To be determined	

11. Adjournment 8:51 am

Motion 38-22

Jason Signarowski

That the Environmental Committee Meeting be adjourned. CARRIED.

These minutes have been approved by members of the Environmental Committee on January 24, 2023.

Shannon Erickson

Chair

Val Fatteicher

Recording Secretary

TITLE: Discretionary Use - DU01-2023 – Auto Wrecking/Junk Yard at 85 York Road West (MI-1 Light Industrial) Council Report #3 – Council Decision	DATE OF MEETING: February 13, 2023 REPORT DATE: February 7, 2023
CLEARANCES: Michael Eger Michael Eger - Director of Planning, Building & Development	ATTACHMENTS: 1. Council Report from January 30, 2023
Written by: Carleen Koroluk - Planner Carleen Koroluk	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Lonnie Kaal - City Manager Lonnie Kaal	

Summary of History/Discussion:

This report is in response to a Discretionary Use Development Permit application for an Auto Wrecking/Junk Yard (Salvage Yard) use at 85 York Road West. The application was first presented to Council at the January 9, 2023 Council Meeting and the required Public Hearing was held at the January 30, 2023 Council Meeting.

Being that the Planning and Infrastructure Commission was unable to review the application prior to the January 30, 2023 meeting, Council deferred the application to the February 13, 2023 Council Meeting pending the Commission's review and recommendation.

Administrative Review:

The subject property is zoned MI-1 Light Industrial and is located on York Road West, along one of the main entrances to the City and Auto Wrecking/Junk Yard uses are listed as Discretionary Uses in this zone. Under *The Planning and Development Act, 2007*, discretionary use applications require Council authorization for Administration to issue a Development Permit.

Public Notice:

Council authorized Administration to proceed with the Public Notice process at the January 9, 2023 meeting. As such, the proposed discretionary use was advertised and circulated in accordance with the public notification requirements of the City of Yorkton, including advertisement in the local newspaper, at City Hall and on the City website. In addition, pursuant to *The Planning and Development Act, 2007*, a direct mail-out was sent to twenty-nine (29) owners

of property within 75 metres (250ft) of the subject property. Planning Administration did not receive any inquiries regarding the application.

The required Public Hearing was held at the January 30, 2023 Council Meeting where one written submission opposing the development was presented. The applicant was also present at the Public Hearing and made a presentation to Council.

Planning & Infrastructure Commission

The Planning and Infrastructure Commission (PIC) plays an important part in civic government by providing representation from a broad spectrum of the community to assist City Council in their decision making. City Administration provides recommendations for the Commission to consider which are based on sound land use planning practices, including relevant policies and procedures.

The Commission, however, is not bound by the Administrative recommendation and is free to carry any motion they see fit, including recommendations either to approve, to approve with conditions, or to deny the application.

The application was reviewed by PIC at the February 1, 2023 meeting where the Commission discussed at length:

- provincial/federal requirements for scrap yards;
- environmental and visual impacts of the proposed use;
- fencing alternatives and maintenance.

While the Commission was not unanimous in its decisions, the following recommendations were carried:

1. That the business provides proof of compliance with required provincial and/or federal permits and/or licencing. Carried Unanimously.
2. The commission is supportive of increasing the fence height up to 20 ft and further that the visual design be to the satisfaction of the City of Yorkton. Carried with 5 in favour and 2 against.

Following up on the Commission's concerns, Administration requested that the applicant provide responses and subsequently, the applicant advised:

1. That the company has implemented a safety program which follows the requirements of the Workplace Hazardous Materials Information System (WHMIS) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

The program includes a Safety Manual and policies regarding staff training to ensure that staff are able to identify and safely handle and dispose of any controlled products in the event of fluid leaks associated with vehicles being processed on site.

A Phase One Environmental Assessment of the site was completed prior to the property purchase and no areas of concern were identified.

2. The business has obtained Federal Clearance for Controlled Goods which is not required, but allows them to recycle sensitive items such as military vehicles and tanks. Certification for this program requires a high degree of integrity on the part of the business operators and compliance with federal regulations.
3. There have been recent changes to the *Pawned Property Act, 2020* to enhance the ability of police to respond to scrap metal theft and crimes associated with auto theft. Recent legislation amendments require scrap metal dealers to obtain and record identification and transaction information from their clients which can then be transmitted to police services in the same manner as with pawn transactions. It also prohibits scrap metal transactions for individuals under 18 and restricts cash transactions. These measures act as a deterrent by removing the ability to quickly make money by anonymously selling stolen metal and are strictly adhered to by the business.

To date, various transactions have been reviewed by the local RCMP who have found no causes for concern.

4. If the use is approved by Council, the applicant proposes to appeal the maximum fence height of 13 feet and request a variance to allow for a 20'tall fence. To achieve this, the applicant proposes to install an 8' privacy screen to the top of the existing 12' metal fence. The screen is constructed of a heavy duty, commercial grade PVC blend mesh that allows wind to pass through while shielding the view into the property. The expected life span of the material is approximately 2 – 3 years and the applicant acknowledges the need for replacement as needed to ensure the visual upkeep of the property.
5. At the Public Hearing, the applicant submitted a photo of a sample mural design for the fence along Industrial Avenue and is open to working with the City to come to a mutual agreement as to a mural content. The applicant's preferred application would be to commission a painter and have a painted art display although consideration is also being given to vinyl decaling. The applicant notes that installation of a mural would not only increase curb appeal, it may also discourage potential graffiti which would be much more visible on a blank wall.

In addition, Administration contacted the Province's Ministry of Environment with regards to the proposed use and regulatory requirements. The Ministry confirms that:

- salvage yards are not prescribed uses under Provincial Environmental Protection Acts and do not require specific permitting or licensing;
- notwithstanding the above, there are regulations under specific Provincial &/or Federal Acts that may apply, depending on the scope of the activity. It is the business operator's responsibility to investigate and comply with these requirements;
- the Saskatchewan Ministry of Environment is responsible for environmental concern follow-up which is typically prompted by specific concerns identified or complaints received.

As such, the information provided by the applicant and the Ministry satisfy PIC's recommendation that the applicant provide proof of provincial and federal requirements.

Council's Options:

1. That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West, legally described as Blk/Par Z; Plan 67Y09629, be approved and that the Development Officer be authorized to issue a conditional Development Permit;
2. That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be approved subject to adherence to Zoning Bylaw requirements including, but not limited to:
 - a. Section 4.17.1 requiring that the yard be enclosed by an opaque or solid perimeter fence at least 2.0 metres in height; and
 - b. Section 4.32.2.B requiring that fencing on industrial properties with high public exposure be of a decorative nature to the satisfaction of the City; andthat the Development Officer be authorized to issue a conditional Development Permit;
3. That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be denied for reasons as listed by Council;
4. That Administration be provided with alternative direction.

Administration's Recommendation:

That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be approved subject to adherence to Zoning Bylaw requirements including, but not limited to:

- a. Section 4.17.1 requiring that the yard be enclosed by an opaque or solid perimeter fence at least 2.0 metres in height; and
 - b. Section 4.32.2.B requiring that fencing on industrial properties with high public exposure be of a decorative nature to the satisfaction of the City; and
- that the Development Officer be authorized to issue a conditional Development Permit.

Attachment 1 – Council Report from January 30, 2023



REPORT TO COUNCIL

TITLE: Discretionary Use - DU01-2023 – Auto Wrecking/Junk Yard at 85 York Road West (MI-1 Light Industrial) Council Report #2 – Public Hearing	DATE OF MEETING: January 30, 2023
	REPORT DATE: January 23, 2023
CLEARANCES: Michael Eger Michael Eger - Director of Planning, Building & Development	ATTACHMENTS: 1. Council Report from January 9, 2023
Written by: Carleen Koroluk - Planner Carleen Koroluk	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Lonnie Kaal - City Manager Lonnie Kaal	

Summary of History/Discussion:

This report is in response to a Development Permit application for a Salvage Yard use at 85 York Road West. While Zoning Bylaw No. 14/2003 does not include Salvage Yard as a defined land use, the definition of Auto Wrecking/Junk Yard most closely resembles the proposed use.

Administrative Review:

The subject property is zoned MI-1 Light Industrial and is located on York Road West, along one of the main entrances to the City and Auto Wrecking/Junk Yard uses are listed as Discretionary Uses in this zone. Under *The Planning and Development Act, 2007*, discretionary use applications require Council authorization for Administration to issue a Development Permit.

Public Notice:

Council authorized Administration to proceed with the Public Notice process at the January 9, 2023 meeting. As such, the proposed discretionary use was advertised and circulated in accordance with the public notification requirements of the City of Yorkton, including advertisement in the local newspaper, at City Hall and on the City website. In addition, pursuant to *The Planning and Development Act, 2007*, a direct mail-out was sent to twenty-nine (29) owners of property within 75 metres (250ft) of the subject property.

As of the date of this report, no inquiries were received and individuals wishing to speak to the proposed Discretionary Use had the opportunity to present to Council during the Public Hearing held earlier in this meeting.

DU01-2023 – Auto Wrecking/Junk Yard at 85 York Rd W (MI-1) (Public Hearing)
Page 1 of 14

Attachment 1 – Council Report from January 30, 2023 – Continued

Planning & Infrastructure Commission

The application was referred to the Planning and Infrastructure Commission for review at the January 18, 2023 Commission meeting, however quorum was not able to be met and, as such, the meeting could not proceed.

The Planning and Infrastructure Commission plays an important part in civic government by providing representation from a broad spectrum of the community to assist City Council in their decision making. City Administration provides recommendations for the Commission to consider which are based on sound land use planning practices, including relevant policies and procedures.

The Commission, however, is not bound by the Administrative recommendation and is free to carry any motion they see fit, including recommendations either to approve, to approve with conditions, or to deny applications.

As such, to ensure the Commission's input, Administration proposes to present the application at the next PIC meeting scheduled for February 1, 2023. The Commission's recommendation would be brought back to a future regular Council meeting.

As noted in the original report to Council, the applicant proceeded with the revised development prior to obtaining approval. Since the subject application was submitted, the applicant has continued its revised operations while awaiting Council's decision. As such, deferring the application will have minimal impact on the applicant.

Council's Options:

1. That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be deferred until feedback from the Planning and Infrastructure Commission can be provided.
2. That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be approved and that the Development Officer be authorized to issue a conditional Development Permit;
3. That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be denied for reasons as listed by Council;
4. That Administration be provided with alternative direction.

Administration's Recommendation:

That Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West legally described as Blk/Par Z; Plan 67Y09629, be deferred until feedback from the Planning and Infrastructure Commission can be provided.

Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023	
 City of Yorkton REPORT TO COUNCIL	
TITLE: Discretionary Use DU01-2023 – Auto Wrecking/Junk Yard at 85 York Road West (MI-1 Light Industrial)	DATE OF MEETING: January 9, 2024
Public Notice Authorization	REPORT DATE: January 5, 2023
CLEARANCES: Michael Eger Michael Eger – Director of Planning, Building & Development	ATTACHMENTS: 1. Key Plan 2. Zoning Map 3. Aerial View 4. Summary of Discretionary Use Process 5. Site Plan 6. Street Views & Fencing 7. Public Notice
Written by: Carleen Koroluk Carleen Koroluk	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Lonnie Kaal - City Manager Lonnie Kaal	
<u>Summary of History/Discussion:</u> This report is in response to a Development Permit application for a Salvage Yard use at 85 York Road West, (see Attachment 1). While Zoning Bylaw No. 14/2003 does not include Salvage Yard as a defined land use, the definition of Auto Wrecking/Junk Yard most closely resembles the proposed use: <i>"A development in which vehicles or materials are stored, parted out, crushed, compacted, or where parts from vehicles or materials are re-sold."</i> The subject property is zoned MI-1 Light Industrial and is located on York Road West, along one of the main entrances to the City (see Attachment 2 & 3). Auto Wrecking/Junk Yard uses are listed as Discretionary Uses in this zone. Under <i>The Planning and Development Act, 2007</i>, discretionary use applications require Council authorization to proceed (see Attachment 4). <u>Administrative Review:</u> The applicant purchased the property in November 2021 and was issued a temporary Development Permit for a Light Industrial use in January 2022, specifically for the purchasing and processing of metals such as copper wire. At the time it was indicated that ferrous metal, like vehicles, would not be stored on site.	
Discretionary Use DU01-2023 – Automotive Wrecking/Junk Yard in MI-1 – 85 York Rd W Page 1 of 12	

DU01-2023 – Auto Wrecking/Junk Yard at 85 York Rd W (MI-1) (Public Hearing)

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Attachment 1 – Council Report from January 30, 2023 –Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

Much has changed from the applicant's initial proposed use and the business has subsequently grown from 5 employees to 17 employees working both on and off-site. Currently, the business has changed by incorporating the following additional components:

- i. **Metal Recycling** – purchase/processing/shipping of scrap metals
 - customers deliver metal products to the site where they are weighed, sorted and unloaded before being processed with a scrap shear and subsequently shipped out to steel mills;
 - the business has recently obtained their Government of Canada Controlled Goods Program Certification which allows them to recycle demilitarized vehicles and equipment from Canadian Forces Bases. The applicant notes that the company is the only recycling facility in western Canada that has obtained this certification.
- ii. **Off-Site Scrap/Demolition** – crews attend specific site locations for scrap metal cleanup which is processed on site, then brought back to the yard on York Road for further preparation and processing prior to being shipped out to steel mills;
- iii. **Equipment/Inventory Storage** – mobile equipment used for off-site processing is stored at the location when it is not being used, in addition stock piles of scrap metal inventory are stored on-site until they are shipped;
- iv. **Sale of Shipping Containers** – new and used containers are stored on-site until they are sold and delivered to customers.

The applicant did not initially apply to the City to undertake the revised development, and therefore was no longer in compliance with the issued Development Permit. Planning Services was forced to initiate enforcement, resulting in the subject application.

Day to day business activities are currently being carried out from a portable trailer located at the rear of the site while the applicant works with an engineer in regards to the status of the existing building. Currently, a portion of the building is being leased to the original owner (Morris Equipment Parts & Sales) as shown on the attached Site Plan (see Attachment 5) while the balance of the building is being reviewed to identify upgrades needed to meet current building code requirements.

Depending on the financial viability of required code upgrades, future plans for the building include the following uses that are permitted in the Light Industrial zoning district:

- office space;
- Mobile Cabin Manufacturing – small, portable cabins to be used on job sites and/or for retail sale would be assembled inside the building;
- Industrial Pallet Racking – raw pallet racking materials would be assembled, organized and shipped out to large distribution centres;
- Shipping Container Modification – modifications would be made to shipping containers such as overhead door installation, installation of racks, etc;
- Attachments Assembly – hydraulic pallet forks, firewood processors, mowers and other skid steer and tractor attachments;

Discretionary Use DU01-2023 – 85 York Rd W – Automotive Wrecking/Junk Yard in MI-1
Page 2 of 12

Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

- New Steel Sales; and
- a potential warehouse/retail store area.

With regards to the specific salvage use, Section 4.16.5 requires that “In all industrial districts, the outdoor storage of raw materials, finished or partially finished products, fuel, salvage materials, junk or waste on a site shall be concealed from sight from adjacent sites, streets or lands by a fence or wall of appropriate design, and sufficient dimension and position such that such materials are not visible from any point 1.5 metres or less above grade on any adjacent site, street or land.”

Furthermore, Section 4.17 of the Zoning Bylaw requires that “All salvage, junk, or scrap yards shall be enclosed by an opaque or solid perimeter fence at least 2.0 metres in height, and not more than 4.0 metres in height, with no material piled higher than the height of the perimeter fence, and furthermore that the perimeter fence shall not be located in the required front yard.

In addition to the specific bylaw requirements, Discretionary Use applications are typically more favourably considered where it can be demonstrated that their location 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;
- 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.

In response, the applicant has provided the following comments:

- a 12' (~3.7m) steel siding fence has been installed along the west and north sides of the site to visually screen the salvage piles and provide additional security (see Attachments 5 & 6);
- business hours are 8:00am – 5:00pm, Monday through Friday, closed on weekends and holidays;
- processing of salvage materials/scrap iron involves typical industrial equipment including forklifts, skid steers, excavators, semi trucks and personal vehicles and creates minimal noise;
- odours are not produced by the processing of metals;
- during summer months, traffic is typical of industrial uses with less traffic through the winter months;
- the majority of the salvage operation is significantly screened from York Road traffic and the neighbouring residential uses on the south side of York Road by the existing building.

The applicant acknowledges that the current salvage metal inventory piles are approximately 20'

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Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 –Continued

– 25' high and significantly exceed both the allowable and current fence height (see Attachment 6). As a result, the salvage piles are visible to traffic on York Road, Industrial Avenue and Ball Road. He further notes that the accumulation of scrap inventory is due to a downturn in the economy over the last year and that materials will be shipped out once prices rebound. Having said that, prices do fluctuate and the potential for large accumulations of salvage metal have been demonstrated.

It is also important to note that if the Discretionary Use is approved by Council, the applicant has indicated that he may appeal the fence height restriction to the Development Appeals Board and request approval of an increase to meet the current pile height of 20' – 25' (~6 – 8 metres). That process is also subject to public notification, but would be focused specifically on the fence height with strict criteria guiding the Board's decision to grant or deny a variance.

Conclusion:

Notwithstanding any appeal regarding fence height, it can be reasonably assumed that the proposed development can be carried out in accordance with Zoning Bylaw requirements. As such, Administration would like to initiate the public notice process including advertisement in the local newspaper, at City Hall and on the City website, as well as circulation to property owners within 75 metres of the subject property.

If authorization for Public Notice is granted, the application 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 Options:

1. That Administration be authorized to proceed with Public Notification for Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003, at 85 York Road West, and that the application be brought back to Council for its review and decision;
2. That Public Notification for Discretionary Use application DU01-2023, which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003 at 85 York Road West, be denied for reasons as listed by Council;
3. That Administration be provided with alternative direction.

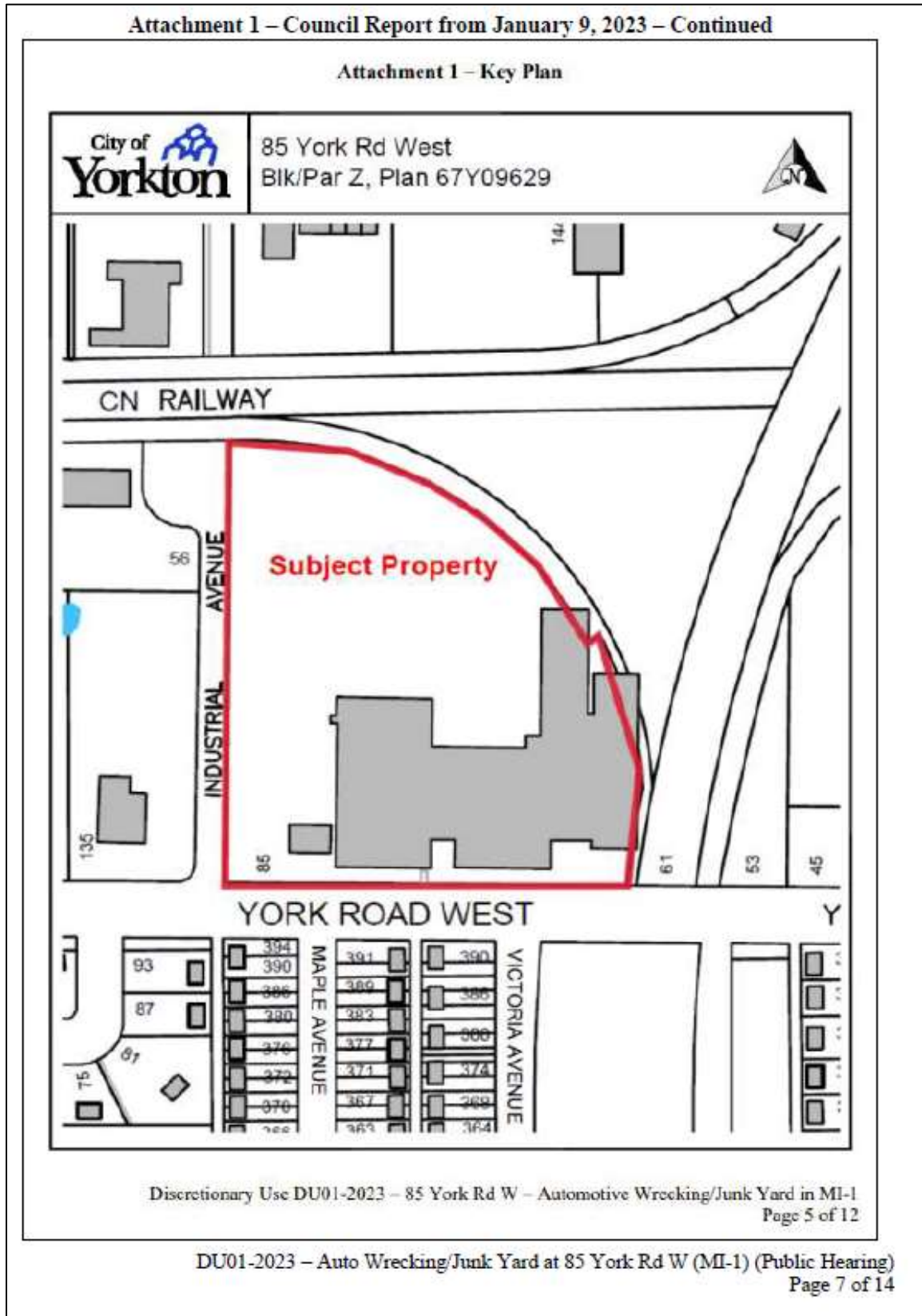
Administrative Recommendation:

1. That Administration be authorized to proceed with Public Notification for Discretionary Use application DU01-2023 which proposes an Auto Wrecking/Junk Yard use as defined in City of Yorkton Zoning Bylaw No. 14/2003 at 85 York Road West, legally described as Blk/Par Z; Plan 67Y09629, and that the application be brought back to Council for its review and decision.

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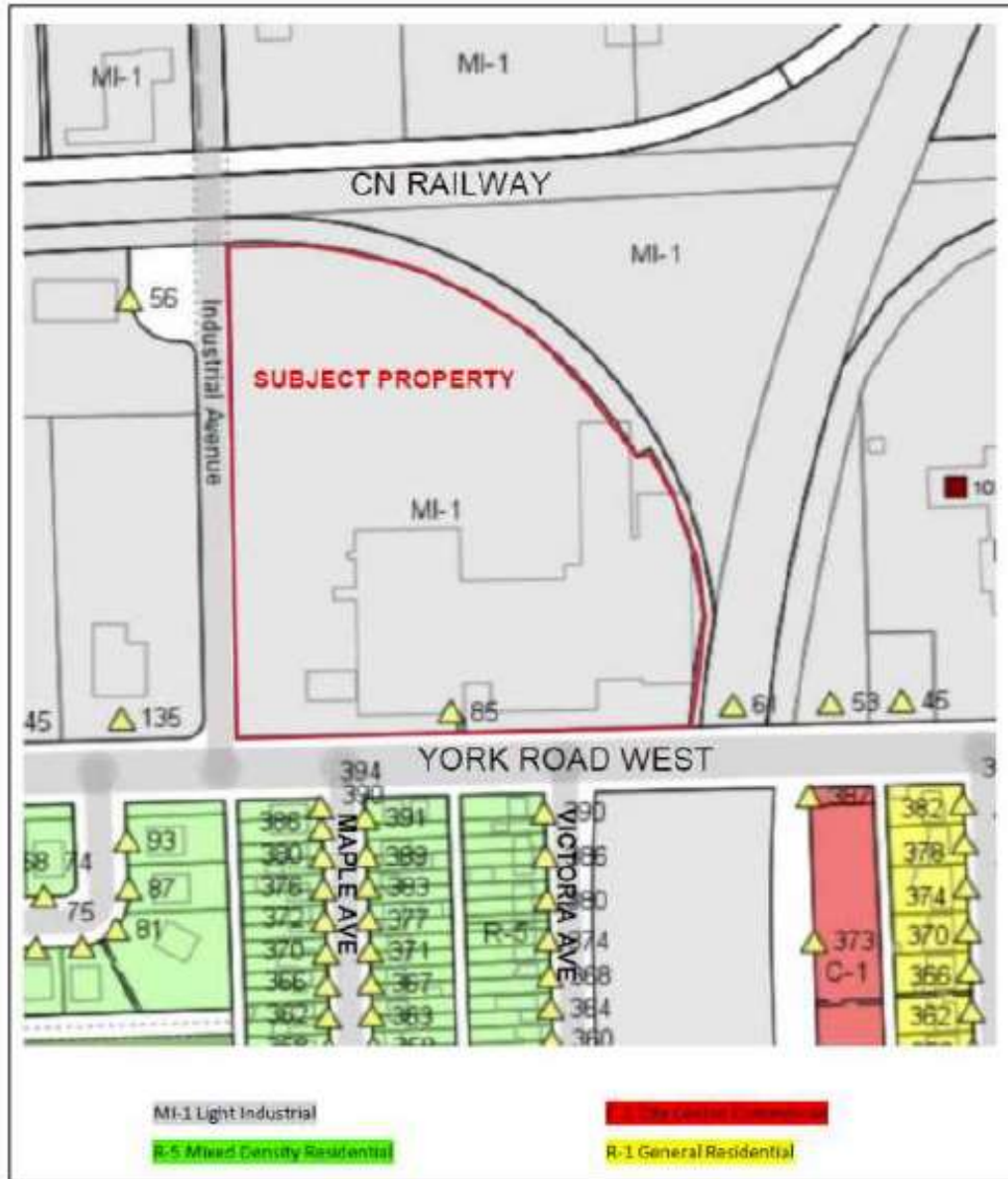
Attachment 1 – Council Report from January 30, 2023 – Continued



Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

Attachment 2 – Zoning Map



Discretionary Use DU01-2023 – 85 York Rd W – Automotive Wrecking/Junk Yard in MI-1
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DU01-2023 – Auto Wrecking/Junk Yard at 85 York Rd W (MI-1) (Public Hearing)
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Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

Attachment 3 – Aerial View



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Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

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.

