TO: Park & Recreation Commission Members
FROM: Bill Waller, City Administrator
Chris Fortsch, Administrative Assistant
Jon Steffes, Summer Recreation Director
DATE: May 4, 2023
RE: Meeting Notice
Monday, May 15, 2023
5:30 p.m., La Crescent City Hall
315 Main Street

AGENDA

1. Consideration of meeting minutes – April 17, 2023.
2. Representatives from the Outdoor Performance Venue Committee will be in attendance at the meeting to review the project. Information about the project is included.
3. Review 2023 Summer Recreation sign up to date.
4. Discussion regarding the rental fee for the new Wieser Park Pavilion. A park shelter reservation form is included.
5. An update will be provided at the meeting on the recommendation to complete an ADA access audit and transition plan of City park and recreation facilities.
6. Attached is information regarding improvements at Abnet Field.
7. Information is included regarding the volunteer days to pull garlic mustard at Vetsch Park.
8. Attached is the Ice System Evaluation Study regarding future improvements required at the Community Ice Arena.
9. National Bike Month Proclamation – information included.
10. Set date for the next meeting.
11. Additional discussion items.
12. Adjournment.

Please call either Chris or Bill at 895-2595, or e-mail us at cfortsch@cityoflacrescent-mn.gov or bwaller@cityoflacrescent-mn.gov, if you will not be able to attend, have questions, or need more information. Thank you.

#1

TO: Honorable Mayor and City Council Members
Park and Recreation Commission Members
FROM: Bill Waller, City Administrator
DATE: April 19, 2023
RE: Meeting Minutes
April 17, 2023

The La Crescent Park and Recreation Commission met at 5:30 p.m., on Monday, April 17, 2023, in the City Council Chambers at the La Crescent City Hall. The following members were present: Jon Steffes, Paul McLellan, Maseray Bangura, Patti Martell, Marge Loch-Wouters, and Diana Adamski. Commission member Sarah Wetterlin was not in attendance. Also in attendance were Teresa O'Donnell-Ebner, Chris Fortsch, Betsy Knowles, and Bill Waller.

1. It was the consensus of the Commission to approve the minutes of the March 20, 2023 Park and Recreation Commission meeting as presented.
2. The Commission reviewed an agreement with MSA to complete an ADA access audit and transition plan for the City's park and recreation facilities. Carter Arndt from MSA was in attendance at the meeting via Zoom to review the agreement. It was the consensus of the Park and Recreation Commission to recommend to the City Council that the agreement with MSA be approved to complete the ADA access audit and transition plan.
3. Summer Recreation Director Jon Steffes reviewed the programming for the upcoming 2023 summer recreation season, and discussed staffing levels for various programs. Discussion followed regarding limiting the initial sign-up for recreation programming to residents of ISD # 300 School District. It was agreed that the initial sign-up for each 2023 summer recreation programming session would be limited to residents of ISD #300, and that non-residents would be allowed to sign up for summer recreation programming at only the second sign-up date initially, and thereafter at the completion of the sign-up period for residents of ISD #300.
4. The Commission was updated on the Wieser Park Improvement Project, including the construction of the new park pavilion. Discussion followed regarding the rental fee for the new park pavilion and a reservation form. It was agreed that staff would prepare a draft reservation form that would be included on the agenda for the May Park & Recreation Commission meeting.
5. The Commission reviewed and discussed a draft of a new City ordinance for Parks, Playgrounds and Public Grounds. It was recommended that language be added to the ordinance prohibiting the sale of liquor without the appropriate liquor license and approval by the La Crescent City Council. It was agreed that the ordinance would be revised and added to the agenda for the May Park & Recreation Commission meeting for further review and discussion.

6. The Commission discussed trail maintenance and the recommendation from a meeting of community volunteers and staff to recommend that trail maintenance activities be coordinated by the City's Sustainability Coordinator, and that a work plan and time frame for each activity would be prepared and submitted to the City's Natural Resource Advisory Group for concurrence prior to the work being completed.
7. The Commission reviewed the Eagle Scout project to construct a dog park adjacent to South 7th Street.
8. Information was presented regarding the City's Safe Routes to School grant application that was awarded a $223,280 grant from the Minnesota Department of Transportation for a 2027 improvement project.
9. Information was presented regarding the fourth phase of the Wagon Wheel Trail Improvement Project which is the construction of a Bicycle/Pedestrian Bridge over the west channel of the Mississippi River that is planned for construction in 2026.
10. The Commission was informed of the Natural Resource Advisory Groups volunteer day to pull garlic mustard at Vetsch Park that is planned for April 22, 2023.
11. Information was presented regarding data generated from the counter on the Bicycle/Pedestrian Bridge that records bicyclist usage on a monthly and daily basis, and on the Bicycling around Minnesota event planned for La Crescent in August of 2023.
12. It was agreed that the next Park & Recreation Commission meeting would be May 15, 2023.
13. There being nothing further to discuss, the meeting was adjourned at approximately 7:20 pm.

La Crescent Outdoor Performance Venue Project

Creating Community Connections Through Enjoyment of the Arts

#2

Background

In December of 2021, the La Crescent Lions Club started exploring what was involved in getting a bandshell built in the city. Members of the club had expressed an interest in creating an outdoor/park venue for local musicians to display their talents. The greater purpose of a bandshell, though, is to bring community together for an evening of enjoyment of the arts, relaxation, and visiting with friends and neighbors. Knowing this was a big undertaking, the Lions asked Rotarians and other community members to be part of the planning team.

Community Visioning Meeting:

Why: Creating community connections through enjoyment of the arts

What: Design, build, and manage an outdoor performance venue to support a wide variety of activities (concerts, theater, movie nights, special events & presentations)

How: Strategic Challenges & Strategic Advantages

How - Strategic Advantages & Challenges

Advantages:	Challenges:
Local Talent in the Arts (Appleseed Community Theater, Apple Annies, La Crescent-Hokah Community Summer Band, Library Programming)	Funding/Finance
Beautiful/Scenic Location Options	Location/Site Selection
Promote Tourism & Support Local Business	Sustainability/Management
Build sense of Community and Community Pride	Competition with other venues and events

Start with Why... then the What

It's more than brick & mortar – It's about...

Creating Community Connections Through Enjoyment of the Arts

What - one of many examples... https://www.stonehorsegreen.org/

STONE HORSE GREEN

WHERE GOOD NEIGHBORS GATHER

How - Project Steering Committee

Steering Committee:

Dean Bergstrom, Dave Ebner, Chris Fortsch, Vanessa Machado, Patti Martell, Randy Rosenberg, Jeffrey Jewell, Monica Holman, Teresa O'Donnell-Ebner, Ron Wilke

How - Project Timeline

Phase I (Fall '22 - Summer '23): Conceptual Design, Budget, Increase Partnerships, Identify Sponsors, Fundraising Campaign, 2023 "Portable Performance Series" (3-4 events)

Phase II (Summer '23 - Winter '24): Finalize Structure Design, Site Selection, Plan 2024 "Portable Performance Series"

Phase III (Spring - Summer - Fall '24): Ground Breaking/Construction, 2024 "Portable Performance Series", Establish Summer Performance Series Board of Directors, Facility Dedication, Fall Events

Phase IV (Spring Summer '25): 2025 Performance Series!!!

How - Project Subcommittees

Marketing & Communications: print materials, website, logo, venue name, branding, social media, etc...

Finance & Fundraising: set up bank account, business/corporate sponsors, research grant availability, etc...

Facility Design/Site Selection/Construction: identify requirements, research options, work with engineering firm/architect, select contractors, etc...

Long-Range Sustainability: event planning, build out 2023 performance series, determine types of entertainment/other uses for the facility, etc.

Project Partners...

La Crescent Lions

La Crescent Rotary

City of La Crescent

Metre Agency

Work Underway...

Steady progress continues, as the OPV Steering Committee moves forward with a wide variety of project tasks. Perhaps the most significant of these tasks has been the continued development of our partnership with the City of La Crescent as we continue to strongly explore options to integrate the OPV into the city's **strategic plan** for downtown redevelopment.

Work Underway...

Marketing & Communications: The **Metre Agency** has joined our team as a project partner/sponsor. Work is underway to develop brand strategy, a marketing plan, and marketing materials for the summer concert series and OPV capital fundraising campaign. The marketing work will include the development of content for a web and social media presence, as well as a variety of print materials.

Finance & Fundraising: Budget work for both expenses and revenue is nearing completion, along with work to solidify tax exempt/501c3 status through a partnership with the La Crescent Lions Club for the 2023 Summer Concert Series. Next tasks will include work to develop and define sponsorship opportunities to generate revenue for the summer concert series.

Work Underway....

Facility Design/Site Selection/Construction: At its December meeting, the La Crescent City Council approved the services of the city's architect to work with our steering committee to develop a concept plan for the OPV. Facility design/programming meetings are underway with the architect. We reviewed a preliminary conceptual plan for review and comment in late April. This was a key step in support of developing a target for the capital fundraising campaign for the project. Also, as stated above, the possibility of locating the facility in a downtown location continues to increase. The downtown location offers great potential to support our mission of "Creating Community Connections Through Enjoyment of the Arts" in La Crescent.

