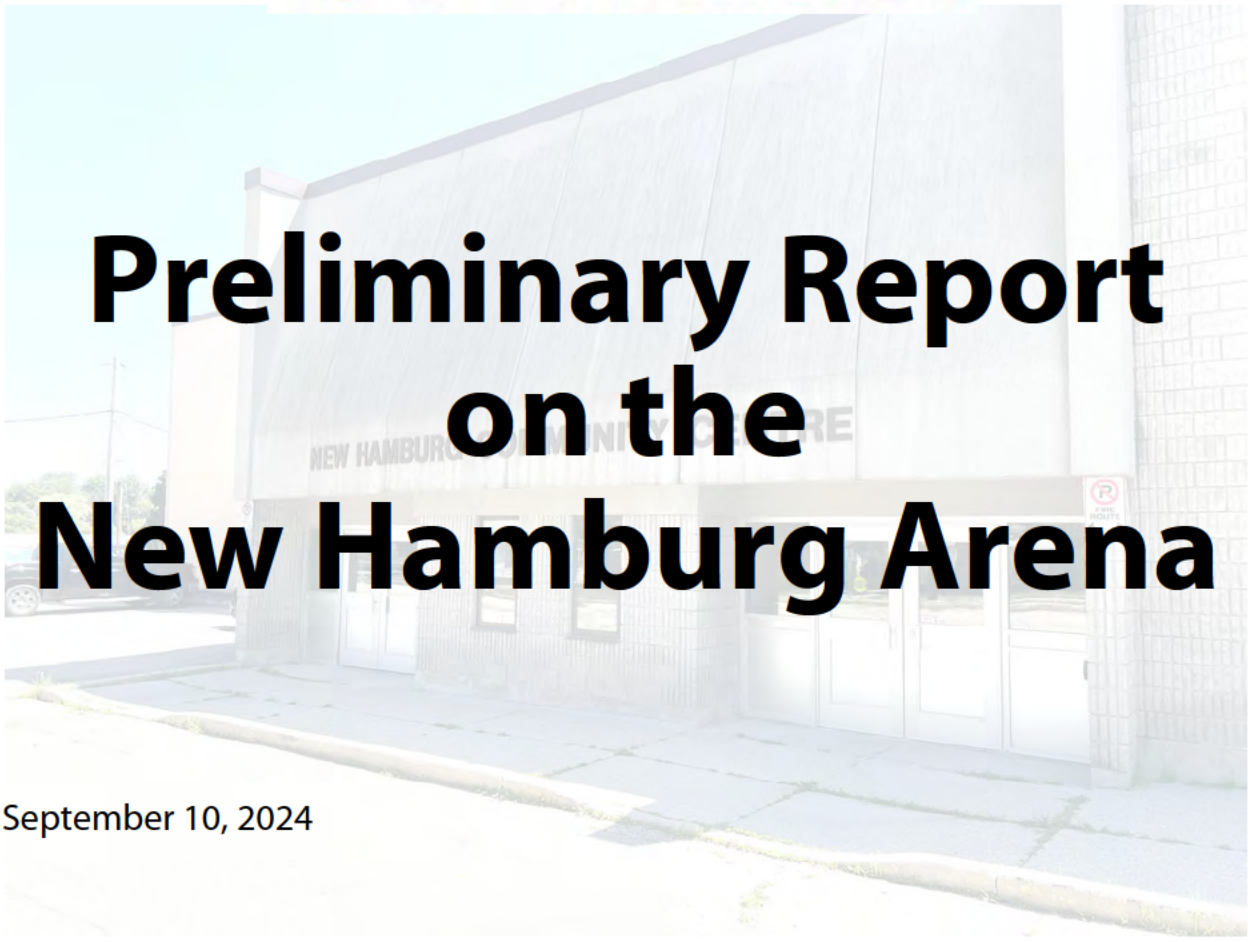
TOWNSHIP OF Wilmot



Preliminary Report on the New Hamburg Arena

September 10, 2024

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INVIZIJ ARCHITECTS INC. 185 Young Street, Hamilton, ON Canada L8N 1V9 | t: 905 525 9000 | invizij.ca

1.0 Introduction

Invizij Architects Inc. were retained on May 30, 2024 by the Township of Wilmot in response to their *RFP No. 2024-02, New Hamburg Arena Reconstruction / Multi-Use Facility Schematic Design & Class D Cost Estimate*. The detailed scope of work is outlined within the RFP, and can be summarized as follows:

1. Review the Township's currently approved ICIP/SPIF Grant application ensuring a thorough understanding of the obligatory scope deliverables expected for which grant funding has already been attained.
2. Review existing reports and documentation from previous arena-related projects to gain a deeper understanding of the factors contributing to the existing condition of the arena,
3. Conduct a comprehensive walkthrough and site assessment of the New Hamburg Arena,
4. Evaluate and prepare a preliminary report for township representatives indicating the arena's viability for transformation into a multi-use facility,
5. Coordinate and implement various stakeholder engagement strategies to gather data, comments, perceptions, expectations, etc. to guide the deliverables of the New Hamburg Arena Reconstruction/Multi-Use Facility concept design,
6. Review the *Community Services Master Plan*, tentatively scheduled for release on August 26, 2024 to identify and incorporate synergies into the development of this facility.
7. Develop and present a Schematic design of the New Hamburg Arena:
    - Utilizing Information attained via items 1 through 6 above
    - With consideration to the impact of the Township's current resources in regards to implementation and sustained management
8. Develop and provide a report to township representative(s) detailing the entirety of the new schematic design describing it's alignment with the ICIP/SPIF Grant application, regulatory requirements and fulfilling stakeholder expectations,
9. Present items 7 & 8 together with a Class D Construction Cost Estimate, to Township Council during a regular council meeting no later than December 21, 2024.

The objective of this Preliminary Report is to address item 4. & 5. above.

2.0 Executive Summary

We have thoroughly examined the Township's currently approved ICIP/SPIF Grant application and familiarized ourselves with the mandatory scope deliverables for the New Hamburg Arena, for which grant funding has already been secured. Additionally, we have meticulously reviewed all background information as provided by the Township to gain a comprehensive understanding of the factors influencing the current state of the arena. Furthermore, we conducted an extensive walk-through and site assessment of the facility securing a more thorough understanding of the facility's current conditions and needs.

At this point we cannot confirm the arena's viability for transformation into the multiuse facility that can accommodate all the deliverables identified within the Township's current Grant application. Given the risks attempting to challenge and revise the current Grand River Conservation Authority's restrictions and requirements on any expansion of this facility's footprint above their currently allowed 100m2 (1076 sq.ft.), the upcoming Schematic Design will need to attempt to accommodate the deliverables identified within the Grant application within the current existing building footprint. However, we cannot confirm this can be accomplished until the upcoming Schematic Design phase completes.

In addition, it is our opinion that the currently approved $5.7M Construction Cost Budget allocated for the work of this Grant is insufficient to cover costs of all required deliverables identified as well as accommodating additional work not listed within the Grant application that either will be required as a result of the Grant's scope (e.g. building envelope upgrades) or otherwise deemed necessary to transform this facility to the updated, functional multi-use facility envisioned.

Next Steps - Invizij

1. Develop draft and then a final Schematic Design concept working closely with Township Staff attempting to address as much scope identified on the Grant application as possible but to be confined within the current footprint of the building. i.e. no new additional construction that would increase the existing footprint. The Design is to also reflect the vision in the Township's upcoming Community Services Master plan and capture the recommendations described within *Item 6. Conclusions & Recommendations*

2. Provide Class D Construction Cost Estimate final Schematic Design concept.

3. Provide final Schematic Design Report (by December 21, 2024)

INVIZIJ
Architects Inc.

Next Steps - Township of Wilmot:

1. Upcoming Community Services Master Plan – IN DEVELOPMENT
   Our understanding is that the Township is presently finalizing this document with a tentative presentation to Council for endorsement scheduled August 26, 2024. The Master Plan will strategically guide the development, enhancement, and management of parks, recreational facilities, and open spaces, throughout the Township aligning community needs with long-term goals for sustainable and equitable access to recreational opportunities. Our office will require the finalized document prior to commencement of Schematic Design to ensure we not only meet the requirements of the Township's currently funded Grant application but also comply with the vision of this Master Plan.

2. Develop a clear understanding, and agreement by all parties, that the word *addition* used within the currently approved Township's ICIP/SPIF Grant application is defined as an addition of amenities within the facility, as defined by MOI during a virtual meeting August 23, 2024, as opposed to an expansion of the building's physical footprint.
   See Recommendations within item 6. For further details

3. Develop and execute a *Designated Substance Survey* in preparation of proceeding with release of a Request For Proposals for a Prime Consultant to provide final design and construction documentation.

2. Using the final Schematic Design Report, work with the local Planning Authority to identify any Site Plan Control approval requirements to be addressed prior a Building Permit submission. This is usually in the form of a Pre-Application Consultation Process with the Local Planning Authority. The resultant requirements are to be identified in the Request For Proposals for a Prime Consultant to provide final design and construction documentation.

3.0 Description of the Arena

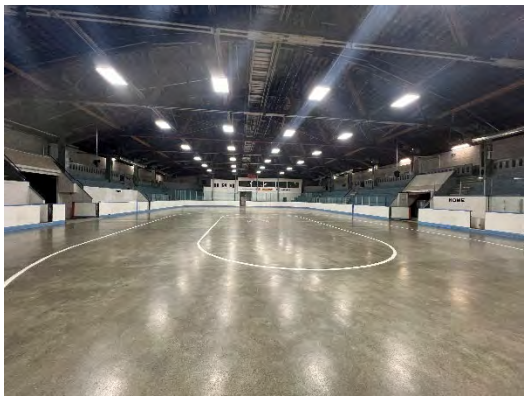
Established in 1948, the New Hamburg Arena, located at 251 Jacob Street, New Hamburg, was constructed in an era when building materials were in short supply. Demonstrating resourcefulness, the Township of Wilmot sought alternative solutions to this scarcity and quickly acquired a decommissioned airplane hangar from an airbase in Jarvis, Ontario.

Aided by the New Hamburg Board of Trade and dedicated community volunteers, the township meticulously disassembled the hanger repurposing its valuable lumber to build a 30,000 SqFt ice-hockey arena. While the lumber from the hanger was ideal for the structural components of the arena, airplane hangars typically feature flat ceilings which are not conducive to the requirements and overall experience of an ice hockey facility. This necessitated the township to acquire a system of pre-cut, arched truss units from a Toronto-based company, contributing to the New Hamburg Arena's distinctive barrel roof and charming 'old-barn' aesthetic.

The arena itself consists of the main playing ice surface, bowl-style spectator seating, dressing rooms, mechanical rooms, storage spaces, and ice-resurfacer bay. In 1953, the building underwent expansion, incorporating a community centre, upper lobby, kitchen, service elevator, offices, storage areas, meeting rooms, tuck-shop, and public restrooms. Serving as the sole ice facility for the Township of Wilmot for over seven decades, the New Hamburg Arena has hosted numerous games, practices, tournaments, events, and celebrations, which have left a permanent impression on the collective memories of the residents of Wilmot.

As documented in the 2006 Canadian Census, the Township of Wilmot experienced a notable 15.4% increase in population within a brief span of four years. This prompted a reassessment of available recreation provisions within the township. One conclusion drawn from this assessment indicated the single ice pad at the New Hamburg Arena was no longer sufficient to meet the expanding needs of the community. This realization initiated a project to design and construct Phase I of the Wilmot Recreation Complex (WRC); a state-of-the-art arena featuring twin NHL-sized ice pads and a seating capacity for 1,500 persons.