Discretionary Use DU01-2023 – 85 York Rd W – Automotive Wrecking/Junk Yard in MI-1

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Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

Attachment 5 - Site Plan



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Attachment 1 – Council Report from January 30, 2023 – Continued

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Attachment 6 – Street Views & Fencing

View from Industrial Avenue



View from Ball Road



View from York Road Travelling East



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Attachment 1 – Council Report from January 30, 2023 – Continued

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Attachment 6 – Street Views & Fencing Continued

From York Road Travelling West



Fence details



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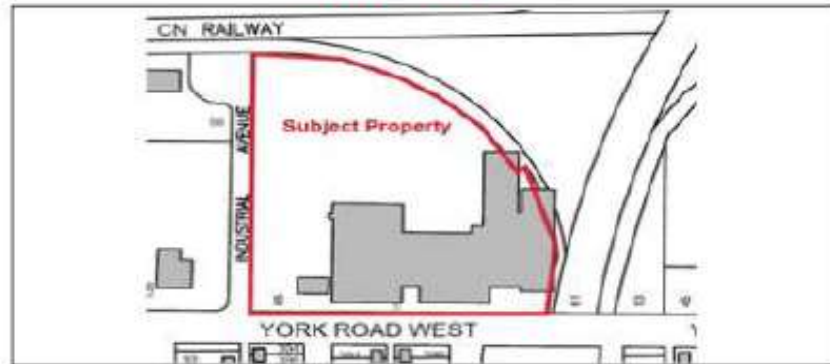
Attachment 1 – Council Report from January 30, 2023 – Continued

Attachment 1 – Council Report from January 9, 2023 – Continued

Attachment 7 – Public Notice

Public Notice

**Discretionary Use Application for Auto Wrecking/Junk Yard use
in MI-1 Light Industrial Zoning District
85 York Road West**



Legal Description: Blk/Par Z, Plan 67Y09629
Civic Address: 85 York Road West
Proposed Use: Auto Wrecking/Junk Yard

Details: The applicant proposes a Salvage Yard use which most closely resembles an Auto Wrecking/Junk Yard use as defined in Zoning Bylaw No. 14/2003 as follows:

"A development in which vehicles or materials are stored, parted out, crushed, compacted, or where parts from vehicles or materials are re-sold."

Auto Wrecking/Junk Yard uses are Discretionary Uses in the MI-1 Light Industrial Zoning District and require City Council authorization under *The Planning & Development Act, 2007* to proceed.

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, January 30, 2023 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 Wednesday, January 25, 2023.** 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

Information: Questions regarding the application may be directed to:

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

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TITLE: Westland Arena Ice Plant & Machine Room Upgrades – Tender Award	DATE OF MEETING: February 13, 2023 REPORT DATE: February 8, 2023
CLEARANCES: Darcy McLeod – Director of Recreation and Community Services: Darcy McLeod	ATTACHMENTS: 1. November 15, 2021 report to Council- Kinsmen Arena Ice Systems Review & Cost Estimate 2. GC Ice Plant Capital Budget Request Form
Presented by: Jeff Fawcett – Manager of Capital Projects Jeff Fawcett	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Gord Kennedy- Acting City Manager Gord Kennedy	

BACKGROUND

November 15, 2021, Council was presented a report on the condition of both the Kinsmen Arena and Westland Arena ice systems, in which both needed significant improvements.

Council passed a resolution indicating “ **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.**”

For the purpose of this report we will be discussing ‘The Westland Arena Ice System’ which was found to need immediate attention, as was outlined in the Strong Refrigeration review and assessment of the Westland Ice System. The cost of a new ice plant had been included in the initial Gallagher Centre Renewal Project at an estimated value of \$1.6 million.

During the 2022 budget process the Westland Arena Ice System project was approved by Council for \$1,085,000. Further, the controls portion of this project was completed in the summer of 2022 at a cost of \$124,000. This leaves \$961,000 to complete the remainder of the project described below.

DISCUSSION/ANALYSIS/IMPACT

Tender drawings were completed by Strong Refrigeration, Alfa Engineering and Brownlee Beaton Kreke.

On January 3rd, 2023, the Invitation to Tender for the Westland Arena Ice Plant & Machine Room Upgrades was advertised on the City of Yorkton Biddingo site as well as SaskTenders for a tender period of four weeks and a closing date of January 27, 2023. This date was chosen to provide for a

mandatory contractor site visit that took place on January 12, 2023, which allowed proponents to review the site and ask for clarification from the engineers, if required.

Two (2) bids were received. A summary of the bids are as follows:

Bidder	Bid Amount (Excluding Taxes)
PCL Construction Management Inc.	\$ 788,055.00
N.L. Construction Inc.	\$ 955,390.00

Both bids were complete, and the bid received from PCL Construction Management Inc., was deemed to be best value as it was the lowest submitted bid.

FINANCIAL IMPLICATIONS

Funding for this project planned in the 2022 Capital budget will come from the recreation levy as approved during budget deliberations.

COMMUNICATION PLAN / PUBLIC NOTICE

All bidders will receive a letter indicating the successful bidder and bid amount. Also, the identity of the successful bidder along with the total bid amount will be posted on Biddingo and SaskTenders for a period of two weeks.

STRATEGIC PRIORITIES/OCP/COMMITTEE RECOMMENDATION(S)

N/A

OPTIONS

1. That Council direct Administration to award the tender for the Westland Arena Ice Plant & Machine Room Upgrades, to PCL Construction Management Inc. for \$ 788,055.00 plus applicable taxes, and further that the Mayor and City Clerk be authorized to execute said contract.
2. That Administration be provided with alternative direction.

RECOMMENDATION

1. That Council direct Administration to award the tender for the Westland Arena Ice Plant & Machine Room Upgrades, to PCL Construction Management Inc. for \$ 788,055.00 plus applicable taxes, and further that the Mayor and City Clerk be authorized to execute said contract.



REPORTS TO COUNCIL

TITLE: Kinsmen Arena Ice Systems Review & Cost Estimate	DATE OF MEETING: November 15, 2021 REPORT DATE: November 8, 2021
CLEARANCES: Ashley Stradeski, Director of Finance Ashley Stradeski	ATTACHMENTS: 1. Summary of Ice System Costs 2. Strong Refrigeration Inc. Kinsmen Arena Refrigeration Review 3. Strong Refrigeration Inc. Gallagher Centre Refrigeration Review 4. BST Consulting Kinsmen Refrigeration Slab Review 5. Global Sport Resources Quote 6. R.J. Consulting Kinsmen Dehumidification Review 7. History of Kinsmen Arena Studies & Gallagher Centre Renewal Project Timelines.
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 26th, 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 3rd 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 (CO₂), nitrogen dioxide (NO₂), 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**

	Kinsmen Arena	If Kinsmen Retained Gallagher Centre	
<u>Ice Plants</u>			
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	
<u>Code Upgrades</u>			
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		
Sub-total	\$ 441,000	\$ 731,000	
Engineering fees @ 10%	\$ 44,100	\$ 73,100	
Contingency of 30%	\$ 132,300	\$ 219,300	
P.S.T. 6%	\$ 37,000	\$ 61,400	
TOTAL Ice Plants	\$ 654,400	\$ 1,084,800	
<u>New Rink Slab & Header Trench</u>			
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		
Sub-total	\$ 835,000		
Chromate Contingency (due to extensive brine leaks over time)	\$ 50,000		
Contingency (Unknown substrate conditions, etc.)	\$ 250,000		
P.S.T. 6%	\$ 68,100		
TOTAL New Rink Slab	\$ 1,203,100		
<u>Dehumidification</u>			
Ventilation, heating & air conditioning	\$ 285,000		
Plumbing, electrical, mechanical	\$ 220,000		
Contingency (mould, asbestos, other unknown)	\$ 105,000		
Sub-total	\$ 610,000		
Engineering	\$ 61,000		
P.S.T. 6%	\$ 40,260		
TOTAL Dehumidification	\$ 711,260		
<u>New Arena Boards</u>			
Remove, dispose old & install new boards/glass	\$ 195,000		
P.S.T. 6%	\$ 11,700		
TOTAL Arena Boards	\$ 206,700		
Total Estimated Costs for Arena Improvements	\$ 2,775,460	\$ 1,084,800	\$ 3,860,260

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 18th, 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 12th, 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

Refrigerant:	R717 (Ammonia)
Rink Operating Season:	7 Months (September 1 st , to March 31 st)
Capacity:	70 TR
Classification:	Indirect
Year Installed:	The ice plant was constructed in phases, starting with a new chiller in 2006, and replacement of the compressors and controls in 2008.
Installed By:	Stevenson Industrial
Refrigeration System Type:	Critical charge
Compressor(s):	1 - Vilter 456XL, 1 – 454XL
Chiller(s):	Flooded Shell and tube, QTY: 1
Condenser Type:	Evaporative condenser
Ammonia Charge:	700 lbs (Based on Door Tag.)
Prime Movers:	1 @ 100 HP, 1 @ 75 HP (112 kW)
Low Side Test Pressure:	163 psig
High Side Test Pressure:	275 psig.
Oil Charge and Type:	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.

YEARS:	EQUIPMENT POTENTIALLY REQUIRING REPLACEMENT OR MAJOR SERVICE.	EQUIPMENT REPLACEMENT BUDGET COST
1-5 (inclusive)	• Brine Chiller • C-1 Oil Separator • C-2 Oil Separator	\$100,000.00
6-10 (inclusive)	• Condenser Replacement • Desuperheater (for ice melt pit) • Underfloor brine heater • Hockey Pump • Underfloor Heat Pump • Condenser Water Pump	\$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.

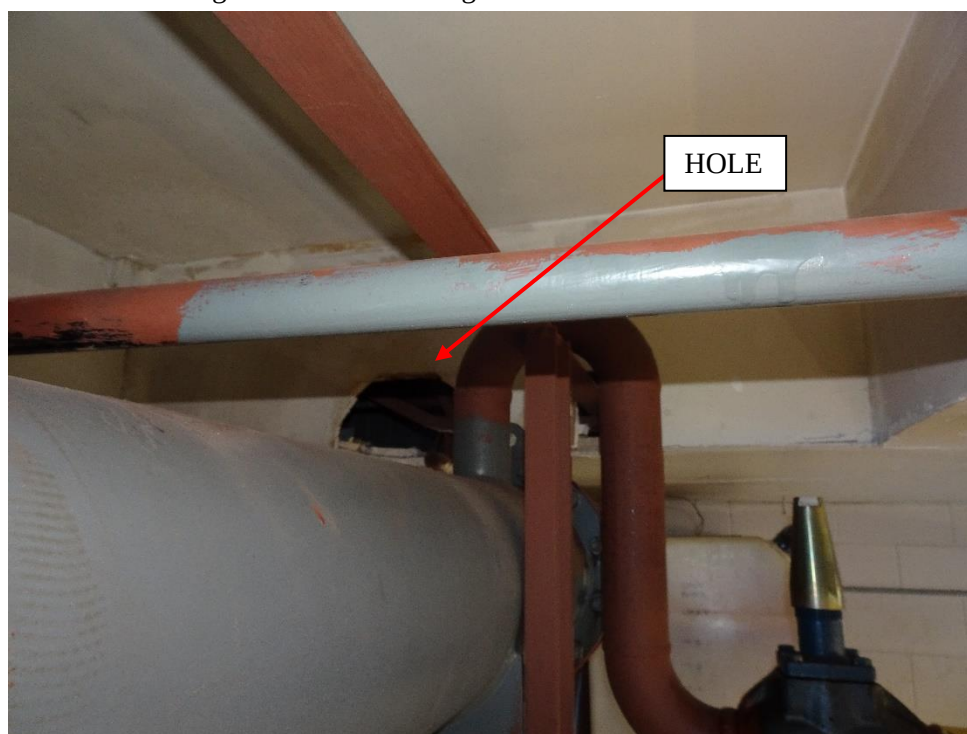


Figure 2 – Example of hole in roof / drywall



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

CODE DEFICIENCY	BUDGET COST
Ammonia Relief System changes	\$30,000.00
Replace Existing Ventilation System	\$75,000.00
Sealing, Fireproofing Machine room	\$20,000.00
Vestibule addition or door removal	\$TBD structural / architectural.
Safety Shower + Eyewash (Assuming a supply of hot + cold water is readily available and drainage is readily available).	\$5,000.00
Labelling, Tagging, As-built P&ID development	\$6,000.00
Add pipe supports, add E-stops, modify ammonia detection system, etc.	\$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 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.*

APPENDICIES / ATTACHMENTS

- Appendix A: Kinsmen Arena – Equipment Inventory, Equipment Life
- Appendix B: Kinsmen Arena – Code Checklist



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October 8th, 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 12th, 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

Refrigerant:	R717 (Ammonia)
Rink Operating Season:	10 Months (July 7 th , to April 30 th)
Capacity:	150 TR
Classification:	Indirect
Year Installed:	The ice plant was constructed in phases, the compressor is the oldest component and was installed in 1998. The chillers were replaced in 2007
Installed By:	Stevenson Industrial
Refrigeration System Type:	Flooded, w / high pressure receiver.
Compressor(s):	2 – Howden Screws (XRV 127 R3, 100 hp)
Chiller(s):	Flooded Shell and tube, QTY: 2 (1 Hockey, 1 curling)
Condenser Type:	Evaporative condenser
Ammonia Charge:	1800 lbs (Based on Door Tag.)
Prime Movers:	2 @ 100 HP (75 kW) = 150 kW TOTAL.
Low Side Test Pressure:	163 psig
High Side Test Pressure:	275 psig.
Oil Charge and Type:	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)	• Screw compressor overhauls. • Control system. • Curling chiller. • Hockey chiller. • Underfloor brine heater.	\$350,000.00
6-10 (inclusive)	• Condenser • QTY: 2 – Hockey brine pumps • QTY: 2 – Curling brine pumps	\$170,000.00
11-15	• QTY: 2- Condenser water pumps • Underfloor heat pump.	\$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.

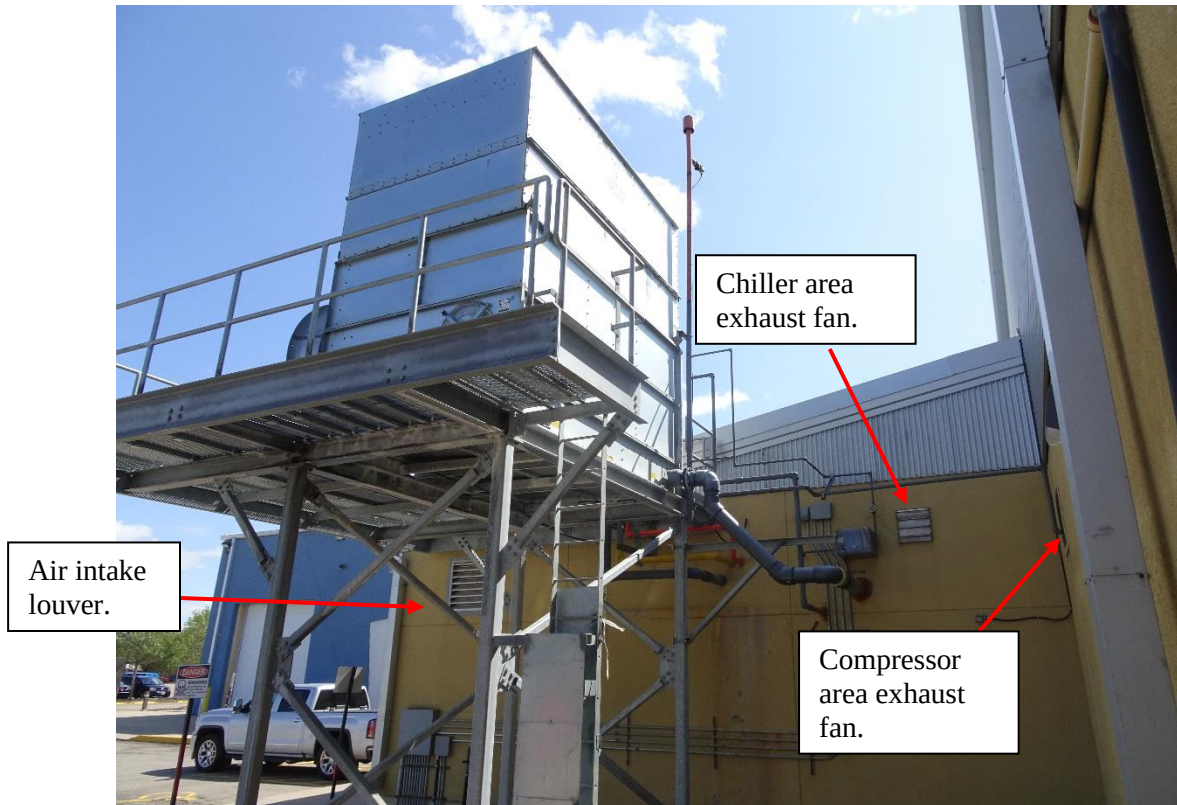


Figure 3 – Exhaust Fans

- 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

CODE DEFICIENCY	BUDGET COST
Ammonia Relief System changes	\$30,000.00
Replace Existing Ventilation System	\$75,000.00
Sealing, Fireproofing Machine room	\$20,000.00
Vestibule Changes	\$TBD structural / architectural
Safety Shower + Eyewash (Assuming a supply of hot + cold water is readily available, and drainage is readily available).	\$5,000.00
Labelling, Tagging, As-built P&ID development	\$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.*

APPENDICIES / 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	Hockey Pump 1 Centrifugal Pump	Bell & Gossett	5BC (?) Nameplate Damaged 920 USGPM, 20 hp.	2013	8		15 years	7 years	
P-4	Hockey Pump 2 Centrifugal Pump	Bell & Gossett	5BC (?) Nameplate Damaged 920 USGPM, 20 hp.	2013	8		15 years	7 years	
P-5	Curling Pump 1 Centrifugal Pump	Bell & Gossett	4BC 650 GPM @ 50 ft. 15 hp, 1700 RPM	2013	8		15 years	7 years	
P-6	Curling Pump 2 Centrifugal Pump	Bell & Gossett	4BC 650 GPM @ 50 ft. 15 hp, 1700 RPM	2013	8		15 years	7 years	
P-7	Underfloor Heat 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)

Project:	City of Yorkton Arena Inspections	Prepared by: Alex Repski
Owner:	City of Yorkton, SK	Date:
Location:	Gallagher Centre	LEGEND ✓ = Requirement Met ✗ = Requirement Not Met ! = Requirement partially met. N/A = Not applicable to this plant. ? = Could not be verified
Refrigerant:	Ammonia (R717)	
Machine Room Gros	750 ft ²	
Refrigerant Charge:	1800 lbs	
Prime Movers:	200 hp	
Occupancy:	Public	
Leakage Probability:	Low	

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
MANDATORY - CODE / REGULATORY REQUIREMENTS				
✗	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 ≤ 300 ppm - Activate rupture ventilation system at concentration ≤ 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 ³ (Vessels larger than ~ Ø16" x 96" or Ø20" x 60") > 10 ft ³	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: • PSVs are replaced every 5 years • Pressure limiting devices are tested every 12 months • All other safeties tested every 12 months • Ammonia detectors tested every 12 months • Manufacturer safety-related maintenance recommendations followed • Power and control terminations checked every 12 months • Components are tagged after testing • Piping inspected quarterly for vibration damage • Vent lines inspected quarterly for blockages or damage • Periodic Leak Inspection is carried out • Cooling towers, cooling tower water systems, air unit fans, etc. inspected before initial startup, before annual startup, and monthly thereafter.	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 vesitbule. 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 .

APPENDIX B - CODE CHECKLIST

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 ³ (17.7 ft ³) 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.
OPERATOR REQUIREMENTS				
	Plants must be under the "general supervision" of an operator with the appropriate licence: Scope of Authority for Licences: - Refrigeration Operator < 100 TR - Refrigeration Engineer (Any Capacity) - 1st Class Power Engineer (Any Capacity) - 2nd Class Power Engineer (Any Capacity) - 3rd Class Power Engineer (Any Capacity) - 4th Class Power Engineer < 500 TR - 5th Class Power Engineer < 200 TR Note: Plants < 45 TR (No Licence Required)		The Boiler and Pressure Vessel Regulations (2017) SK	Kurt is aware of these requirements and is working to ensure that Yorkton has operators with the required training / licences.
	"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 Regulations (2017) SK	

APPENDIX B - CODE CHECKLIST

REQUIREMENT		CSA B52 Section	OTHER SOURCE?	COMMENTS
GOOD PRACTICE - STRONG RECCOMENDATIONS FOR SAFETY				
X	Up to date plant PID drawing posted in machine room showing: • All valve with unique numbered tags, • All major equipment • All refrigerant piping • Critical safety devices.			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.
X	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)	
X	Relief stack terminates: - 7.5 feet above the nearest walkway - 7.5 feet above the tallest roof. - Directly upward		IIAR-2-2014	Stack does not terminate 7.5 feet above tallest roof.
✓	Safety Switches: - Low suction pressure cutout - High Discharge pressure cutout - Oil failure switch			M&M panels incorporate pressure Limitations for compressors.
X	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



7908-18 Street NW, Edmonton, AB T6P 1Y7

PHONE: 780.461.6674 FAX: 780.401.3469

September 13th 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 25th 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.



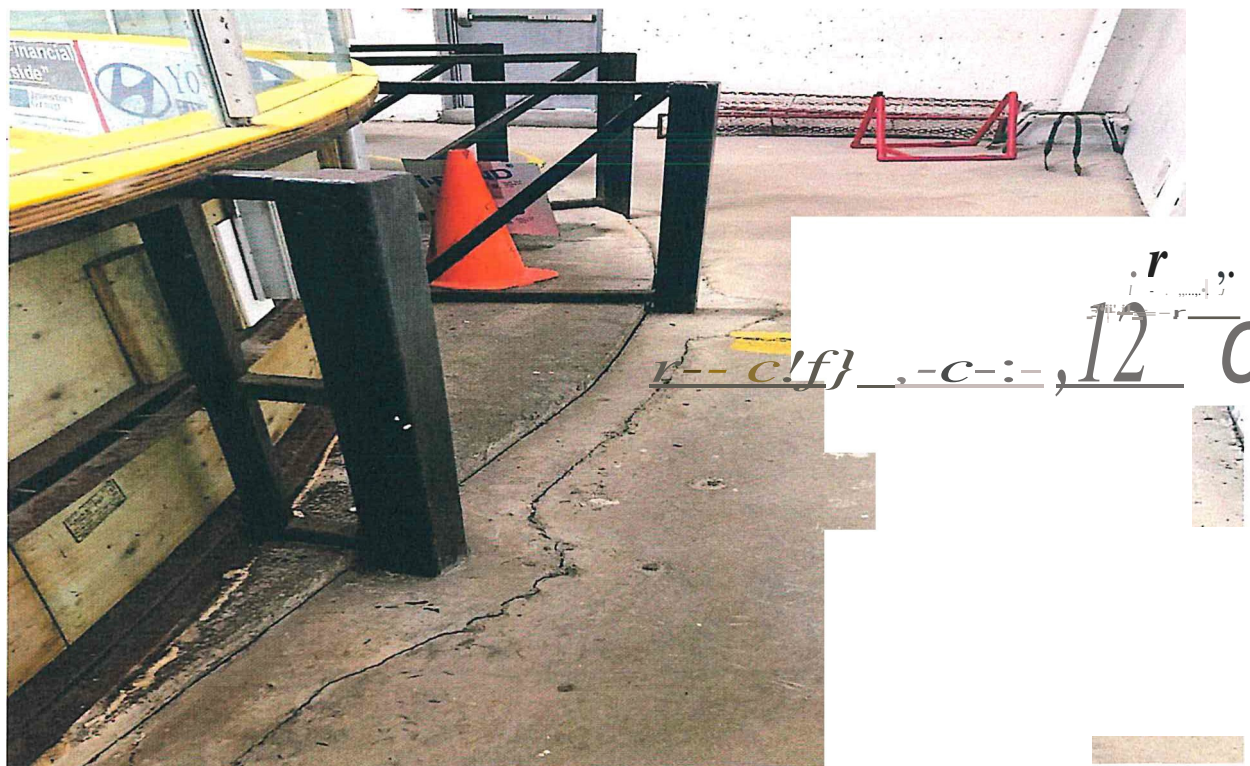
Picture #5 - Elevation variance on either side of ice resurfacer apron crossing.



Picture #6 - Concrete topping represents a trip hazard.



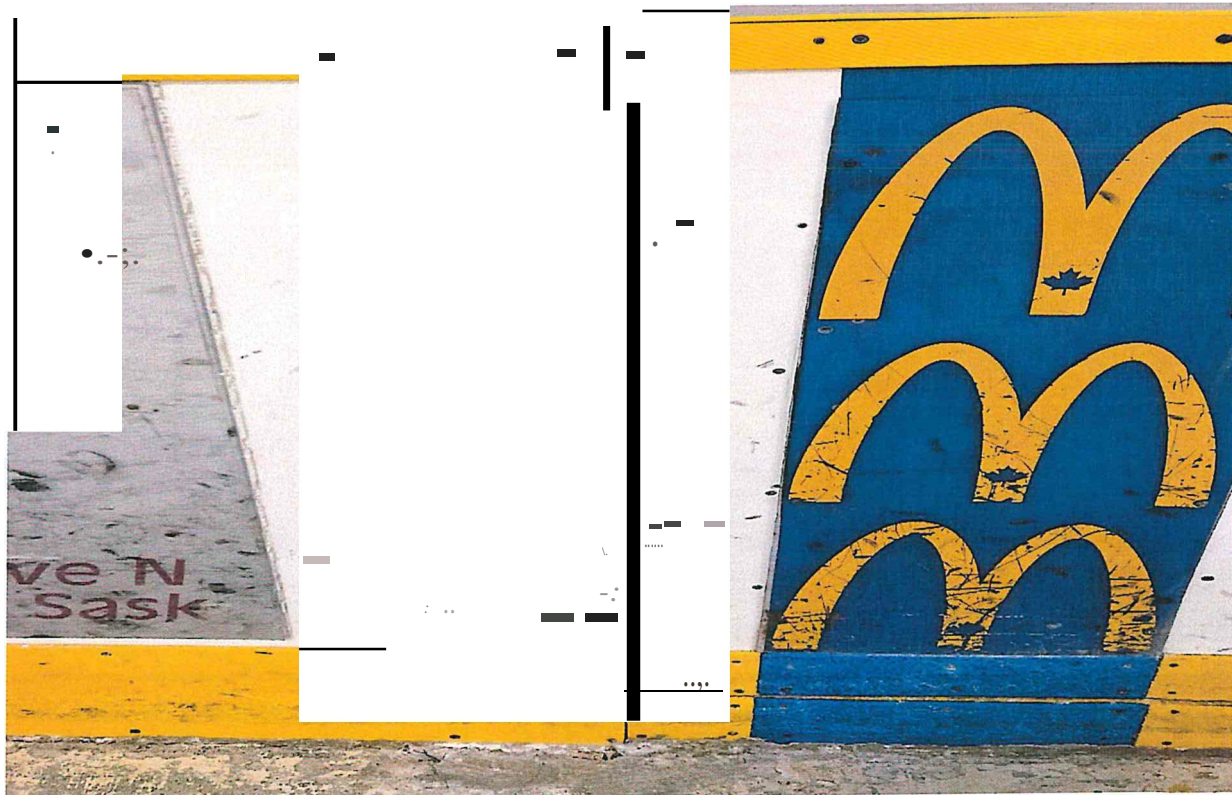
Picture #7 - Past modification to radii.



