Community Services
Staff Report

REPORT NO:	CS-2024-21
TO:	Council
SUBMITTED BY:	Chris Catania, Director of Community Services
PREPARED BY:	Amber Schenck, Project Coordinator
REVIEWED BY:	Greg Clark, Acting Chief Administrative Officer
DATE:	September 23, 2024
SUBJECT:	New Hamburg Arena Preliminary Study Update

RECOMMENDATION:

THAT Report CS-2024-21 New Hamburg Arena Preliminary Study Update be received for information.

SUMMARY:

This report updates Council on the progress of key preliminary tasks completed and currently underway by Community Services personnel for the successful advancement of the New Hamburg Arena Reconstruction/Multi-Purpose Project. These tasks include an in-depth evaluation of the ICIP/SPIF Grant application, insights from stakeholder engagement sessions, initial site assessments and investigations, and a review of current regulatory requirements and constraints. The report outlines how project tasks interconnect, identifies key dependencies, and provides a transparent overview of the project's development process to date.

BACKGROUND:

The Ontario government, supported by the Investing in Canada Infrastructure Program (ICIP) and the Strategic Priorities Infrastructure Fund (SPIF) – Sport and Community Renewal (SCR) sub-stream, approved a grant application awarding a significant investment in the New Hamburg Arena Reconstruction/Multi-Use Facility project. This initiative, informed by the 2017

New Hamburg Arena Recommissioning Report, proposes to transform the aging arena into a versatile space that alternates between warm floor recreational activities and ice usage, ensuring year-round functionality for a variety of purposes.

While this investment represents a significant advancement for the Township, it is important to acknowledge that the original ICIP/SPIF Grant application, submitted in 2019, was prepared prior to the Covid-19 pandemic. At that time, the Township could not foresee the pandemic's direct effects on the community, including substantial shifts in community priorities. These unforeseen changes have resulted in an increased demand for a broader range of recreation services and amenities, highlighting the evolving needs of residents.

As a result, the Community Services Department procured the services of an architectural firm to produce a comprehensive preliminary report providing a transparent understanding of the project's true scope, feasibility, and overall impact through three preliminary analyses, including:

- Stakeholder engagement sessions which offered an opportunity to reassess the initial assumptions and considerations noted in the grant application to ensure that current project objectives reflect the requirements of all stakeholders and align with the evolving needs of the community

- Assessments of the arena's physical structure, including design and construction methodology, as well as its infrastructure. This includes evaluating compliance with grant application criteria and stakeholder requirements, archaeological findings, Indigenous rights and principles, fire and building code regulations, AODA accessibility standards, floodplain restrictions, and other relevant jurisdictional authority requirements to determine permissible modifications and improvements to the property, and

- Providing a well-informed preliminary report concluding the facility's capacity to accommodate the required modifications and improvements, including professional recommendations for any and all additional project works needed to achieve the desired outcomes including project work not explicitly mentioned in the application; accompanied by a thorough rationale.

Constructed in 1947, predominantly by dedicated community members, the New Hamburg Arena had been a vital hub for recreational activities and community events in the Township until the opening of the Wilmot Recreation Complex (WRC) in 2008 which led to the decommissioning of its aging refrigeration plant, thereby ending ice-related activities at the location.

Although the arena has continued to serve various community needs as a multi-use space since that time, its original 'natural ice' design, which depended on external weather conditions to maintain the ice surface's negative temperatures, results in significant fluctuations in the arena's ambient temperatures, thereby limiting its usability throughout the year.

In addition to the steep and irregular steps of the bowl-style arena seating, the narrow and uneven passageways beneath the seating—an inherent feature of its original design—have been used as unconditioned storage by the Township and various user groups for items such as tables, displays, chairs, fixtures, and fittings. This storage practice has raised significant concerns regarding safety and hygiene, as the space has become susceptible to issues with dust, insects, rodents, mould, and other undesirable effects on the stored items. As a result, both the seating and its undersurface storage have been identified as failing to meet the current requirements for spectator and user group needs.

Notably, significant renovations were carried out on the roof structure in 2001, including the installation of four roof support posts at both the north and south ends of the ice pad to address structural deflection in the arched trusses. Threaded rods and cross bracing were also added to reinforce the roof, modifications which must undergo maintenance in five-year intervals to safeguard the stability of the barrel roof. While these improvements have extended the roof's lifespan to an estimated 25 years—now nearing its end—they have restricted the ice pad to a recreational-sized pad only.

In light of these challenges, the Community Services department procured the services of Invizij Architects Inc. to evaluate the feasibility of renovating the arena to enhance its functionality and safety, ensuring it continues to effectively meet the community's needs.

REPORT:

A Stage 2 archaeological assessment was conducted on the property of the New Hamburg Arena by Detritus Consulting Ltd., with representatives from the Mississaugas of the Credit First Nation, Six Nations of the Grand River, and the Haudenosaunee Development Institute in attendance. This assessment sought to address potential impacts on Indigenous communities and ensure the preservation of cultural heritage. The Archaeological Report is attached in the Appendix of the Preliminary Report (pages 121-148).