Following the grand opening of the WRC to the public in 2008, the aging refrigeration plant at the New Hamburg Arena was decommissioned, marking the end of ice-related activities at this location. Though the space was adapted into a multi-purpose facility catering to various community needs beyond those dependent on ice, the use of the arena is limited as its 'natural ice'-style design relies on weather conditions to help maintain the surface of the ice. Regrettably, these conditions result in considerable fluctuations in the arena's ambient temperatures, consequently limiting its overall usability in the summer and winter months.



In 2017, Township Council endorsed the New Hamburg Arena Engineering/Re-commissioning Study acknowledging the nostalgia of the New Hamburg Arena and the significance of reaching its seventh decade milestone. This proactive initiative resulted in two reports; the Engineering Report which included a comprehensive examination of the Arena's structural components, suggesting various repairs and maintenance procedures—all successfully implemented; and the Re-commissioning Report, which engaged community members, organizations, township staff, and council through consultations, surveys, and public comment forums which put forth two prospective uses: a multi-use configuration or the re-commissioning of the ice pad for 'practice pad only' purposes. The former of the two proposals was endorsed by Township Council to guide grant applications submitted in 2019 with the intention of enhancing financial support for the realization of this project.

In April 2022, the Ontario government, with support from the Investing in Canada Infrastructure Program (ICIP) and the Strategic Priorities Infrastructure Fund (SPIF) – Sport and Community Renewal (SCR) sub-stream, announced a substantial investment in the New Hamburg Arena Reconstruction / Multi-Use Facility project. The original scope outlined in the ICIP/SPIF Grant application reflects the findings of the 2017 Recommissioning Report and includes such items as transforming the arena into a versatile space suitable for year-round, multi-purpose sports and recreational activities with ice usage and providing a semi-permanent venue for The Community Players of New Hamburg (TCP) to bolster Arts and Culture in Wilmot. While this news is indeed promising, the township acknowledges the challenges brought

about by the Covid-19 pandemic that led to widespread shutdowns, causing a reallocation of staffing resources to address urgent needs in a triage manner significantly impacting the evaluation and award of the grant funding by nearly four years. During the creation of the initial ICIP/SPIF Grant application in 2019, the township had not yet experienced the full effects of the pandemic, including the reprioritization of recreation services and amenities by community members which saw a significant increase in appeal and usage. Due to the changes in circumstances and dynamics within the community, the township is uncertain about the continued relevance and applicability of the existing scope of work for the New Hamburg Arena Reconstruction / Multi-Use Facility project. This uncertainty has led the township to reevaluate the initial assumptions and considerations used to inform the successful grant application.

In addition to the above, the Township is presently finalizing it's Community Services Master Plan. Tentatively scheduled for release in August 2024, this Master Plan is intended to provide a roadmap to enhance and grow the Township's parks and recreation facilities and services for residents, user groups and visitors, now and into the future. The Master Plan will guide decision-making across all aspects of parks and recreation, from playgrounds to facilities and everything in between. The project will also include a robust service delivery review to ensure efficiency and alignment with community needs and staff capacity.

4.0 Review of Background Information (Appendix B))

For this project, the Township provided a comprehensive range of background information, some of which our team reviewed prior to our initial June 25, 2024 site visit. The information is itemized in Appendix B. The following represents notable items, which could impact the upcoming Schematic Design process, extracted from our overall review of all the material

Item 1. Community, Culture and Recreation 2019 Intake: Business Case – Multi-purpose stream
(The Township's approved Grant application which identifies required deliverables)

- Many of the items committed to with this funding would be considered typical for a major renovation and will be included in our upcoming Schematic Design

- The application describes: "There will be a new *addition* that will contain accessible change rooms for dryland and ice user groups, as well as theatre storage space (props, equipment, set pieces, seating)." As you will read within item 7. of this section, "Grand River Conservation Authority Correspondence", an *addition,* which may be perceived as an extension of the building's current footprint is not feasible for this project. A clear definition of this term, that will work within the restraints of this project has been established with the help of Greg Michener, the Township's grant representative from the Ministry of Infrastructure.

- Commits to future ice sport usage. This is the biggest impact item. While this entails the new refrigeration & ice slab described within the grant, it will also mean building envelope upgrades which are not described. This will be shown in our upcoming Schematic Design and will add approximately $600,000 in construction costs for envelope upgrades that are not eligible expenses for the grant funding and will require 100% funding from the Township. It is not clear if only seasonal or year round ice is required by this grant.

- Commits to bleacher seating replacement, Dryland training and Cultural event space. These items will need to be identified in our upcoming Schematic Design.

● The Community Players (TCP) are described as providing additional funding for the project, some of which is earmarked for specific project enhancements. As a partnering user group, TCP's vision must be clearly outlined, thoroughly understood, and thoughtfully integrated into the project's overall deliverables, as best as possible.

● While the funding is based on "bringing the building up to current building and fire code" we understand this to mean for any new construction as allowed for within the *Ontario Building Code*. There is also reference to compliance with AODA. The AODA is an "Act" and it does not define specific regulations. We will assume this to mean comply with minimum accessibility requirements as defined within the *Ontario Building Code*. The Township has also confirmed they have not developed / documented any further Accessibility requirements for this facility.

Item 2. New Hamburg Arena Re-Commissioning Study

● This 2019 Consultant Study was performed to determine the necessary renovations required to recommission the arena portion as either a warm floor multi-purpose space or as a third ice surface for the township. It reviews existing systems / conditions and provides conceptual architectural drawings for both scenarios. Our understanding is that this study was performed prior to the submission and approval of item 1. (Township's approved Grant Application)

● Component Assessment: Identifies replacement of the existing refrigerant plant, piping and concrete slab if the new ice rink option is selected. Since item 1. commits to winter ice this work will form part of our upcoming Schematic Design

● Component Assessment - Barrel roof: Describes assessment based on "conversations" & "past experiences with this type of roof and its current age". For such a report, the roof should have been inspected to gain a better understanding of its condition and life expectancy. Given this information, and our review of item 5. below, replacement of this roof with one of a higher R value and vapour mitigation, will need to be part of the upcoming Schematic Design. The new roof will also reduce energy costs of the new ice making equipment.

● Component Assessment - Plumbing, Gas and Electrical Systems: While the study addresses the condition of existing systems there appears to be no discussion at the site service level i.e. is the current electrical service capable of handling any of the scenarios presented. Similar for water and gas service. Since various scenarios of development were part of this study, this should have been addressed as it could represent large costs and programming impacts. E.g. installation of a new transformer on the site. Refer to exp's Mechanical & Electrical Systems Report in Appendix A for more detailed information on this item.

● Component Assessment - Site Improvements: Recommends that "half the parking lot should be replaced in the next few years". It's unclear where, exactly, this half is located and also makes no mention of the expected lifespan for the remainder. This is addressed further in item 5.0 of this report.

● Item 4.2 Facility Usage: The referenced data is 6 years old now, doesn't reflect the impact of COVID, and is based on a warm use facility so it is difficult to project these stats for ice sports . It does show that of the 9 Floor activities listed, 2 (Indoor Sports and Drop-in Youth Activities) have trended lower over the 4 year study period while 4 (Sale / Auction Misc, Special Events, Day Camp and the 3 categories of the Community Players) are trending up.

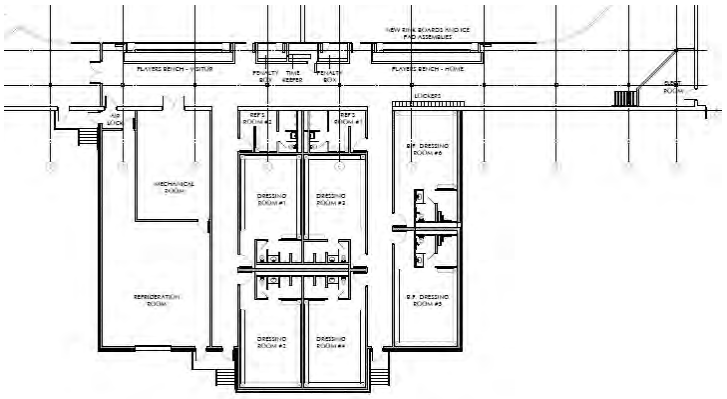
Appendix B: New Hamburg Arena Structural Condition Assessment

- This report is surprisingly (for the age of the building) positive, and provides a good case for repurposing this facility.
- The arena proper structure is also given a good grade,
- The items listed throughout are minor in nature and most of the issues appear to be with water runoff from the various roofs (not structural).
- There are, however, 2 concerns with this assessment:

1. Mentioned a few times is "*a large crack*" on the west side of the building that is described aesthetically but not addressed in structural context i.e. is this a structural concern or cosmetic issue? This should have been clarified in the report and if at all possible have the author clarify this now.
2. There are descriptions of "*tele-posts"* in the basement along with a comment stating the consulting firm is unclear of their purpose but again does not speak to them in a structural context. i.e. are they required? Can they be removed? This could become an important issue with any significant redesigns being considered. We would recommend having the author clarify this as well.

   The Township reached out to the engineers that noted the above 2 items (NA Engineering). Unfortunately, none of the personnel present at this Structural Condition Assessment project are still employed with them so no clarification could be offered. For the purposes of the upcoming schematic design & costing phase, we will assign a cash allowance of $85,000 to address these items.

Appendix D: Proposed Architectural Schematic Design Floor Plans



● Both Design Options 1&2 make note of an existing "floodplain" but provide no other details. In our experience, the presence, or even possibility, of a floodplain can present many developmental challenges. We noted this as a critical item and investigated it further in item 8 below. The result was that these 2 Conceptual Design Options and Design Option No. 3 are not feasible developmental possibilities. These 2 cold ice options don't appear to address energy use. As an older facility, the existing building envelope would require significant upgrades and / or an understanding from the Township that energy use will be quite high during the ice making season.

● Design Option 3 represents a warm facility. This design does not comply with the current funding application deliverables and as described above, is not a feasible development (see also item 8.)

● Items we would like to discuss with the Township that do not appear to be addressed in this study:

1. Most ice sport facilities struggle with 2 items. The first is that almost all users want the same hours, 5-11pm M-F and 6-11 S&S, leaving the facility empty during the day M-F. The ability to fill the reaming time is crucial to the success of the facility and our upcoming Schematic Design will need to reflect the same.
   The other item is the provision of either seasonal or year round ice. This again relates to community needs and programming ability. Provision of year round ice requires a different rink slab design (that has underfloor heating to prevent permafrost) which cannot be revised later, and also requires more intensive building envelope upgrades i.e. the entire project becomes much more expensive. For a facility of this age, while "possible" year round ice is likely not "feasible". This will be reviewed further during our Schematic Design Stage however at this stage our recommendation would be the facility provide six month seasonal ice only.
2. For the Design options shown was demountable dasher boards, and telescopic / portable bleacher seating ever discussed? These items allow various programming flexibility but may require additional temporary staff to manage. We will review these items with the Township in our upcoming Schematic Design
3. Both ice rink options separate the lobby from the ice surface. We have number of facilities that allow the lobby to go right up to the dasher boards offering a much better spectator engagement to activities on the ice (while reducing construction costs). Again, we will review this with the Township in the Schematic Design Stage.