Picture #8 - The dasher boards are mounted to a grade beam around the perimeter.



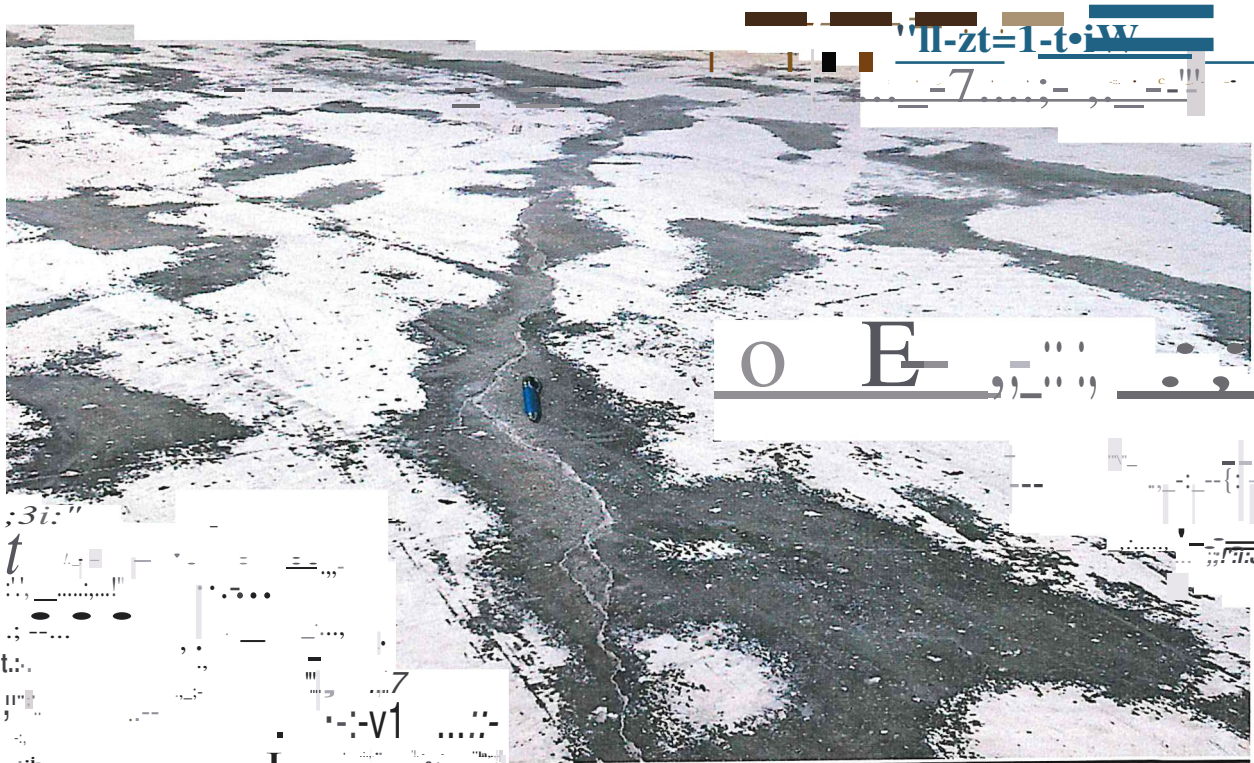
Picture #9 - On the north side the dasher board gates are not in line with the rest of the system and must be constantly adjusted to minimize risk to players.



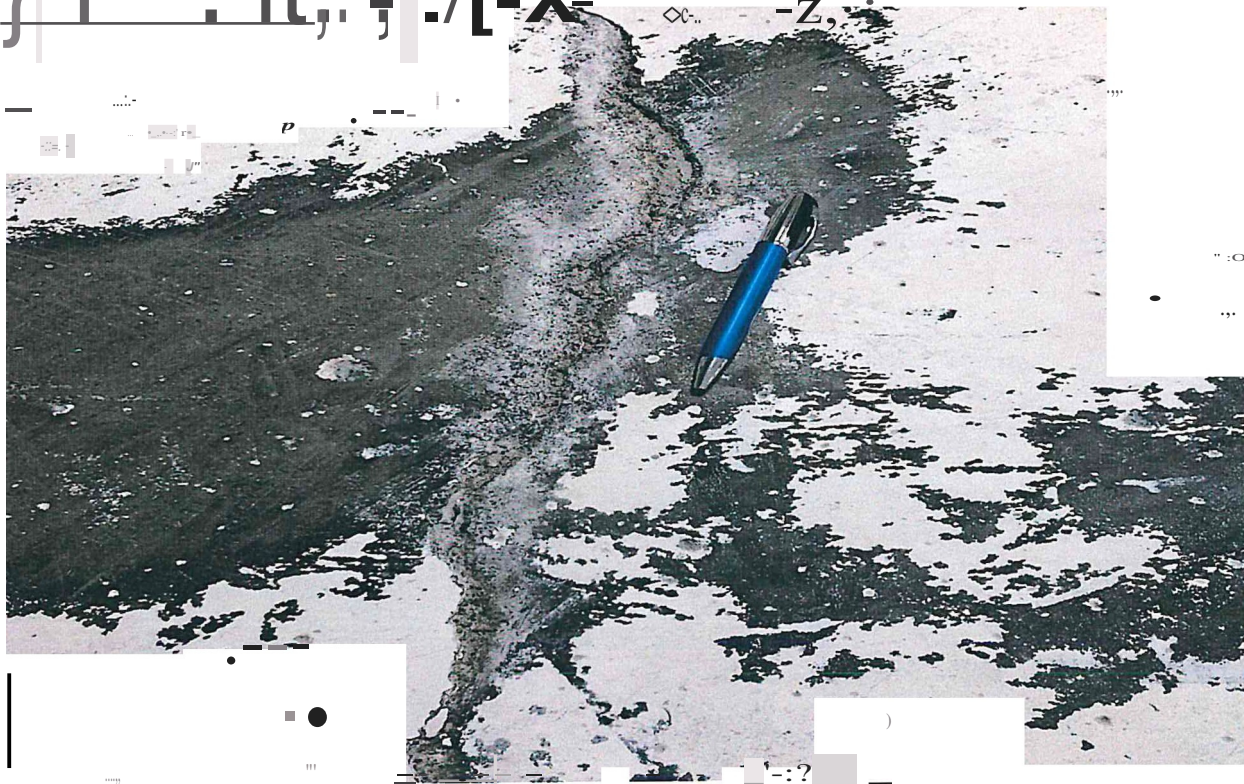
Picture #10 - Gaps between the gates and the boards are creating substantial player safety issues.



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 2nd AND 3rd 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.

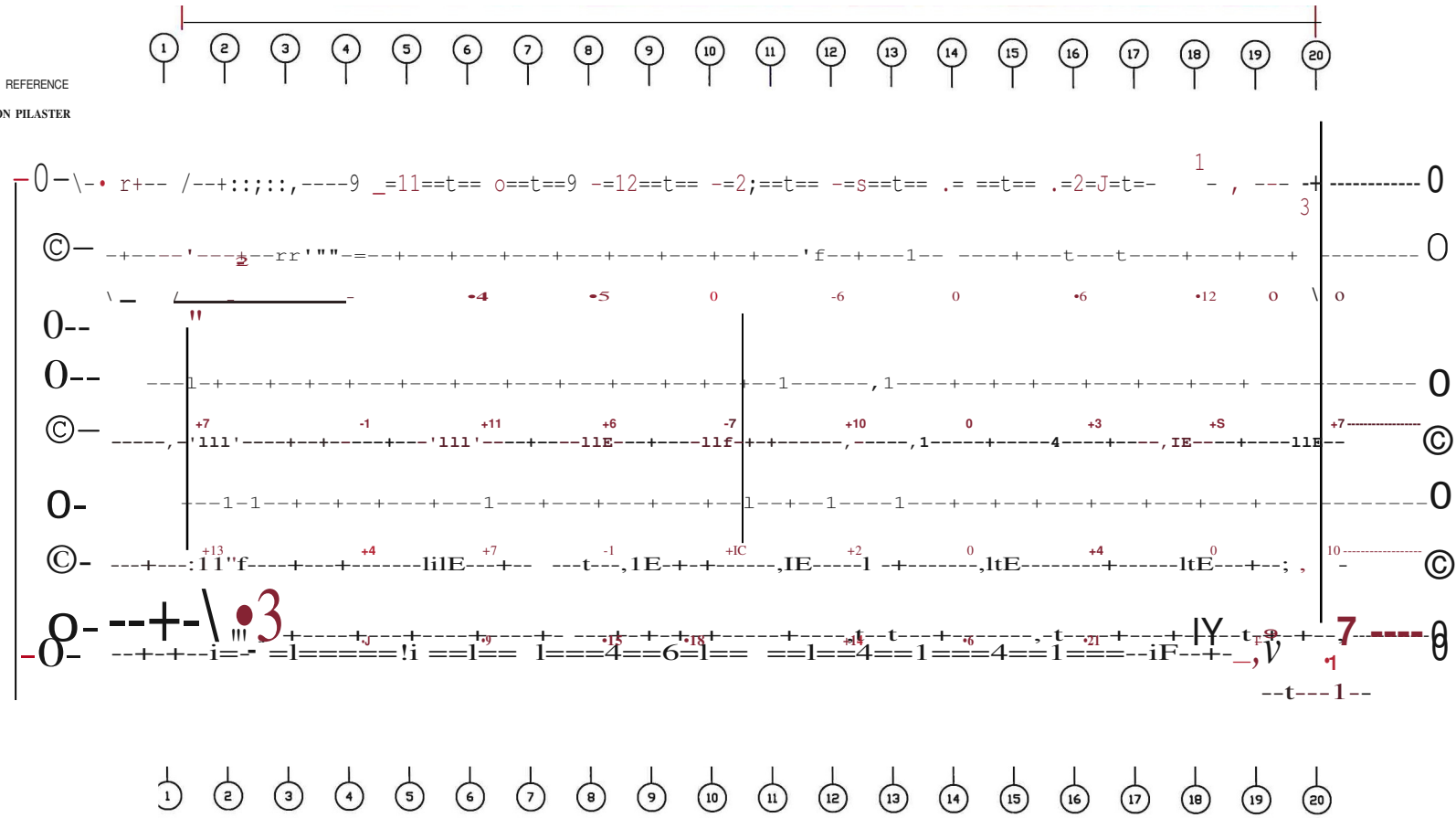
Closing

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.

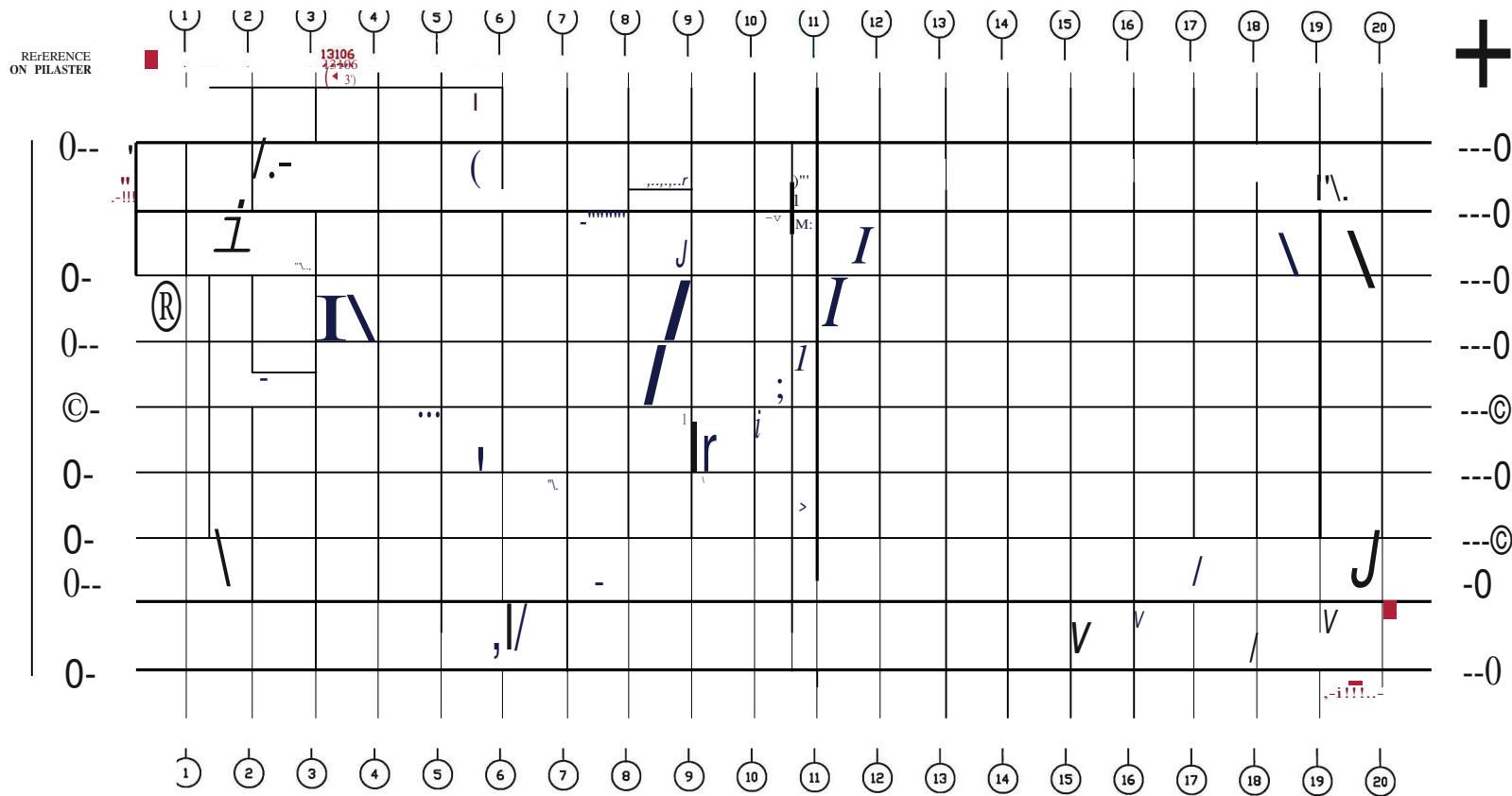
REFERENCE
ON PILASTER



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USE THIS LINE (DPT) AND THE INFORMATION CONTAINED ON THE DRAWING FOR THE DESIGN AND THE CONSTRUCTION OF THE PROJECT. THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF BST CONSULTING INC. AND IS NOT TO BE REPRODUCED OR COPIED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF BST CONSULTING INC.

2021-09-02
N.T.S
S. DUBE
YORKTON KINSMEN ARENA
L. PORTAS
YORKTON KINSMEN ARENA
FLOOR SURVEY
B-2.0



**EST
CORP
INC**

REVISION _____

	2021-09-02
PROJECT MGR:	
	N.T.S
CHECKED BY:	
S. DUBE	RYSANDICE AREN
DRAWN BY:	
L. PORTAS	
LOG TITLE	

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

LEGACY SERIES STEEL DASHER BOARD OFFER YORKTON SK – KINSMEN ARENA

May 5, 2021

Kurt Stechyshyn
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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50523 HWY 21 Leduc County, AB
Phone: 780469-7980 Fax: 780-463-7988 Tollfree: 877-477-8007
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

SHIELDING

Ends (Straight Section) -	5/8" x 6' tall ANSI rated tempered glass – Seamless
Radius Corners -	½" x 6' tall ANSI rated – laminated/bent glass at 28'3" arc
Spectators Side -	1/2" x 4' tall ANSI rated tempered glass – Seamless (reuse existing glass)
Penalty Box Side -	1/2" x 4' tall ANSI rated tempered glass – Seamless (reuse existing glass)
Box Dividers -	1/2" x 4' tall ANSI rated tempered glass - Seamless (reuse existing glass)
Speaker Hole -	3 ¼" diameter = Qty. 1 (1 at front of time keepers' box)
Aluminum Supports -	T6 clear anodized aluminum posts at all terminations
Padding -	36" heavy duty protective pads placed at shielding termination points = Qty. 4
Netting -	Reattach existing netting to board system

PRICING

Shipping:	F.O.B Yorkton SK
Note:	Federal, Provincial, and local sales taxes excluded
Payment:	40% due on contract acceptance and 60% due at substantial completion

OPTIONS – Please add to base price as required

<u>A: Advertising Kits:</u>	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 Price = \$225.00 + TAX/8 lineal feet of advertising space
<u>B: Hockey Goals:</u>	One pair of "professional" style hockey nets. Includes pre-laced 6mm resin coated mesh, and net protector belt. (goal inserts, pegs, and fenders are not included) Price = \$1,750.00 + TAX

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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- 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:

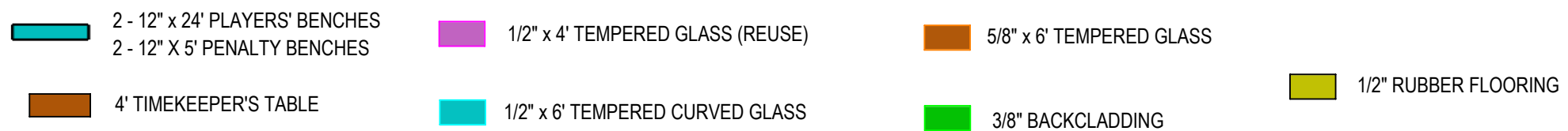
- Mechanical, electrical, painting, paving, and landscaping work
- All licenses, taxes and fees related to project
- Fees, taxes and tariffs imposed by province of Saskatchewan for out of province workers/companies
- Electrical termination of the lift gate, score clocks, time clocks or any other component
- 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

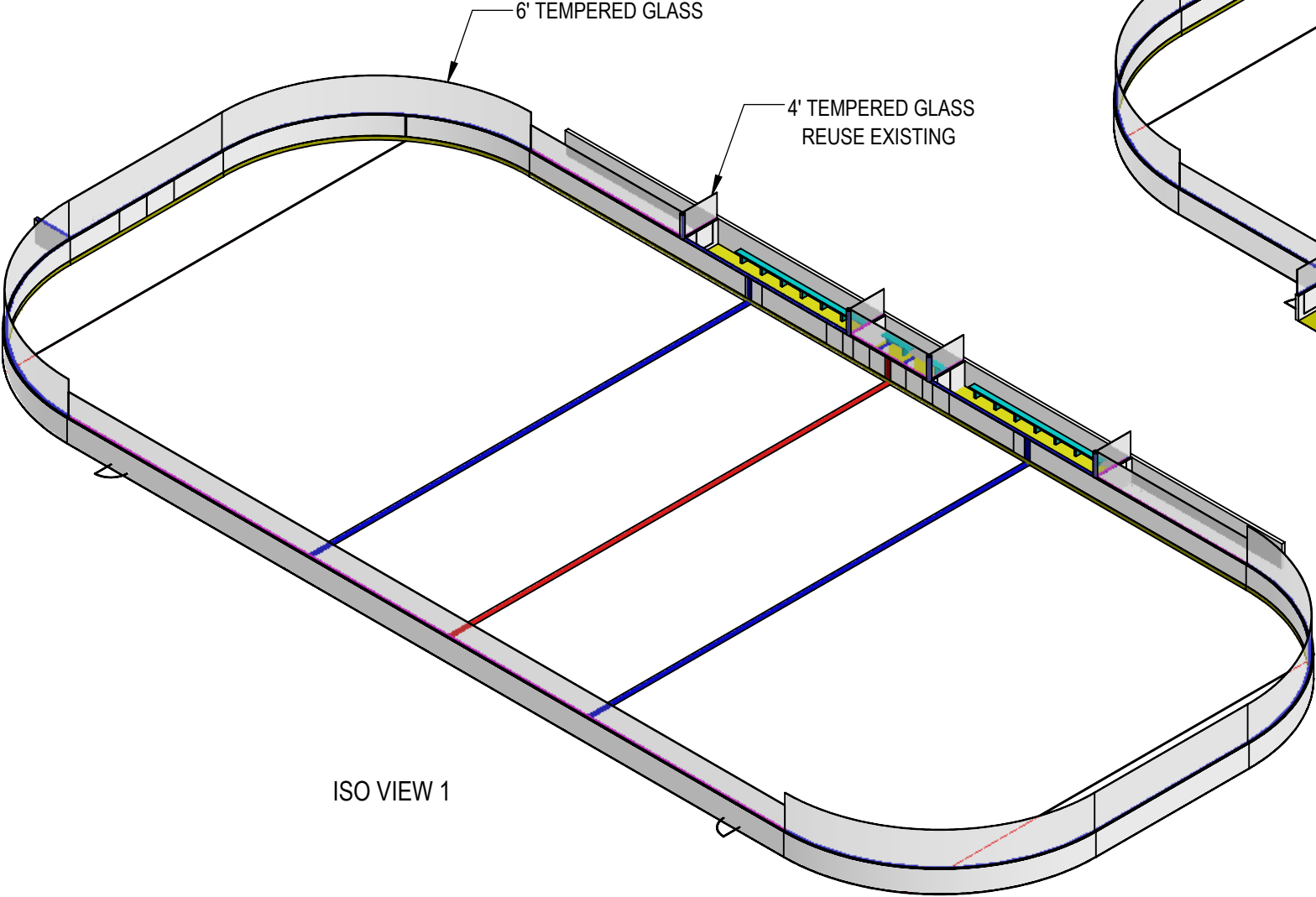
We thank you for the opportunity to bid on this project. We look forward to being able to provide a superior product, which will give the community many years of trouble-free service. Should you wish to discuss further ways and means to make this project as efficient and cost effective as possible, we would be glad to provide our input.

Nick Etchells
Director – Dasherboard Systems
Global Sport Resources Ltd.
Tel: (780) 469 7980 Cell: (780) 242 4417

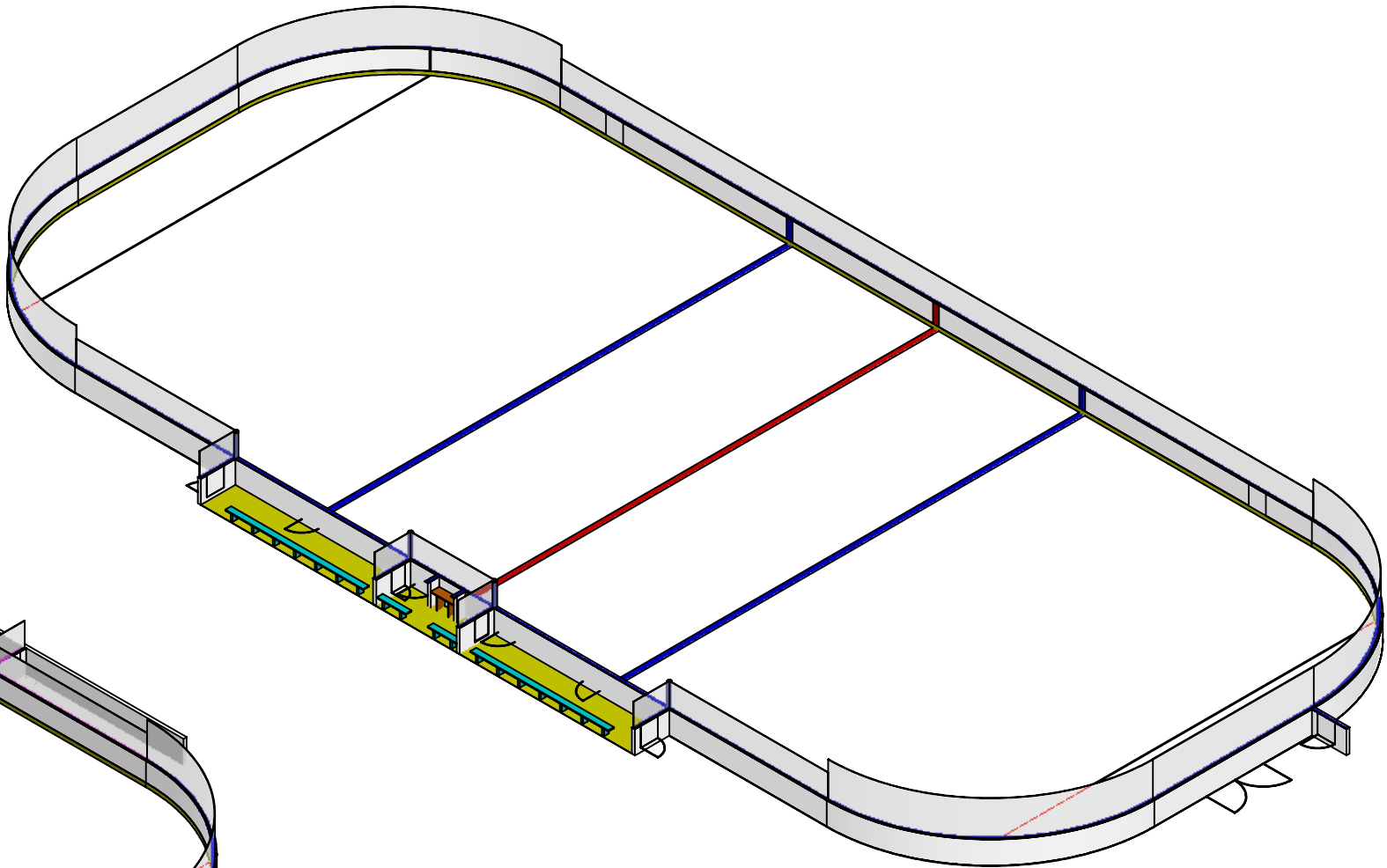




SCALE: 1:384	DO NOT SCALE DRAWING	SHEET 1 OF 1
DWG. NO. KINSMEN ARENA LAYOUT		REV. A



ISO VIEW 1



ISO VIEW 2
EXISTING WALL NOT SHOWN

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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	BY	DATE
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



Global Sport Resources
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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.



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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 :



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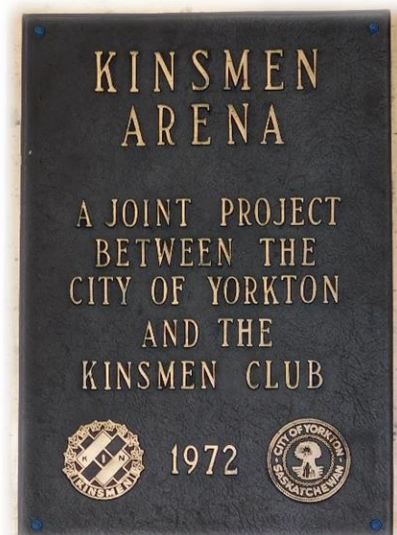
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1. INTRODUCTION

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 (CO₂), nitrogen dioxide (NO₂), 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 LPS¹ (1,100 CFM²).