Long-Term Sustainability/Event Planning: We are kicking off the project this year with a Summer Concert Series! Our first concert is May 30th at Vet's Park with the well-known area band, TUGG. You can take in the Farmer's Market while you enjoy the music as well. We'll continue the Summer Concert Series with a performance in June, July and August with more details to come. Dust off your lawn chairs or grab a blanket! We can't wait to celebrate the music of summer in La Crescent with you!

Project Partners...

None of us is as smart as all of us....

We are hopeful that you will consider joining us on a subcommittee to support this community venue. **We need enthusiastic volunteers with a passion for the arts to make this project successful.** To learn more, to receive project updates, or to sign up to help, contact us at friendsofLCOPV@gmail.com

#4

2023 FACILITY USE REQUEST

RESERVATION INFORMATION:

Organization/Group Name (If Applicable): _____

Contact Person: _____ Phone Number: _____

Email Address: _____

Address: _____ City, State, & Zip Code: _____

RENTAL & EVENT INFORMATION:

Desired Facility Location: _____ Desired Reservation Date: _____

Arrival/Set-Up Time: _____ Departure/Tear-Down Time: _____

Type of Activity/Event: _____ Approximate Number of People Attending: _____

RENTAL RATES:

FACILITY	2023 FEES
Old Hickory Park Shelter located at 1200 Jonathan Ln. Open-air shelter Two sides available for rent – Jonathan & Red Apple	$45.00 / side / day
Wieser Park Pavilion located at 1811 County 6 All-Season pavilion	$50.00 – Civic/Non-Profit / up to 6 hours $75.00 – City/Township Resident / up to hours $100.00 – Non-Resident / up to 6 hours $100.00 – Civic/Non-Profit / 6+ hours $150.00 – City/Township Resident / 6+ hours $200.00 – Non-Resident / 6+ hours No Charge – Monday, Tuesday, Wednesday, Thursday for Civic/Non-Profit meetings
Wieser Park Shelter located at 1811 County 6 Open-air shelter	No Charge

Remit completed form & payment to:
City of La Crescent
Attn: Chris Fortsch, Administrative Assistant
315 Main St, PO Box 142
La Crescent, MN 55947
cfortsch@cityoflacrescent-mn.gov

All reservations are tentative until paid in full. To secure your reservation, payment must be received within 10 days of reservation request.
Fees are non-refundable.

DAMAGE RESPONSIBILITY AGREEMENT:

You agree that you are responsible for any damages, excess cleaning fees, repairs, or replacement of City-owned property as a result of the rental.

FACILITY USE AGREEMENT:

Groups are reminded that their reservation is for the pavilion or shelter area only. Other City park facilities are open to public use – i.e., restrooms, parking lots, etc. Please be kind and considerate to our parks and neighboring residents.

It is agreed that this use agreement is to use the facilities for the stated purpose. The undersigned, their organization and its members, in consideration for the use of the above-described facility, agree to assume responsibility for cleaning and leaving the facility in order for the next user. User agrees to abide by all policies and procedures set forth by the City of La Crescent. Open-air shelters are available on a first-come-first-serve basis after all paid reservations are honored. Please check the schedule of reservations posted on the shelter.

I have read and agree to abide by all City ordinances, park rules and regulations, as well as conditions with this reservation request.

Renter's Signature	Date	City Representative, City of La Crescent	Date

#6

Improvements at Abnet Field

Addition of Scoreboards & Electrical Panel

Late last fall, the City ordered two scoreboards for Abnet Field. Those scoreboards have finally arrived and will be installed this week. La Crescent Youth Ball (LYB) and ISD300 have agreed to assist with the installation costs of extending electrical service to the sites. The project will be completed in the next week or so.

Dugout Improvements

Simon Wieser, a member of Boy Scout Troop 33, plans to improve the dugouts at Abnet Field this summer for his Eagle Scout project. He and a number of other scouts will be building covers over the dugouts on both fields at Abnet. La Crescent Youth Ball (LYB) will be covering the cost of supplies for this project. The project will be completed this summer (2023).