Item 3. Stage 1-2 Archaeological Assessment Part of 251 Jacob Street, New Hamburg

The Executive Summary/Analysis and Conclusions sections both describe an initial Stage 1 background research that indicated the Study Area exhibiting moderate to high potential for the identification and recovery of archaeological resources. However, a subsequent Stage 2 Field Assessment was then completed for a study area (shown in Section 8.0 Maps) representing the extents of any possibility for future development. The Executive Summary describes the Stage 2 investigation resulted in the identification of no archaeological material; therefore, no further archaeological assessment of the Study Area was recommended.
It does caution that any portion of the Assessment Property not included within the current Study Area and impacted by development will again require another Stage 1 archaeological assessment.
Our future Schematic Design will respect this requirement and avoid development outside the study area unless necessary.

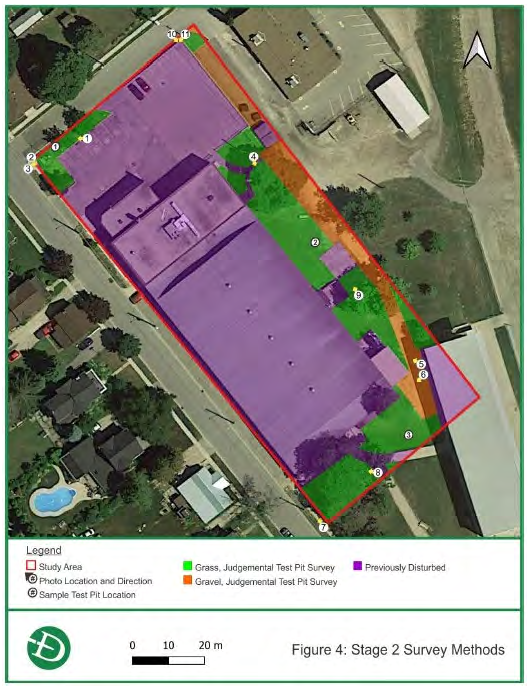


Figure 4: Stage 2 Survey Methods

Item 5. New Hamburg Arena Roof Replacement Information

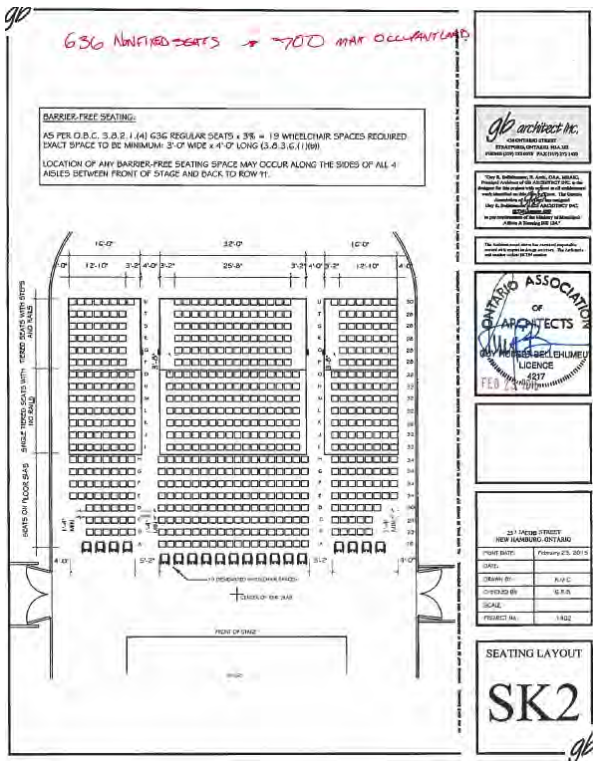
These documents indicate the replacement of the roof system over the arena proper area in 2001 with a new 2 ply, modified bitumen roofing system. While few details are provided, the one detail indicates a new roof system consisting of 1 ½" of polyisocyanurate insulation installed over a "felt underlay" between the insulation and the existing wood deck. While specific insulation product type is not mentioned, the R-value of 1 ½" polyisocyanurate insulation is generally around 8.6 which is considered extremely low, especially for an arena. While describing compliance with the minimum insulation, vapour barrier and energy use requirements of the current Ontario Building Code can be quite lengthy and depend on a many factors, generally the absolute minimum R-value for new roof construction today would require an R-25 rating for the roof and R-15 for walls. In our experience, based on energy modelling, we have found that for arenas, values of R-40 for roofs and R-20 for walls offer the best value to Owners in terms of initial capital costs vs long-term energy costs.

In addition, the "felt overlay" indicated in the detail is not defined in the specifications so it is unclear as to what role this element is performing within the roof system. The specification does describe a "Waterproofing Mastic" within Part 2 (products) but this is not explained under Part 3 (execution) or shown in the detail. We have designed a number of 2 ply modified bitumen roof systems and the basis of these systems follows known building science principals that have an "air & vapour retarder" provided over the existing roof substrate followed by the poly iso insulation application, a protection board (if the base sheet is torch applied), the base sheet membrane and finally completed with the cap sheet membrane installation.

Given this roof installation is 23 years old, it's condition unknown, the insulation R value too low especially for an arena, and no air / vapour barrier installed, we would recommend that this roofing be replaced / upgraded if the facility is to be returned to ice making capabilities. The water run-off issues (see "*Observations and Findings*" section) would also be addressed with a new installation. The Township may wish to retain specialized testing and inspections services to assess the conditions of this, and the other roofs of this facility.

Item 6. Township of Wilmot Building Department Comments &
Item 13. Township of Wilmot Fire Department Clarification

Initially we were provided with item 5. which we believe indicated the Local Building Departments approval of the Community Players of New Hamburg proposed seating application (Layout and Occupant Load, Arena Floor Stage) in January of 2020 for floor stage shows.
However, this was clarified with item 13, where the Township's Fire Department advised that the 2020 application was never approved and provided a previous 2016 application for the same that was approved. They also confirmed the 2016 application remains the only approved seating layout for stage shows. This 2016 application also indicates provision of permanently installed supplemental exhaust and a deluge sprinkler addition above the stage curtain location.



Item 8. Grand River Conservation Authority Correspondence

As described under item 2, the conceptual design options 1 & 2 of the "New Hamburg Arena Re-Commissioning Study", make reference to an existing floodplain with no further details. As this could be a critical item in terms of development on the Site, the GRCA were contacted requesting any parameters they would have around the possibility of expanding the footprint of the existing building to accommodate new development, including considerations of what is permissible and what is not permissible. A floodplain drawing for the property was also requested.

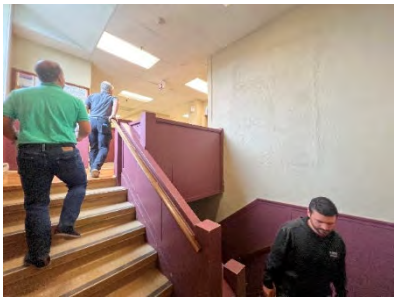
GRCA's response indicated that any feasible areas for footprint expansion of this faciality would fall within their floodplain area. While the GRCA will allow for a 50% increased ground floor area expansion within the floodplain area, it is limited to a maximum of 100 m^2 (1076 ft^2) and must be provided with *floodproofing* measures. This area expansion allowance is quite restrictive. For comparison, the plans included in NA Engineering's "New Hamburg Arena Re-Commissioning Study" showed increased ground floor areas of 5,200 – 7,500 ft2 (depending on the option). As well, specific floodproofing measures e.g. passive or active and to what geodetic elevation, were not provided.

A follow up clarification e-mail was sent to the GRCA requesting:

1. What would be the process if we needed a larger building addition within the floodplain area? eg. 7,000 ft2
2. Provide clarification that the type of floodproofing measures that would be considered. E.g. passive or active

GRCA's follow up response indicated that for any realistically sized proposed footprint addition to this facility, e.g. 5,000 sq.ft. + that could for example accommodate new changerooms, would present significant challenges in terms of authoritative approvals with no guarantee of acceptance and a significant increase in construction costs certainly not possible within the current construction budget. Their response also confirmed that only passive floodproof measures would be permitted.
Our schematic design approach will be to attempt to accommodate all programming requirements within the existing building footprint.

Item 11. Township of Wilmot Fire Department Concerns



Andrew Mechalko, the Chief Fire Prevention Officer for the Township requested a meeting with Invizij and our Consulting Mechanical and Electrical Engineer's exp, in order to identify past issues and concerns the Fire Department has with the current arena and to hopefully have them addressed in any proposed development. A virtual meeting was held on August 1, 2024 the minutes of which are within the appendix. Overall, the Fire Departments concerns are not considered overly onerous but would add some unexpected costs to the project. Our recommendation is to accommodate their described concerns.

Item 12. Stakeholder Engagement Meeting 1

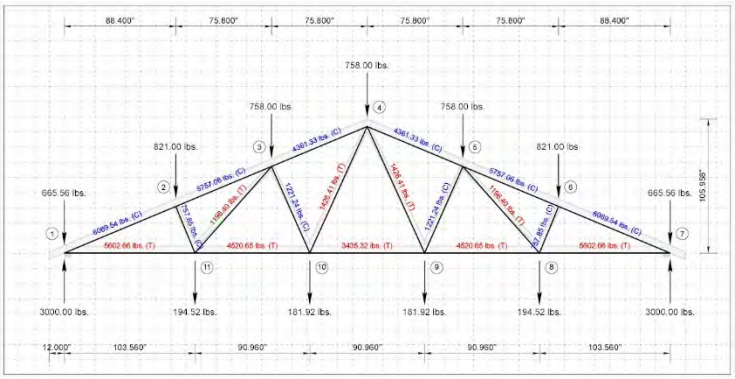
● In order to gain a better understanding of the arena from a user standpoint, and to identify potential items to consider in the upcoming Schematic Design, an invitation to the Arena's major Stakeholders was e-mailed on June 28, 2024 inviting them to meet with our office. This session aimed to provide each of them with an opportunity to share with our office their experiences, feedback, and ideas regarding the successes, shortcomings, and opportunities of the New Hamburg Arena as it related to their use of the facility for the foreseeable future. This invitation was sent to the following groups:
The Community Players (TCP); Mennonite Relief Sale; New Hamburg Legion; Moparfest; Agricultural Society / Fall Fair; Wilmot Softball; Wilmot Family Resource Centre; Mississaugas of the Credit First Nation
● In preparation of this meeting, a subsequent July 10, 2024 e-mail was sent requesting responses, before the planned meeting, from each group to questions related to the existing facility
● The Agricultural Society / Fall Fair were the only group to provided responses to the above questions and the August 7, 2024 meeting had representatives from the following 3 groups in attendance :
The Community Players (TCP); Mennonite Relief Sale; Agricultural Society / Fall Fair
The Minutes from this meeting are attached in Appendix B.

● The 3 groups present all expressed a great deal of support for the existing facility and identified what would be considered only relatively minor improvements which are captured in the meeting minutes. The improvements would be in line to work with the requirements of the Township's Grant application and will be considered during the upcoming Schematic Design stage. The groups also exhibited a willingness to work together, pool resources and even make accommodations for improvements that may benefit the facility but cause them to rethink their existing processes.

Item 14. New Hamburg Arena Roof Truss Information

While no drawings are provided with this package, we presume this explains the extra steel columns installed behind the dasher boards at both ends of the ice surface and a number of other observed structural modifications that do not appear to be from the original construction.

During our site visit we measured the existing ice surface size as 79.741'Wide x 180'Long. The Township's current funding application (item 1) requires provision of both a new ice rink slab and surrounding dasher boards. This would have provided an opportunity to investigate expanding the ice surface to National Hockey League (NHL) requirements of 85'Wide by x200'Long which would present a number of additional marketing opportunities to the Township. However, the presence of the extra steel columns installed with these truss modifications makes further lengthening of the ice surface to the 200' NHL requirements or even that of a standard recreations ice surface size of 85'Wide x 185'Long infeasible.