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/m² (0.75 CFM/ft²).

¹ LPS = volumetric flow rate of air : litres per second. Metric units.

² 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 MBTUH³ 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

³ 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) between⁴.

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

⁴ 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		
Sports Arena	10 LPS/person (20 CFM per person)	0.9 LPS per square metre (0.18 CFM per square foot)
Spectator Area	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 temperature⁵ 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.

⁵ 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 ⁶
Rink Dimensions :	
Length	190 feet
Width	85 feet
Corner Radius	15 feet
Rink Surface Area	15,957 ft ²

⁶ 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 potentially⁷ 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.

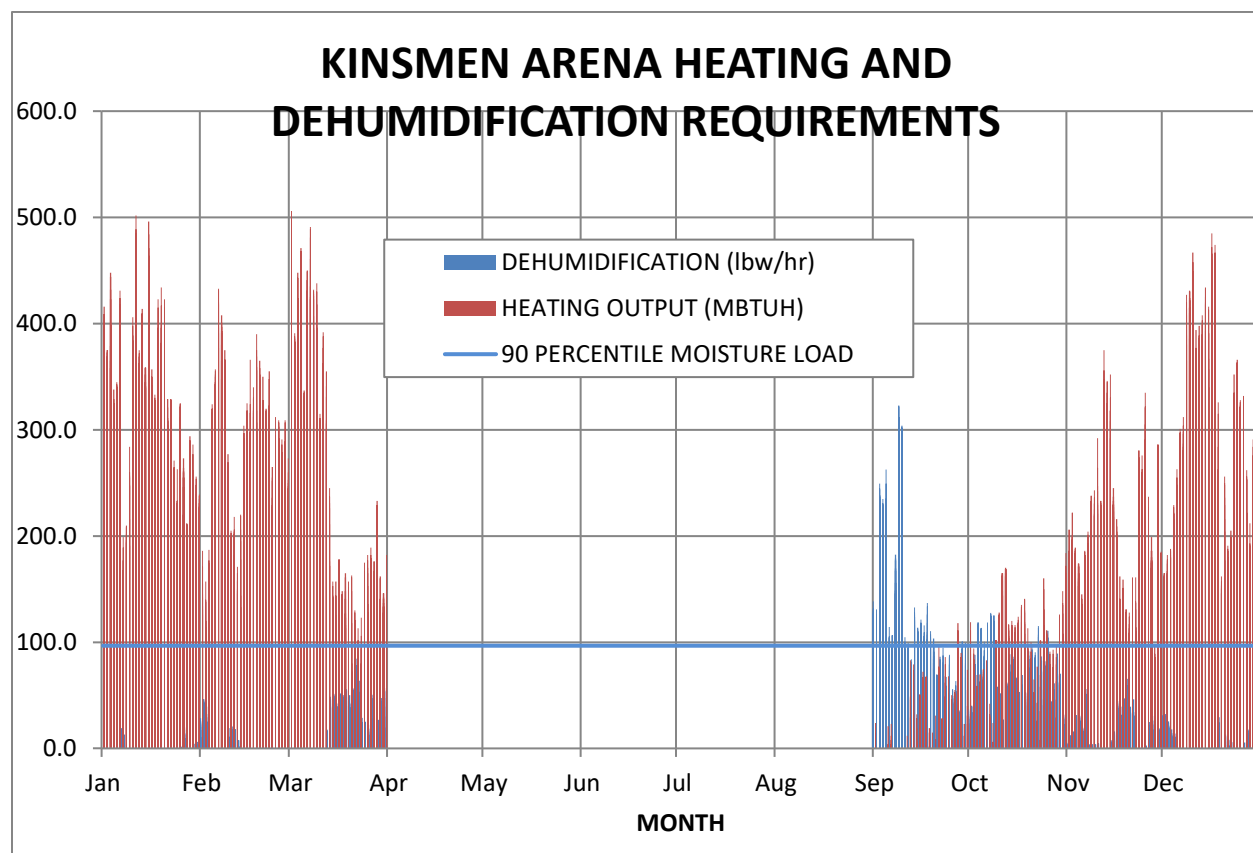
The value noted above of 97 lbw/hr moisture removal can be broken down as follows:

⁷ “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
TOTAL	96.6

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	
SUBTOTAL MECHANICAL	\$395,000	
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	
TOTAL	\$610,000	

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 2nd 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 2nd 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 3rd

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 5th 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.



Capital Budget Request Form

Project Title:	Gallagher Centre Ice Plant		
Department:	Recreation & Community Services	Division:	
Project Location:	Gallagher Centre		

Description	Year	Gross Cost	Grants	Reserves	Other Funding Sources	Capital Budget
Provide brief explanation (Rollover, Pre-design, Design, Tender, Project)						
Tender	2022	\$ 1,085,000.00				\$ 1,085,000.00
						\$ -
TOTAL		\$ 1,085,000.00	\$ -	\$ -	\$ -	\$ 1,085,000.00

Detailed Description of Project (Scope of Work):

Consultants were engaged to determine the scope of work required to ensure the Kinsmen Arena can remain a viable ice service for the community over the next 15 years. Since these consultants were in Yorkton, we had them conduct the same reviews of the Gallagher Centre ice systems to provide an overall picture of ice systems provided by the City. 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, however both screw compressors require an overhaul immediately. Rather than overhauling the screw compressors, we would replace them with reciprocating compressors. Replacing the screw compressors with reciprocating compressors would be more costly than overhauling the screw compressor. However, the reciprocating compressors will be more efficient, and would simplify the refrigeration system and its controls. Ice plant code related upgrades are required at the same time as well to ensure proper ventilation and both OH&S and public safety.

Description of "Other Funding Sources":

--

Project Manager (Name & Title):

Jeff Fawcett, Manager of Capital Projects,

Members on Project Team (Name & Title):

Kurt Stechyshyn, Facilities Manager, Taylor Morrison, Gallagher Centre GM

Submitted by:	Darcy McLeod, Director	Date:	November 18, 2021
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TITLE: Adoption of 2023 Operating & 2023/2024 Capital Budgets	DATE OF MEETING: February 13, 2023
	REPORT DATE: February 3, 2023
CLEARANCES:	ATTACHMENTS: 1) January 30, 2023 Report to Council and Budget Submission Package 2) Public Feedback Responses
Written by: Ashley Stradeski - Director of Finance Ashley Stradeski	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Gord Kennedy – Acting City Manager Gord Kennedy	

BACKGROUND

The proposed 2023 Operating & 2023/2024 Capital Budgets were presented to Council at the January 30, 2023 Council meeting. At that Council meeting, the drafts of the 2023 Operating & Capital Budgets were approved for public consumption, and published for public review on the City's website.

The detailed report (Attachment #1) includes the original report in its entirety, which includes the operating plans for 2023, as well as the 2023/2024 capital projects and funding sources.

DISCUSSION/ANALYSIS/IMPACT

On January 31, 2023 the entire budget report was posted to the City's website, as well as advertised on our social media platforms, a news release and the local newspaper. The public was encouraged to review the budget and provide any feedback, comments or questions. Any legitimate public response will be summarized and presented to Council, if it is received by noon February 13, 2023.

Given that the public feedback period closes on February 13, additional public comments/questions may be presented to Council by Administration on the day of the Council meeting (which may not be contained in this written report).

As of the date of this report, eight written submissions were received, see Attachment #2.

FINANCIAL IMPLICATIONS

To reiterate the original budget submission, the 2023 Budget is proposed with a 3.93% increase to taxation revenue, which is broken down as follows:

All Department Operations	2.93%
Capital	<u>1.00%</u>
Total Budget Increase	3.93%

As the City is not allowed to run a deficit, the budget contains a small forecasted surplus of \$2,939.

COMMUNICATION PLAN/PUBLIC NOTICE

If approved, the 2023 Budget will be posted on the City's website at www.yorkton.ca/budget along with the public review form being available year round for general comments or queries. The approved budget will also be promoted through our social media platforms and in the local newspaper.

OPTIONS

1. That Council adopt the 2023 Operating & 2023/2024 Capital Budget as presented.
2. That Council adopt the 2023 Operating & 2023/2024 Capital Budgets with amendments.
3. That Council deny the adoption of the 2023 Operating & 2023/2024 Capital Budget as presented for reasons provided by Council.
4. That Council provides other direction to Administration.

RECOMMENDATION

- 1. That Council adopt the 2023 Operating & 2023/2024 Capital Budgets as presented.**

REPORTS TO COUNCIL

TITLE: 2023 Operating & 2023 / 2024 Capital Budgets	DATE OF MEETING: January 30, 2023
	REPORT DATE: January 25, 2023
CLEARANCES:	ATTACHMENTS: 1) 2023 Budget Submission; 2) 2023 Operating Budget Summary; 3) 2023 / 2024 Capital Budget; 4) Tax Revenue and Departmental Expense Pie Chart
Written by: Ashley Stradeski – Director of Finance Ashley Stradeski	
Reviewed by: Jessica Matsalla - City Clerk Jessica Matsalla	
Approved by: Lonnie Kaal - City Manager Lonnie Kaal	

BACKGROUND

Budget preparations were begun by the individual departments in September and October of last year. These were compiled, analyzed and adjusted through our cooperative process over October and November, and initially brought before Council at the Strategic Planning meetings on November 28 & December 14 of 2022, and January 16, 2023, to present, discuss, and to seek direction from Council.

During these meetings, departmental budgets were reviewed, discussed, and service levels were considered in conjunction with budget. All queries and additional details were brought back to Council for consideration, as well as in depth discussion on topics and areas where Council thought important.

DISCUSSION

The City has prepared a service level status quo budget as our starting point. This means that costs reflected in the preliminary budgets are estimated to provide the same level of services to the residents of Yorkton as the year prior.

With maintaining service levels being our starting point, the impact to tax payers is the next primary focus. With regards to this, the City has, just like everyone else in Canada, been affected by the above average levels of inflation in 2022. Inflation for the year has been sitting around the 7% or higher mark, and this affects all of the goods and services the City requires to operate.

Items like asphalt and other aggregates used in construction are up 15-25%; electricity is up 8% and energy costs up more than 17%. High fuel prices (50% higher or more throughout the year) affect many of the core services that utilize mobile equipment, as well as driving up costs of nearly every product the City purchases. At the end of the day, the total required budget has gone up; this is not due to increased areas of spending, but rather increased costs to do the same amount of work.

Because of this our initial budget numbers were high and the impact to taxpayers would have likewise been high. The initial budget came in at approximately 8%, and this has caused us to ask the question – what do we do with these cost increases? The attached budget presentation includes the results of the pre-budget survey conducted on “Shape Your City” and, generally speaking, there were no core service areas where citizens were overwhelmingly willing to see decreased levels of service. With regards to how to fund cost increases, there was a clear leaning towards increasing user fees. User fees are charged on various services the City offers such as recreation passes, penalties on taxes, and many other items. These are collected such that the individual who used the service or incurred the expense pays for it rather than the taxpayers in general.

Increasing user fees is something that is never easy to do, however a balance of user fee increases can help keep the tax increase more affordable for our residents. Of the \$55 million or so that the City spends each year, only half of that is collected via taxes and the remainder is various fees, charges, and other sources of funding. When costs are increasing dramatically across the board, increasing taxes alone would shuffle the burden for all services more onto the taxpayers and thus user fee increases are appropriate.

Work continued to limit the areas of increase and to manage the tax increase to an amount that is as affordable as possible for our residents; every increase was challenged and assessed to see if it was necessary, and as mentioned charges, fees and revenues were scrutinized to ensure we are capturing all opportunities for maximizing revenue generation in our existing business units.

That being said, the proposed budget includes the following increases required in taxation:

Operations	2.93%
Capital	<u>1.00%</u>
Total:	3.93%

This works out to approximately \$1.05 million in additional taxation revenues. The impact to the average residential homeowner would be roughly \$6.50 a month. Various user fees for City services have also been increased by approximately 5% to help offset the increasing costs to provide these services.

Operating Budget – 2023

Attachments 1 & 2 include the Operating Budget Submission and the Operating Budget Summary. The Operating Budget Submission is a more in depth look at the various departmental budgets as well as a summary of what services those departments perform, with the summary being a “one pager” of the budget as a whole.

The overall increase in taxation to fund the City's operations is 2.93% - significantly below inflation. This includes everything from Public Works, Parks, RCMP, and every other non-utility department. This was a challenge in a year where costs were rising so drastically in Canada, however the burden on taxpayers was kept in mind throughout the entire budget process. Similarly, to any individual or business, inflation does affect the majority of costs incurred by the City as well. As costs for goods and services rise, the City bears these increases in its budget.

Significant Items

Gallagher Centre

This is an area where the various cost increases compound with lower revenues to add significant costs to the City. This is a large building with high heating and power bills, with various high power use items such as ice plants for the rinks, water pumps for the pools, and generally a large amount of space to heat and light. With energy prices rising 17% and power 8%, this hits all our large facilities greatly.

Overall costs were up around 4.4% at the Gallagher Centre, however decreased revenue from leases and concessions have added to this. To offset, many of the fees and charges at the facility will be increased by 5% throughout the year, with a net increase in cost of \$250,000.

RCMP Contract

Last year saw the largest increase in policing costs we have ever encountered due to contract negotiations, and this year the expected contract is still a large increase with numerous requirements for body cams and other personal equipment that has been overdue for replacement or modernization.

The budgeted cost increase here is over 4%, with extra funding going towards the mentioned equipment and increased staffing costs.

Corporate Services

Corporate Services encompasses many services to run the City including chief administration, human resources, finance, payroll, city-wide IT services, as well as many service provider contracts ranging from legal and accounting to assessment services.

Included in this are software costs, and this is an area that is becoming increasingly expensive as well, with the majority of software providers now on a subscription service rather than the previous "buy the software" model. Many of our software suites, primarily Microsoft, have increased significantly. Additionally, improved cyber security tools are budgeted here.

Public Works

Public Works is responsible for maintenance of our linear assets such as roads, curbs, sidewalks, including snow removal among other things.

This is another area heavily hit by rising prices – aggregates used in road construction and repair have seen increases in the 15-25% range, as well as fuel costs for the heavy equipment, snow plows, and other items.

Another point of cost increase has been snow removal; the City typically budgets snow removal based on the 5-year average cost. 2022 was a record year for snow, with the City actually hitting its entire snow removal budget by the end of February.

The overall budget here has been increased by 9.87% to offset the increased asphalt, fuel and snow removal costs.

Environmental Services (Waterworks, Landfill & Refuse/Recycling)

With regards to our Water Utility, this budget includes the previously approved 4.75% increase to water rates as well as the \$3 / month increase to the residential water base charge. This will offset increasing costs with replacing water lines, sewer lines, and meters, as well as the ever aging water and sewer underground infrastructure as discussed in an earlier Council meeting.

While this rate increase is substantial, the costs of water and sewer replacement, as well as breaks, and even the cost of power and natural gas at the treatment plants has risen sharply and needs to be maintained.

Capital Budget - 2023

The capital budget includes a 1% increase in taxes, or roughly \$267,000, for capital projects. This will bring our annual capital expenditure total to \$4,910,000 for 2023. The capital budget as prepared is a 2-year capital budget to allow for planning of larger and more complex capital projects, and the 2024 year has a planned increase of 1% as well.

This increase will help go towards our “infrastructure deficit,” which is the gap in what we should be spending on an annual basis to replace our aging infrastructure and what we are currently spending.

The 2024 capital total will be \$5,189,000, which is an increase of 20% over 5 years. It is important that we continue to increase our capital spending as not only do we have aging infrastructure that desperately needs replacement, but also cost increases in nearly every aspect of capital, often far in excess of standard inflation.

For 2023, the capital budget was approved last year and included funding for York Road, and updates to our Kinsmen Arena ice system to keep it operational for the future.

New items on this budget are the 2024 capital, which include projects such as the Airport Terminal building, replacements for several street lights and traffic signal poles, and further funding towards roadwork.

One major notable project is upgrades to Highway 10 East past Mayhew Ave, which is in partnership with the Province via the Urban Highway Connector Program. This project will essentially complete the eastern stretch of Highway 10 within the City limits.

The biggest new project on the docket is the detailed design of our upcoming Water Pollution Control Plan (WPCP) – this is a must have for the City to meet new regulations with regards to wastewater treatment. This plant will continue to keep Yorkton viable with regards to water treatment, particularly with industrial uses in mind.

There are other smaller projects including various work and improvement to parks around the City, as well as some much needed maintenance in our other facilities. Deer Park also receives money towards ongoing irrigation upgrades.

This is far from a complete list, as there are numerous small projects being funded from either the capital budget or from reserves, and the entire list is included as Attachment 3.

FINANCIAL IMPLICATIONS

This budget once again represents the City doing what it can to control cost increases that are being seen across North America, utilizing a blend of fee increases and tax increases to keep the impact to taxpayers as minimal as possible.

The increase to taxation allows the City to balance the budget despite the larger than normal inflation, which hits construction and infrastructure particularly hard.

As mentioned, the impact to the average residential homeowner will be approximately \$6.50 per month, or roughly twice that for an equally valued commercial property.

COMMUNICATION PLAN

As has been our practice, the package included with this report will be made public on our website subject to Council's approval tonight, and the budget submission presentation will be posted permanently on the City's website as well. This presentation has been updated to be much more readable and easier to follow for the general public.

The budget information will be posted January 31, 2023, until the next Council meeting for feedback to be collected on our website or by direct communication with us at the City. We encourage all questions by phone, email or through our website feedback form, available on www.yorkton.ca/budget which will be linked off our main page and on social media.

OPTIONS

1. That Council direct Administration to publish the 2023 Operating and 2023/2024 Capital Budget report in its entirety on the City's website for public review, and further that Administration bring a subsequent budget report to the February 13, 2023 Council Meeting for adoption.
2. Other direction as Council deems appropriate.

RECOMMENDATION

That Council direct Administration to publish the 2023 Operating and 2023/2024 Capital Budget report in its entirety on the City's website for public review, and further that Administration bring a subsequent budget report and summary of feedback to the February 13, 2023 Council Meeting for adoption.



Where Good Things Happen!

City Budget 2023

Operating & Capital

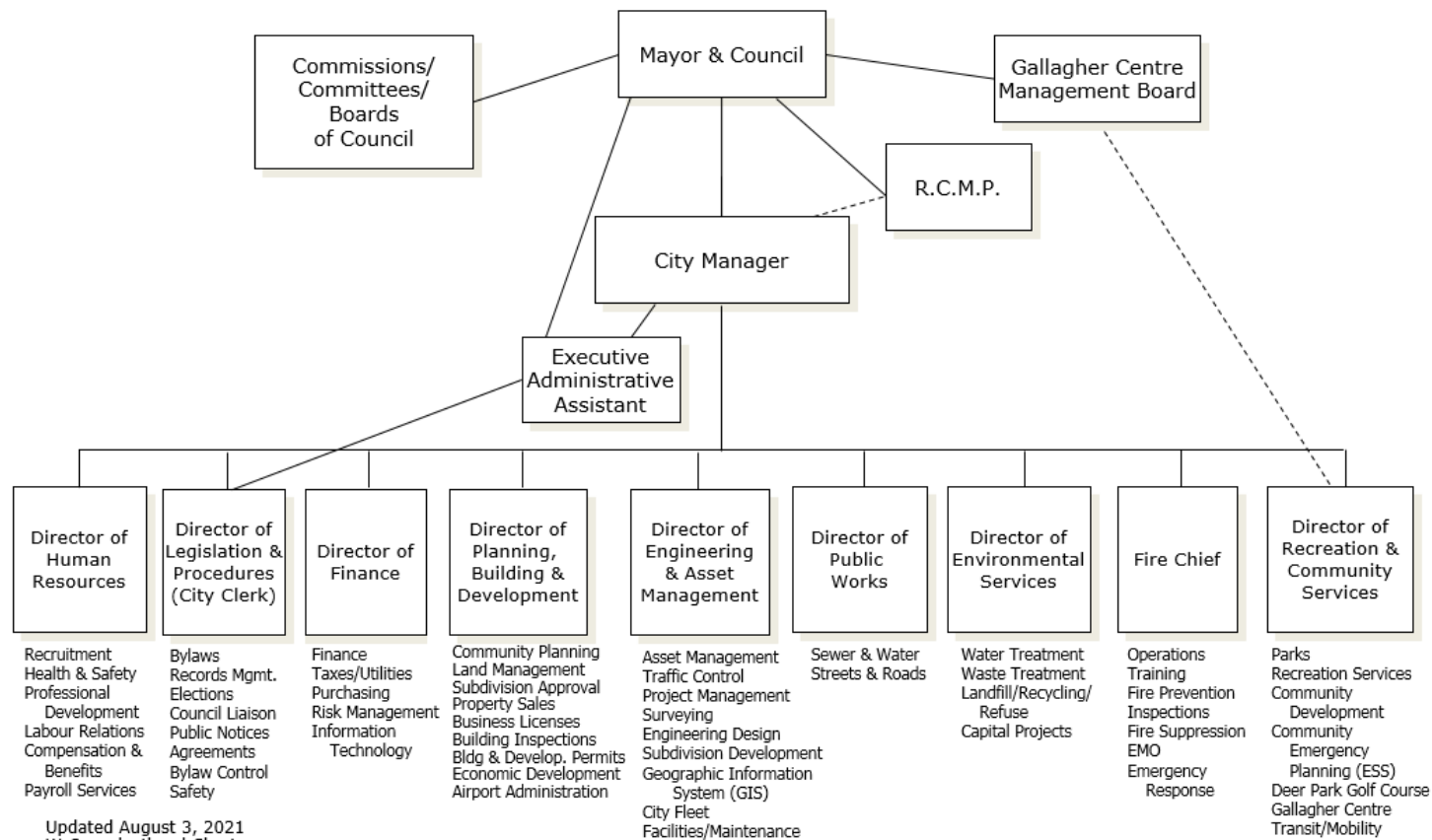
Presented to Council – January 30, 2023

Operating Summary

- Providing same levels of service as prior year
- Reflects minimal changes to operations
- Includes significant cost increases for inflationary items:
 - Utilities: Power 8%, Energy 17%
 - Fuel approx. 50%
 - Asphalt and other aggregates 15-20%
- Presented on a department by department basis
- Significant variances explained
- Highlights from pre-budget public survey included

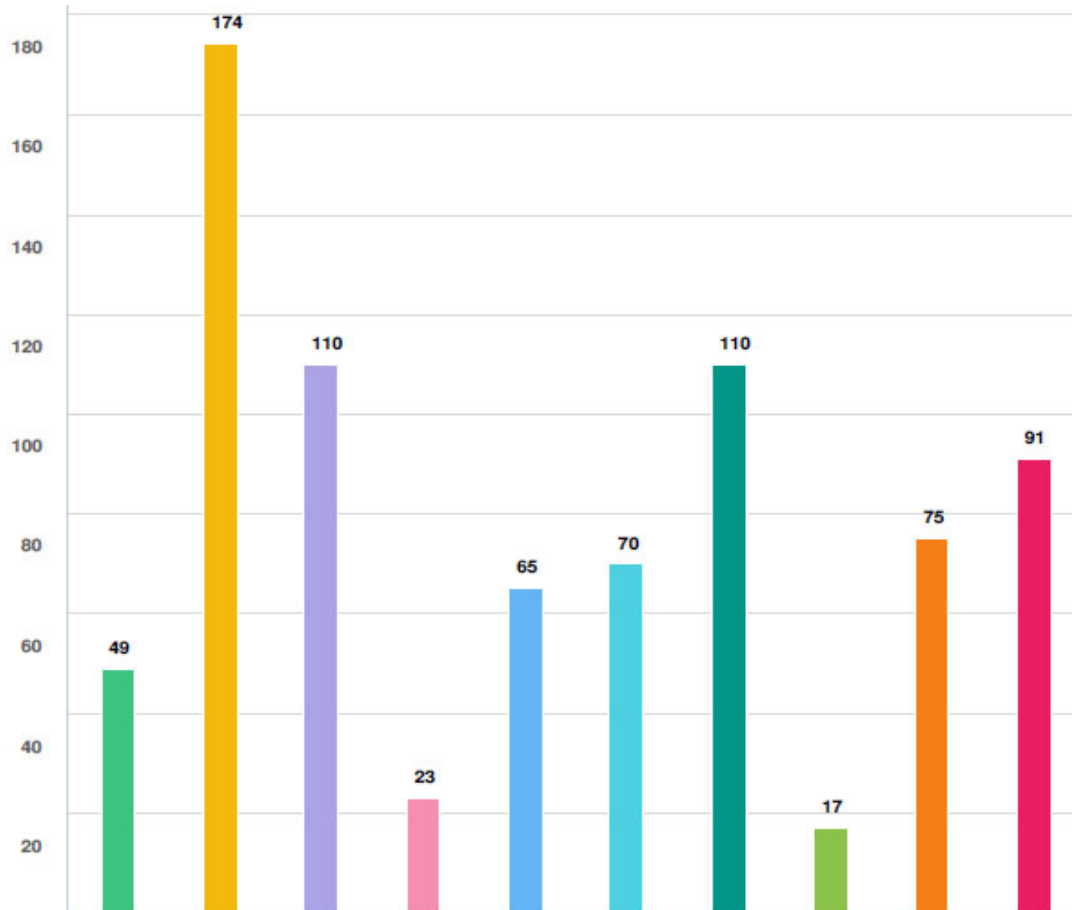
Operating Budget – The Means to Provide Services

City of Yorkton - Organizational Structure



Updated August 3, 2021
W:Organizational Charts

Pre-Budget Public Survey (264 Responses)



Question – What are your top 3 community concerns?