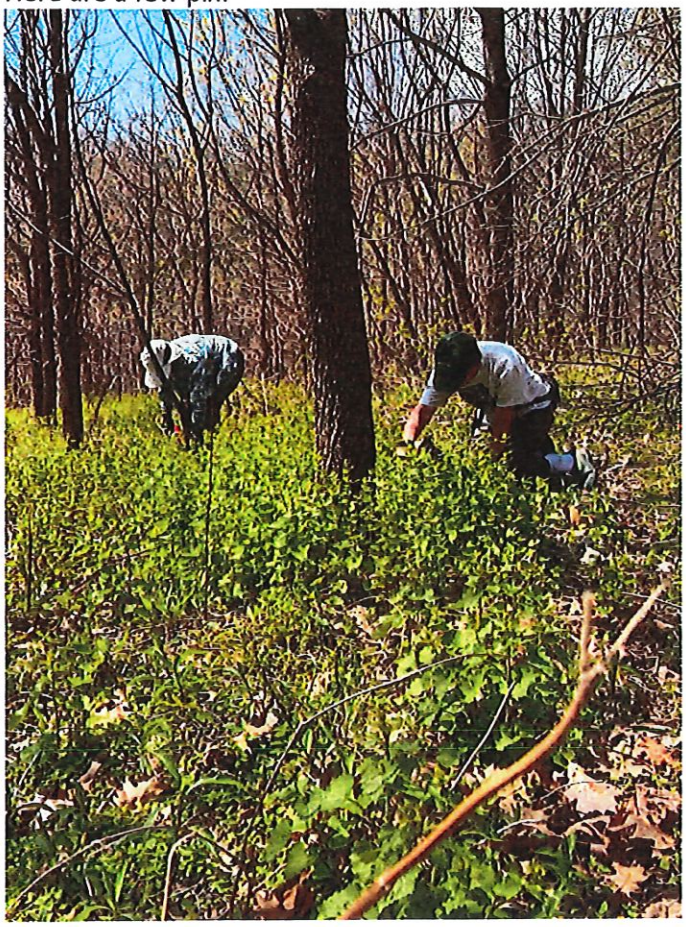
#7

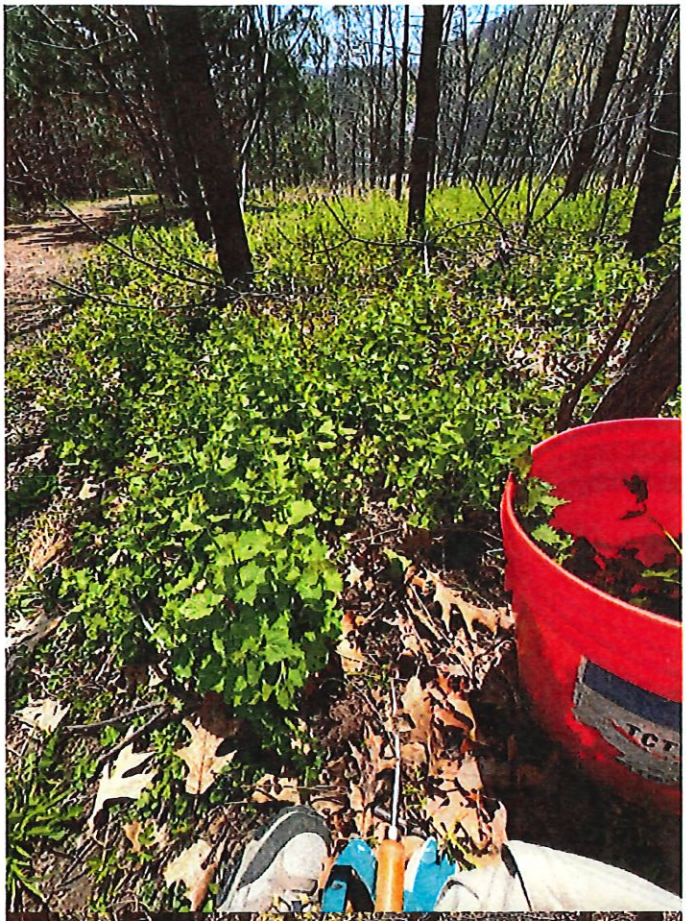
Bill Waller

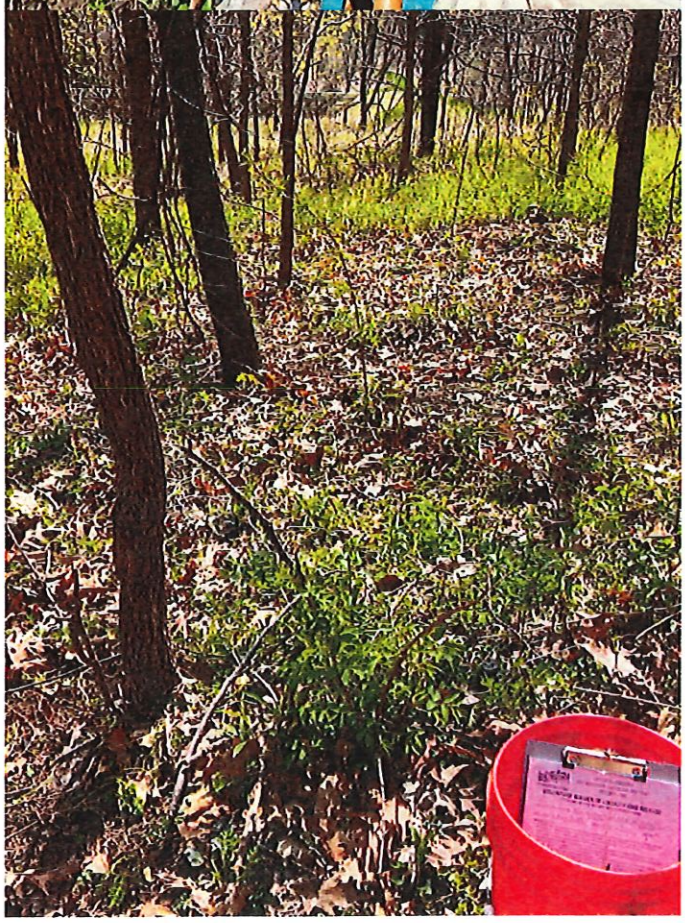
From: Marge Loch-Wouters <lochwouters@gmail.com>
Sent: Friday, May 5, 2023 8:49 AM
To: Ruth Nissen; rnissen@acegroup.cc; Betsy Knowles; URICH RANDALL; Bill Waller; Jason Ludwigson
Subject: Garlic Mustard Pulling Project

We had three 1.5-2 hour work shifts 4/22; 5/1 and 5/4 with a total 9 different volunteers including some of us. Pulled approximately 20 bags (?) of garlic mustard. Finished most of one patch (up near the cemetary) and got two others about halfway done (by the pines and by the windmill). It was a great first try and we have some thoughts about next year.

Here are a few pix!







Marge Loch-Wouters
lochwouters@gmail.com
719 Hillcrest Ave, La Crescent MN 55947
608 790-0211

#8

La Crescent MINNESOTA
Growing from River to Ridge

Ice System Evaluation Study

La Crescent Community Ice Arena

For:

City of La Crescent
315 Main Street
La Crescent, MN 55947

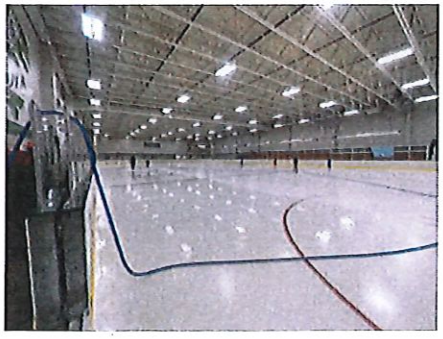
February 23, 2023
Rev 1 March 13, 2023

Submitted By:

B32° Engineering Group

B32 Engineering Group, Inc.
2211 O'Neil Road
Hudson, WI 54016

B32 File No. 900.22.469



1.0 TABLE OF CONTENTS

2.0 PROJECT INFORMATION

Facility Addresses:
La Crescent Community Ice Arena
520 S 14th Street, La Crescent, MN 55947
Facility Manager: Tyler Reining
P. 507.884.5275

Owner Representative:
City of La Crescent
315 Main Street
La Crescent, MN 55947

Consulting Engineering Firms:
B32 Engineering Group, Inc.
2211 O'Neil Road
Hudson, WI 54016
P. 651.436.2075
M. 651.492.1376
Mr. Scott A. Ward, P.E.
President
scott.ward@b32eng.com

Certification

The opinions stated in this report are based on limited visual observations and physical investigations only. No warranty is made, expressed or implied, that deficiencies that may affect life safety, though not addressed in this report, may not exist. The recommendations and/or description of repairs and energy use estimates and/or savings are for general information only, and should not be relied upon for securing funding and do not constitute design and bidding and/or construction documents. Actual energy use will vary depending on many factors outside B32 Engineering Group's control.

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Minnesota.

Scott A. Ward

40921	2.23.23
Scott A. Ward , P.E.	MN P.E. Registration Number	Date
President, B32 Engineering Group, Inc.		

3.0 BACKGROUND AND PURPOSE

3.1 Background

The La Crescent Community Ice Arena has a long-standing tradition of providing quality ice-related activities. The facility offers skating opportunities for hockey, figure skating and the public. The arena features a standard NHL sized ice sheet and spectator seating for approximately 300-500 people. The facility was originally constructed in 1997 and is 26 years old. The facility operates in the ice mode from mid-August to May 1, approximately 8 1/2 months of the year and is considering extending the season to 11 months. The building is owned by the City and operated by the La Crescent Youth Hockey Association (LYHA) and the site is owned by the School District.

The existing ice system (refrigeration and ice rink floor system) is an indirect R-22-glycol system that is 26 years old and has exceeded its expected life of 20 years.

Photo 1 – Front exterior of facility

Photo 2–Side exterior of facility near mechanical room.

3.2 Purpose

As part of a continued effort to: improve operation and efficiency at the ice rink facility; to plan for future improvements to the ice system (refrigeration system, ice rink floor and dasher board system) and other related systems; and to continue to provide high quality ice for its user groups; B32 Engineering Group, Inc. was retained by the City to prepare a study/evaluation of the ice system at the La Crescent Community Ice Arena. The primary objectives of this study are as follows:

- To provide the scope of work for future improvement project(s) that will extend the life and function of the ice system for another 25+ years.
- To identify ice system improvements to extend the life of the existing ice system and replacement options to assist the City and the LYHA in budgeting for future needs.
- To provide accurate cost and project scheduling information to assist the City and the LYHA in making informed decisions on future projects.

- To recommend improvements that maximize energy efficiency while incorporating sustainable design practices that reduce the use of fossil fuels, the production of greenhouse gas emissions, total energy use, wherever possible, and overall, lower the carbon footprint of each facility.

It is recommended that the findings presented in this study be used to improve the operations and maintenance of the facility and to assist in planning and budgeting of the recommended improvements.

3.3 Scope of Services and Approach

The scope of this project includes completing an in-depth evaluation of the physical conditions and improvement options for the following systems:

- Refrigeration system;
- Ice rink floor system;
- Waste heat recovery system;
- Dasherboard system; and
- Overview of MEP, electrical and building systems that are related to the recommended refrigeration system improvements.

3.4 Investigation Methods and Documents

Various methods were used to evaluate the existing facility including:

Visual Observations: A site visit was conducted on August 17, 2022, to observe the condition and operation of the facilities and the ice and mechanical system. The ice sheet was in placed during the site visit.

Interviews: During the on-site visits, in-depth discussions were conducted with the facility's management and operational staff to document existing issues with the facility and discuss historical problems with its systems.

Research: Where applicable, additional research was conducted to provide accurate and detailed information regarding improvements or systems recommendations.

Documents and Timeline: The following documents were received and reviewed for the study which also chronicles construction and improvements at each facility:

- Drawings:
    - Community – Arena Original Drawings dated 1998 A1-A5, M1-M2
    - Dasher Board System drawings dated July 3, 1997
    - Rink Tec Drawings dated April 1997
    - Fabcon Insulated Wall Panel Shopdrawing
    - Mid-City Steel Shopdrawings

3.5 Estimated Project Costs

The proposed cost estimates presented throughout this report were developed by estimating the probable construction costs based on similar types of construction projects and work performed and bid in 2020-23 and updated for 2024 costs unless otherwise noted. The estimated costs include all materials and labor for a complete

installation unless otherwise noted. Costs will vary depending on the time of year the projects are bid, the current economic climate and the size and scope of project. The costs are based on a standard project and construction schedule as described in Section 6. If a reduced construction schedule is desired, additional costs for overtime pay, etc. should be applied to the specific project.

The cost estimates also account for, or are based on, the following references:

- Prevailing Wage requirements that will be required by the State of Minnesota.
- Current (2023) pricing trends with supply shortest, etc. (20%-30% in the Midwest).

In addition to the probable construction costs of the proposed work, other associated project costs are included to provide a total estimate cost for the project. The Estimate, Design and Construction Contingency line item in each cost table is included during the preliminary phase of design projects because the exact scope of the project has not yet been determined. This percentage is typically reduced from 20% to 8% during the final design phase of the project.

The Engineering, Legal, Financial and Administrative line item in each cost table is provided to cover all work performed by the design team, geotechnical services and other material testing services, and all legal, financial and administrative responsibilities required by the City for projects of this type. These costs will vary based on project scope. A proposal will be provided to the City for all engineering design services at their request.

3.6 Escalation Factor and Method for Application

Where costs are projected beyond the current year, an escalation factor of 4% per year is typically applied. Given the current supply shortages, etc. an escalation factor of 8% was applied. The escalation factor is based on the current conditions of the economy and location and is applied to midpoint of construction which is estimated to be July 1st of the applicable year.