5.0 Observations & Findings

On June 25, 2024 a guided tour was provided by the Township of Wilmot representatives Amber Schenck, Project Coordinator & Justin Carrafiello, Arena Supervisor to Bob Prince, Principal, Invizij Architects, Murray Wickham, Mechanical Principal & Felix Martich Venderhorst , Electrical Project Manager of exp. Exp's Mechanical & Electrical Observation and Findings are provided in more depth in their report found in Appendix A. The following represents some of the highlights of this review

Exterior & Site - Observations

The Arena is located at 251 Jacob Street, intersecting with Boullee Street in New Hamburg. Both Jacob and Boullee Streets, being narrow, frequently experience congestion during events at the arena or the adjacent baseball diamonds.

On-site parking is limited to approximately 30 spaces in the paved parking area located at the north end of the building / site. However, the markings in this area have faded to the degree that any formal or structured parking order is not apparent to at least the casual visitor. There is overflow gravel lot parking to the east of the Arena, to the east of the Legion and at the Dead End of Boullee Street. The Township's Planning Department has advised (refer to Appendix B "Township Planning Department Comments on Existing Parking") the arena is an existing Township owned facility and current zoning regulations with respect to parking don't apply. If there were to be a substantial change in the building that would increase the occupancy beyond what historically was a possibility (not part of this project's scope) permanent parking solutions would be ideal, but ultimately the building is existing, parking is existing, it is a Township owned facility, so Development Services/the zoning by-law would not dictate parking requirements. This is beneficial to the Township as expanding on-site parking capability would be a challenge Thus, while any parking upgrades that may / would be expected with such a significant renovation as the one the upcoming Schematic Design will encompass, such upgrades or design changes should be deemed as 'preferred' only as opposed to "required" by any local authority. The parking area does provide at-grade / zero entry main entrances to either the Arena or Community Center which does contribute to minimum accessibility requirements.

Project North

The site slopes fairly steeply down from the west to east requiring exterior stairs at the exit doors along the east exterior wall and guards around the east end of the north end parking.

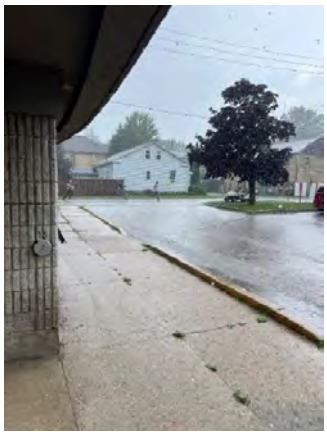
The original building's arena proper masonry exterior has been reclad with a combination of insulated prefinished steel siding panels, vertical prefinished steel siding and some areas of what appears to be a cementitious textured coating, all over the original building's masonry block exterior. The north elevation 2 storey addition around the main entrance, incorporates elements of split face block, poured concrete and 2 prefinished aluminum door systems, one for the Arena and the other for the Community Centre.

The flat roof areas at the north end of the building are accessed via roof hatch in the community center and consist of a 4 ply built-up roof system over the north end 2 storey construction and a 2 ply modified bitumen roof system over the arena proper and the 1 storey infill roof that connects these 2 masses. Air handling units and exhaust from commercial kitchen are mounted on the north end 2 storey flat roof above the Community Center.

Exterior & Site - Findings

While the work of the Township's currently approved ICIP/SPIF Grant application does not specifically address work on the exterior or site, a number of issues can be observed from outside the building:

1. There is a great deal of water runoff from the arena proper roof and the infill roof area that connects the Arena Lobby / Community Center, to unprotected public areas at grade below, including at exit door locations. Viewed on the roof, this appears to be caused by roofs that pitch from the center towards the perimeter with inadequate or no water collection at those low points. Attempts should be made to address this in the upcoming Schematic Design by at least buffering the areas at grade from the public, perhaps with landscaping elements.



2. Further to item 1, the design of the north (main) entrance to both the Arena and Community Centre offers little weather protection with rain runoff pouring down the face of the sloped concrete wall / roof area directly above the doors. As well, rain water collected from the roof areas of the 2 small stair additions on the south end of the facility is out-letting at grade via either disconnected downspouts or leaking gutters. Both these situations represent potential dangerous slip and fall conditions (when the water freezes) and has / is also causing staining to the walls. If feasible during the Schematic Desing stage, these should be addressed.

3. The south elevation along Jacob St. has an awkward pavement strip that runs adjacent to the building. It's signed as no parking but can easily be confused as vehicular parking spaces. The south end has a sign mounted on the exterior wall indicating Barrier Free parking. There are no line markings and this location is too far from the main entrance to be useful for that application.

4. All roof areas appear to be in good condition. No sponging effect felt when walked on.

5. The overhead door on the east elevation has been modified to eliminate vehicular use and appears to now be utilized as an emergency exit for TCP patrons. However, overhead doors do not comply with the requirements of an exit as defined by the Ontario Building Code. Subsequent advisement to our office from the Township clarified that that these doors are only used as an exit when opened fully and temporary wall construction, complete with man doors that have panic devices installed are inserted into the openings.

6. The asphalt pavement in the main (north) parking area has reached it's life expectancy and is need of replacement including new painted linework

7. The only realistic area for any proposed building expansion would be to the east of the arena. However, since this area drops off steeply in terms of grading, it would present significant challenges in terms of accessibility.

8. While the arena and community center massing tie-in very well programmatically on the site with pathways to the baseball diamonds and grandstand to the east and green space to south, the building itself presents a rather bland, somewhat dated, impression providing no views or animations of interior spaces.

Interior – Observations

- Occupant Loads (as provided by the Township):
  - Arena Floor, Sporting Uses: 130
  - Arena Floor, Non- Sporting Uses: 700
  - Community Centre: 300

The Township's currently approved ICIP/SPIF Grant application identifies several key improvements:

1. Refrigerated rink slab and refrigeration system for ice making
2. Dasher boards, glass and safety netting
3. Replacement of wooden spectator seating with fixed bleacher seating along the west wall.
4. The addition of accessible change rooms
5. Elevator
6. HVAC equipment,
7. Consolidate the operations of The Community Players (TCP) for storage needs, (props, equipment, set pieces, seating) rehearsal and performance space.
8. Upgraded electrical/wiring panels and plumbing infrastructure, where required for building/fire code compliance.
9. Fully compliant fire alarm system

The goal of the above is to create a warm floor multi-purpose facility for part of the year, and ice usage for the remainder of the year. Observations and findings of this section will focus on the review and evaluation of existing items impacting the arena's viability to accommodate the above transformation.

The existing arena rink slab appears to be in good condition with no obvious cracks, settling or heaving. However, previous reports provided by the Township have identified that new refrigeration and ice pad construction are both required in order for the facility to be re-commissioned for ice making (refer to exp's report in Appendix B). The measured ice surface size was found to be 79.741'Wx180'L.

The existing dasher board system, which is 48" in height, appears to be in good condition, however, the galvanized steel framing is cast into the slab, which would not allow for it to be salvaged and reinstated. There is a step down of approximately 8" from the players benches and penalty boxes to the ice surface.

The bowl style spectator seating, surrounding the ice surface is constructed of painted wood and is in fair, but dated condition. They are pitched very steep and would not be Ontario Building Code compliant by today's standards. A significant crack, as reported in Section 4.0, "*Item 2. New Hamburg Arena Re-Commissioning Study",* was observed above the overhead door on the west elevation in the seating area.

Currently the facility offers 4 change rooms. 2 changerooms are located just outside the double doored north entrance to the ice surface. These rooms are very small and over-due for refurbishment. There are 2 other change rooms located at the east end of the long E-W public corridor adjacent to the lobby. These rooms are finished a little better but still in need of refurbishment. One is also considered too small. A fifth changeroom was previously located at the west end of the E-W public corridor but has been converted to a meeting / multi-purpose room.

A small, LULA (limited use limited access) type elevator currently provides an additional, separate, access to the upper level of the community centre. This type of elevator offers the lowest level of accessibility and not considered user or public friendly. Unlike traditional elevators, LULA elevators are not designed for general public use. They are specifically intended for individuals assisted by mobility devices, with capacity limited to one passenger per trip. The best way to describe a LULA elevator is to say that it is a hybrid of a small commercial elevator and a wheelchair lift. Traditionally, and as in this situation they are very small, out of the way, and only used if someone cannot traverse the stairs.

The Township advised that The New Hamburg Community Player's (TCP) does have issues with the acoustics during their performances and have designated $50K of their donated funds to the installation of acoustic paneling to address this issue. Currently, TCP controls the acoustics by draping the entirety of the arena with heavy black curtains. TCP presently use programmed area at both ends of the ice surface, with their backstage area for performances being located at the south end. Would be beneficial to consolidate all programming in one area

While not addressed in the Township's currently approved ICIP/SPIF Grant application, and outside the scope of this project, a review of the upper level community space was performed. This area offers a large and open space, uninterrupted by any columns or protrusions, with a high acoustic tile ceiling. A raised stage area is located at the east end. Hardwood flooring, that appears to be in reasonable condition, is located throughout the entirety of this level with exception of the kitchen and coat storage which are vinyl tile. The commercial grade kitchen on this level appears well maintained and the large coat storage area provides adequate storage for events. A convenience stair leading to this second floor is in good condition, with colour accentuated nosings and dimpled, slip resistant treads. This stair appears steep and may not reflect current Ontario Building Code requirements for tread width and riser height

Interior - Findings

● The ice Surface size of 79.741'Wx180'L is unique and considered odd. The National Hockey League requires an ice surface of 85'Wx200'L and as such, almost all recreational arenas constructed today build to this standard in order to take advantage of more marketing opportunities as well as to attract anchor tenants from lower competitive amateur leagues. Another common ice size is "Typical Recreational" e.g house league hockey, which is measured at 85'Wx185'L. Some ice sports such as speed skating would require even larger than an NHL ice size but most other sports (including warm floor sports) can utilize the NHL size for their activities. To enlarge this ice surface to NHL size is not feasible due to the length constraints caused by the structural modifications described within *"Item 14. New Hamburg Arena Roof Truss Information"* in Section 4.0. As ice size is a critical factor to User Groups the above needs to be explained to all groups during schematic design.

● Design of the new dasher board system also needs to be reviewed with stakeholders and users groups. Consideration should be given to lowering the height from 48" to a more typical (and NHL standard) of 42". The latter providing better viewing opportunities for both spectators surrounding the ice surface and young players on the bench. Additionally, a flush level ice entry should be considered as opposed to the current 8" step to address accessibility. A demountable aluminum system, while initially more expensive to install, can also provide additional marketing opportunities by eliminating the ice surface size as a constraint for floor events.

● Removal of the wooden bleacher seating offers an opportunity for more uses within the rink area taking advantage of the high ceiling. Schematic Design should review the possibility of constructing all six new change rooms within the existing arena foot print while providing the required new bleacher seating above. As well as avoiding interaction with the ice resurfacer, these new change rooms also need to be designed and located to avoid security issues such as intermixing with spectators, and having both teams access the ice surface through the same door, a situation that currently exists. Potentially, the new bleacher seating could be constructed above the new changerooms. While not addressed in the Township's currently approved ICIP/SPIF Grant application, the arena will require significant building envelope upgrades to conform to not only the minimum requirements of the Ontario Building Code but also support ice making activities.

● For the proposed multi-passenger elevator, a location needs to be selected that is highly visible and offers access to not only the community room but any level that has public access eg. arena seating. Ideally, it would be adjacent to stairs offering access to the same locations.