1. Infrastructure (roads, utilities, facilities)(66%)
2. Cost of living (42%)
3. Health and public health (42%)

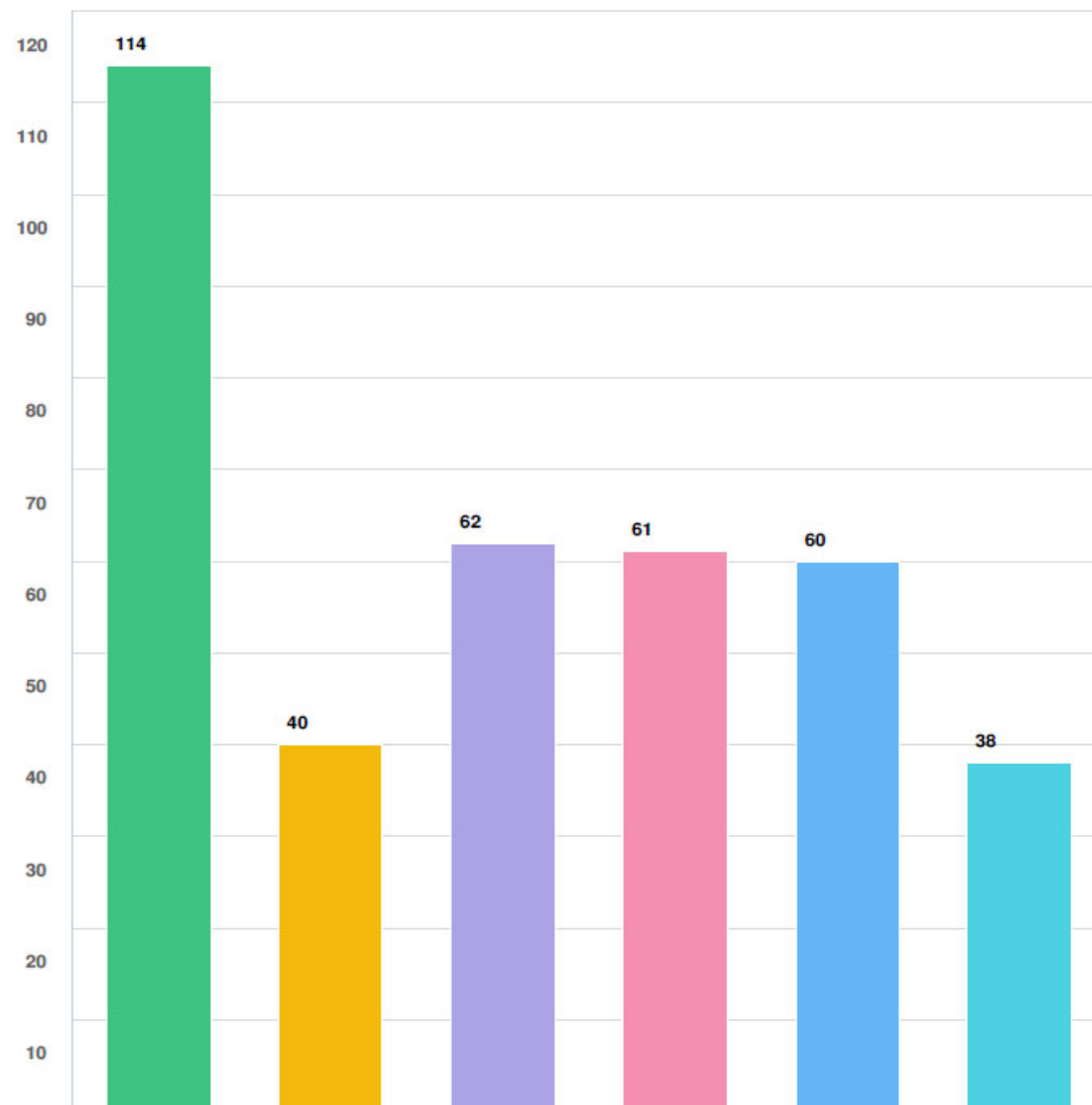
Question options

- Affordable housing and accommodations
- Infrastructure (roads, underground utilities, facilities)
- Cost of living
- Social issues
- Economy, jobs, economic issues
- Business development and growth
- Health and public health
- Environment, environmental issues and sustainability
- Crime and public safety
- Improve parks, recreational facilities, and services

Pre-Budget Public Survey (264 Responses)

Priority	Citizens asked to rank City services from most important (1) to least important (10) to them.	Average Rank
1.	Public safety (RCMP, Fire, Bylaw) and property standards/enforcement	3.66
2.	Road resurfacing/pot hole repairs	3.73
3.	Snow clearing/ice removal	4.42
4.	Water and sewer infrastructure	5.16
5.	Recreation facilities/programs	5.46
6.	Drainage/storm water management	5.53
7.	Economic and business development	6.00
8.	Parks and greenspace maintenance (grass, trees, weeds)	6.21
9.	Garbage/recycling services	6.21
10.	Transit	8.36

Pre-Budget Public Survey

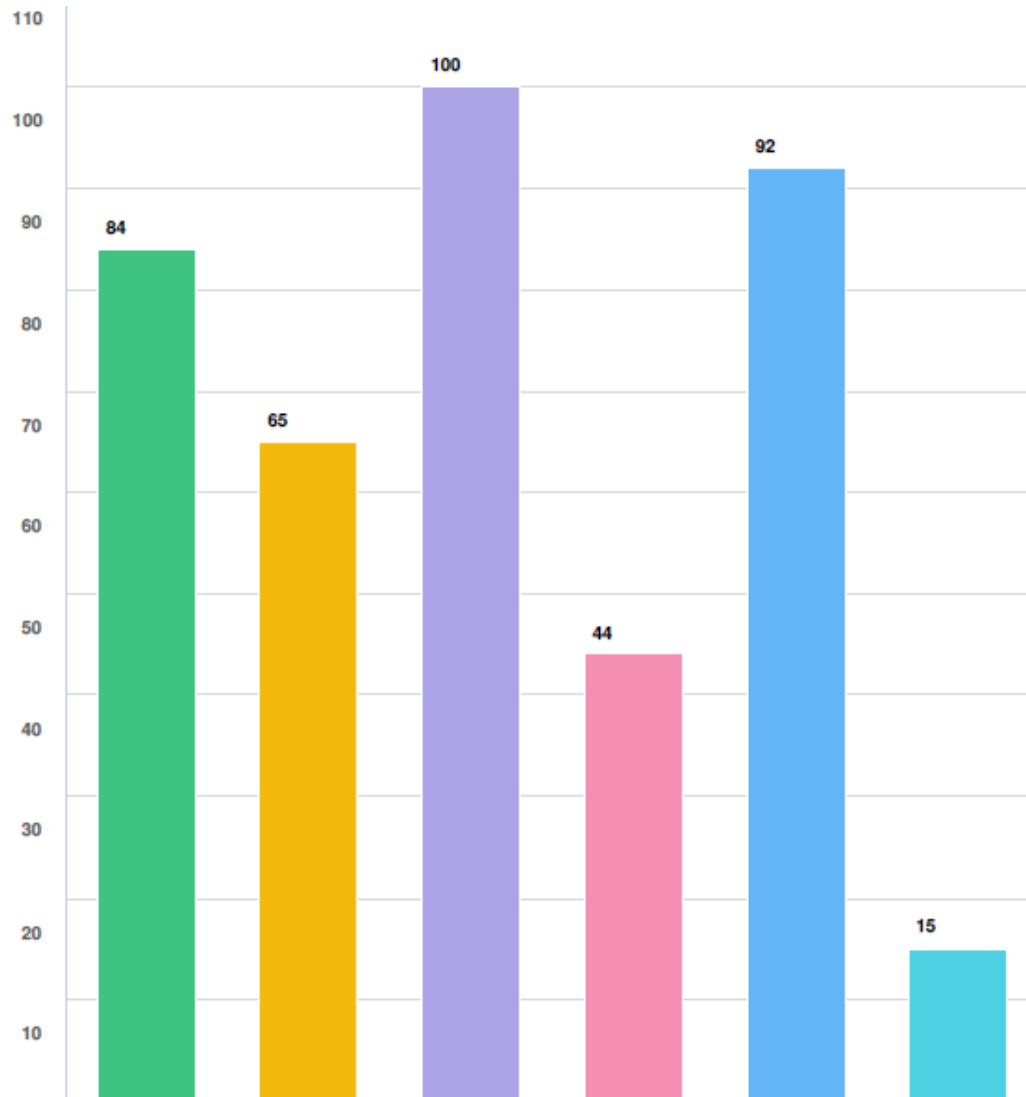


Question – With inflation, the cost of City services increases; how would you prefer we offset these rising costs?
(Select up to two:)

- Increase user fees
- Increase utility rates
- Introduce new user or service fees
- Increase property taxes
- Reduce service levels
- Stop providing a particular service

- 45% Favour Increasing User Fees

Pre-Budget Public Survey



Question – Would you support the idea of a dedicated property tax levy for a specific service? (Select all that apply:)

- Road Levy
- Recreation Facility Levy
- Hospital Levy
- Drainage and Storm Water Levy
- No - none of the above
- Other (please specify)

- 39% Favour Hospital Levy
- 36% Favour No - None

General Revenue

	Actual	Budget	Budget	\$	%
	2021	2022	2023	Change	Change
Revenue					
Taxes including Grants In Lieu	25,249,317	26,509,872	27,853,027	1,343,155	5.07%
Tax Losses	-742,401	-100,000	-100,000	0	
Interest Income and Tax Penalties	292,211	469,099	482,075	12,976	2.77%
Crown Surcharges	3,126,034	3,130,000	3,200,000	70,000	2.24%
Municipal Operating Grant	3,266,773	3,109,734	3,287,000	177,266	5.70%
	<u>31,191,934</u>	<u>33,118,705</u>	<u>34,722,102</u>	<u>1,603,397</u>	<u>4.84%</u>

Legislative



Provides:



Support & training for Council objectives



Council receptions/committees



Local grants (YBID, Film Festival, Art gallery and Tourism facility rents, youth rec facility rebates) and donations

Legislative

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Expenses					
Council remuneration	247,358	261,370	277,130	15,760	6.03%
City promotional	12,048	16,000	20,000	4,000	25.00%
Office expense	67,543	73,825	88,621	14,796	20.04%(1)
Election expense	0	4,500	5,000	500	11.11%
Receptions & recognitions	8,300	7,000	14,500	7,500	107.14%(2)
Grants and donations	248,971	255,305	256,600	1,295	0.51%
Facility rebates	86,470	161,500	161,500	0	0.00%
	<u>670,690</u>	<u>779,500</u>	<u>823,352</u>	<u>43,852</u>	<u>5.63%</u>

Variances:

- (1) City Hall expenses (utilities, maintenance)
- (2) Increase for committee appreciation night



Corporate Services

Corporate Services

Provides support for city-wide services

City Clerk's Office



- Records management – policies/bylaws/minutes
- Council admin – meetings/agendas/elections
- Committee administration
- Legal matters
- Privacy and access to information
- City-wide contract administration
- Land leases
- Bylaw services (traffic, parking, property standards and enforcement)
- City-wide safety programs and administration

Corporate Services

Human Resources



- Recruitment and onboarding of new employees
- Corporate learning and development strategy
- Workforce planning
- Payroll and benefits administration
- OH&S programming, COR certification
- Administration and management of disability claims (WCB, STD, LTD)
- Employee relations, performance management and discipline
- Unionized relations and the bargaining cycle

Finance



- Budget
- Property tax (assessment and enforcement)
- Utility billing administration and collections
- Accounts payables, receivables, city-wide payment processing
- Financial reporting and treasury management
- Insurance and risk management
- City-wide IT services, security, network and delivery

Corporate Services

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Leased Land	19,897	32,000	25,000	-7,000	-21.88%
Office Services	55,522	37,500	41,000	3,500	9.33%
Bylaw Services	27,621	93,000	82,000	-11,000	-11.83%(1)
Parking Fees	18,380	20,000	20,000	0	0.00%
	<u>121,421</u>	<u>182,500</u>	<u>168,000</u>	<u>-14,500</u>	<u>-7.95%</u>
Expenses					
City Manager/City Clerk	644,956	604,231	616,807	12,576	2.08%
Human Resources	567,168	648,095	666,072	17,977	2.77%
Finance/Information Technology	1,103,370	1,232,346	1,249,643	17,298	1.40%
City Administration	818,887	867,650	977,400	109,750	12.65%(2)
City Owned Property	13,711	10,000	10,000	0	0.00%
Bylaw	310,278	345,756	350,170	4,413	1.28%
Parking	25,993	36,050	36,050	0	0.00%
	<u>3,484,363</u>	<u>3,744,128</u>	<u>3,906,141</u>	<u>162,013</u>	<u>4.33%</u>
Net Expenses over Revenue	<u>3,362,942</u>	<u>3,561,628</u>	<u>3,738,141</u>	<u>176,513</u>	<u>4.96%</u>

Variances:

- (1) Reduction in contracted service revenue
- (2) Software costs (\$36,000 – Adobe, MS, website, DUO MFA);
Cybersecurity suite \$80,000



Fire Protective Services

Fire Protective Services

Provides:



- Fire suppression for the City, RM of Wallace, RM of Orkney and York Lake (24 hour availability)



- Vehicle accident rescue and response
- Emergency medical response support
- Prevention (fire drills, CO₂ detection)



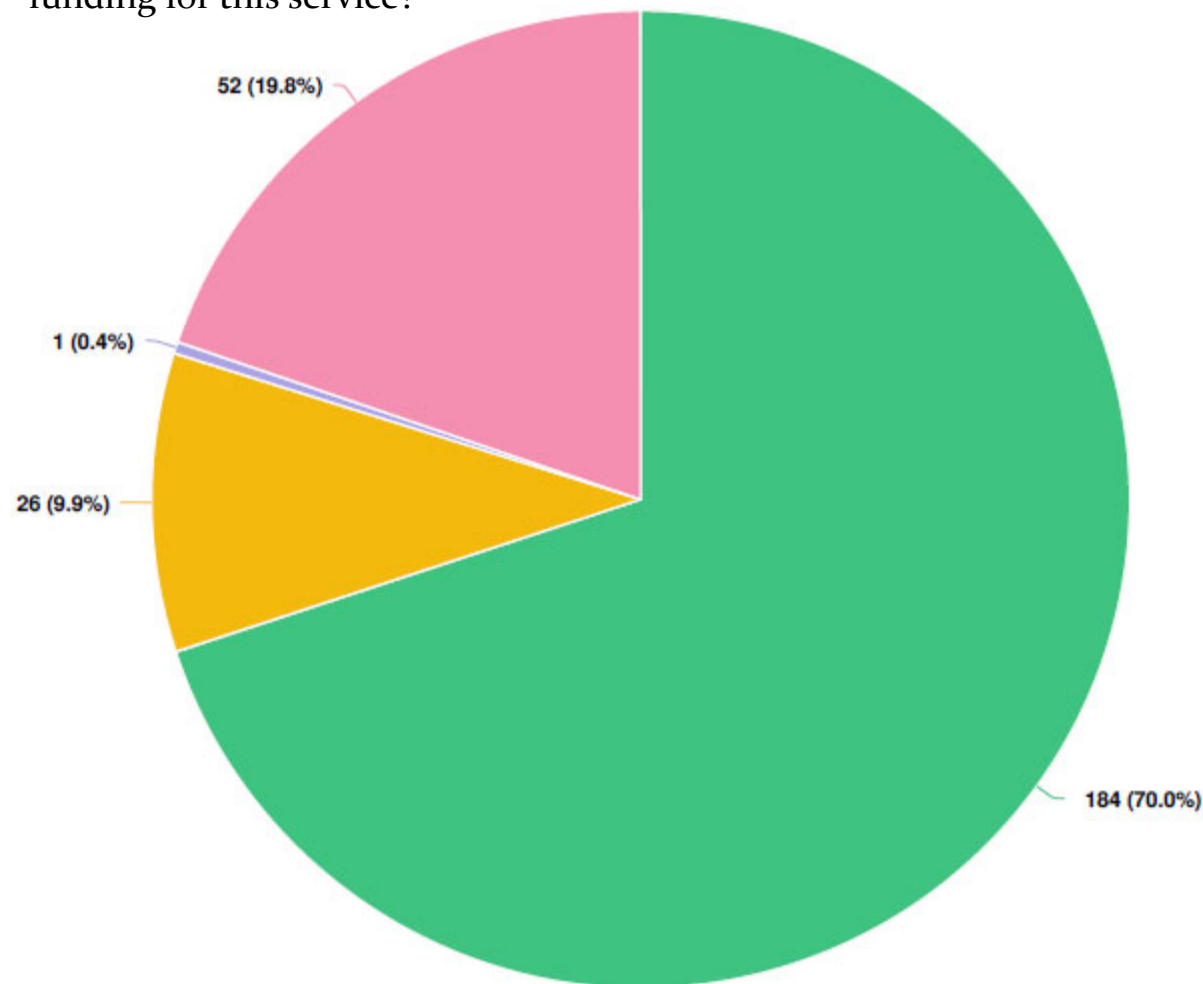
- Manages mass alert system city-wide (Voyent Alert)
- Public education and equipment safety programs
- Fire inspections (residential, commercial, industrial)
- Emergency management (EMO) for the City and Fire Hall acts as Emergency Operations Centre
- Hazardous material response
- Train derailment response

Fire Protective Services – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service?

Question options
(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.



Fire Protective Services

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Fire Service Fees	74,933	75,500	75,500	0	0.00%
Fire Service Agreements	373,509	370,000	385,000	15,000	4.05%
	<u>448,442</u>	<u>445,500</u>	<u>460,500</u>	<u>15,000</u>	<u>3.37%</u>
Expenses					
Administration	444,862	457,240	463,904	6,664	1.46%
Prevention & Education	4,825	20,000	20,300	300	1.50%
Operations & Suppression (IAFF)	2,167,005	2,227,690	2,311,762	84,072	3.77%(1)
Training	6,048	39,000	39,000	0	0.00%
Equipment	347,551	299,620	296,620	-3,000	-1.00%
Hall Maintenance	111,072	92,390	97,990	5,600	6.06%
Emergency Measures	19,532	24,135	24,135	0	0.00%
	<u>3,100,895</u>	<u>3,160,075</u>	<u>3,253,711</u>	<u>93,636</u>	<u>2.96%</u>
Net Expenses over Revenue	<u>2,652,453</u>	<u>2,714,575</u>	<u>2,793,211</u>	<u>78,636</u>	<u>2.90%</u>

Variances:

(1) Overtime increase to cover staffing shortages



RCMP



RCMP

Provides:



- 24-hour policing service with a 28 member force
- Public education programs (bike rodeo, positive ticketing, driving without impairment, school resource officer)
- GIS (plain clothes unit, warrant writing, drug enforcement)



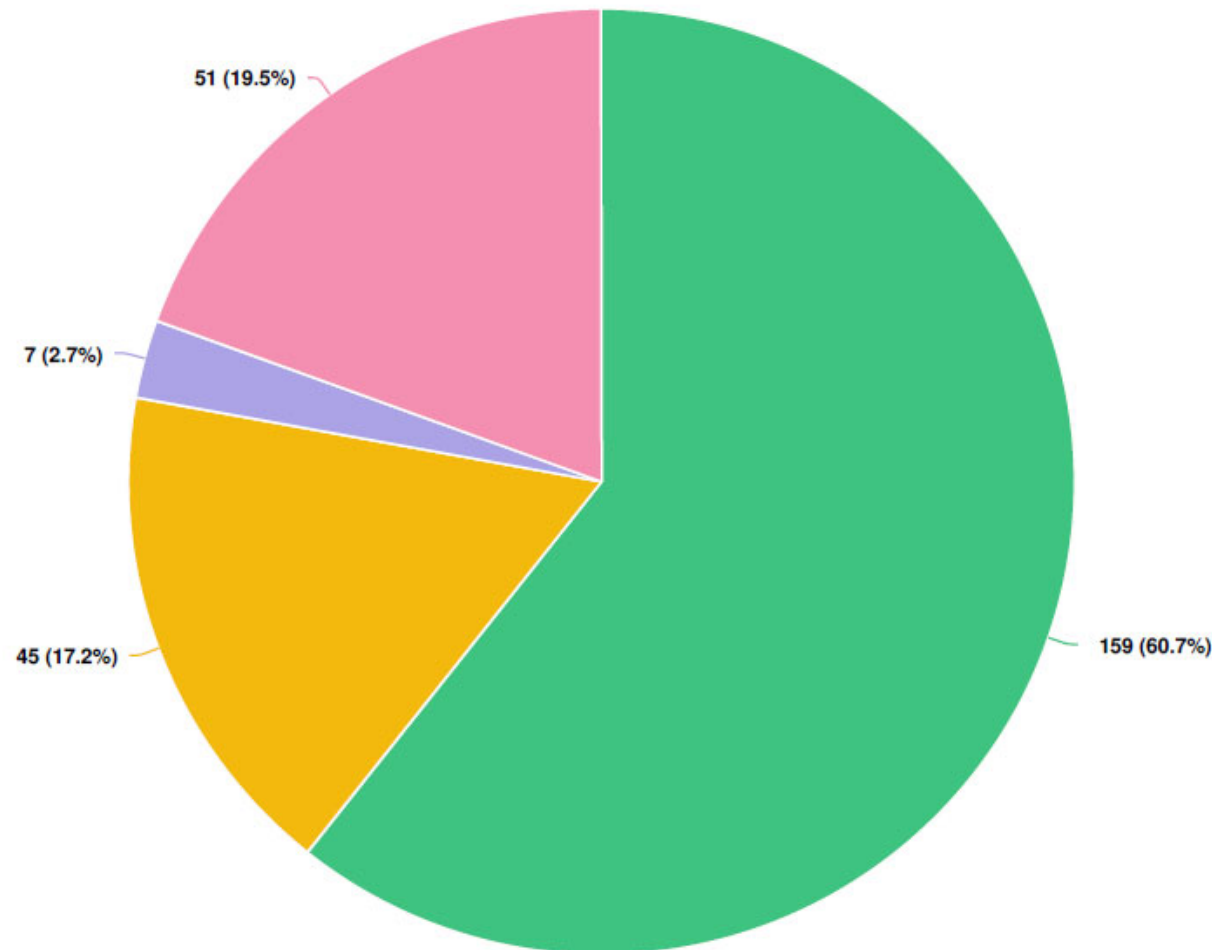
- Police and Crisis Team (assists with mental health calls, community service needs, liaison with Yorkton Hospital)
- Crime Reduction Unit (warrants executions, offender compliance checks)



- Events monitoring/parade escorts
- School zones and traffic enforcement
- King's Bench security
- Criminal record checks
- Victim services

RCMP/Bylaw – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service?



Question options

(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.

RCMP

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Court fines & criminal record checks	195,351	220,000	220,000	0	0.00%
Rent agreement	61,815	61,197	61,197	0	0.00%
Provincial Government funding	330,000	330,000	330,000	0	0.00%
	<u>587,167</u>	<u>611,197</u>	<u>611,197</u>	<u>0</u>	<u>0.00%</u>
Expenses					
Administration	951,872	828,423	861,590	33,167	4.00%(1)
Federal Contract	<u>4,188,344</u>	<u>4,937,970</u>	<u>5,125,000</u>	<u>187,030</u>	<u>3.79%(2)</u>
	<u>5,140,215</u>	<u>5,766,393</u>	<u>5,986,590</u>	<u>220,197</u>	<u>3.82%</u>
Net Expenses over Revenue	<u><u>4,553,048</u></u>	<u><u>5,155,196</u></u>	<u><u>5,375,393</u></u>	<u><u>220,197</u></u>	<u><u>4.27%</u></u>

	Variances:
(1)	City Hall occupancy costs
(2)	Contract price increase

Cemetery

Provides:



- Casket and cremation interments



- Coordinate plot sales and buy-back programs, permit applications



- Interment site preparation
- Maintenance services (grass cutting, flowers, snow removal)



Cemetery

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Sales, permits & fees	195,141	168,000	205,000	37,000	22.02%(1)
	195,141	168,000	205,000	37,000	22.02%
Expenses					
Salaries & Benefits	81,809	105,000	118,825	13,825	13.17%
Utilities	7,871	12,300	14,862	2,562	20.83%
Maintenance & Equipment	98,462	89,340	100,340	11,000	12.31%
	188,141	206,640	234,027	27,387	13.25%
Net Expenses over Revenue	-7,000	38,640	29,027	-9,613	-24.88%
Transfer to / from Reserve	55,000	0	7,500	7,500	100.00%
	48,000	38,640	36,527	-2,113	-5.47%

Variances:

(1) Overall fee increase, winter surcharge

Deer Park



- 18 hole full service golf course



- Pro shop, clubhouse, food and beverage services



- Tournament hosting
- Junior, Adult, and Senior programs
- Maintenance (irrigation, grass cutting, course repairs)



Deer Park

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Fees, season passes & tournaments	559,548	473,200	493,000	19,800	4.18%
Concession commission	2,250	2,500	5,000	2,500	100.00%
	<u>561,798</u>	<u>475,700</u>	<u>498,000</u>	<u>22,300</u>	<u>4.69%</u>
Expenses					
Administration	108,685	107,600	109,500	1,900	1.77%
Golf Course	462,585	471,530	508,250	36,720	7.79%
Clubhouse	49,579	59,000	50,000	-9,000	-15.25%
Fleet equipment	150,000	107,000	118,000	11,000	10.28%(1)
	<u>770,848</u>	<u>745,130</u>	<u>785,750</u>	<u>40,620</u>	<u>5.45%</u>
Net Expenses over Revenue	<u>209,050</u>	<u>269,430</u>	<u>287,750</u>	<u>18,320</u>	<u>6.80%</u>

Variances:

(1) Increased fuel & maintenance costs

Library



Provides:



Library services contracted through Parkland Regional Library/Yorkton Public Library (books, movies, digital resources, library loans, internet provision)



Our budget provides for the annual levy, library programming activities and operations of the building including:



- Utilities
- Rental rooms
- Janitorial
- Snow removal
- Security

Library

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Rental income	3,654	2,500	7,000	4,500	64.29%
Fees and other revenue	14,735	15,000	15,000	0	0.00%
	<u>18,390</u>	<u>17,500</u>	<u>22,000</u>	<u>4,500</u>	<u>25.71%</u>
Expenses					
Building & maintenance	187,298	182,275	155,442	-26,833	-14.72%
Materials	40,283	44,000	44,000	0	0.00%
Regional levy requisition	385,000	390,000	350,000	-40,000	-10.26%
	<u>612,580</u>	<u>616,275</u>	<u>549,442</u>	<u>-66,833</u>	<u>-10.84%</u>
Net Expenses over Revenue	<u>594,190</u>	<u>598,775</u>	<u>527,442</u>	<u>-71,333</u>	<u>-11.91%</u>

RCS - Admin

Provides:



- General RCS dept-wide administration
- Contract and agreements management



- Community and Culture programs (fitness, activities, summer programming, park parties)

- Heritage and archives
- Sask lottery grant administration to community



- Deer Park marketing, administration and cash reporting
- Cemetery finance and administration