3.7 Estimated Energy Savings

Estimated savings presented in this report are computed from the equipment and manufacturer's information provided to us and based our Team's experience with similar systems. The actual energy savings will depend on many factors including: conservation measures implemented seasonal weather variations, energy price increases, energy use practices of the facility's staff and users. Payback calculations are typically not presented during this level of survey/investigation but rather provided after further programming and scope identification is completed during the preliminary or schematic design phases of the project.

3.8 Applicable Codes and Standards

The latest adopted version of the following codes and standards, as amended by the City, are currently applicable for this project:

- Uniform Building Code and Energy Code (based on 2018 IBC).
- International Mechanical Code (IMC), as amended.
- International Fire Code, as amended.
- NFPA 70
- National Electric Code, as amended.
- Uniform Plumbing Code

- ANSI/ASHRAE Standard 15-2019
- ANSI/IIAR 2-2021
- The City's CODE OF ORDINANCES or ADMINSTRATIVE CODES were not reviewed or reference for this survey or study.

4.0 ICE SYSTEM REVIEW

4.1 Description of Existing Ice System

The existing ice system includes a refrigeration system, an NHL sized (200'x85') concrete-based ice rink floor system and a dasher board system. The existing refrigeration system is an indirect R-22-based/glycol refrigeration system and was installed in 1997 along with the concrete-based ice rink floor and dasherboard systems. Since 1997 the following major improvements to the ice system were completed:

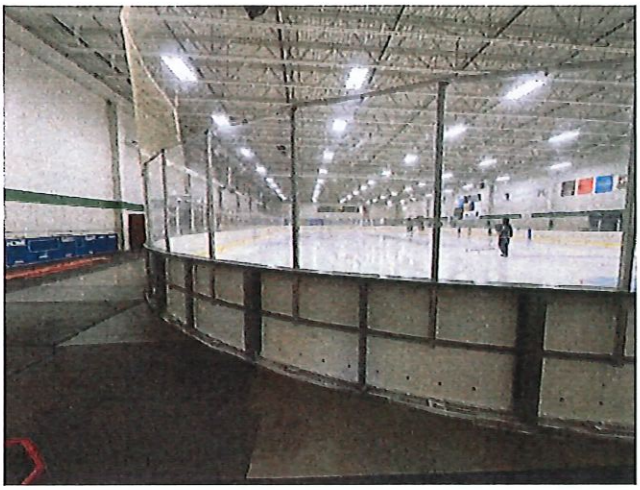
- Refrigerant. Lost R-22 due to leak in 2022. Cost of repairs $25,000.
- Compressors. Replaced all 4 compressors once, in 2002, 2012, 2017, 2021.
- Air cooled condenser. Have replaced fan motor(s).
- Other related building improvements:
    - Roof. Added 2" of insulation. TPO membrane.
    - Dehumidification system. Arid Dry CDI system installed around 2019.
    - Replaced all fire suppression piping in arena.
    - Recalked joints in precast building panels.

4.2 Ice Rink Floor System

The existing NHL sized (200'x85') concrete-based ice rink floor system was installed in 1997 and is an *indirect* type of system. The existing drawings show the rink floor section to be as follows (from bottom to top): 6" thick subfloor heating system layer with polyethylene tubing at 18" on center, 4" thick insulation layer and 5" thick concrete with 1" polyethylene cooling pipes at 4" on center. The drawings show the Schedule 40 steel header piping for the rink piping (cold) located at center ice. The steel header and PVC return bends are connected to the polyethylene rink piping by hose clamps. The transmission mains for the subfloor and rink floor systems are shown to be PVC. Leaking glycol is noticeable in the northwest corner of the rink. The ice is discolored in a single spot roughly 24 inches in diameter. There is reported surface cracking in the concrete showing small leaks primarily on the western half of the rink.

4.3 Dasherboard System

The dasherboard system was installed with the construction of the building and is 26 years old. The manufacture is Becker Arena Products. It is a steel framed system with polyethylene facing, caprail and kickplate, acrylic shielding with aluminum support posts, and protective netting. The system is in fair condition.



Photos 3 and 4 – Existing ice rink floor and dasher board system

4.4 Refrigeration Room and Life Safety Systems

The existing refrigeration room is located on the north east corner of the facility. The existing room is sufficient size for the replacement of the equipment in the future and is approximately 510 SF. There are two exterior walls for this room. There is one set of interior double doors and no exterior doors. The walls are masonry block and precast and the roof is metal decking and metal bar joists.

Photos 4 & 5 – Existing Refrigeration Room and Refrigeration Equipment

The following observations for the refrigeration room were noted:

- There is an existing unit heater in this room.
- There appears to be an existing fire sprinkler system in the room.
- The existing electrical service for the entire building appears to be 800 amps. The current chiller voltage is 460/60/3.
- Life safety systems. The operations of the life safety systems were not verified or observed by B32. The following observations and concerns were noted. The concerns should be addressed and corrected asap. Only personnel trained in R-22 refrigerant safety should enter the until these items are corrected.
    - There does not appear to be a gas monitoring system.
    - It was verified that there is a mechanical ventilation system serving this room which is required by code.
    - There are no emergency stop switch for the refrigeration room or ventilation override switch on the outside of the interior door for the refrigeration room.
    - There is no life safety signage on the door that provide access to the refrigeration room. This is required by code.
    - The date when the pressure relief valves were changed last was not noted.
    - There are no eyewash shower stations inside the room.

4.5 Refrigeration System

The arena is served by a 26-year-old *indirect* R-22-based refrigeration system. The refrigeration skid was manufactured by Systematic Refrigeration and installed by Rink Tec International and is original to the building. The major components include four (4) 35 HP compressors, one (1) direct expansion type chiller barrel, two (2) accumulators, one (1) air cooled condenser, two (2) chilled water/rink floor pumps, and one (1) motor control panel. There is also a separate equipment package for the subfloor heating system (frost prevention system) that includes two (2) heat exchangers, two (2) pumps, one (1) glycol tank and a control panel. The subfloor heating system has been dismantled due to suspected leaks in the piping system. The refrigeration system is 26 years old and exceeded its 20 year life expectancy. The total capacity of this system is approximately 70 to 90 tons. Overall, the system is showing its age and equipment replacements and leaks have become more common. Rink Tec provides the maintenance on the system. The main concern with this system is the age, increased potential for equipment failures, refrigerant leaks and the phase out of R-22 refrigerant that started in 2010. The resurfacer dumps outside vs inside the building in a pit.

Photo 6 – Existing refrigeration package

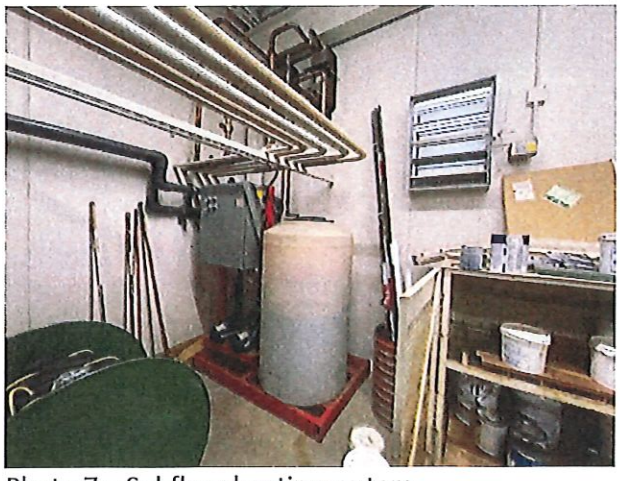


Photo 7 – Subfloor heating system

Photo 8 – Ex. refrigeration system motor control panel

Photo 9 – existing air cooled condenser

4.6 Arena HVAC and Dehumidification System

The HVAC systems were not included in the scope of the study but briefly reviewed below.

- Dehumidification System. A new Arid Ice CDI dehumidification system was installed approximately 3 years ago. There are reports of condensation still occurring inside the arena at certain times of the year.
- Ventilation. There are ventilation fans in the arena. The capacity of these systems was not verified.
- Heat. The only heat source in the arena space appears to be radiant heaters located over the bleacher or seating area.

5.0 ICE SYSTEM RECOMMENDATIONS

5.1 General

The existing 26-year-old ice system (refrigeration system, ice rink floor system and dasher board system) has exceeded it expected life and should be scheduled for replacement in the near future. This section of the report outlines recommended improvements to this system that will extend the life span and will also improve life safety. Some improvements have been made to the refrigeration system, as outlined above. Additional information such as common terms or definitions, financial programs, cost estimates, etc. can be found at the end of this report.

5.2 Existing Ice Rink Floor System Improvements

The existing concrete rink floor system is 26 years old. Its expected life span is 25 years but can last longer. The hose clamp connections used to connect the polyethylene rink piping to the steel header and PVC return bends are the weakest part of the system. There are leaks in the cold floor piping which could potentially be repaired. However, it is unknown at this time how severe the leaking is and if repairs could extend the life of the rink floor. The rink floor can be replaced at a separate time from the refrigeration system.