● The main E-W corridor that runs adjacent to the main lobby, exhibits a fairly noticeable downward slope from the west to the east with many door thresholds off this corridor having small steps to get into the rooms. Ideally, these tripping hazards can be addressed in the schematic design

● The arena heating system is not operational and requires replacement. A new HVAC system will be required to accommodate the proposed future use of the facility (refer to exp's report in Appendix B).

● A couple of cisterns were observed under the seating areas. These will need to be investigated during Schematic Design

While not addressed in the Township's currently approved ICIP/SPIF Grant application, and outside the scope of this project, the following findings are also noted:

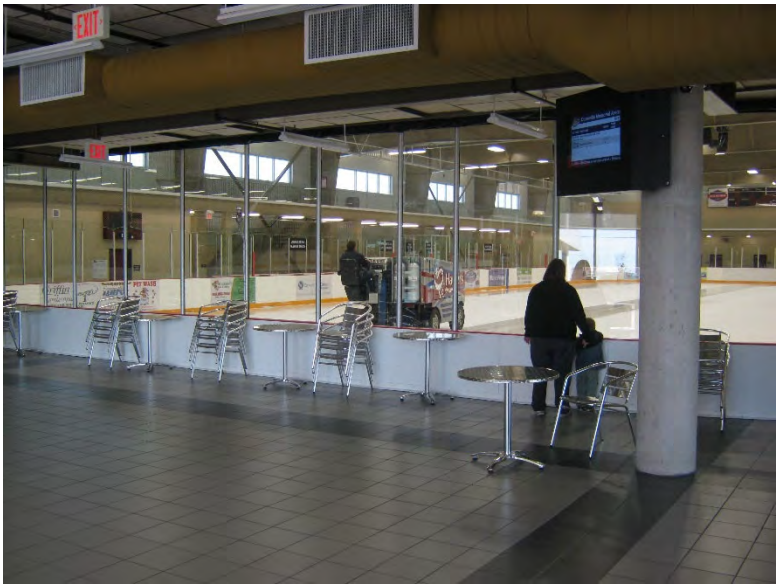
● An exterior wall leak through an opening on the Jacob St. (west) side allows surface water at grade against the building into the basement level Mechanical space. Rainwater flowing freely off the roof in this area exacerbates the situation. This needs to be addressed immediately.

● The upper level Community Centre while well maintained, and programmatically functional, could use an upgrading particularly in the washrooms as well as finishes other than the wood floor . A better and more obvious connection to the arena would also benefit this space. It is accessed by the public via a single pedestrian-door with single step down onto the upper concourse level of the arena bowl seating. Since the Fire Department (see Section 4.0, "*Item 11. Township of Wilmot Fire Department Concerns")* has identified concerns with the lobby stair and a new elevator planned, schematic design should review access to the upper level. A more open, wider, less steep, stair would be beneficial. As well, a stronger connection to both the exterior and arena proper should be looked at.

● Major leaks in south end arena upper level exit stairs were observed. Review opportunities in the upcoming Schematic Design to address.

● Existing plumbing and ventilation systems to be revised to accommodate accessibility / universal washroom design.

● The main Lobby's connection to the arena proper through a long intersecting corridor space is awkward. Since the changerooms between these spaces will be relocated, review during Schematic Design opportunities for the lobby to interact better with the ice surface activities, as well as to create a connection with the exterior



6.0 Conclusions & Recommendations

From our review of Township's currently approved ICIP/SPIF Grant application and understanding of the obligatory scope deliverables expected, our review of all Township provided background information identified in Appendix B and our walkthrough and site assessment of the facility, we have arrived at the following Conclusions and Recommendations:

Conclusions

1. Given the challenges overcoming the current Grand River Conservation Authority's restrictions and requirements on expanding the footprint of this facility above their current allowable 100m2 (1076 sq.ft.), the upcoming Schematic Design will need to attempt to address the deliverables identified within the Township's currently approved Grant application within the current existing building footprint. However, until the Schematic Design phase completes, we cannot confirm at this point that can be accomplished and therefore confirm the arena's viability for transformation into the multiuse facility envisioned.

2. The scope included in the Township's currently approved ICIP/SPIF Grant application fails to address other improvements / modifications that would either be required or otherwise deemed necessary to transform this facility to the updated, functional multi-use facility envisioned. Most notably, with the new ice making abilities, the building envelope will require significant upgrades including provision of a new roof over the arena proper.

   exp's report (Appendix A) also identifies the following Mechanical & Electrical work that will be required as a result of the work identified within the Grant:
   1. Upgrades to the current incoming water service.
   2. Upgrade of the current natural gas service.
   3. The installation of a new 150mm sanitary sewer to accommodate new plumbing fixtures.

   Incorporation of these items will add another approximate $750,000 in construction costs.

3. There are also items that could be expected (eg. by the public or user groups) to be included with a renovation of this magnitude that are also not identified within Grant or even required as a result of the work of the Grant (Item 2 above). As an example, the current onsite parking area at the north end of the building is nearing the end of it's usability and should be addressed with any significant building renovation. While this work could be pushed to the future, the Township should be aware that this could be a significant cost item. Approximately $500,000 should be allocated to Site Improvements.

exp's report (Appendix A) also recommends the following Mechanical & Electrical work for a renovation such as this:

1. Installation of a building automation system (BAS) to monitor and control new and existing mechanical equipment.
2. Replacement of all the red Exit signs with current green Running Man signs.
3. Replacement of older emergency lighting with new LED emergency lights.
4. The upgrading of existing interior and exterior lighting with LED energy-efficient fixtures
5. Upgrading of the existing Wi-Fi infrastructure.
6. Upgrading of the existing audio system

Again, these could easily add an extra $125,000 to the projected Construction Costs

4. It is our opinion that the currently approved $5.7M Construction Cost Budget allocated for the work of the Township's currently approved Grant application is insufficient to cover costs of all required deliverables identified, including additional work not listed within the Grant application that either will be required as a result of the Grant's scope (e.g. described building envelope upgrades) or otherwise deemed necessary to transform this facility to the updated, functional multi-use facility envisioned.

5. While the building would be a suitable candidate to that of a refurbished / repurposed arena into a multi-use facility without ice making capabilities, this would not be in line with the currently approved ICIP/SPIF Grant application. Such a repurposed facility could cater to the needs of The Community Players while also addressing other Community non-ice related recreational needs such as pickleball, indoor soccer, lacrosse, basketball, roller blade sports, an upper level walking track, skateboarding, tennis, virtual rooms and many other uses. Although such a renovation would still require a significant capital investment, it would be far less then the capital costs of returning the facility to seasonal ice making capabilities and offer additional services to the Community.

Recommendations

1. There will need to be a clear understanding, and agreement by all parties, that the word *addition* used within the currently approved Township's ICIP/SPIF Grant application be defined as a "smart" *addition* to the building. The term referring not to an expansion of the building's physical footprint but to the thoughtful integration of new amenities within the existing spatial constraints. While this approach ensures we are adding valuable features and enhancing the building's functionality, we are doing so without altering its external dimensions. A "smart" *addition* involves:

- Reworking of the current layout to incorporate new amenities.
- Enhancing and retrofitting existing areas to accommodate additional features.
- Applying creative design solutions to make the most of the current internal space.

This strategy emphasizes that while the project includes an addition of amenities, it does so within the confines of the existing building, preserving its current external boundaries.

2. That the upcoming schematic design include addressing existing concerns identified by the Township's Fire department as outlined in 4.0 of this report.

3. That the upcoming schematic design attempt to address water run off from the roof over pedestrian areas as described in 5.0 of this report.

4. That the upcoming Schematic Design include working with Arena Stakeholders to identify possible synergies or common interests between them and include the same into the design.

5. That the upcoming Schematic Design include impact on current Township resourcing with regards to: personnel (manager/supervisor/operators), maintenance, security, insurance, wi-fi & networking, lighting, sound systems, HVAC, plumbing, seating, parking, concessions, annual operations budget, utilities etc.

6. That the upcoming schematic design & costing phase allocate a cash allowance of $85,000 to address the large crack in the exterior wall and a permanent solution to the currently installed tele-posts on the lower level as described in Section 4.0, "*Review of Background Information (Appendix B)*"; "*Item 2. New Hamburg Arena Re-Commissioning Study*"; *"Appendix B: New Hamburg Arena Structural Condition Assessment"*.

7. That for the upcoming Schematic Design, the following design features be integrated:
    1. That all changerooms for the ice surface provide separation from the public and opposing teams when accessing and exiting the ice surface.
    2. The use of 42" high dasher boards with zero entry ice access to accommodate accessibility.

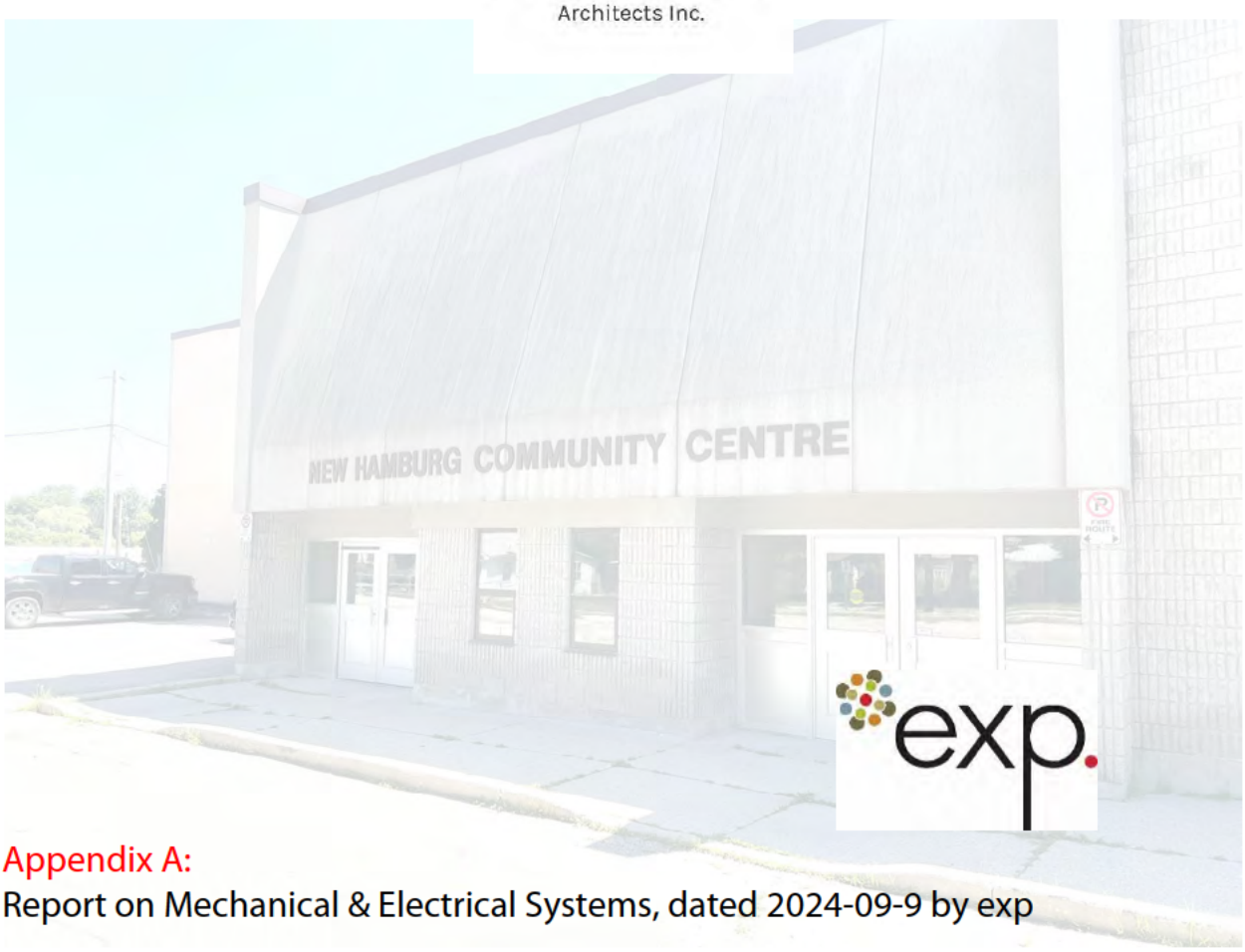
3. Consolidate The New Hamburg Community Player's (TCP) programming into one area preferably the south end or backstage area of their current Local Authority agreed-to stage set up.
4. Advise User Groups that the existing ice surface size is 79.741'Wide x 180'Long and it is not possible to extend its length to either National Hockey League (NHL) sizing of 85'Wide by x200'Long or even that of a common recreation ice surface size of 85'Wide x 185'Long. See if some other size is desired.
5. The use of off-site storage for items not requiring immediate access, or climate control.