RCS - Admin

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Fees	66,902	59,500	73,500	14,000	23.53%
Grant revenue	190,751	207,394	201,400	-5,994	-2.89%
	<u>257,653</u>	<u>266,894</u>	<u>274,900</u>	<u>8,006</u>	<u>3.00%</u>
Expenses					
Administration	325,494	340,465	345,106	4,641	1.36%
Heritage	30,721	42,090	38,000	-4,090	-9.72%
Programming	<u>390,881</u>	<u>427,094</u>	<u>430,154</u>	<u>3,060</u>	<u>0.72%</u>
	<u>747,095</u>	<u>809,649</u>	<u>813,260</u>	<u>3,611</u>	<u>0.45%</u>
Net Expenses over Revenue	<u>489,442</u>	<u>542,755</u>	<u>538,360</u>	<u>-4,395</u>	<u>-0.81%</u>

RCS - Facilities

Provides:

Preventative, reactive maintenance, capital upgrades, janitorial services and snow removal



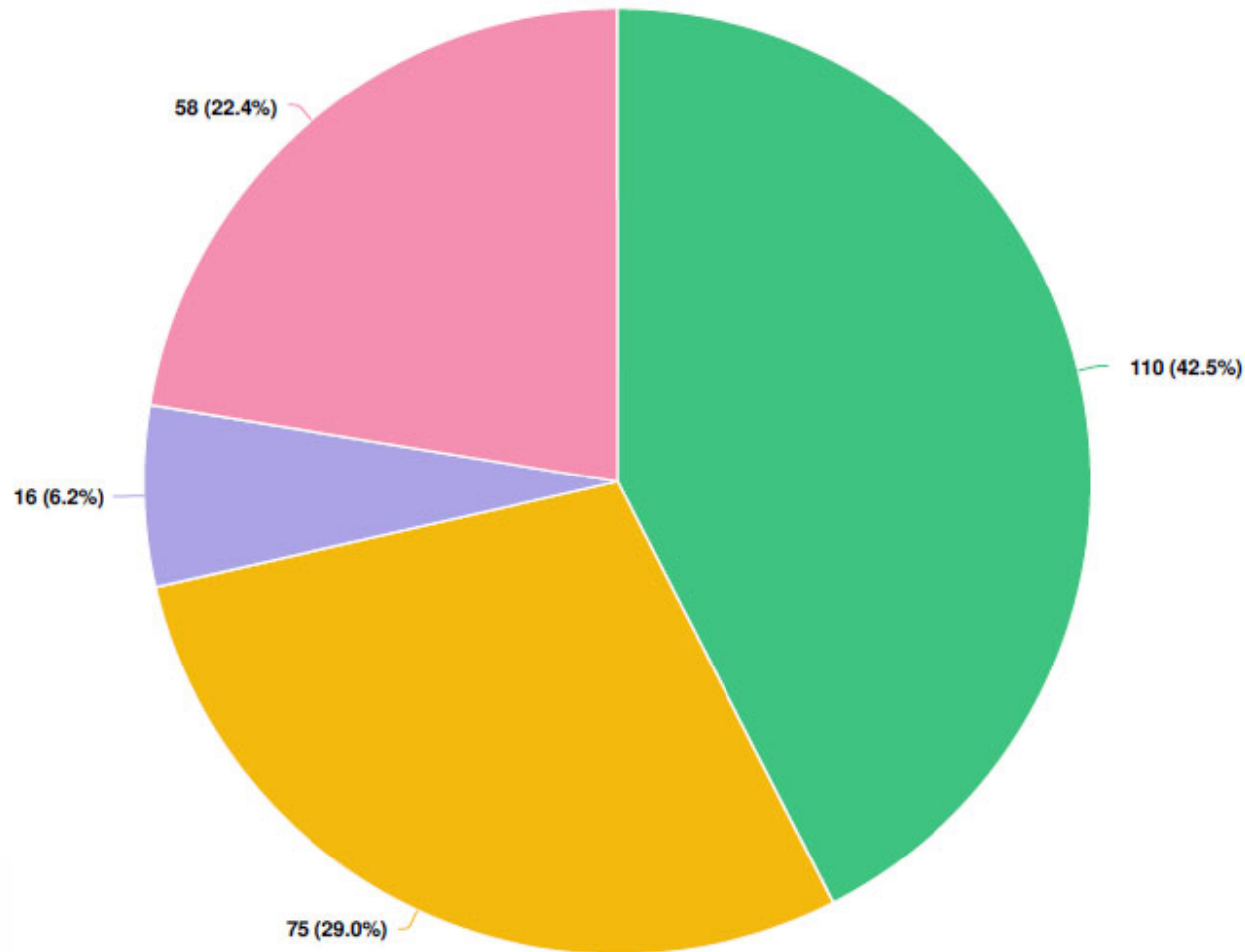
Facilities include:

- *Godfrey Dean/Land Titles* – facility rentals, strategic partnerships (Art Gallery, Arts Council, Film Festival)
- *Gloria Hayden* – sport and recreation programming, gym rentals
- *Tourism/Chamber*
- *Kinsmen Arena*
- *Deer Park Clubhouse*
- *Outdoor man-made structures*



RCS Facilities – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service? (Includes: Gallagher/Kinsmen/GHCC/Godfrey/Library)



Question options

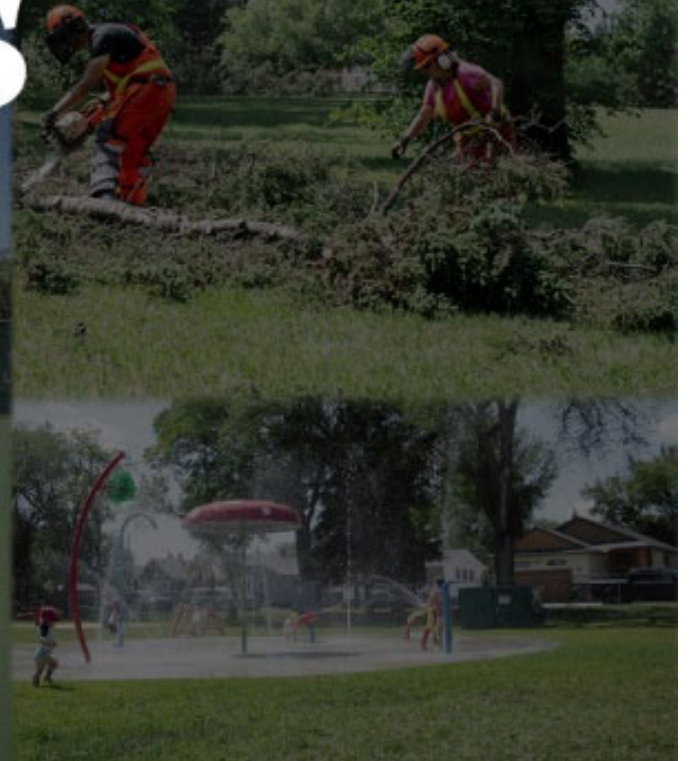
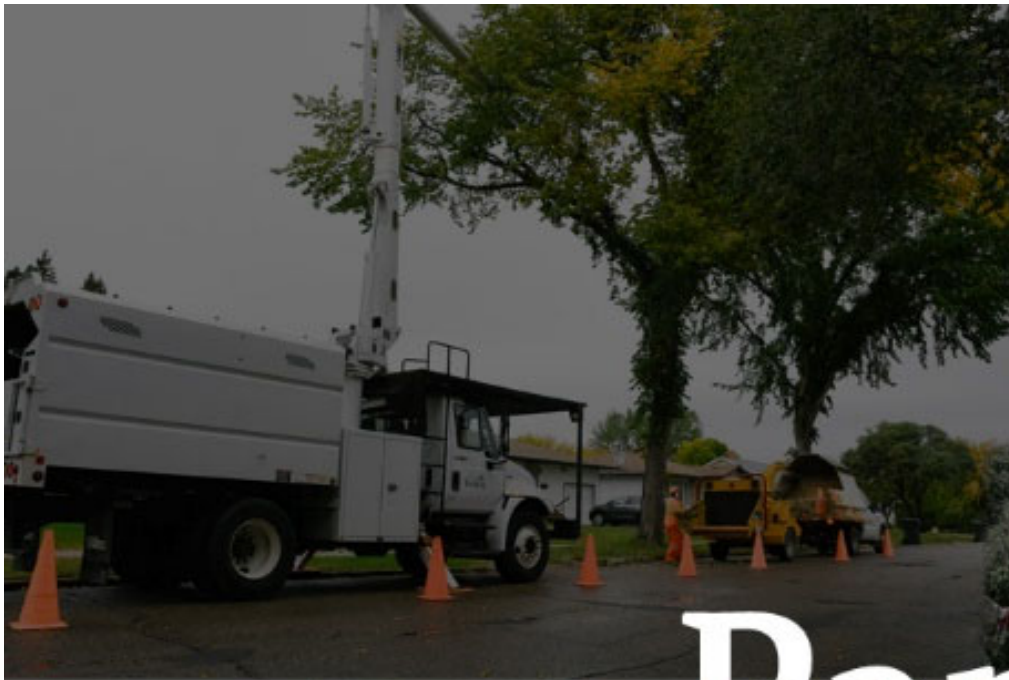
(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.

RCS – Facilities

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Godfrey Dean	58,064	52,000	59,000	7,000	13.46%
Kinsmen Arena	135,916	218,500	226,250	7,750	3.55%
Gloria Hayden	55,962	48,000	55,000	7,000	14.58%
Tourism	20,374	24,000	24,000	0	0.00%
	<u>270,316</u>	<u>342,500</u>	<u>364,250</u>	<u>21,750</u>	<u>6.35%</u>
Expenses					
Godfrey Dean	71,293	77,280	80,050	2,770	3.58%
Kinsmen Arena	224,648	310,245	310,588	343	0.11%
Gloria Hayden	110,738	116,650	121,300	4,650	3.99%
Facility Maintenance	219,725	240,542	249,090	8,548	3.55%
Tourism	32,038	32,180	34,400	2,220	6.90%
	<u>658,442</u>	<u>776,897</u>	<u>795,428</u>	<u>18,531</u>	<u>2.39%</u>
Net Expenses over Revenue	<u>388,126</u>	<u>434,397</u>	<u>431,178</u>	<u>-3,219</u>	<u>-0.74%</u>

Parks



RCS - Parks

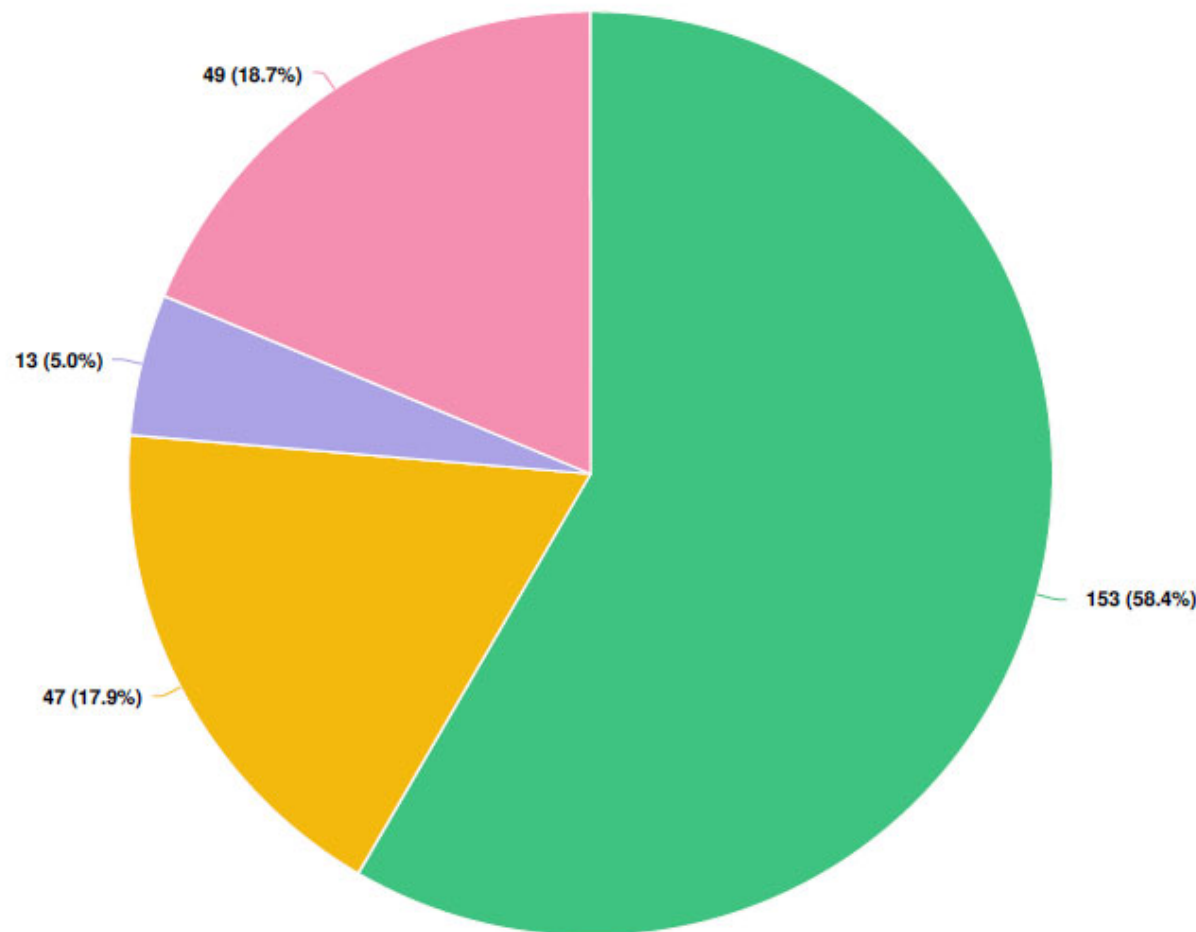
Provides:



- City-wide green space and park management
 - Urban forestry (tree trimming, debris)
 - Grass cutting (city-wide, over 550 acres)
 - Horticulture and beautification (shrubs/flowers)
- 
- Sportsfields maintenance (ball diamonds, soccer fields, disc golf course, tennis courts)
 - Playgrounds (8), spray parks (3), outdoor rinks (5), skate park, dog park
- 
- Pathways (9.6 km paved, 9.9 km unpaved) (includes snow removal and maintenance)
 - Pest control (weeds, tree worms, mosquitoes, Dutch Elm disease, gophers)

Parks – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service?



Question options

(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.

RCS - Parks

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Parks/Ball Diamonds	56,444	63,500	79,600	16,100	25.35%
Other outdoor	18,205	14,600	15,400	800	5.48%
	<u>74,649</u>	<u>78,100</u>	<u>95,000</u>	<u>16,900</u>	<u>21.64%</u>
Expenses					
Administration	378,537	425,849	458,124	32,275	7.58%(1)
Parks maintenance	232,835	197,304	240,450	43,146	21.87%(2)
Grass cutting	264,701	324,925	342,460	17,535	5.40%
Forestry	397,955	301,310	333,600	32,290	10.72%
Soccer fields	18,941	33,525	34,625	1,100	3.28%
Horticultural	119,257	128,810	142,700	13,890	10.78%
Pest control	30,199	40,047	41,060	1,013	2.53%
Ball diamonds	130,759	138,901	100,400	-38,501	-27.72%
Outdoor facilities	115,305	137,207	139,100	1,893	1.38%
	<u>1,688,487</u>	<u>1,727,878</u>	<u>1,832,519</u>	<u>104,641</u>	<u>6.06%</u>
Net Expenses over Revenue	<u>1,613,838</u>	<u>1,649,778</u>	<u>1,737,519</u>	<u>87,741</u>	<u>5.32%</u>

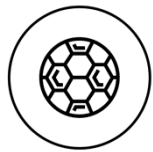
	Variances:
(1)	Rental costs & linens, benefit costs (CPP)
(2)	Increased spray park water use, insurance costs
*	Increased fuel & maintenance costs throughout



Gallagher Centre

Gallagher Centre

Provides:



- Community programs (drop in sports, public skating, walking tracks)
- Sport, recreation and event hosting
- Aquatic programs, rentals and swimming lessons
- Ice surfaces (hockey arena, curling rink)
- Convention Centre (small – large meetings, conferences, weddings, catering)
- Exhibition grounds, grandstand, agricultural events

Gallagher Centre

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
General fees & commissions	274,575	362,000	288,300	-73,700	-20.36%(1)
Agri-Pavillion	13,523	15,500	16,081	581	3.75%
Ice rentals	192,240	316,500	332,842	16,342	5.16%
Room rentals	102,402	54,000	71,588	17,588	32.57%
Convention centre & concession	74,419	343,500	256,563	-86,938	-25.31%(2)
Curling rink	15,792	55,000	55,000	0	0.00%
Flexi-Hall	52,730	129,000	133,838	4,838	3.75%
Grounds & parking lot	1,329	12,000	12,450	450	3.75%
Waterpark	405,669	640,000	676,450	36,450	5.70%(3)
	1,132,681	1,927,500	1,843,110	-84,390	-4.38%
Expenses					
Administration	376,642	527,942	537,220	9,278	1.76%
Agri-Pavillion	59,985	54,626	58,885	4,259	7.80%
Arena	325,673	427,036	455,250	28,214	6.61%
Building maintenance and utilities	591,593	713,600	753,890	40,290	5.65%(4)
Janitorial	308,143	348,140	409,144	61,004	17.52%(4)
Convention centre & concession	166,609	214,150	146,081	-68,069	-31.79%(2)
Curling rink	8,560	30,003	31,320	1,317	4.39%
Flexi-Hall	34,482	56,105	60,580	4,475	7.98%
Grounds & parking lot	121,260	131,457	138,170	6,713	5.11%
Waterpark	1,091,498	1,312,478	1,392,960	80,482	6.13%(4)
	3,084,442	3,815,536	3,983,500	167,964	4.40%
Net Expenses over Revenue	1,951,761	1,888,036	2,140,390	252,354	13.37%
Transfer (from) to Reserves	34,999	35,000	35,001	1	0.00%
	1,986,760	1,923,036	2,175,391	252,355	13.12%

Gallagher Centre (continued)

	Variances:
(1)	Functional Rehabilitation lease expired
(2)	No longer operating full concession
(3)	Waterpark usage still not at pre-pandemic levels
(4)	Overall costs up – power 8%, energy 17%, product/chemical costs

Transit

Provides:



- Contracted service through SaskAbilities
- RCS supervises contract, administration
- Maintenance of transit vehicles and stops/shelters



Transit

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Grants	58,924	55,000	55,000	0	0.00%
Transit	27,691	30,000	27,520	-2,480	-8.27%
	<u>86,615</u>	<u>85,000</u>	<u>82,520</u>	<u>-2,480</u>	<u>-2.92%</u>
Expenses					
Maintenance and Insurance	20,033	94,020	98,500	4,480	4.76%(1)
Transit Contracted Services	504,719	323,000	350,900	27,900	8.64%(1)
	<u>524,752</u>	<u>417,020</u>	<u>449,400</u>	<u>32,380</u>	<u>7.76%</u>
Net Expenses over Revenue	438,137	332,020	366,880	34,860	10.50%
Transfer to Reserves	<u>16,000</u>	<u>17,000</u>	<u>19,000</u>	<u>2,000</u>	<u>11.76%</u>
	<u><u>454,137</u></u>	<u><u>349,020</u></u>	<u><u>385,880</u></u>	<u><u>36,860</u></u>	<u><u>10.56%</u></u>

Variances:

- (1) Operating cost increases (fuel, parts)



Engineering & Asset Management

Engineering & Asset Mgmt

Provides:



- Engineering services and support for city-wide projects:

- Technical expertise, cost estimations
- Engineering standards
- Drafting (AutoCAD), surveying, custom mapping
- Infrastructure design
- Subdivision development



- Capital project management (tenders, contracts)
- Traffic control (intersection design, traffic analysis, day to day operations, and equipment maintenance)
- Street lights (repair and maintenance, long term planning)
- Drainage (storm water modeling, investigation, improvements)
- Asset Management (GIS database, civic addressing, asset inventory, conditions, risk assessment)



Engineering & Asset Management

	Actual	Budget	Budget	\$	%
	2021	2022	2023	Change	Change
Expenses					
Engineering	774,850	757,246	777,015	19,770	2.61%
Street Lighting	531,069	559,800	584,800	25,000	4.47%(1)
Traffic Control	83,126	86,335	89,835	3,500	4.05%(1)
	<u>1,389,046</u>	<u>1,403,381</u>	<u>1,451,650</u>	<u>48,270</u>	<u>3.44%</u>

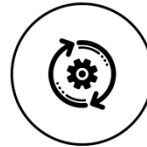
Variances:

(1) Increase in SaskPower costs

Engineering - Facilities



Provides:



Maintenance services for non-recreation facilities and equipment including:



- City Hall (including janitorial)
- City Operations Centre
- Sewer Treatment Plant
- Water Treatment Plant



Capital upgrades as needed

Engineering - Facilities

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
City Operations Centre Rental	0	228,000	249,000	21,000	0.00%
City Hall Rental	446,915	420,018	440,734	20,716	4.93%
	<u>446,915</u>	<u>648,018</u>	<u>689,734</u>	<u>41,716</u>	<u>6.44%</u>
Expenses					
Salaries and wages	210,517	235,525	240,709	5,184	2.20%
Maintenance and contracted services	107,921	162,000	160,000	-2,000	-1.23%
Janitorial	25,611	89,000	91,000	2,000	2.25%
Insurance	20,848	55,000	44,500	-10,500	-19.09%
Utilities	196,946	180,500	217,100	36,600	20.28%(1)
Materials & supplies	22,765	37,000	43,000	6,000	16.22%
Equipment	9,692	10,000	10,500	500	5.00%
	<u>594,299</u>	<u>769,025</u>	<u>806,809</u>	<u>37,784</u>	<u>4.91%</u>
Net Expenses over Revenue	<u>147,384</u>	<u>121,007</u>	<u>117,076</u>	<u>-3,931</u>	<u>-3.25%</u>

Variances:

(1) Increase in Power (8%); Energy (17%)

Engineering - Fleet

Provides:



Vehicle and equipment maintenance services for entire city



Over 265 vehicles/equipment maintained



Fleet and equipment value of approx. \$21.4 million



Engineering - Fleet

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Fleet Rental	2,005,561	1,704,000	1,940,000	236,000	13.85%
Expenses					
Salaries & Benefits	444,092	464,314	474,317	10,003	2.15%
Fuel	241,133	305,000	395,000	90,000	29.51%(1)
Insurance	102,138	140,000	140,000	0	0.00%
Parts, Supplies & Maintenance	246,843	255,000	285,000	30,000	11.76%(2)
Rent & Building Costs	162,229	77,000	119,920	42,920	55.74%(3)
	1,196,434	1,241,314	1,414,237	172,923	13.93%
Net Expenses over Revenue	809,127	462,686	525,763	63,077	13.63%
Transfers to/from Reserves	809,127	462,686	525,763	63,077	13.63%
	0	0	0	0	0.00%

Variances:

- | | |
|-----|---------------------------------|
| (1) | Fuel increase estimate for 2023 |
| (2) | Parts cost increases |
| (3) | Internal Rent (utilities) |

Planning, Building, Economic Development & Airport

Planning services:

- Administer and implement official community plan, zoning and development bylaws and plans
- Liaise with land developers, property owners, regional planning district
- Development permits, land agreements, contracts, easements

Building services:

- Approve/administer building permits
- Property/building inspections
- Enforce building code and property standards
- Administer business license bylaw



Planning, Building, Economic Development & Airport

Economic Development:

- Create opportunities for business attraction, retention and growth
- Property sales/acquisition
- Administer incentives
- Promotional activities for the City (marketing material, website and social media)
- Liaise with business community, Chamber, YBID, Ec Dev Committee

Airport Management:

- Day-to-day operations, maintenance and development
- Management of tenants, leases, contractors
- Regulatory compliance and safety



Planning, Building, Economic Development & Airport

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Business Licenses	88,003	95,000	95,000	0	0.00%
Building & Development Permits	132,852	110,000	110,000	0	0.00%
Zoning & Subdivision Fees	550	3,000	3,000	0	0.00%
Airport	161,414	124,177	144,134	19,958	16.07%(1)
	<u>382,819</u>	<u>332,177</u>	<u>352,134</u>	<u>19,958</u>	<u>6.01%</u>
Expenses					
Planning Services	310,907	288,716	298,288	9,572	3.32%
Building Services	208,740	260,467	269,446	8,979	3.45%
Economic Development	367,980	387,626	405,099	17,473	4.51%(2)
Airport	234,074	223,980	275,800	51,820	23.14%(3)
	<u>1,121,700</u>	<u>1,160,789</u>	<u>1,248,633</u>	<u>87,844</u>	<u>7.57%</u>
Net Expenses over Revenue	738,881	828,612	896,499	67,887	8.19%
Transfer to Reserves	<u>65,000</u>	<u>64,328</u>	<u>65,000</u>	<u>672</u>	<u>1.04%</u>
	<u><u>803,881</u></u>	<u><u>892,940</u></u>	<u><u>961,499</u></u>	<u><u>68,559</u></u>	<u><u>7.68%</u></u>

Variances:

- | | |
|-----|---|
| (1) | Lease revenue increase |
| (2) | Increase in share of rental costs |
| (3) | Insurance, snow removal, fuel costs increases |



Public Works

Public Works

Provides:



- General administration including managing contracts, inventory control, public inquiries and custom work



- Roads (207 km) and sidewalks (154 km) maintenance:
 - Street cleaning/sweeping
 - Snow removal/ice control
 - Pot hole repairs
 - Road resurfacing
 - Annual inspections



- Street sign/traffic line maintenance
- Drainage and storm sewer (116 km) maintenance

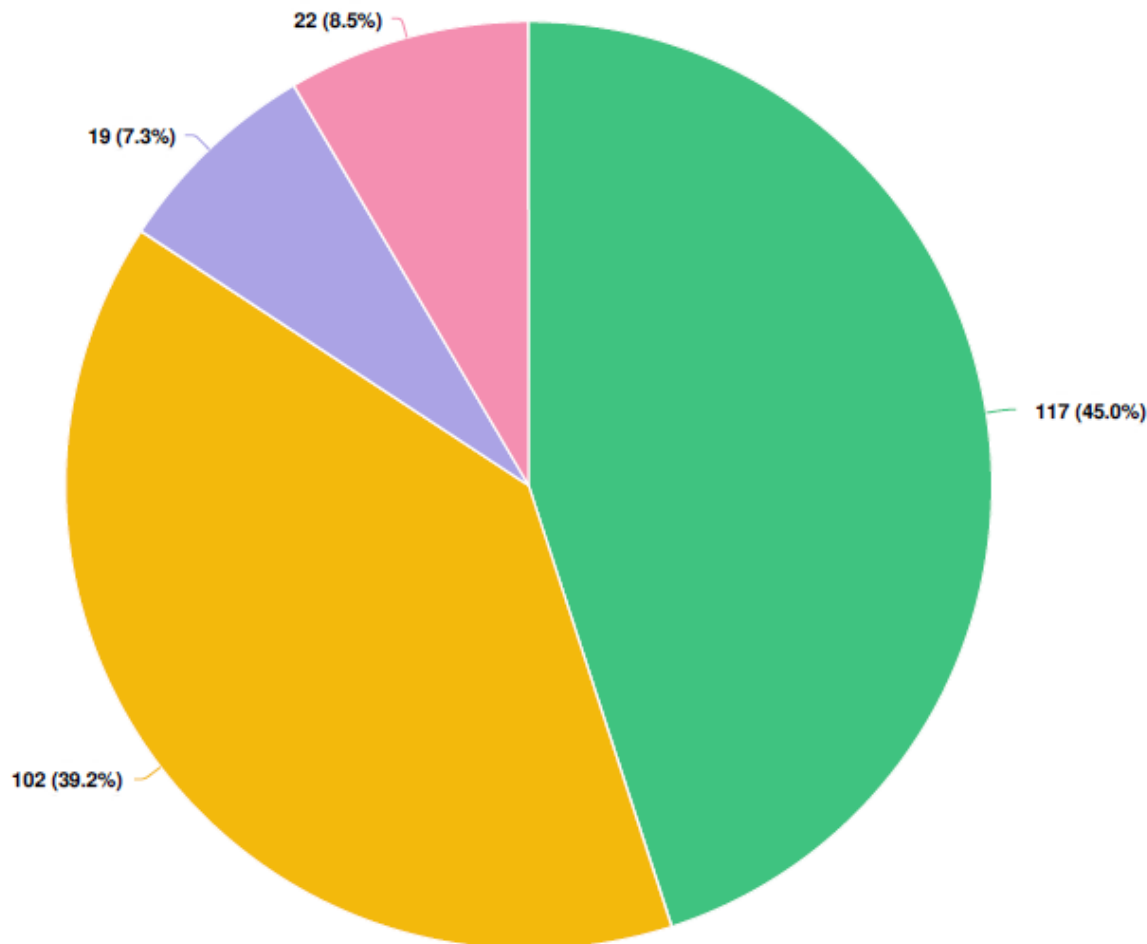
Streets & Roads – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service? (Includes: repairs/paving/street sweeping)

Question options

(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.