We recommend the following improvements to the existing ice rink floor system.

- Monitor the flooring systems, surrounding concrete and foundation for any signs of frost heave, cracking, etc. This is very important since the subfloor heating system is not working and the system operates more than 6 months during the year. Frost can do tremendous damage to the ice rink floor system, adjacent building fountains etc. and is very costly to remove.
- Monitor the piping and piping connections in the concrete rink floor for glycol leaks. The leaks can typically be repaired by chipping away the concrete at the location of the leak, replacing the hose clamp connection(s) and patching the concrete. However, if the leaks are occurring in the poly piping itself, then there is a larger concern that the pipe material is starting to degrade.
  Cost Estimate: Typical maintenance.
- Repair subfloor heating system equipment in refrigeration room.
  Cost Estimate: $85,000
- Schedule for the replacement of the transmission mains in the very near future. PVC transmission mains have a more limited life than steel and polyethylene, in this application, and will be one of the first areas of the system to fail.
  Cost Estimate: $130,000
- New rink floor system and mains. Starting planning for the replacement of the ice rink floor system.
  Cost Estimate: $1,400,000

5.3 Dasherboard System Improvements

The existing dasher board system is 26 year old. The expected life span of this type of system is 25 years but often will last longer. The existing system appears to be in fair to good condition but we did not review the system in detail. At this time, we do not have any recommendations for improvements to this system. The design of these systems has changed some over the years and now offer options to improve player safety, etc. We can discuss these systems with the City at their request. We recommend the City start budgeting for a new community level system. *Cost Estimate:* $331,000

5.4 Existing Refrigeration Room and Life Safety Systems

We recommend the following improvements to the existing refrigeration room:

- Life safety systems. The operation of the life safety systems was not verified or observed by B32. The following concerns should be addressed and corrected asap. Only personnel trained in R-22 refrigerant safety should enter the until these items are corrected.
  - Install gas monitoring system.
  - Verify the existing mechanical ventilation system serving this room meets current code requirements for volume of the room. Connect to the gas monitoring system and thermostat, etc.
  - Install one (1) emergency stop switch and one (1) ventilation override switch on the outside of the interior door for the refrigeration room.
  - Install life safety signage on access doors to the refrigeration room as required by code.
  - Replace all pressure relief valves that are older than five (5) years.
  - Install one (1) eyewash shower station inside the refrigeration room.

  Cost Estimate: $55,600

5.5 Existing Refrigeration System Improvements

The existing refrigeration equipment is 26 years old. The expected life of the overall system is 20 years. Some equipment has been replaced over the years. We recommend the system be replaced in its entirety in the very near future. Until the system is replaced, we recommend the following.

- Install life safety system recommendations as outlined in Section 5.4 of this report.
- Continue monitoring and testing:
  - Monitor the condition of all systems for life and safety concerns.
  - Monitor for refrigerant leaks in the system including in the rink floor.
  - Monitor and test all fluids in the system once a year.
  - Fill out daily log of system observations like system pressures, temperatures, observations, etc. Record a minimum of twice daily. This will help identify potential problems before they occur and aid in troubleshooting and repairing problems when problems when they do occur.
- Continue to perform the required maintenance on the equipment and systems.
- Stock up on extra R-22 refrigerant for unexpected leaks or repairs.
  Cost Estimate: Typical maintenance.

5.6 Resurfacer Room – Snow Melt Pit

The existing resurfacer currently dumps the ice shavings, from the resurfacing process, outside the building. There is no snow melt pit inside the resurfacer room. There appears to be sufficient floor space in the resurfacer room for a snow melt pit, however, the ceiling height is too low (11' feet to bottom of OH door tracks and 9'-10" to sprinkler pipe). A full size resurfacer needs about 13' of clear height to fully dump. Further evaluation is needed to determine if there is an option for dumping inside the existing resurfacer room. Reasons for an indoor snow melt pit include:

- Ice Maintenance. Every time the resurfacer drives outside the building to dump, which is typically every hour during busy programming, the tires need to be washed to help avoid carrying soil and contaminants on to the ice sheet. It is nearly impossible to completely clean the tires so some soil and contaminants are ground into the ice sheet requiring additional ice maintenance and skate sharpening.
- Energy Loss. Every time the door is opened to go outside the building, unconditioned air enters the arena space requiring the mechanical equipment to work harder to condition the air. If the air is not adequately conditioned, it can add an additional heat load to the ice sheet and require the refrigeration system to work harder and run longer.
- Environmental. Environmental groups are becoming more vocal about dumping ice shaving outside the building given the potential contaminants of paint, blood and other bodily fluids, and other containments in the ice shavings.

Cost Estimate: $100,000

5.7 Building Systems

The building systems were not included in the scope of this study. Information of a low emissivity ceiling was included as requested. We recommend the installation of a low emissivity ceiling if the rink will be maintaining ice in the summer months.

The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) states that up to 28% of the heat load on an ice sheet is caused by heat, from the surrounding building, radiating on to the ice sheet. The installation of a low emissivity ceiling (a foil faced radiant barrier) will greatly reduce the radiation from the ceiling where the majority of the radiation is generated. Other advantages include:

- Reduces lighting requirements due to reflective properties of the foil material.
- Helps to prevent ceiling condensation and dripping.
- Reduces ceiling maintenance costs.

Cost Estimate: $122,400. The simple payback on these systems ranges from 6 to 9 years for a facility that operates year-round. The cost estimate assumes the existing sprinkler heads do not need to be extended.

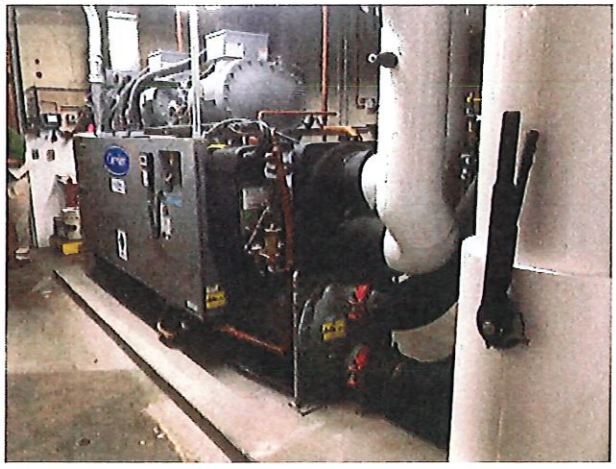
5.8 New Refrigeration Systems

For long term planning, we have identified three (3) refrigeration system replacement options to consider. The options are listed in this section starting with systems that use artificial/synthetic refrigerants followed by systems that use natural refrigerants such as ammonia and CO2.

- Option 1: New indirect, commercial grade, HFC/HFO synthetic-based refrigeration system.
- Option 2: New indirect, industrial grade flooded ammonia-based refrigeration system.
- Option 3: New indirect, CO2-based refrigeration system.

5.8.1 Option 1: New indirect, commercial grade HFC/HFO-synthetic based system (R-513, etc.)

Description: Replace the existing R-22-based *indirect* refrigeration system with a new *indirect* R-513-based refrigeration system, or similar type refrigerant, in the existing refrigeration room. The equipment used in this type of system is more commercial grade quality and may include direct expansion chillers (vs flooded), blended HFC or HFO refrigerant, semi-hermetic compressors (vs open drive) and pumps. In addition to manufactures like Carrier or Trane(local to La Crescent), Multistack (local to La Crescent) may be an option as well. This quality of this system is similar to the quality of the existing refrigeration system.



Photos 10 & 11 - Example of a Carrier or Trane package systems

Advantages:

- Lower capital cost.
- Potentially less space required.
- Lower refrigerant charge.
- Greater potential to be converted to another synthetic refrigerant type as synthetic refrigerants are phased out in the future. R-513 is a new blended synthetic refrigerant that is supported by the National Hockey League as a sustainable, non-ozone depleting, lower global warming potential (GWP) alternative refrigerant. Its GWP is 613 and its ASHRAE Safety Classification is A1 which is lower toxicity and no flame propagation.

Disadvantages:

- Lower quality of materials and equipment compared to the existing system. For example, the compressors would likely be replaced when they fail and not re-built, refrigerant piping is copper in place of steel, etc.
- Lower life expectancy (approx. 20 years)
- Lower efficiency than industrial grade system. Estimated to be 35-40% less energy efficient than an ammonia system and approximately 10%-15% less efficient than the existing R-22 indirect system.
- Uses synthetic (HFO) refrigerant. Future regulations are uncertain regarding synthetic refrigerants.
- Less waste heat available to recover and use from system.
- Refrigerant cost is much higher than natural refrigerants like ammonia and CO2.
- In general, a lower quality waste heat is available for recovery and use from system for heating the snow melt pit system, subfloor heating system, preheating domestic water, etc.
- Equipment arrangement may make maintenance more difficult.
- These types of systems are generally flow sensitive and therefore require additional monitoring and adjustments to operating conditions, further reducing the energy efficiency of the system.
- Blended refrigerants can't be recycled or reclaimed.