8. That for the upcoming Schematic Design, the following design features be reviewed and if feasible, integrated:
    1. Use of a removable dasher board system to allow programming flexibility (consider storage solutions if this option is endorsed).
    2. As the 2 existing changerooms adjacent to the double door north entrance to the ice surface are too small and will undoubtedly be demolished, review extending the lobby directly to the ice surface dasher boards which would also offer a much better spectator connection to activities on the ice
    3. Use of retractable and / or portable bleacher style seating to allow more programming options.
    4. Inclusion of items currently not considered that could provide benefits to the community, and could be easily and inexpensively accommodated as a result of the new construction. E.g. upper level bleacher seating would require an access route behind that could double as a continuous walking track; incorporation of controlled natural daylight by utilizing the existing exterior openings.

9. That all new work be designed to conform to the minimum standards set forth in the *Ontario Building Code* in construction, fire safety and accessibility as required by the ICIP/SPIF Grant Application.

Township of Wilmot - Preliminary Report on the New Hamburg Arena
251 Jacob St,
New Hamburg, Ontario
September 10, 2024

Prepared By:
Invizij Architects Inc.



Appendix A:
Report on Mechanical & Electrical Systems, dated 2024-09-9 by exp

New Hamburg Arena

Mechanical and Electrical Building Assessment Report

Project Name:
Mechanical and Electrical Building Assessment Report

EXP Project Number:
ALL-24007519-A0

Prepared and Reviewed By:
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Date + Time Submitted:
2024-09-9

Table of Contents

1 INTRODUCTION

EXP was retained to provide a mechanical and electrical building assessment report for the New Hamburg Arena located at 251 Jacob Street in the Town of New Hamburg in the Township of Wilmot.

On June 25, 2024, a guided tour of the facility was provided by the Township of Wilmot representative Amber Schenck, Project Coordinator and Justin Carrafiello Arena Supervisor. Bob Prince, Principal, Invizij Architects also attended the tour.

This report has been prepared based on the visual observations made during the tour and by reviewing the New Hamburg Arena Re-Commissioning Study dated 04/11/2019, prepared by NA Engineering & Associates. In addition we have reviewed all background information as provided by the Township in order to understand the factors contributing to the existing condition of the Arena. Refer to Appendix B of the Preliminary Report on the New Hamburg Arena, prepared by Invizij Architects Inc., for the list of background material.

EXP has reviewed the Township's currently approved ICIP/SPIF Grant Application to ensure a thorough understanding of the obligatory scope deliverables expected for which funding has been secured.

This report, prepared by EXP Services Inc., is intended for the exclusive use of Invizij Architects Inc. and the Township of Wilmot. None of EXP Services Inc., Invizij Architects Inc., and the Township of Wilmot, assume any liability for the use of this report, or for the use of any information disclosed in the report, or for damages resulting from the use of this report, by other parties.

2 MECHANICAL

2.1 Description of Existing Systems

2.1.1 Fire Protection

The building is served by a 150 mm incoming fire line, fed from Jacob Street, complete with a monitored sprinkler valve. A 25 HP fire pump is provided to boost the water pressure to meet the fire code requirements. The incoming fire service does not have a backflow preventor which is now required by the Ontario Building Code (OBC).

The Arena is served by a wet-pipe sprinkler system complete with alarm check valve. The Arena is also served by a dry-pipe deluge system complete with control valve and air compressor. The deluge system was installed to provide additional protection for the Stage curtain area during theatrical performances.

The Community Centre is served by a wet-pipe sprinkler system. The entire sprinkler system is maintained by Everding Fire Protection Limited.

The Township reported that the facility has experienced minor sprinkler system leaks over the past several years.

2.1.2 Ice Plant/Refrigeration System/Rink Slab

Although decommissioned, the building's existing ice plant still contains major components from its past operations. These original components were installed by Cimco Refrigeration and consisting of the following:

- Two (2) 50 HP Mycom compressors
- One (1) shell and tube chiller
- 15 HP brine pump
- Evapco air cooled condenser
- Brine distribution piping serving the rink (floor) slab
- Incoming power and Control Panel
- Electric unit heater

The Township indicated that the Ice Plant was sized for seasonal ice, but has not been functional since December 31, 2007.

A refrigerant gas detector is located within the Refrigeration Room and is complete with air intake louvre and exhaust fan.

It was observed that the existing Refrigeration Room is not separated from the Arena by an air-lock vestibule, which is required by CSA-B52 - Refrigeration Code.

The brine piping serving the rink slab has not functioned since December 31, 2007.

2.1.3 Arena Heating

The Arena bowl seating was heated by multiple gas-fired infrared heaters located above the seating areas.

The Township advised that the infrared heaters are not operational.

There is no other heating equipment serving the Arena which includes, both, the seating areas and storage rooms.

2.1.4 Arena Ventilation

The Arena is served by two (2) 7,500 CFM in-line exhaust fans located at ceiling level within the Arena, complete with ductwork, exhaust grilles, and exterior louvres. Louvres are located on the west elevation of the building.

The system is manually operated and is designed as a smoke evacuation system to serve the Stage area during Theatrical productions.

There are no supply air systems , dehumidification systems , air conditioning systems or make-up air systems serving the Arena.

2.1.5 Incoming Water Service

The building is served by two (2) incoming water services, as follows:

- A 32 mm water service, located in the Community Centre's Lower Lobby which serves the cold-water lines for the Community Centre and the Arena.
- A 32 mm water service, located in the Community Centre's Basement which serves the domestic hot water tanks for both, the Community Centre and the Arena.

2.1.6 Gas Service

The gas services comes into the building from Jacob Street and is complete with gas meter and regulator.

Gas distribution piping is extended to serve the following equipment:

- Arena Infrared Heaters
- Community Centre Rooftop Unit
- Community Centre Furnaces (2)

- Community Centre Domestic Water Heater.

2.1.7 Community Centre HVAC

The Community Centre is served by the following equipment:

- The Ground Floor is served by two (2) 50 MBH gas-fired furnaces complete with distribution ductwork.
- The Second Floor Multipurpose Room is served by a York gas-fired packaged heating cooling unit complete with associated ductwork

2.1.8 Community Centre Plumbing

The Community Centre is served by various water closets, lavatories, and sinks.

Hot water serving the plumbing fixtures is generated by an A.O. Smith 155 MBH, gas-fired water heated complete with an 80 gallon storage tank.

2.2 Discussion of Existing Systems

2.2.1 Fire Protection

The incoming fire service requires a backflow preventor to meet OBC requirements.

The operation and integrity of the existing sprinkler distribution piping, Fire Pump, flow switches, deluge system, should be confirmed/verified by the Sprinkler Contractor (Everding Fire Protection) in order to identify required repairs.

2.2.2 Ice Plant

The existing ice plant and associated rink slab distribution piping have not been operational for over 16 years.

Based on this information, we believe the entire ice plant would require replacement including, but not limited to, the following:

- In-floor brine piping
- Compressors
- Brine pump
- Outdoor condenser
- Shell and tube chiller
- Interconnecting piping
- Main Control Panel

The existing ammonia gas detecting system including exhaust fan and intake louvres should be replaced.

2.2.3 Arena Heating

The existing gas-fired infrared heaters should be replaced with new gas-fired infrared heaters.

The balance of the Arena does not have a heating system. Based on the anticipated future use of the Arena, options for a new Arena heating system will need to be evaluated to provide adequate heating throughout the facility.

2.2.4 Arena Ventilation

The existing smoke evacuation system serving the Arena does not provide adequate ventilation, air conditioning or humidity control to accommodate a multi-use facility. Additional HVAC systems will be required based on the design requirements of the proposed multi-use facility.

2.2.5 Incoming Water Service

The incoming water services may need to be increased in size to accommodate a multi-use facility.

2.2.6 Domestic Hot Water

The existing domestic hot water system will need to be increased in capacity to accommodate the requirements of a multi-use facility, including ice flooding and additional showers.

2.2.7 Gas Service

The existing gas service will need to be increased in size to accommodate additional gas loads to serve HVAC and domestic hot water equipment.

2.2.8 Community Centre HVAC

The existing gas fired furnaces and packaged rooftop unit serving the Community Centre appear to be in good condition. No upgrades are anticipated for this equipment.

2.2.9 Community Centre Plumbing

The existing plumbing fixtures appear to be in fair condition,

Fixtures and components such as flush valves and faucets to be replaced as required to accommodate accessibility updates to the Community Centre.

2.3 Recommendations to achieve the Township's Grant Application

1. Replace the Ice Plant and brine piping and concrete ice pad to accommodate seasonal ice and provide a replacement ammonia detection system.

2. Add new HVAC systems to provide ventilation, heating, and air conditioning and/or dehumidification complete with ductwork, piping, and controls.

3. Add domestic hot water boilers, storage tanks, piping, and controls to accommodate ice flooding, and additional plumbing fixture loads.

4. Upgrade existing incoming water services complete with piping and backflow prevention.

5. Upgrade existing natural gas service.

6. Add plumbing and drainage distribution systems to accommodate new plumbing fixtures and ice flooding.

7. Upgrade existing sprinkler and deluge systems, as required. Provide a backflow preventor to meet OBC requirements for incoming fire service water.

The above recommendations are all viable based on observations on site.

2.4 Recommendations to achieve the Township's Grant Application but are not identified in the Grant.

1. Install a new 150 mm sanitary sewer from the arena to the street to accommodate new plumbing fixtures

2.5 Additional Exp Recommended Work

.1 Install a building automation system (BAS) to monitor and control new and existing mechanical equipment.

3 Electrical

3.1 Description of Existing Systems

This section of the report presents technical observations, general conditions, assessments, and recommendations for the electrical system and components. The technique followed was a walk-through examination and only visual observations were made to examine the electrical components. Testing of equipment was not included in our scope of work and no attempt was made to examine components that were inaccessible, covered by insulation, or built into walls or ceiling spaces. No equipment was disconnected from the power supply. The lighting and power panel boards that were easily opened were opened to verify the condition of the internal components. The site visit included a review of the following:

- Main Disconnect Switch;
- Distribution Systems;
- Lighting Systems and Receptacles; as well as
- Emergency Systems;
- Communications.