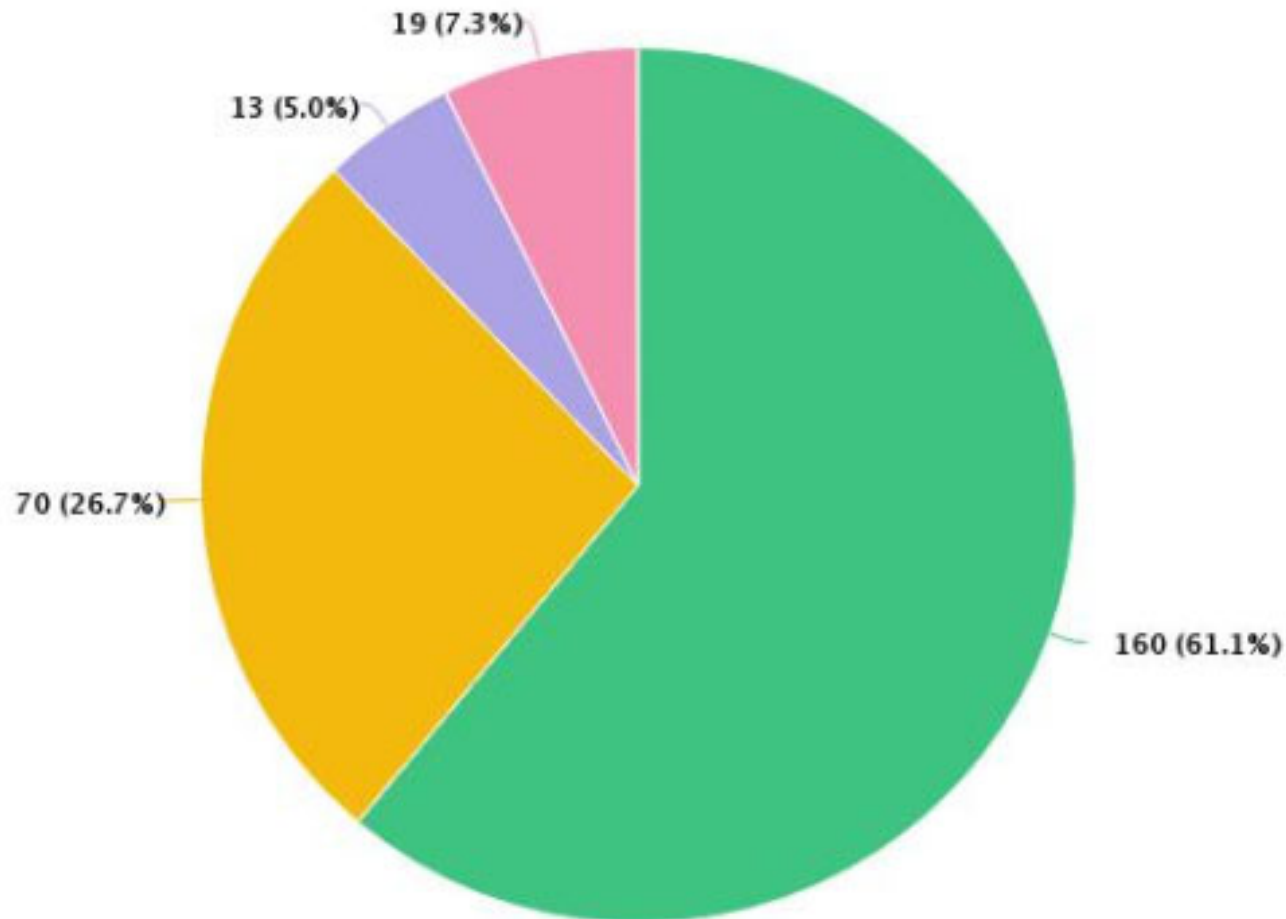
Snow Removal – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service?

Question options

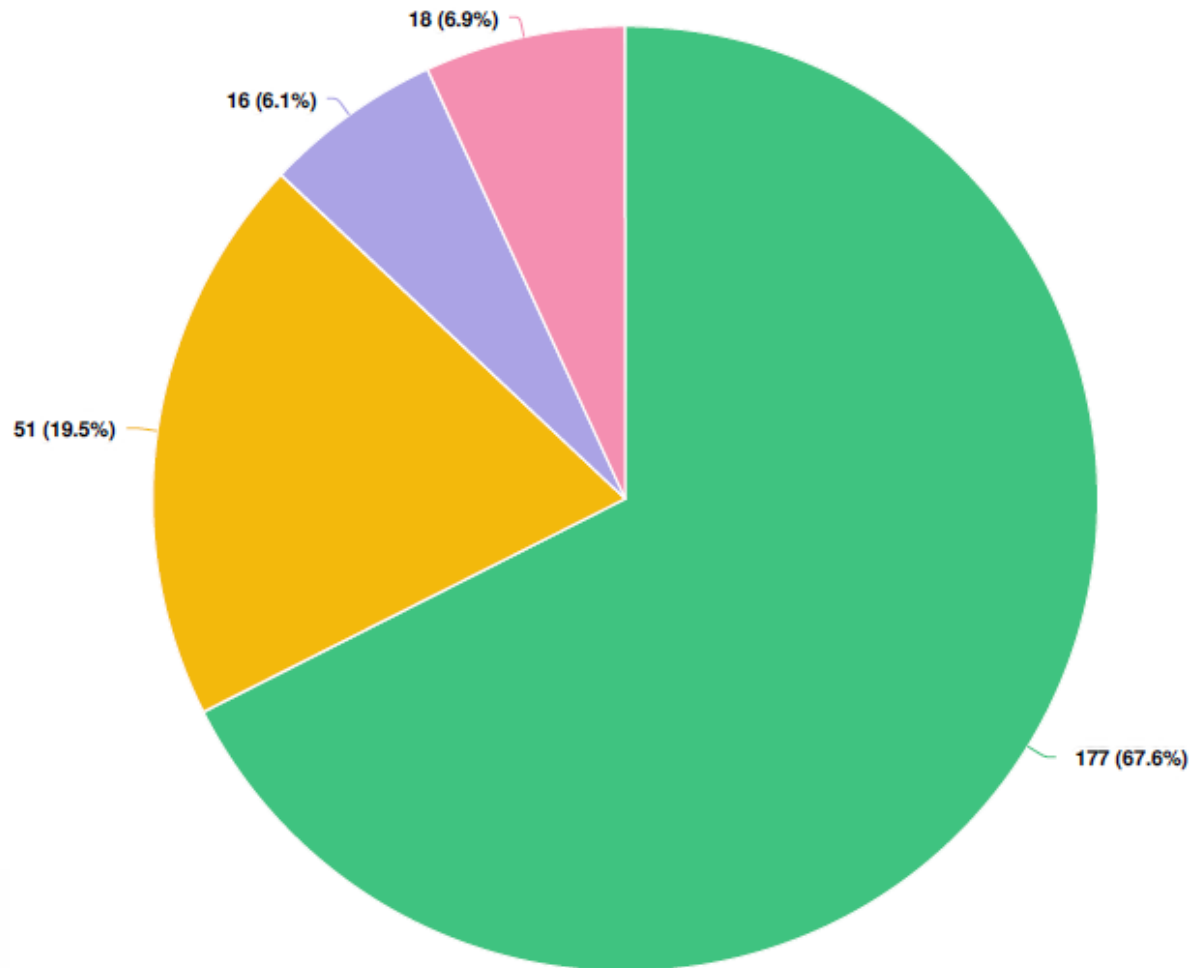
(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.



Drainage/Storm – Survey Feedback

Based on your satisfaction level, how would you adjust your property tax funding for this service?



Question options

(Click items to hide)

- No change – I am satisfied with our current levels.
- I would be willing to pay a little more (up to 10%) for better service.
- I would be willing to pay a lot more (more than 10%) for better service.
- This service could be reduced and I would still be satisfied.

Public Works

Revenues

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Urban Connector Grant	1,686,511	189,000	113,150	-75,850	-40.13%
Snow Permits	3,400	7,000	7,000	0	0.00%
Custom Work	30,513	15,000	5,000	-10,000	-66.67%
	1,720,424	211,000	125,150	-85,850	-40.69%

Expenses

Administration	1,130,790	1,011,097	1,048,761	37,664	3.73%(1)
Street Cleaning	145,746	165,000	168,200	3,200	1.94%
Surfaced Streets & Lanes	2,433,152	1,220,000	1,351,300	131,300	10.76%(2)
Gravelled Streets & Lanes	177,461	196,000	206,000	10,000	5.10%
Drainage & Storm Sewer	124,106	346,600	372,600	26,000	7.50%(3)
Catch Basin Maintenance	67,951	73,800	76,200	2,400	3.25%
Inspections	147,549	238,200	241,000	2,800	1.18%
Ice Control	127,857	115,700	123,700	8,000	6.91%(4)
Snow Removal	957,586	576,900	702,500	125,600	21.77%(4)
Sidewalk & Curb Maintenance	507,650	370,000	371,500	1,500	0.41%
Decorative Lighting	19,591	13,500	13,500	0	0.00%
Traffic Control	37,610	45,800	46,000	200	0.44%
Traffic Lines	61,570	70,000	75,300	5,300	7.57%
Street Sign Maintenance	23,857	22,800	13,000	-9,800	-42.98%(5)
Railway & Watershed Levy	46,254	42,500	42,500	0	0.00%
Custom Work	15,057	10,000	5,000	-5,000	-50.00%
	6,023,789	4,517,897	4,857,061	339,164	7.51%

Net Expenses over Revenue

4,303,365	4,306,897	4,731,911	425,014	9.87%
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Transfer to (from) Reserves

0	0	0	0	0%
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4,303,365	4,306,897	4,731,911	425,014	9.87%
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Public Works (continued)

	Variances:
(1)	Benefit cost increases (CPP); power/energy increases
(2)	Asphalt price increase (15%)
(3)	Contract to clean ditches (Victoria, Dracup, York – currently only afford one)
(4)	Updated to new 5 year average (higher snowfall)
(5)	Many new street signs from 2022 capital; less maintenance required

Enviro Services – Landfill

Provides:



Waste disposal site for residential, commercial, industrial and outside city use (including large scale composting, organics and yard waste)



Daily operations contracted out to Hartmier Contracting



Annual profits kept with utility to plan for future capital expansion and decommissioning



Enviro Services - Landfill

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Fees	2,622,756	2,052,750	2,182,750	130,000	6.33%(1)
	<u>2,622,756</u>	<u>2,052,750</u>	<u>2,182,750</u>	<u>130,000</u>	<u>6.33%</u>
Expenses					
Administration	222,307	295,272	308,909	13,637	4.62%
Waste Disposal Grounds	1,229,905	1,077,684	1,133,000	55,316	5.13%(2)
Waste Disposal Gate	75,342	73,512	78,700	5,188	7.06%(2)
	<u>1,527,554</u>	<u>1,446,468</u>	<u>1,520,609</u>	<u>74,141</u>	<u>5.13%</u>
Net Expenses over Revenue	-1,095,201	-606,282	-662,141	-55,859	9.21%
Transfer to Reserves	<u>1,095,201</u>	<u>606,282</u>	<u>662,141</u>	<u>55,859</u>	<u>9.21%</u>
	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.00%</u>

Variances:

- | | |
|-----|---|
| (1) | Rate increase (Aug 2022); increase in contaminated soil revenue |
| (2) | Increase in landfill contractor fees |

Enviro Services - Refuse

Provides:



Weekly curbside collection of garbage (residential), contracted by Ottenbreit Sanitation Services



Refuse division operates on a break-even philosophy



Enviro Services - Refuse

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Residential Fees	1,042,555	1,034,114	1,106,570	72,456	7.01%(1)
	1,042,555	1,034,114	1,106,570	72,456	7.01%
Expenses					
Residential Pickup	556,077	560,031	602,330	42,298	7.55%(2)
Organics	0	0	35,000	35,000	0.00%(3)
Tipping Fees	393,750	393,750	393,750	0	0.00%
	949,827	953,781	1,031,080	77,298	8.10%
Net Expenses over Revenue	-92,728	-80,333	-75,491	4,842	-6.03%
Transfer to Reserves	92,728	80,333	75,491	-4,842	-6.03%
	0	0	0	0	0.00%

Variances:

- | | |
|-----|---|
| (1) | Monthly fee increase to offset OSS contract and organics pilot addition |
| (2) | Increase in OSS contract due to CPI adjustment |
| (3) | Organics pilot project |

Enviro Services - Recycling

Provides:



- Weekly curbside collection of household recycling services by the Prairie Harvest Employment Program
- Recyclable materials are sorted and processed by SaskAbilities (RecyclAbility Centre)

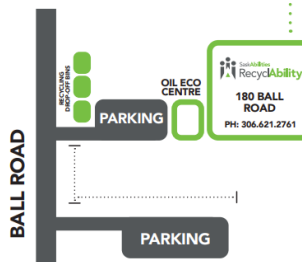


- Public education programs and continuous waste reduction strategies through the Environmental Committee



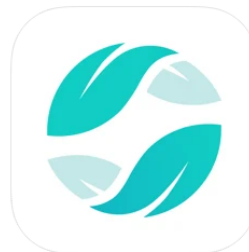
- Programs partially funded through Multi-Material Stewardship Western
- Annual profits kept with the utility for future capital projects with goal to keep levies affordable but sustainable

 **SaskAbilities**
BALL ROAD SERVICES



TRANSIT
SERVICES OFFICE
RECYCLABILITY
ENTERPRISES

- Recycling drop-off bins for household cardboard, paper, tin, glass, plastics
- Oil Eco-Centre
- Confidential Shred Drop-off
- Fluorescent tubes
- Commercial drop-offs of recyclable products



Recycle Coach

[Municipal Media Inc.](#)

Designed for iPad

#48 in Reference

★★★★★ 4.6 • 9K Ratings

Free

City of
Yorkton
Where Good Things Happen!

Enviro Services - Recycling

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Grants	221,549	191,941	266,481	74,540	38.83%(1)
Recycling Fees	537,076	536,688	536,688	0	0.00%
	<u>758,625</u>	<u>728,629</u>	<u>803,169</u>	<u>74,540</u>	<u>10.23%</u>
Expenses					
Recycling Collection	284,776	365,000	436,000	71,000	19.45%(2)
Recycling Processing	268,407	200,000	236,000	36,000	18.00%(2)
	<u>553,183</u>	<u>565,000</u>	<u>672,000</u>	<u>107,000</u>	<u>18.94%</u>
Net Expenses over Revenue	-205,443	-163,629	-131,169	32,460	-19.84%
Transfer to Reserves	<u>205,443</u>	<u>163,629</u>	<u>131,169</u>	<u>-32,460</u>	<u>-19.84%</u>
	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.00%</u>

Variances:

- | | |
|-----|--|
| (1) | Increase in annual grant funding (MMSW) |
| (2) | Program cost increases due to fuel, lower recyclable market values |



Environmental Services Water/Sewer

Enviro Services – Water/Sewer

Provides:



- Potable treated water distribution and wastewater treatment and infrastructure (approx. 6450 residential and commercial customers, and several large industrial users)
- Repair and maintenance services to the water systems: hydrant flushing, well and aquifer improvements, water breaks, custom work (over 300 km of water and sewer pipe)



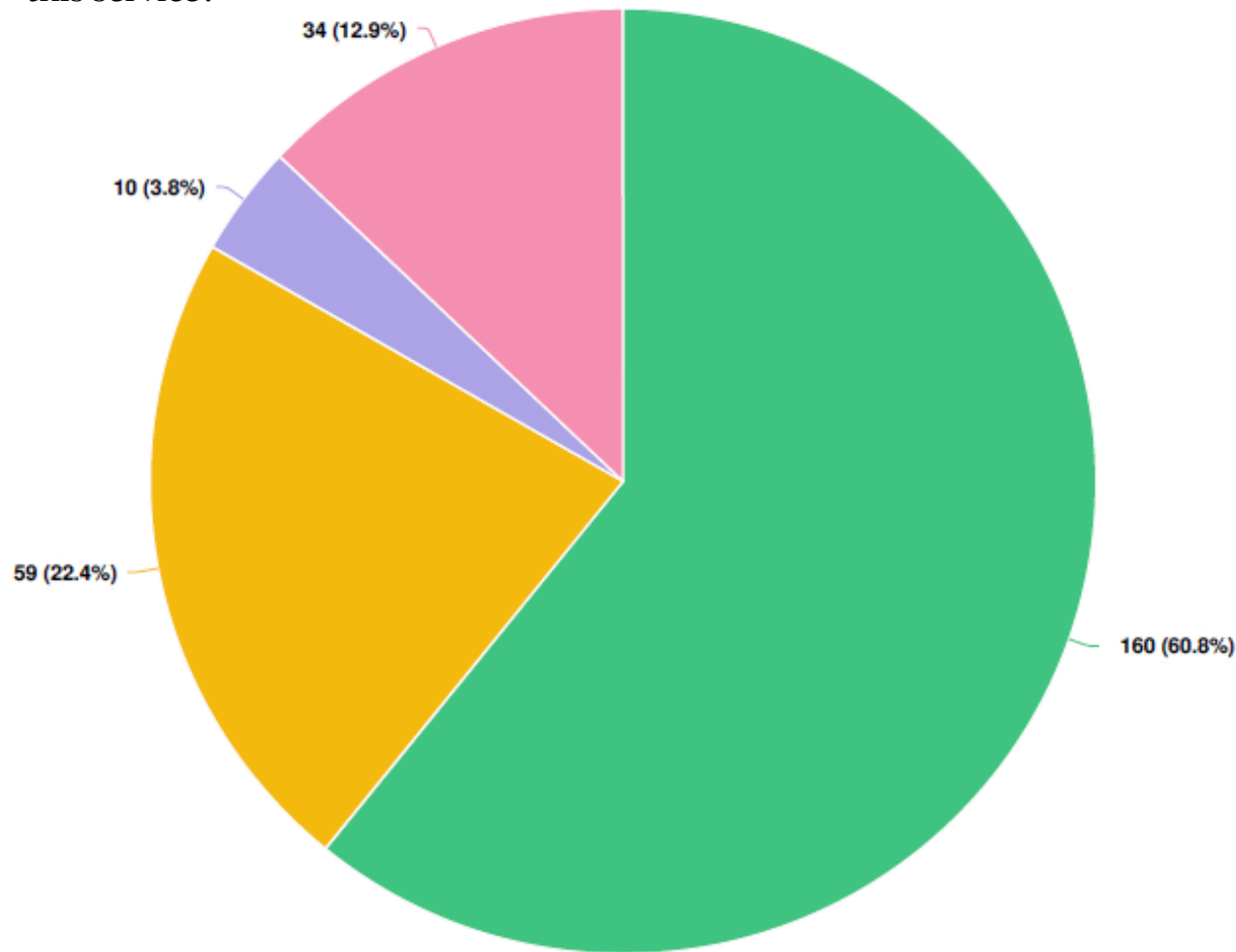
- Annual water and sewer main replacements
- Maintaining and replacing sewer/water customer connections, water meters, and water billing
- Regulatory compliance procedures



- Facility operations and equipment maintenance for the Queen Street WTP, wells and well buildings, water tower, Hwy 10 pumping station and the Water Pollution Control Plant
- Any net profit is kept within the utility to fund future waterworks capital infrastructure

Water/Sewer – Survey Feedback

Based on your satisfaction level, how would you adjust your utility bill for this service?



Question options

(Click items to hide)

- I am satisfied with our current levels (requires a 5% rate increase to maintain service).
- I would be willing to pay a little more (up to 10%) for better service (proactive repairs to reduce instances and duration of service disruptions).
- I would be willing to pay a lot more (up to 15%) for better service (proactive repairs to reduce instances and duration of service disruptions).
- This service could be reduced and I would still be satisfied (increase chances of service disruptions).

Enviro Services – Water/Sewer

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenues					
Sale of Water	9,910,299	9,427,450	9,933,121	505,671	5.36%(1)
Custom Work	462,401	300,000	50,000	-250,000	-83.33%(2)
Sewer Service / Connection Fees	265,780	122,000	122,000	0	0.00%
Yorkville Utility Board Revenue	96,294	90,000	90,000	0	0.00%
	<u>10,734,773</u>	<u>9,939,450</u>	<u>10,195,121</u>	<u>255,671</u>	<u>2.57%</u>
Expenses					
Administration	1,172,169	1,201,493	1,257,952	56,459	4.70%(3)
Water Meters	134,259	228,700	187,810	-40,890	-17.88%(4)
Wells	248,895	300,600	303,100	2,500	0.83%
Aquifer	29,746	31,000	31,000	0	0.00%
Distribution System	185,413	225,000	181,060	-43,940	-19.53%(5)
Water Breaks	989,674	732,000	1,078,500	346,500	47.34%(6)
Hydrants	62,718	59,665	60,175	510	0.85%
Water Main Replacement	1,755,187	712,500	720,000	7,500	1.05%
Sewer Main Replacement	20,390	281,500	284,000	2,500	0.89%
Water Treatment Plant	847,858	969,500	995,480	25,980	2.68%
Water Tower	20,893	18,200	20,500	2,300	12.64%
Sewer Treatment Plant	1,070,111	1,319,200	1,353,820	34,620	2.62%
Sanitary Sewer Maintenance	314,818	280,000	288,400	8,400	3.00%
Connections	334,762	320,000	160,000	-160,000	-50.00%(2)
Interest on Long Term Loans	89,347	46,443	9,464	-36,979	-79.62%(7)
	<u>7,276,241</u>	<u>6,725,801</u>	<u>6,931,261</u>	<u>205,460</u>	<u>3.05%</u>
Net Expenses over Revenue	-3,458,533	-3,213,649	-3,263,860	-50,211	1.56%
Long Term Loan Principal Payments	803,000	836,000	871,000	35,000	4.19%
Transfer to Reserves	<u>2,655,533</u>	<u>2,377,649</u>	<u>2,392,861</u>	<u>15,211</u>	<u>0.64%</u>
	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0.00%</u>

Enviro Services – Water/Sewer (continued)

	Variances:
(1)	Increase in rates
(2)	Decrease in call outs for charged services (connections, etc.)
(3)	Additional benefit costs (CPP/EI increase for all staff charged here)
(4)	Meter services due to new AMI system
(5)	Less time to be spent here as break frequency increases
(6)	Huge increase in breaks (staff time and contracted services)
(7)	Final year of loan for Queen Street WTP

Capital Budget – Investing in Infrastructure

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

Capital Goals



Council Direction -
Keep adding to the
capital budget, at
least 1% per year

2023 capital budget
with 1% increase =
**\$4,910,000 available
dollars**

Capital Project Highlights (2022)



Deer Park Clubhouse



Smith Street Paving



Logan Green Pathway

Capital Budget – Projects

Items to
consider:

Community need vs. wants

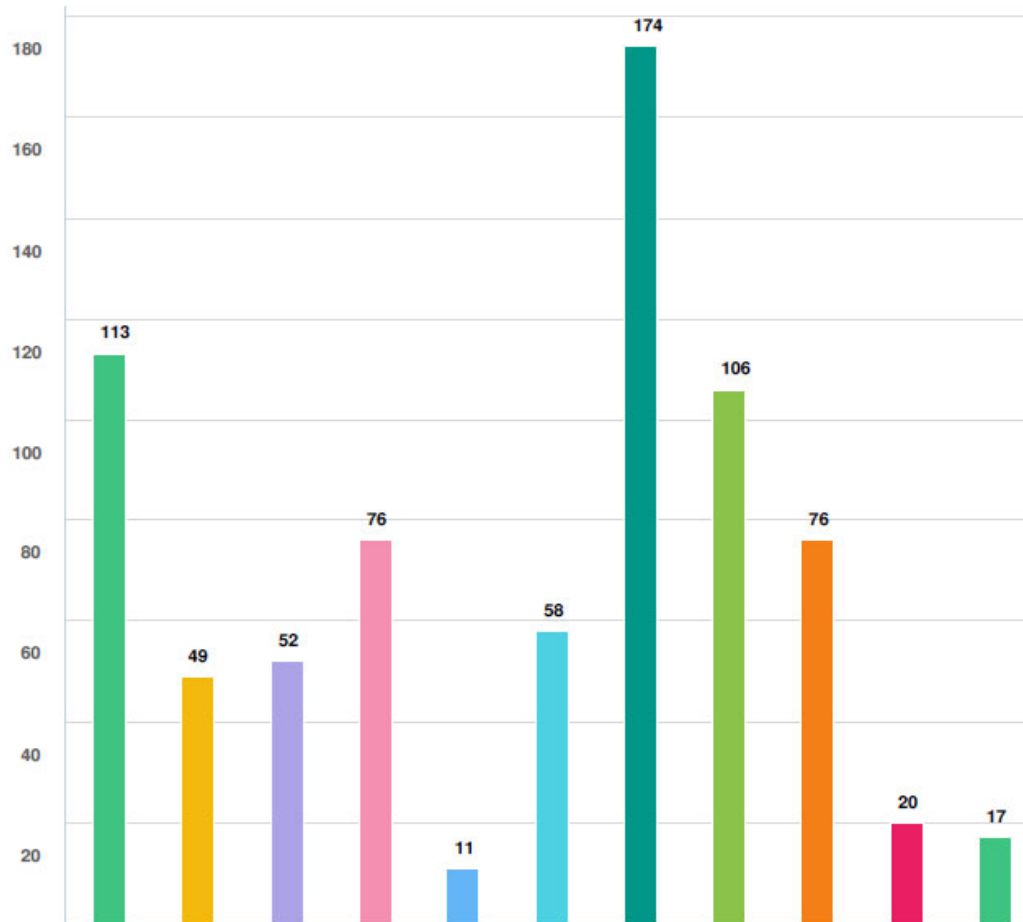
Analysis, investigation, studies

Scope/complexity/timing

Alignment with strategic goals/rec
master plan/official community plan

Ongoing funding sources and
availability

Pre-Budget Public Survey - Results (Capital)



Question options

Recreation Facilities (Gallagher, Kinsmen Upgrades, etc.) Parks / Greenspaces / Sports Fields Pathways
Outdoor Recreation (play structures, outdoor rinks, spray parks, tennis courts) Deer Park Improvements
Downtown Revitalization Road Infrastructure Water / Sewer Infrastructure
Drainage Upgrades / Storm Water Management Airport Improvements Other (please specify)

Survey asked the public to pick top three spending priorities for capital. Results:

1. Road Infrastructure (66%)
2. Recreation Facilities (43%)
3. Water/Sewer Infrastructure (40%)

264 Responses

Summary

Based on the proposed budget, the City requires raising taxes by **\$1,052,000 (3.93%)**

Breakdown of budget increase:

2.93%	Operations
<u>1.00%</u>	<u>Capital</u>
3.93%	Total Increase

Visit www.yorkton.ca/budget to fill out our budget feedback form!