Cost Estimate: $1,253,000

Recommendation: This is a good option if the budget cannot support a natural refrigerant, will plan for replacement in 20 years or less, and these systems are currently being used in other ice rink facilities including some college and NHL facilities.

5.8.3 Option 2: New indirect, flooded, ammonia-based refrigeration system.

Description: Replace the existing R-22-based *indirect* refrigeration system with a new *indirect* ammonia-based refrigeration system in the existing refrigeration room. This system consists of industrial grade refrigeration equipment including open drive reciprocating or screw compressors, flooded chiller or heat exchanger, steel piping, waste heat recovery equipment, evaporative or water-cooled condenser, controls, etc. See Figure 1 at the end of the report for a conceptual equipment layout.

Photos 12 & 13 - Examples of a stick-built industrial grade, flooded ammonia-based system.

Advantages:

- Best available proven technology for this application.
- Proven performance and dependability.
- Maximum operational efficiency. 25 to 30% more energy efficient than the existing R-22 indirect system.
- Sustainability. Ammonia is a naturally occurring refrigerant.
- Longevity of industrial grade equipment and refrigerant (30+ years). Synthetic refrigerants may be faced with future restrictions with high global warming potentials. Ammonia is also a pure refrigerant.
- Lower cost refrigerant ($2 per pounds vs. $15 to $28 per pound for synthetics)
- Availability of equipment and parts.
- Could also explore the option of a low charge ammonia system reducing the charge to under 500 pounds.

Disadvantages:

- Requires more space. Typically, an ammonia system will require more space for the equipment because of the industrial grade equipment that is used in these systems and the systems are typically built on-site and are not a package type system.
- Recommend installing a vestibule between the refrigeration room and public spaces even though it's not required by code.
- Potentially greater health/safety hazards in comparison to synthetic refrigerants. However, all refrigerants are considered dangerous and should be handled with caution. Ammonia is somewhat of a "self-detecting" refrigerant in that a person will smell and feel the refrigerant immediately upon a leak potentially allowing more time to find safety where synthetic refrigerants can remove oxygen from a person's body with little warning. Also, there are additional safety systems that are installed with an ammonia refrigeration plant to improve life safety.
- Reporting requirements. There may be additional annual reports that are required depending on the volume of ammonia that will be in the system. The US EPA has been more aggressive at requiring additional reporting for ice rinks (mainly on the east coast) that operate with more than 500 pounds of ammonia. The proposed system could require as much as 800 pounds. If a low charge ammonia system was used that quantity could be much less, maybe even less than 500 pounds. The reporting for any facility that has less than 10,000 pounds is fairly straightforward.

- Greater ventilation requirements in room.
- Higher capital costs.

Cost Estimate: $1,754,000

Recommendations: This option should be strongly considered because of its increased efficiency and use of natural refrigerants as well as the ever-changing phase-out of synthetic or artificial refrigerants. However, the City should be mindful of the potentially greater health hazard over synthetic or artificial refrigerants such as R-513, etc. Although all refrigerants are hazardous. It would be prudent to start discussions of the replacement options with the fire marshal, the City's insurance carrier, and other interested parties to educate them on all aspects of ammonia refrigerant.

5.8.4 Options 3: New indirect carbon dioxide (CO2)-based system

Description: Replace the existing R-22-based *indirect* refrigeration system with a new *indirect* CO2-based refrigeration system in a new refrigeration room. The use of CO2 refrigerant may likely be the next substantial "innovation" in the ice rink industry. It's likely that this option will fit in the existing refrigeration room. See the Future of Refrigerants section in this report for additional information on CO2 and the use of CO2 in ice rink facilities.

Photo 14 - Example of an Indirect CO2 Chiller Package

Advantages:

- Higher efficiency. CO2 indirect is estimated to be approximately 5% less efficient than an ammonia system.
- Potentially higher heat recovery temperatures.
- Potentially less space required than an industrial grade system.
- Uses an air-cooled gas cooler system which is shorter in height than a traditional fluid cooler. Similar to the existing air-cooled condenser.

Disadvantages:

- Higher equipment costs due to limited availability.
- Fewer contractors familiar with technology.
- Proprietary control systems used with this technology.
- Efficiency drops off in warmer temperatures.
- Additional safety devices and systems may be required.
- There is a U.S. patent on some or all of this technology as it applies to ice rinks and therefore manufacturers are limited to LMP-Montreal (Owned by Evapco MD) and Carnot-Quebec (Owned by M&M Refrigeration NJ)

Cost Estimate: $1,879,000

Recommendations: If the City is interested in pursuing the use of CO2 refrigerant, we encourage a site visit to at least one facility that is currently using this type of system (St. Michael Albertville Ice Rink in Albertville MN; Brett Memorial Arena in Wasilla, Anchorage ice rinks or McDonald Arena in Eagle River), along with in-depth discussion with the facility's management and operation personnel and manufacturer's representatives. B32 Engineering Group has extensive experience with CO2 refrigerant applications in ice rink facilities.

6.0 PROJECT SCHEDULE

The improvements should be planned well in advance of the desired construction time so equipment and materials can be ordered and delivered to the site. Minimizing disruption to the facility's busy schedules and user groups will be a key element to the success of this project.

A very general, typical schedule for similar ice rink type projects is as follows:

Design Phase:	March-June (3-4 months)
Bidding:	July (October was the ideal bidding time for this type of work but recent equipment shortages has lengthened the time required to receive for long lead items so bidding early in July or September is recommended)
Order Materials:	September – December
Construction:	March – October (we estimate construction on this project to take 4 months)

If construction is started later and the new refrigeration system is not operational by October, a temporary chiller could be used until the new refrigeration system is complete. The cost of a temporary chiller system is approximately $30,000 per month plus utilities. These costs are not included in the cost estimate.

B32 Engineering Group, Inc. has extensive experience in working closely with clients to evaluate and identify renovation and improvement solutions for existing ice systems. We understand the City will use the information in this report to determine the scope of the refrigeration system replacement project. Once the project scope and funding sources have been identified, we will work closely with the City to develop a detailed project schedule.

7.0 SUPPLEMENTAL INFORMATION

7.1 General Definitions

Included in this section are definitions for the basic terminology used throughout this report.

Ice System: A term that collectively refers to the refrigeration system, ice rink floor system, waste heat recovery system and dasher board system.

Direct System: A *direct* refrigeration system circulates the primary refrigerant (e.g., R-22) directly through the ice rink floor. There is no secondary solution or refrigerant. These types of systems were very common in the 1970's and early 1980's. Today, indirect refrigeration systems, where glycol solutions are circulated in the rink floor, are more common due to costs and environmental concerns with large quantities of refrigerant required to operate the system.

Indirect-type System: In an *indirect* system the primary refrigerant (e.g., R-22, ammonia, etc.) stays in the refrigeration room. Heat is removed from the ice rink floor through a secondary refrigerant or glycol solution that is circulated in the floor. The heat exchange between the glycol solution and the primary refrigerant takes place in the refrigeration room. This is the type of system that is currently installed in this facility.

HCFC: Hydrochlorofluorocarbon (e.g., R-22, etc.) – synthetic refrigerant with less ozone depleting than CFCs (e.g., R-12, etc.) but deplete natural resources and contribute to global warming. These are phased out by the Montreal Protocol.

HFC: Hydrofluorocarbon (e.g., R404A, R407C, R-507, etc.) – synthetic refrigerant that deplete natural resources and contribute to global warming. Many have a high global warming potential (GWP) and are now to being phased out of production.

HFO: Hydrofluro-Olefins (e.g., R513A, 1234YF, etc.) – a new class of synthetic refrigerant that have a much lower global warming potential (GWP) than HCFCs or HFCs. These new refrigerants are blends of several refrigerants and are not pure refrigerants as many of the HCFCs and HFCs are.

u-HFC: Unsaturated Hydrofluorocarbons - Low GWP HFCs that produce dangerous hydrogen fluoride when they burn and transform to trifluoro-acetic acid in the atmosphere. These are generally patented and much costlier.

Natural Refrigerants: Naturally occurring refrigerants such as ammonia (R-717), carbon dioxide (CO2) and hydrocarbons.

7.2 The Future of Refrigerants

When discussing ice system options, refrigerants are now the key element to consider when determining what type of refrigeration system is the best fit for your ice rink facility. So, it is necessary to understand how refrigerants impact refrigeration equipment and system options. First, let's start with a little history. R-22 has been the most popular refrigerant used in ice rink applications in recent history. With the signing of the Montreal Protocol in 1987, the United States Environmental Protection Agency (EPA) implemented the final rule of Section 604 of the Clean Air Act in July 1992, limiting the production and consumption of a set of chemicals known to

deplete the stratospheric ozone layer as measured by their ozone depleting potential (ODP). R-22, which also has a high global warming potential (GWP), was one of these targeted chemicals and as of 2020, is no longer manufactured or imported in the U.S and can no longer be installed in new refrigeration systems. However, R-22 can be used in existing systems until the supply runs out.