3.1.1 Main Disconnect Switch

Electrical power, from the municipal grid, enters the building via overhead service entry; the service entry is in the main (east) electrical room.

The conduit enters the building's main electrical room, where it supplies power to the main switches. The first main disconnect switch is manufactured by "Federal Pioneer" and is rated for 400 amps, 347/600V. This switch supplies power to a splitter unit, which then distributes the power via disconnect switches, having amperage capacity ranging from 60 or 400 Amps.

The observed disconnect switch appears to be the original to the building.

3.1.2 Distribution System

The main distribution equipment is installed within the electrical room; the equipment generally consists of electrical panel boards, transformers, and disconnect switches. The equipment generally appeared to be of a combination of older and newer vintages and in functional condition.

The electrical disconnect switches reviewed are generally utilized for powering the various heating and cooling units and transformer units. The transformers are generally utilized to drop down the voltages to be used by the distribution panel boards. The panel boards are generally used to provide power to multiple receptacles, lighting fixtures, equipment, rooftop heating and cooling units, exhaust fans, security systems, and additional mechanical and electrical equipment required for building operation as per the labeling and circuit directories reviewed.

The condition of the electrical wiring is unknown and may require replacement as the wiring appears to be original to the building.

The distribution equipment serving the arena appears to be original to the building and past its useful service life expectancy. The equipment shows signs of corrosion.

3.1.3 Lighting System and Receptacles

The interior is primarily illuminated via a combination of recessed, surface, and ceiling-suspended fluorescent light fixtures. The fixtures are of varying vintages and appear to be in operable condition. The lighting is controlled by local switches and a lighting control system.

The exterior of the building is predominately illuminated by wall-mounted high-pressure sodium floodlight type fixtures, The fixtures are of varying vintages and appear to be in operable condition. The exterior lighting is controlled by a photocell and a mechanical timer switch.

Convenience receptacles are installed throughout the building. In general, the building appears to have sufficient receptacles for present use.

3.1.4 Emergency Systems

The emergency directional signage lighting consists of a combination of ceiling-mounted red Exit signs and green Running Man signage, depending on the space reviewed. The lighting reviewed generally appeared to be in operable condition. Some exit signs were covered with a bag (Uncovered and use them only when there is a performance).

Emergency lighting is accomplished by emergency battery packs and remote mounted lighting heads, some of which are installed above the exit signage. The emergency lighting fixtures generally appear to be in operable condition. Some of the lighting fixtures appear to be of older vintage and may require replacement within the term of this report.

The building is provided with a fire alarm panel, the panel is manufactured by Mircom. There are also annunciator panels installed at the entrance of the building. The fire alarm panel and associated annunciator panels appear to be in operable condition at the time of the visit.

A few heat detectors and smoke detectors are also found installed in the budling. Based on our cursory review, the detectors and alarms throughout the building generally appear to be in operable condition.

3.1.5 Communication

Existing Wi-Fi access points and public address speakers were observed at the time of the site visit.

3.2 Recommendations

The funding is based on "bringing the building up to current building code, fire code, and AODA perspective." We recommend that all new work be designed to conform to the minimum standards set forth in the OBC. And as required by the ICIP/SPIF Grant Application.

3.2.1 Recommendations to achieve the Township's Grant Application

- Distribution System

We recommend all electrical equipment be provided with updated, printed circuit directories. Current installations include handwritten schedules with modifications made as renovations were completed in the past.
The building is of relatively older vintage. The condition of the electrical wiring is unknown and may require replacement as the wiring continues to age and degrade.

The above recommendation is viable based on observations on site.

3.2.2 Recommendations to achieve the Township's Grant Application but are not identified in the Grant.

- Main Disconnect Switch

The 2019 New Hamburg Arena Re-Commissioning Study reviews existing systems/conditions. While the study addresses the condition of the existing systems there appears to be no reference to the hydro incoming service. Based on the current electrical size of the existing ice plant It's assumed that the new ice plant will be of similar capacity and therefore reuse the existing electrical service. Since the Ice Plant is to accommodate seasonal ice, during the summer months the ice plant's electrical load will be not in use, this load/power will be used for Additional HVAC systems required based on the design requirements of the proposed multi-use facility.

Based on the above conditions the existing electrical incoming service appears to be adequate for the New Hamburg Arena.

We recommend doing a load study to confirm the existing load.

- Emergency Systems

We recommend replacing all the red Exit signs with green Running Man signs to meet the latest OBC.

We recommend replacing the older emergency lighting with new LED emergency lights.

The operation of the Fire Alarm System should be confirmed/verified by the Fire Alarm Contractor (Everding Fire Protection). Also, the existing fire alarm system is to be upgraded to provide coverage as per the latest OBC.

The above recommendations are all viable based on observations on site.

3.2.3 Additional Exp Recommended Work

- Lighting System

The existing lighting system appears to be in good condition and the light levels appear to be adequate. While not addressed in the current funding application. We recommend upgrading the existing interior and exterior lighting with LED energy-efficient fixtures for energy saving and to meet the latest OBC and ASHRAE 90.1.

The above recommendation is viable based on observations on site.

3.2.4 Communication

Upgrade the existing Wi-Fi infrastructure to improve coverage and signal strength throughout the facility.

Upgrade the existing audio system to improve audio quality, coverage, and reliability.

The above recommendations are all viable based on observations on site.

4 APPENDICES

4.1 Appendix A - Photographs

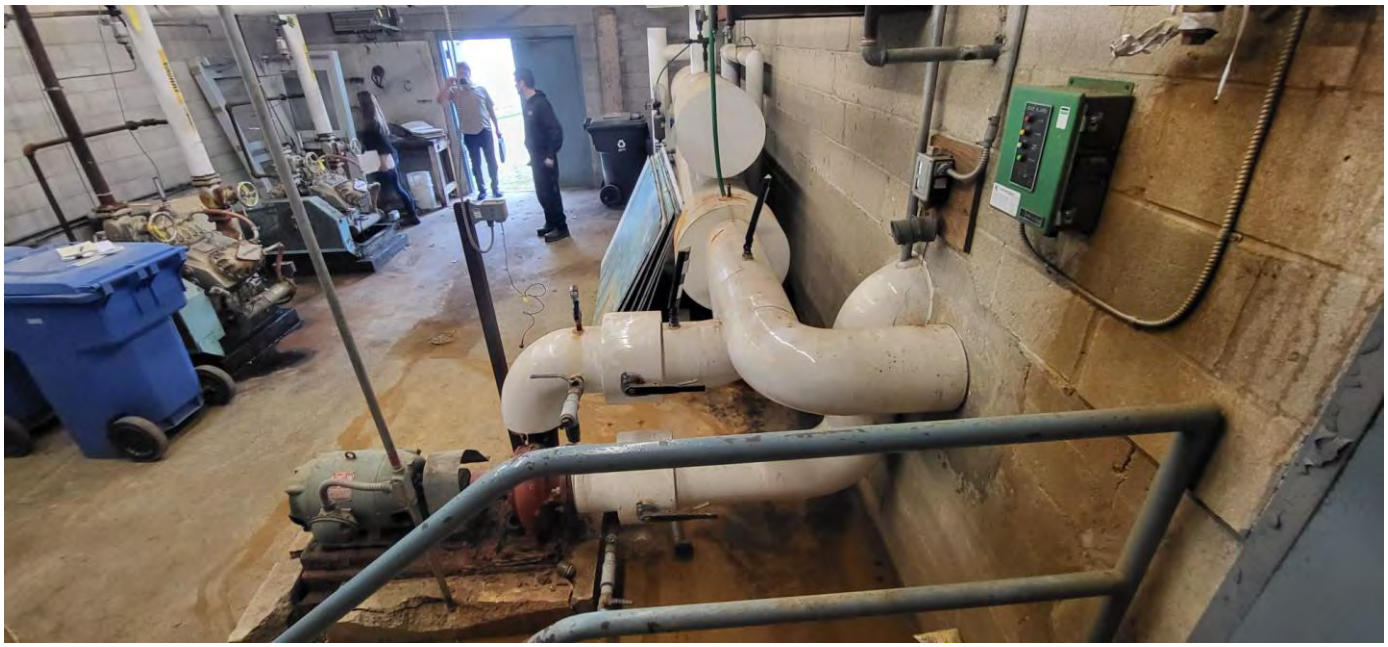
Appendix A – Photographs

Fire Protection Photographs (Mechanical)

Dry Sprinkler Air Compressor

Fire Pump and Wet Sprinkler Header

Refrigeration Room/Ice Plant Photographs (Mechanical)



Refrigeration Room with Brine Pump

Ice Plant Shell & Tube Chiller

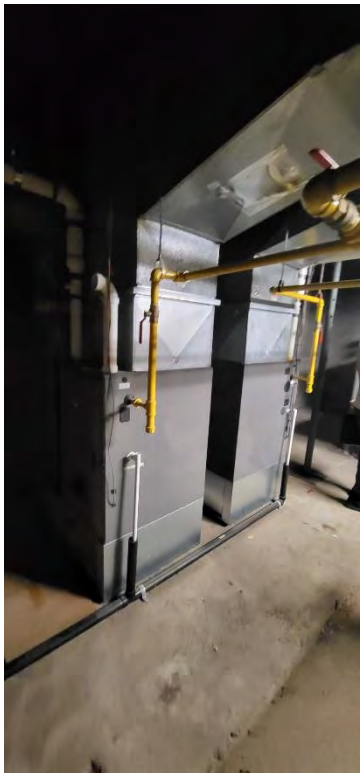
Refrigeration Room/Ice Plant Photographs (Mechanical)

Ice Plant Condenser

Plumbing Photographs (Mechanical)

Community Center Washroom Fixtures

Community Centre Heating/HVAC (Mechanical)