Attachment #2

CITY OF YORKTON BUDGET SUBMISSION ORIGINAL FOR THE YEAR ENDED DECEMBER 31, 2023

	Actual 2021	Budget 2022	Budget 2023	\$ Change	% Change
Revenue					
Taxes including GIL	24,620,812	26,642,872	26,642,872	0	0.00%
Tax Growth			171,155	171,155	0.64%
Increase to Taxes			785,000	785,000	2.93%
Increase for Capital			267,000	267,000	1.00%
Total Taxes	24,620,812	26,642,872	27,866,027		
BID Levy	-113,893	-113,000	-113,000	0	0.00%
Interest and Tax Incentives	292,211	349,099	482,075	132,976	38.09%
Surcharges	3,126,034	3,130,000	3,200,000	70,000	2.24%
Municipal Operating Grant	3,266,773	3,109,734	3,287,000	177,266	5.70%
Total Revenue	31,191,937	33,118,705	34,722,102		
Net Departmental Expenses					
General					
Legislative/Council	684,965	779,500	823,352	43,852	5.63%
Corporate Services	3,072,673	3,292,822	3,453,921	161,100	4.89%
Bylaw Control	290,269	268,806	284,220	15,413	5.73%
Total General	4,047,907	4,341,128	4,561,493		
Protective Services					
Fire	2,682,453	2,714,575	2,793,211	78,636	2.90%
RCMP	4,553,048	5,155,196	5,375,393	220,197	4.27%
Total Protective Services	7,235,502	7,869,771	8,168,604		
Recreation & Community Services					
Cemetery	48,000	38,640	36,527	-2,113	-5.47%
Deer Park	209,050	269,430	287,750	18,320	6.80%
Library	599,264	598,775	527,442	-71,333	-11.91%
Leisure Services - Admin & Programs	489,442	542,755	538,360	-4,395	-0.81%
Leisure Services - Facilities	415,126	434,397	431,178	-3,219	-0.74%
Leisure Services - Outdoor & Parks	1,617,768	1,649,778	1,737,519	87,741	5.32%
Transit	387,105	349,020	385,880	36,860	10.56%
Total Recreation & Community Services	3,765,756	3,882,796	3,944,656		
Gallagher Centre					
Gallagher Centre	1,300,933	1,250,558	1,458,880	208,322	16.66%
Waterpark	685,828	672,478	716,510	44,032	6.55%
Total Gallagher Centre	1,986,761	1,923,036	2,175,390		
Engineering & Asset Management					
Engineering & Asset Management	736,239	757,246	777,015	19,770	2.61%
Facilities	172,384	121,007	117,076	-3,931	-3.25%
Fleet	0	0	0	0	0.00%
Traffic Control, Street Lighting & Special Events	614,196	646,135	674,635	28,500	4.41%
Total Engineering & Asset Management	1,522,819	1,524,388	1,568,726		
Planning, Building & Development					
Planning & Building Services	285,621	341,183	359,734	18,551	5.44%
Economic Development	367,980	387,626	405,099	17,473	4.51%
Airport	136,873	164,131	196,666	32,534	19.82%
Total Planning, Building & Development	790,473	892,940	961,499		
Public Works	4,303,365	4,306,897	4,731,911	425,014	9.87%
Environmental Services					
Landfill/Garbage	-0	-0	0	0	0.00%
Residential Garbage	-0	0	0	0	0.00%
Water & Sewer	-0	-0	-0	0	0.00%
Total Environmental Services	-0	-0	-0		
Total Net Departmental Expenses	23,652,583	24,740,954	26,112,278	5.25%	
Capital, Debt & Reserve Expenditures					
Capital					
Capital Expenditures	4,390,000	4,645,000	4,910,000	265,000	5.71%
New Deals Gas Tax Grant	-1,666,424	-980,879	-980,879	0	0.00%
Total Capital	2,723,576	3,664,121	3,929,121		
Debt					
Clubhouse / Arenas	1,151,254	1,151,254	1,151,254	0	0.00%
Dracup	695,636	696,198	696,198	0	0.00%
Fire Hall	638,465	648,789	648,789	0	0.00%
City Operations Center	1,476,523	1,476,523	1,476,523		
Total Debt	3,961,879	3,972,764	3,972,764		
Reserve Allocation	705,000	705,000	705,000	0	0.00%
Total Capital, Debt & Reserve Expenditures	7,390,455	8,341,885	8,606,885		
NET OPERATING & CAPITAL BUDGET	148,899	4,422	2,939		

2023 & 2024 City of Yorkton Capital Budget

2023 Capital Budget Projects (Rolled Over)

		2023 Tax Dollars towards Capital Budget					4,910,000
Dept	Project Description	Total Cost	From Reserves	Grants/ Donations	Trade-in/Loans/ Other/Land Fund	Capital Budget	
Council	Yorkton Brick Mill - Project Cost Sharing	\$ 270,000	\$ (270,000)			0	
Deer Park	Irrigation & Drainage	\$ 109,300	\$ (109,300)			0	
Deer Park	Clubhouse - Building, Water/Sewer, Contents	\$ 5,040,000			\$ (5,040,000)	0	
Deer Park	Equipment Purchases - mowers	\$ 200,000	\$ (200,000)			0	
Engineering	Pedestrian Crossing at West Broadway Tim Horton's	\$ 52,000	\$ (52,000)			0	
Engineering	Faded Signs Replacement - various	\$ 66,000	\$ (66,000)			0	
Engineering	COC - Stockpile Site - Scale Installation	\$ 115,000	\$ (115,000)			0	
Engineering	Safe Play Zone Review - Signage and Radar Signs	\$ 78,500	\$ (78,500)			0	
	Sask Abilities Recycling Centre Improvements - Community Recycling/Compost Drop						
Enviro Services	Off Site	\$ 50,000	\$ (50,000)			0	
Finance/IT	Storage Area Network (SAN) Upgrades	\$ 65,000	\$ (65,000)			0	
Fire	Equipment - Jaws of Life / SCBA Bottles	\$ 47,000	\$ (47,000)			0	
Fire	Urban Interface (Pumper) Vehicle Replacement	\$ 500,000	\$ (500,000)			0	
Gallagher Centre	Fire Protection Upgrades	\$ 11,400	\$ (11,400)			0	
Gallagher Centre	Waterpark Dehumidification	\$ 572,300	\$ (572,300)			0	
Gallagher Centre	Flat Roof Replacement/Repairs	\$ 225,000	\$ (225,000)			0	
Gallagher Centre	Waterpark Ladies Changeroom	\$ 20,000	\$ (20,000)			0	
Gallagher Centre	Arena Ice Plant Upgrades	\$ 967,000	\$ (5,000)		\$ (962,000)	0	
Landfill	Master Plan Landfill	\$ 161,400	\$ (161,400)			0	
Landfill	Power/Electrical Upgrade for Soil Conditioning Pad	\$ 67,900	\$ (67,900)			0	
Public Works	Residential Reconstruction - Engineering Investigation and Design (Weinmaster)	\$ 150,000	\$ (150,000)			0	
Public Works	Smith Street Improvements: Design - Myrtle to 7th Ave	\$ 150,000	\$ (150,000)			0	
Public Works	Gladstone Avenue Improvements: Design - Bradbrooke to Smith Street	\$ 150,000	\$ (150,000)			0	
RCS	Lions Ball Diamond Electrical and Backstop Improvements	\$ 23,900	\$ (23,900)			0	
RCS	Columbia Park Development - Outdoor Basketball Courts ***DEFERRED JAN 30/23	\$ 100,000	\$ (100,000)			0	
RCS	Library Sewer Line Replacement	\$ 30,000	\$ (30,000)			0	
RCS	HVAC Rooftop Replacement Program (Godfrey Dean)	\$ 15,000	\$ (15,000)			0	
RCS	Waterloo Park Pathway	\$ 100,000	\$ (100,000)			0	
RCS	Godfrey Dean/Gloria Hayden/Library - Roof repairs	\$ 45,400	\$ (45,400)			0	
RCS	Development of Community Culture Plan	\$ 40,000	\$ (20,000)	\$ (20,000)		0	
Waste Water	WPCP Down Stream Study/Master Plan	\$ 88,400	\$ (88,400)			0	
Water Works	Aquifers	\$ 44,000	\$ (44,000)			0	
Water Works	Water Well Improvements #9 & #13 <i>Estimated Project Total = \$900,000</i>	\$ 592,500	\$ (592,500)			0	
Water Works	Water Pollution Control Plant Expansion - Pre-design (Phase 2/5)	\$ 300,000	\$ (300,000)			0	
Water Works	Water Pollution Control Plant Expansion - Preliminary Design (Phase 3/5)	\$ 1,200,000	\$ (1,200,000)			0	
Water Works	Boiler Replacement at Water Treatment Plant	\$ 125,000	\$ (125,000)			0	
Water Works	New Water Well Buildings (#13 and #9) and Back-up Generator Improvements	\$ 569,000	\$ (569,000)			0	
Total Rollovers		\$ 12,341,000	\$ (6,319,000)	\$ (20,000)	\$ (6,002,000)	0	

2023 Capital Budget Projects (Approved in 2022)

Dept	Project Description	Total Cost	From Reserves	Grants/ Donations	Trade-in/Loans/ Other/Land Fund	2023 Capital Budget
Airport	Airport Runway (Internal Loan Re-payment) <i>Balance Remaining = \$245,093.81</i>	\$ 250,000				\$ 250,000
Airport	Allocation for New Terminal Building	\$ 268,000				\$ 268,000
Deer Park	Parking Lot Cart Compound	\$ 15,000				\$ 15,000
Deer Park	Course Drainage	\$ 50,000				\$ 50,000
Deer Park	Fleet Storage & Maintenance Building - Trailer Installation	\$ 50,000				\$ 50,000
Deer Park	Irrigation	\$ 100,000				\$ 100,000
Deer Park	Topdressing & Soil Storage	\$ 15,000				\$ 15,000
Engineering	Fiber Optic Cable Installation (Hwy 10/Mayhew, Hwy 10/Kelsey, Hwy 9/Hamilton)	\$ 107,000	\$ (54,000)			\$ 53,000
Gallagher Centre	Fencing & Gate Upgrades	\$ 50,000	\$ (50,000)			\$ -
Gallagher Centre	Flexihall Sound System Upgrades	\$ 50,000				\$ 50,000
Gallagher Centre	Westland Arena Hot Water Heaters	\$ 55,000				\$ 55,000
Gallagher Centre	Lighting Upgrade - Ag Pavillion & Flexihall	\$ 170,000				\$ 170,000
Gallagher Centre	North Fire Lane Paving	\$ 50,000				\$ 50,000
Gallagher Centre	Waterpark Hot Water Storage Tanks	\$ 19,000				\$ 19,000
Gallagher Centre	Ride-on Floor Scrubber	\$ 25,000	\$ (25,000)			\$ -
Gallagher Centre	Rooftop Replacement Program	\$ 50,000				\$ 50,000
Gallagher Centre	Wavepool Underwater Lighting Upgrade	\$ 35,000	\$ (35,000)			\$ -
Public Works	Annual Road Allocation (Darlington / Mayhew / York)	\$ 2,000,000				\$ 2,000,000
Public Works	Annual Drainage Allocation (York Rd)	\$ 500,000				\$ 500,000
Public Works	Weinmaster Reconstruction Master Plan (Design)	\$ 75,000				\$ 75,000
RCS	BMX Park - 2nd Basketball Court ***DEFERRED - JAN 30/23	\$ 90,000				\$ 90,000
RCS	New Basketball/Pump Bike Park Parking Lot ***DEFERRED - JAN 30/23	\$ 175,000				\$ 175,000
RCS	BMX Park - Pump Bike Park behind Columbia School ***DEFERRED - JAN 30/23	\$ 425,000				\$ 425,000
RCS	BMX Park - Flood Mitigation - Reallocation of Drainage Funding from Engineering ***DEFERRED - JAN 30/23	\$ 300,000				\$ 300,000
RCS	Cemetery - Chemical Storage Shed	\$ 21,000	\$ (21,000)			\$ -
RCS	Weinmaster Park - Washroom & Warm-up Shelter	\$ 75,000	\$ (75,000)			\$ -
RCS	Godfrey Dean - Exterior Revitalization	\$ 160,000		\$ (80,000)		\$ 80,000
RCS	Godfrey Dean - Flooring Replacement	\$ 25,000	\$ (25,000)			\$ -
RCS	Godfrey Dean - Kitchenette Upgrade	\$ 20,000	\$ (20,000)			\$ -
RCS	Kinsmen Arena Ice Systems Upgrades	\$ 2,775,000			\$ (2,775,000)	\$ -
RCS	Outdoor Recreation (Football) - Investigation/Study	\$ 30,000				\$ 30,000
RCS	Indoor Rec Facility - Investigation/Study	\$ 40,000				\$ 40,000
Water Works	Water Tower Repairs - inspection, recoating, underground piping	\$ 3,335,000	\$ (3,335,000)			\$ -
Total Pre-approved 2023		\$ 11,405,000	\$ (3,640,000)	\$ (80,000)	\$ (2,775,000)	\$ 4,910,000

2023 Capital Budget Projects (Additional - Fully Funded)

Dept	Project Description	Total Cost	From Reserves	Grants/ Donations	Trade-in/Loans/ Other/Land Fund	Capital Budget
Cemetery	Mower Replacement	\$ 15,000	\$ (15,000)			\$ -
Bylaw	E-ticketing Software	\$ 14,000	\$ (14,000)			\$ -
Deer Park	Equipment Replacements (Utility Vehicle, Sprayer, Fairway Aerator)	\$ 60,000	\$ (60,000)			\$ -
Engineering	City Hall Maintenance - sinks, Canada Post flooring, parkade windows, AC unit	\$ 50,000	\$ (50,000)			\$ -
	Fleet Equipment Purchases (Excavator, Tandem Gravel Trucks, Compact Track Loaders)	\$ 1,101,463	\$ (1,061,463)		\$ (40,000)	\$ -
Engineering	Timber Bridges - Follow Up Inspection	\$ 6,500	\$ (6,500)			\$ -
Engineering	Hwy 9 Intersections Signalization (King St. & National Street) (Revised Cost Estimate)	\$ 2,860,000			\$ (2,860,000)	\$ -
Engineering	City Hall - Design Upgrades	\$ 10,000	\$ (10,000)			\$ -
Engineering	York Road Reconstruction <i>Estimated Project Total = \$17,000,000</i>	\$ 16,422,900	\$ (1,558,800)	\$ (3,234,200)	\$ (11,629,900)	\$ -
HR	Human Resources Information System - Software	\$ 20,000	\$ (20,000)			\$ -
Landfill	Landfill Leachate Disposal Line	\$ 565,000	\$ (565,000)			\$ -
Water Works	Well #10 - Underground and Mechanical	\$ 223,500	\$ (223,500)			\$ -
Water Works	Well Rehabilitation and Decommissioning (Old Wells #9, 10, 13)	\$ 420,000	\$ (420,000)			\$ -

2023 Capital Budget Projects (Additional - Capital Required)

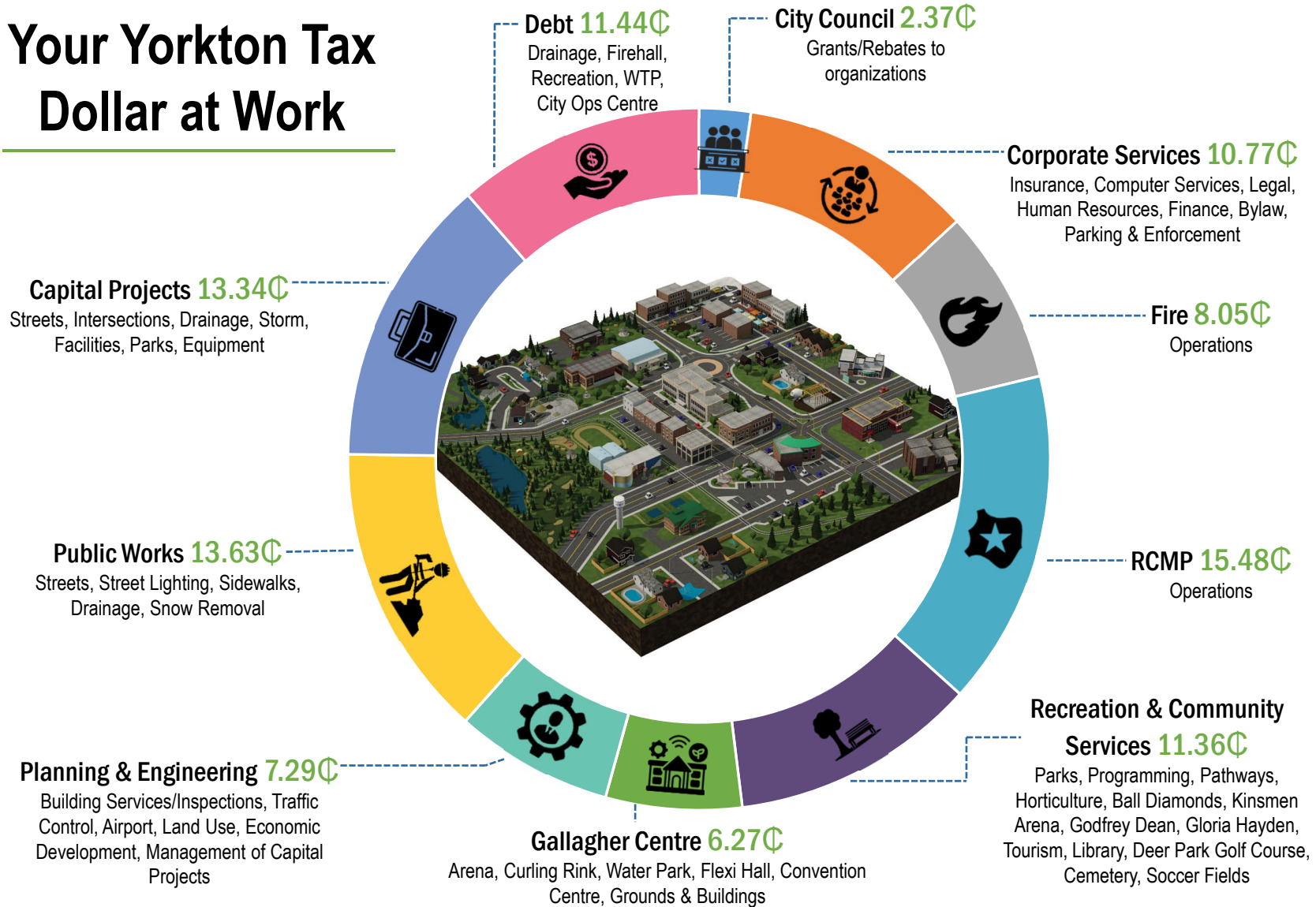
Dept	Project Description	Total Cost	From Reserves	Grants/ Donations	Trade-in/Loans/ Other/Land Fund	Capital Budget
Airport	Terminal Building Replacement	\$ 850,000	\$ (850,000)			\$ -
Total Additions to 2023		\$ 22,618,363	\$ (4,854,263)	\$ (3,234,200)	\$ (14,529,900)	\$ -
Total 2023 Capital Budget		\$ 34,023,363	\$ (8,494,263)	\$ (3,314,200)	\$ (17,304,900)	\$ 4,910,000

2024 Capital Budget Projects (Proposed)

Dept	Project Description	Total Cost	From Reserves	Grants/ Donations	Trade-in/Loans/ Other/Land Fund	2023 Capital Budget	2024 Capital Budget
Airport	Annual Allocation	\$ 250,000					\$ 250,000
Deer Park	Irrigation	\$ 100,000					\$ 100,000
Deer Park	Sea Can Storage	\$ 26,000					\$ 26,000
Engineering	City Hall - Key Card System Upgrade	\$ 60,000					\$ 60,000
Engineering	City Hall - Elevator Modernization	\$ 225,000					\$ 225,000
Engineering	Fleet Equip Purchases (Excavator, Skid Steers, Crew Cab, Equipment Trailer, Utility Tractor)	\$ 459,570	\$ (449,570)		\$ (10,000)		\$ -
Engineering	Traffic Signals & Pole Replacement Program - Broadway & Myrtle (Revised Cost)	\$ 670,000	\$ (350,000)				\$ 320,000
Engineering	Downtown Street Lights Upgrades	\$ 185,000					\$ 185,000
Engineering	Pedestrian Crosswalk Signals (Gladstone & King; Gladstone & Independent) - Safety	\$ 137,000					\$ 137,000
Engineering	UHCP - Highway 10 East Upgrades (Mayhew to Husky Road)	\$ 1,534,150		\$ (1,073,905)			\$ 460,245
Gallagher Centre	Waterpark Swirl Pool UV Filter System	\$ 125,000					\$ 125,000
Legislative	Tech Upgrades for Council Chambers	\$ 200,000					\$ 200,000
Public Works	Annual Road Allocation (York Road)	\$ 2,000,000					\$ 2,000,000
Public Works	Annual Drainage Allocation (York Road)	\$ 500,000					\$ 500,000
Public Works	COC Enviro Assessment & Corrective Action - Testholes and Groundwater Monitoring	\$ 150,000	\$ (60,000)				\$ 90,000
RCS	Broadway & Hwy 9 Beautification (Trees & Grass)	\$ 75,000					\$ 75,000
RCS	Heritage Heights Tennis & Pickleball Court Improvements	\$ 220,000	\$ (175,000)				\$ 45,000
RCS	JC Beach Ball Diamond #3 & #4 - Dugout Upgrades	\$ 60,000					\$ 60,000
RCS	Jubilee Diamond #1 Improvements	\$ 100,000					\$ 100,000
RCS	Logan Green Tree Planting Program	\$ 30,000	\$ (30,000)				\$ -
RCS	Roof Replacement Program - Godfrey Dean & Gloria Hayden	\$ 330,000	\$ (100,000)				\$ 230,000
Water Works	Water Pollution Control Plant Expansion - Detailed Design/Procurement (Phase 4/5)	\$ 5,800,000	\$ (5,800,000)				\$ -
Total 2024 Capital Budget		\$ 13,236,720	\$ (6,964,570)	\$ (1,073,905)	\$ (10,000)	\$ -	\$ 5,188,245

Total of projects above requiring capital funding	2023 4,910,000	2024 5,188,245
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Your Yorkton Tax Dollar at Work



2023 Budget Review Form Responses

02/02/2023 7:56 PM

If taxes keep increasing I wonder how we will be able to stay in the city upon retirement. There doesn't seem to be any restraint on big capital projects. There doesn't seem to be any effort in attracting business or incentives to new home building in the city. I feel we already pay too much in taxes after the huge increase a couple of years ago. When our household faces increased costs we look at ways to save and cut costs maybe the city could do the same.

02/01/2023 8:41 AM

I get inflation but when everything is going up would have rather seen more cuts to try and hold as close as can.

02/01/2023 3:38 AM

With costs rising at the Gallagher centre I think part is the new free structure. The cost for some people has become too high. I would recommend a review of the rates of facility's and admissions. I think you lose some revenues from a lot of the different groups or have people making other choices to travel to use these facilities

01/31/2023 10:46 AM

Lower the tax hike and charge a lot more to the golfers using the new club house.

01/31/2023 4:32 PM

I was wondering if we could get a small discount like the Town of Kamsack gives, if paid by a certain date?

01/31/2023 12:14 PM

Why doesn't the city stop investing in residential and commercial developments that are sitting empty. Shut off the lights on the York Road subdivision that sits empty. Stop charging huge prices for City owned lots that are not selling. The waste of infrastructure money spent on vacant city lots is horrific. The airport doesn't need a new building. Start offering tax concessions for new construction. Stop over salting the streets. This is the worst city I have lived in for over using salt in the winter.

01/31/2023 11:51 AM

Cut back on vehicles that the employees get to drive back and forth to work and take home for lunch.

01/31/2023 9:08 AM

I'm okay with the 2023 tax increase as I do understand that costs increase every year. What I think should be looked at in the near future is privatizing the Deer Park golf course and looking at our fire department staffing which could consist of voluntary firemen. IMO Yorkton's fire department isn't a busy department and having highly paid fulltime firemen is a unneeded added cost to taxpayers. Policing is another costly endeavor to taxpayers, I really don't know if Yorkton had it's own police force like some other cities in Saskatchewan have would be more financially feasible or not?