Following the initiation of the Preliminary Study, Community Services personnel, together with the Lead Architect from Invizij Architects Inc., hosted a Stakeholder Engagement meeting. During this session, stakeholders were formally brought into the project team, ensuring their active participation moving forward. The meeting provided an opportunity for team members to familiarize themselves with one another and fostered open dialogue on key project elements. The session provided a platform to clarify expectations, address assumptions, and share updates on ongoing consultations with all jurisdictional authorities. Furthermore, the meeting established a clear and open line of communication, ensuring that all project team members, including the newly integrated stakeholders, could exchange information seamlessly as needed throughout the project's development.

The attached Preliminary Study Report, completed by Invizij Architects Inc. provides a thorough analysis of the New Hamburg Arena Reconstruction/Multi-Use Facility project. After receiving feedback and evaluating project limitations, parameters, building condition reports, and recommendations—while identifying known-knowns, known-unknowns, and acknowledging potential unknown-unknowns—the study concludes that the feasibility of

transforming the New Hamburg Arena into a multi-use facility cannot be adequately assessed until the Schematic Design Phase is completed. Furthermore, the Preliminary Report highlights the substantial challenges associated with meeting the project's objectives within the existing $5.7M construction budget.

It should be noted that while repurposing the facility without ice-making capabilities would be more cost-effective, this alternative does not align with the approved grant requirements. Therefore, it was not considered in the Preliminary Study.

The Preliminary Study Report incorporates specific recommendations from Invizij Architects Inc. including structural, HVAC, and electrical system upgrades that are essential for modernizing the facility and ensuring compliance with regulatory standards. These detailed findings will be used to inform the creation of Schematic Designs and a Class D Construction Cost Estimate, which will be presented to Council at a future date this Fall for review, consideration and an approval for advancing the project further.

Key Recommendations noted within the Preliminary Study Report are summarized below:

ICIP/SPIF Grant Requirements:

- Create a hybrid facility for multi-purpose warm floor uses for a portion of the year and ice usage for the remainder.
- Consolidate Performing Arts operations, including storage, rehearsal, and performance spaces.
- Create accessible change rooms for both dryland and ice user groups.
- Incorporate theatre storage space for props, equipment, set pieces, and seating.
- Replace concrete floor slabs and underfloor refrigeration lines.
- Install new rink boards, glass, and safety netting.
- Replace HVAC equipment, electrical wiring/panels, and plumbing infrastructure as required for code compliance.
- Remove inaccessible wooden spectator seating.
- Install fixed bleacher seating along the west wall.
- Install a fully compliant fire alarm system.
- Install a new elevator to service the updated facility.

Structural & Facility Upgrades:

- Commit to utilizing ice on a seasonal basis (September to March) to reduce building envelope costs.
- Limit building expansion to areas cleared in the Stage 1-2 Archaeological Assessment.
- Limit building expansion to a maximum of 100 m^2 (1,076 ft^2) of total floor space based on floodplain restrictions which apply to all forms of development at this location, including any expansions to the existing facility and/or any accessory structures, whether single or multiple units.

- Conduct a Non-Destructive Examination (NDE) to identify the severity of the large crack on the west wall above the Jacob Street overhead door and the purpose of the tele-posts in the basement mechanical room.

HVAC System Upgrades:

- Replace the ice plant, refrigeration lines, and floor slabs.
- Install a new ammonia detection system.
- Add new HVAC systems for ventilation, heating, air conditioning, and dehumidification.
- Install domestic hot water boilers and upgrade plumbing systems for ice flooding and fixtures and install a backflow preventer.
- Upgrade natural gas services.
- Upgrade the existing sanitary sewer service line to 150mm at the current street connection on Jacob Street.
- Add building automation system (BAS).

Electrical System Upgrades:

- Conduct a load study to assess the capacity and condition of the existing electrical service.
- Update circuit directories and replace aging electrical wiring as necessary.
- Upgrade emergency lighting and exit signage throughout,
- Upgrade fire and life safety systems,
- Upgrade lighting to energy-efficient LED fixtures.
- Improve Wi-Fi infrastructure.
- Upgrade audio systems for better coverage and reliability.

The Preliminary Study Report from Invizij Architects Inc is attached.

ALIGNMENT WITH THE TOWNSHIP OF WILMOT STRATEGIC PLAN:

- Responsible Governance through Fiscal Responsibility
- Responsible Governance through Infrastructure Investments

FINANCIAL CONSIDERATIONS:

Financial considerations will be forthcoming with the creation of Schematic Designs and a Class D Construction Cost Estimate, which will be presented to Council at a future date for review and consideration.

ATTACHMENTS:

Invizij Architects Inc. – Preliminary Study Report (September 2024)