In 2016 the Kigali Amendment was applied to the Montreal Protocol focusing on the phasedown of production and consumption of HFCs to reduce greenhouse gas emissions driving down the global warming potential (GWP) of refrigerants. More than 90 countries ratified this amendment in 2019 including Canada but excluding the U.S. as of February 2020. The U.S EPA made certain HFC refrigerants unacceptable for us in the Significant New Alternatives Policy (SNAP) Rules 20 (2016) and 21 (2017). However, the U.S. courts partially vacated these rules, and the industry is awaiting the EPA rewrite expected in 2020. Despite this, states may choose to adopt and set their own timeline for implementation of the SNAP rules. Some of the refrigerants that are currently used in ice skating facilities and are on the phasedown list include: R-134A R-404A, R- 407B, R-407C, and R-507A.

California is one of the states leading the way to lower GWP refrigerants. The California Air Resources Board (CARB) Activity adopted the SNAP Rules 20 and 21 in September 2018 and approved a limit the GWP of refrigerants used in ice rinks to < 750, following the lead of other Countries such as Canada and Europe. This would eliminate R-134a which has a global warming potential of 1410 (meaning the release of one gram of R134a would have the same global warming effect as releasing 1410 grams of carbon dioxide). In late 2020 California passed legislation reducing the GWP even lower to < 150, eliminating most synthetic refrigerants. California is part of a "Climate Alliance" that approximately 14 other states participate in, including New York, which have adopted HFC transition dates.

Currently, the ice rink industry is caught in a transition period for refrigerants as new environmental regulations are implemented. Careful consideration and evaluation of the current refrigerant options should be made. The replacement refrigerants for HCFC refrigerants (e.g., R-22, etc.) and HFC refrigerants (e.g., R-507, R407C, R-134a, etc.) are fairly new with a limited history and performance data in this application. Some of those new refrigerants are R-448A, R-449A, and R513A. R-513 is a new blended synthetic refrigerant that is supported by the National Hockey League as a sustainable, non-ozone depleting, lower global warming potential (GWP) alternative refrigerant. Its GWP is 613 and its ASHRAE Safety Classification is A1 which is lower toxicity and no flame propagation.

Large global companies, such as Coca Cola, are leading the charge to ban HFCs and use natural refrigerants such as CO2, hydrocarbons and ammonia. Since 2004, more than thirty ice skating facilities in Europe have switched over to using CO2 as the secondary refrigerant with ammonia as the primary. The first CO2-based ice system in North America, and the first *direct* CO2-based system in the world, opened in 2011 in Quebec, Canada with a second rink opening in Montreal in 2012. The U.S. now has eight ice rink facilities that use CO2. B32 Engineering Group, Inc. was the leader in this application designing the first CO2 based ice rink system in the U.S. in 2016 and has since designed five more in Anchorage AK, Eagle River AK, Wasilla AK, and Minneapolis, MN.

END

APPENDIX A
Opinion of Probable Project Costs - Ice System Evaluation Study
La Crescent Community Ice Arena
La Crescent, Minnesota
B32 File No. 900.22.469

B32° Engineering Group

Date 12.15.23

Table 1 - Existing Transmission Main Replacement Cost Estimate

1. Costs are in 2024 dollars

2. Costs include: escalation, general conditions, ice rink contractors profit, insurance, bonds

Item	Cost Estimate[1]
1. Demolition of existing concrete (800 SF)	$6,000
2. Remove and store glycol	$5,000
3. Demolition of existing 6" PVC rink floor and 2.5" PVC subfloor mains	$4,000
4. New 8" insulated mains high density polyethylene with fusion welded connections (220 LF)	$32,000
5. New 3" insulated subfloor mains high density polyethylene with fusion welded connections (220 LF)	$12,000
6. Backfill and new concrete (800 SF)	$16,000
7. Assume existing pumps can be throttled down to accommodate larger diameter mains	$0
8. Remove and reinstall existing rubber flooring (allowance)	$10,000
9. Recharge system with existing glycol	$5,000
Subtotal of estimated construction costs	$90,000
Estimate, design and constr. Contingency (20%)[1]	$18,000
Total estimated construction costs	$108,000
Engineering, legal, financial and administrative (20%)[1]	$21,600
Total estimated project costs (2024)	**$129,600**
Adjusted Costs for 2025[2]	$139,968
Adjusted Costs for 2026[2]	$151,165

Table 2 - New Ice Rink Floor System Cost Estimate

Item	Cost Estimate[1]
1. Remove existing dasher board system. Store inside existing building	$25,000
2. Demolition of existing concrete ice rink floor system (NHL size). Assume no frost under rink floor	$110,000
3. New 5" thick concrete ice rink floor system with subfloor heating system	$720,000
4. Reinstall existing dasher board system	$30,000
5. New transmission mains	See Table 1
6. Replace existing glycol pumps to accommodate new rink floor	$60,000
7. Misc. other work: remove and reinstall existing rubber flooring (allowance)	$30,000
Subtotal of estimated construction costs	$975,000
Estimate, design and constr. Contingency (20%)[1]	$195,000
Total estimated construction costs	$1,170,000
Engineering, legal, financial and administrative (20%)[1]	$234,000
Total estimated project costs (2024)	**$1,404,000**
Expected useful life - new rink floor system (yrs.)	35-40
Adjusted Costs for 2025[2]	$1,516,320
Adjusted Costs for 2026[2]	$1,637,626

Table 3 - Dasher Board System Cost Estimate

Item	Cost Estimate[1]
1. Replace existing system with new community level system (NHL sized)	$230,000
Subtotal of estimated construction costs	$230,000
Estimate, design and constr. Contingency (20%)[1]	$46,000
Total estimated construction costs	$276,000
Engineering, legal, financial and administrative (20%)[1]	$55,200
Total estimated project costs (2024)	**$331,200**
Expected useful life - new dasher board system (yrs.)	20-25
Adjusted Costs for 2025[2]	$357,696
Adjusted Costs for 2026[2]	$386,312

Footnotes:

1. See cost estimate narrative in report.
2. Applied escalation costs of 8% per year.

APPENDIX A

Opinion of Probable Project Costs - Ice System Evaluation Study

La Crescent Community Ice Arena

La Crescent, Minnesota

B32 File No. 900.22.469

B32° Engineering Group

Date 2.15.23

Table 4 - Refrigeration Room Improvements Cost Estimate

1. Costs are in 2024 dollars

2. Costs include: escalation, general conditions, ice rink contractors profit, insurance, bonds

Item	Cost Estimate[1]
1. Install gas monitor system	$15,000
2. Verify ex. mechanical ventilation system serving the refrigeration room meets current code requirements	$2,000
2. Install one (1) emergency stop switch for the refrigeration system and one (1) ventilation overide swtich	$5,000
3. Install life safety signage on both access doors as required by code	$600
4. Replace all pressure relief valves	$6,000
5. Install one (1) eyewash shower station	$10,000
Subtotal of estimated construction costs	$38,600
Estimate, design and constr. Contingency (20%)[1]	$7,720
Total estimated construction costs	$46,320
Engineering, legal, financial and administrative (20%)[1]	$9,264
Total estimated project costs (2024)	**$55,584**
Adjusted Costs for 2025[2]	$60,031
Adjusted Costs for 2026[2]	$64,833

Table 5 - Low E Ceiling Cost Estimate

Item	Cost Estimate[1]
1. Low E Ceiling System	$85,000
Subtotal of estimated construction costs	$85,000
Estimate, design and constr. Contingency (20%)[1]	$17,000
Total estimated construction costs	$102,000
Engineering, legal, financial and administrative (20%)[1]	$20,400
Total estimated project costs (2024)	**$122,400**
Adjusted Costs for 2025[2]	$132,192
Adjusted Costs for 2026[2]	$142,767

Footnotes:

1. See cost estimate narrative in report.
2. Applied escalation costs of 8% per year.

APPENDIX A

Opinion of Probable Project Costs - Ice System Evaluation Study

La Crescent Community Ice Arena

La Crescent, Minnesota

B32 File No. 900.22.469

B32° Engineering Group

Date: 2.15.23

Revised:

Table 6 - New Refrigeration System Options Cost Estimate

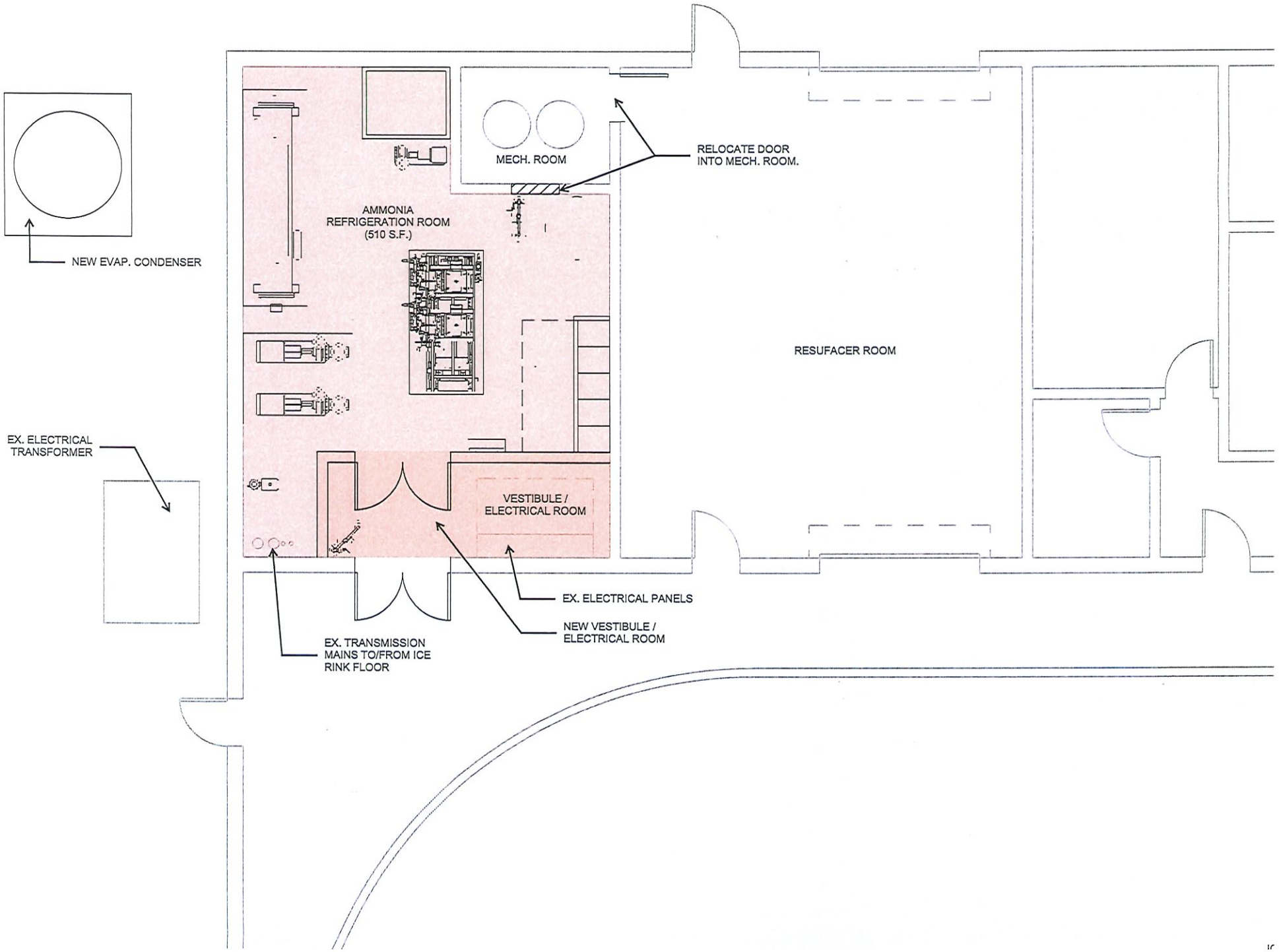
1. Costs are in 2024 dollars

2. Costs include: escalation, general conditions, ice rink contractors profit, insurance, bonds

Item	Cost Estimate[1]		
	Option 1	Option 2	Option 3
Refrigerant type	R-513	Ammonia	CO2
Grade of system	Commercial	Industrial	Mix
Demolition of existing refrigeration system and condenser	$20,000	$20,000	$20,000
Misc. HVAC demolition	$5,000	$5,000	$5,000
Misc. Electrical demolition	$5,000	$5,000	$5,000
Remove, store, test and reuse existing glycol, add new as needed	$10,000	$10,000	$10,000
New refrigeration system sized for 12 month operation (includes new motor control center or panels, condenser , pumps, glycol, refrig, etc.)	$720,000	$1,040,000	$1,150,000
Preheat for resurfacer water	Not available	Not included	Not included
Concrete equipment pads	$2,000	$2,000	$2,000
New condenser supports for evaporative condenser	$8,000	$8,000	$8,000
New electric service if required	$25,000	$0	$25,000
Eyewash and shower stations (1 for synthetic and CO2 and 2 for ammonia)	$10,000	$15,000	$10,000
New ventilation system in refrigeration room	$35,000	$45,000	$35,000
Misc. plumbing in refrigeration room (water lines, move or add drains, etc.)	$15,000	$20,000	$20,000
Misc. electrical in refrigeration room (receptacles, panels, lights, etc.)	$15,000	$15,000	$15,000
Replace interior double door if existing door is not fire rated (ammonia only)	NA	$8,000	NA
Relocate existing door in existing mechanical room - See Figure 1	NA	$7,000	NA
New vestibule (for ammonia only)	NA	$18,000	NA
New fence around condenser - reuse existing	not incl	not incl	not incl
Paint interior of existing refrigeration room	not incl	Not incl	not incl
Subtotal of estimated construction costs	$870,000	$1,218,000	$1,305,000
Estimate, design and constr. Contingency (20%)[1]	$174,000	$243,600	$261,000
Total estimated construction costs	$1,044,000	$1,461,600	$1,566,000
Engineering, legal, financial and administrative (20%)[1]	$208,800	$292,320	$313,200
Total estimated project costs (2023)	**$1,252,800**	**$1,753,920**	**$1,879,200**
Expected useful life - refrigeration system (yrs.)	15-20	30+	25
Adjusted Costs for 2024[2]	$1,353,024	$1,894,234	$2,029,536
Adjusted Costs for 2025[2]	$1,461,266	$2,045,772	$2,191,899

Footnotes:

1. See cost estimate narrative in report.
2. Applied escalation costs of 8% per year.


NEW EVAP. CONDENSER
EX. ELECTRICAL TRANSFORMER
AMMONIA REFRIGERATION ROOM (510 S.F.)
MECH. ROOM
RELOCATE DOOR INTO MECH. ROOM.
RESUFACER ROOM
VESTIBULE / ELECTRICAL ROOM
EX. ELECTRICAL PANELS
NEW VESTIBULE / ELECTRICAL ROOM
EX. TRANSMISSION MAINS TO/FROM ICE RINK FLOOR

#9

To: City Council

From: Jason Ludwigson, Sustainability Coordinator

Date: 05/01/2023

Re: National Bike Month

May is National Bike Month, promoted by the League of American Bicyclists and celebrated in communities from coast to coast. Established in 1956, National Bike Month is a chance to showcase the many benefits of bicycling — and encourage more folks to giving biking a try.

National Bike to Work Week and Bike to Work Day are often cited as the month's flagship events, occurring the third week and third Fridays of May, respectively. This National Bike to Work Week is may 15th-19th. National Bike to Work Day falls on May 19th this year.

Encouraging more people to go places by bike is beneficial to La Crescent's health, economic growth and sustainability. According to Bill Nesper, executive director of the League of American Bicyclists, "When local communities invest in making bicycling safer and a real transportation option for more people, the return on investment is clear for individuals and society at large from cost-savings on public health to small businesses' growth and more."

Included in the packet is a Proclamation for consideration to celebrate National Bike Month. The city is planning to promote Bike to Work day May 19th with a photo opportunity and healthy snack at the bike and pedestrian bridge at 7:30 a.m. on the 19th. All are welcome and encouraged to attend.

CITY OF LA CRESCENT
315 Main Street
P.O. BOX 142
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National Bike Month Proclamation

WHEREAS: May is National Bike Month, sponsored by the League of American Bicyclists and celebrated in communities from coast to coast; and

WHEREAS: May 15-21, 2023 is "Bike to Work Week" and May 19, 2023, is "Bike to Work Day"; and

WHEREAS: the bicycle is an economical, healthy, convenient, and environmentally sound form of transportation and an excellent tool for recreation and enjoyment of La Crescent's scenic beauty; and

WHEREAS: La Crescent's Road and trail system attracts bicyclists each year, providing economic health, transportation, tourism, and scenic benefits; and

WHEREAS: creating bicycle-friendly communities has been shown to improve citizens' health, well-being, and quality of life, to boost community spirit, to improve traffic safety, and to reduce pollution and congestion; and

WHEREAS: the City of La Crescent has worked diligently to promote bicycle usage with community outreach educational programs, implementation of bicycle lanes designed to increase usage to commute in the City of La Crescent and to surrounding communities, expansion and improvements to the Wagon Wheel Trail, and the continuation of creating awareness and opportunities to engage residents in the activity of bicycling.

NOW, THEREFORE, I, Mike Poellinger, Mayor of the City of La Crescent, Minnesota, do hereby proclaim May 2023, as

National Bike Month

In the city of La Crescent, I strongly encourage our community members who are able to celebrate with a bicycle ride.

Further, I urge all citizens to plant and care for trees to gladden the heart and promote the well-being of this and future generations.

Dated this 8th day of May in the year 2023.

Mayor _____