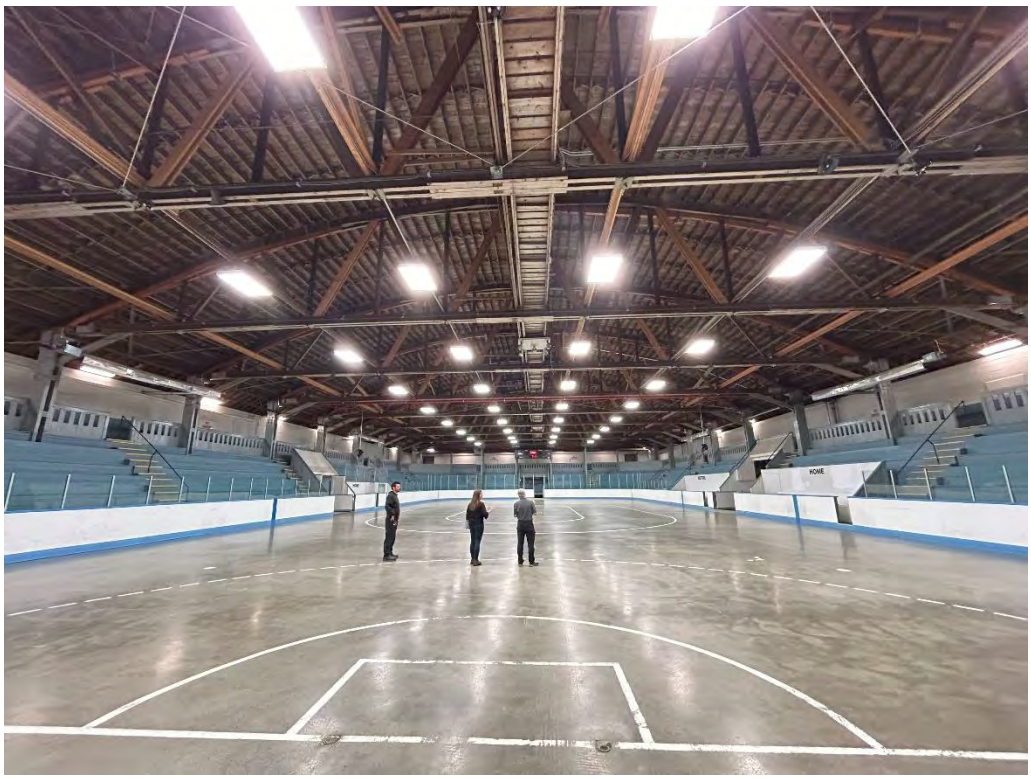
Gas Fired Heating Furnaces

Community Centre Multipurpose Room HVAC Unit

Electrical Photographs

Building Exterior

Rink Lighting

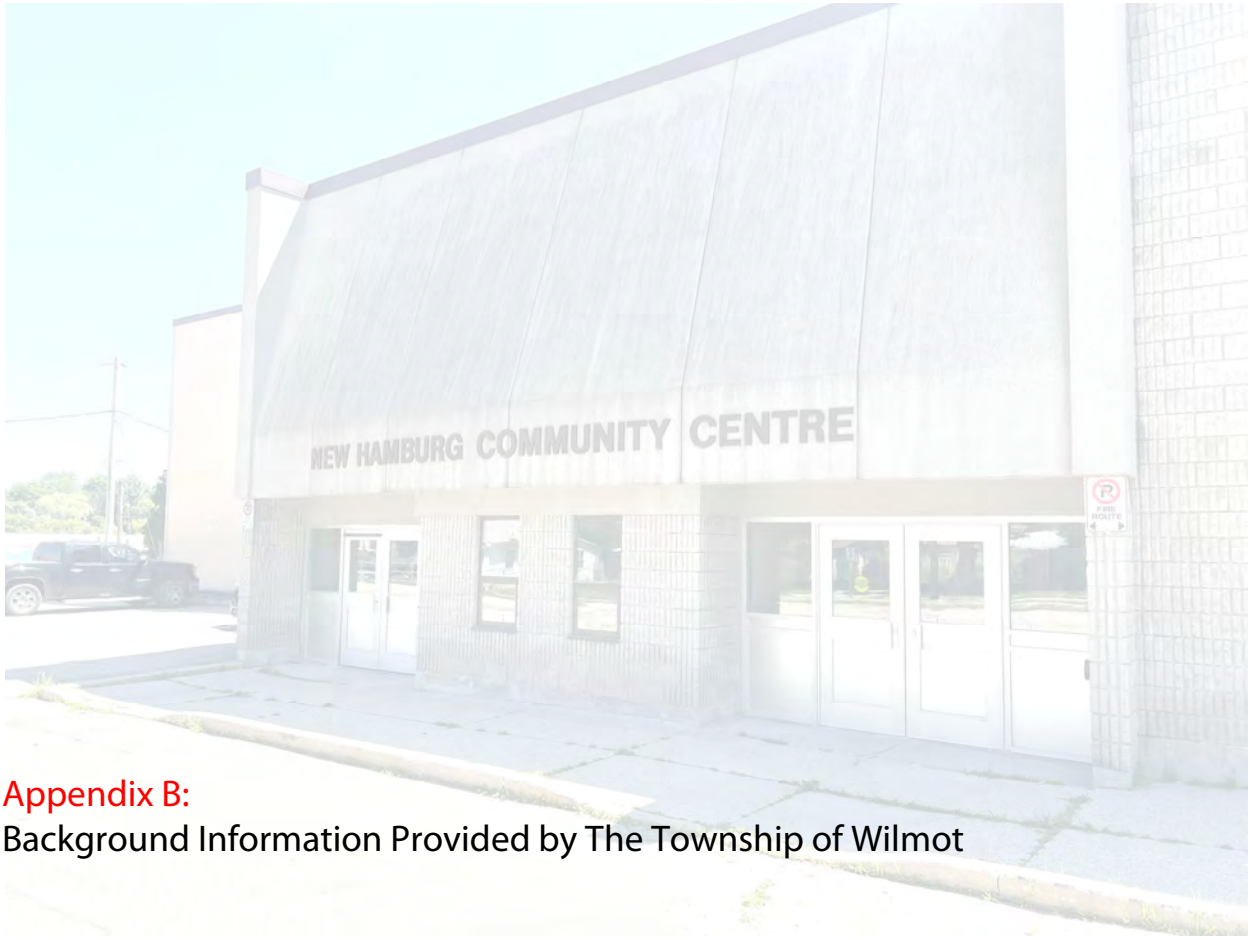


Sample Exit Sign to be replaced

Sample Electrical Panel to be replaced

Existing Fire Alarm Panel

Wiring Run Exposed



Appendix B:
Background Information Provided by The Township of Wilmot

Owner Provided Information – Provided Prior to June 25, 2024 Consultant Site Visit

1. Community, Culture and Recreation 2019 Intake: Business Case – Multi-purpose stream
4 pages, No Author, No Date
Township's currently approved ICIP/SPIF Grant application identifying required deliverables.

2. New Hamburg Arena Re-Commissioning Study
New Hamburg Arena Re-commissioning Study
DRAFT PRINT, dated 2019-04-11 by NA Engineering Associates Inc.
46 pages total including the following:

Appendix A:
Existing Architectural Ground Floor Plan
1 page. No Author, No Date
Appendix B:
New Hamburg Arena Structural Condition Assessment
Dated 2019APR11, by NA Engineering Associates Inc.
11 pages total
Appendix D
Proposed Architectural Schematic Design Floor Plans
5 pages total, all dated April 4, 2019, by GB Architect Inc.

3. Archaeological Assessment
Stage 1-2 Archaeological Assessment Part of 251 Jacob Street, New Hamburg
Part of Lot 22, German Block North of Bleams Road Geographic Township of Wilmot, Historical County of Waterloo, now the Regional Municipality of Waterloo, Ontario
Dated September 7, 2023, by Detritus Consulting Ltd.
28 pages total

Owner Provided Information – Provided on or After June 25, 2024 Consultant Site Visit

4. Photocopy of Annunciator Panel Graphic
1 page, received June 25, 2024, from Amber Schenck

5. New Hamburg Arena Roof Replacement Information
A. *New Hamburg Arena Roof Membrane Replacement,*
Dated June 29, 2001 by Stantec. Specifications and drawings.
8 pages total
and
B. *New Hamburg Arena Roof Membrane Replacement,* by Stantec
Dated June 29, 2001, by Stantec. Identified as Tender Package.
53 pages total,

6. Township of Wilmot Building Department Comments
On The Community Players of New Hamburg Proposed Revised Seating Application.
(Layout and Occupant Load, Arena Floor Stage)
Drawings by R Ritz Architect & Staging Canadell, dated January 2020,
8 pages total

7. New Hamburg Arena Renovations 2013

Architectural drawings by GB Architect Inc., dated February 25, 2014.
17 pages total.

8. Grand River Conservation Authority Correspondence

1. Initial e-mail correspondence to Township of Wilmont (Amber Schenck) dated July 10, 2024, including floodplain map, 3 pages total.
2. Subsequent e-mail correspondence to Township of Wilmont (Amber Schenck) dated August 14, 2024, forwarding GRCA response to Invizij comments on item 1, 7 pages total.

9. Information / Input from The Community Players (TCP)

Forwarded e-mail from Amber Schenck, dated June 27, 2024.
4 pages total,

10. Township Planning Department Comments on Existing Parking

Forwarded e-mail from Amber Schenck, dated July 16, 2024.
2 pages total

11. Township of Wilmot Fire Department Concerns

E-mail / Minutes from Amber Schenck from August 1, 2024 virtual meeting with Andrew Mechalko, Chief Fire Prevention Officer.
3 pages total

12. Stakeholder Engagement Meeting 1

1. June 28, 2024 e-mail from Amber Schenck inviting Stakeholders to meeting. 2 pages.
2. July 10, 2024 e-mail from Amber Schenck. Stakeholder Feedback Request to Questions. 3 pages.
3. Meeting Minutes from August 7, 2024, 4 pages

13. Township of Wilmot Fire Department Clarification

Forwarded e-mail from Amber Schenck, dated August 13, 2024, clarifying item 6. above.
Includes sketch SK-2 showing approved seating layout and Drawing M1 showing additional exhaust system.
5 pages

14. New Hamburg Arena Roof Truss Information

New Hamburg Arena Roof Truss Upgrade
Dated September 2000, by Stantec. Provided / Loaned by Amber Schenck August 7, 2024.
82 pages total. Not attached / included, returned to Township

15. Operation & Maintenance Manual

Operation and Maintenance Manual
New Hamburg Arena Renovations
Associated with item 7. above
Dated April, 2014. Provided Amber Schenck August 7, 2024.
236 pages total. Not attached / included, returned to Township

16. Facility Forum Magazine

Winter 2019 issue. Article on Listowel Arena Collapse, 60 years later. Provided Amber Schenck August 7, 2024. Returned To Township.
5 pages total. Not attached / included, returned to Township

- END OF SECTION –

Ontario

Ministry of Infrastructure

Community, Culture and Recreation 2019 Intake
Business Case – Multi-purpose stream

Submission Instructions

Save the completed form and upload it as an attachment to Grants Ontario by the deadline. The business case is intended to gather more detailed information and provide assessment scores on the criticality of the proposed project.

In order to be considered eligible for funding, applicants must complete the schedule in full.

For information on the eligibility requirements and desired outcomes of the Community, Culture and Recreation category, please refer to the Program Guidelines.

1.1 Key Issue Description

Please indicate which of the following benefits are anticipated for the community as a result of the proposed project. Where a benefit is selected, **provide a description of the issue to be addressed and how the project addresses the issue to achieve the selected benefit.**

Mandatory.

Benefit	Details
Improves and/or makes access to and/or increases quality of cultural, recreational and/or community infrastructure for Ontarians, including Indigenous peoples and vulnerable populations?	This project will bring an older Arena facility into compliance with current building and fire codes, as well as AODA. Upon completion, sporting groups will have access for seasonal training opportunities, and access will be enhance for the local performing arts community (2 major performances annually)
Addresses a demonstrated community need or service-level gap?	The reconstruction will address a potential gap in need vs. available ice time for ice sport user groups within the community. This project will further address the need for safe, accessible, centralized facilities for access to cultural activities and the performing arts.

Select all that apply.

Benefit	Details
☑ Incorporates principles of multi-purpose design and/or integrated service delivery to meet needs of clients	The project will produce modern multi-use facility to accommodate additional ice sport usage as well as dryland training. The partnership with The Community Players (TCP) will ensure the Performing Arts community also benefits from the upgrades.
☐ Provides services for vulnerable communities and/or Indigenous Peoples?	
☑ Aligns with provincial priorities?	Provides a safe (building code, fire code), accessible (AODA) facility, that is a partnership between the municipality, key user groups and our provincial and federal counterparts. This project aligns with 2 key provincial priorities: Build Safer Communities and Balance the Budget Responsibly.
☐ Promotes innovative solutions for greater accessibility?	

1.2 Project Asset Type

Please select the asset type(s) your project applies to:

☑ Community Centre / Hub

☑ Recreation Facility

☑ Cultural Facility

☐ Other – please specify

1.3 Project Description

Provide a technical description of the proposed project. This includes outlining the scope of the project and a full description of all the **infrastructure work** to be undertaken. Do not include any benefits of the project in this section. (Maximum 2000 characters)

The purpose of the project is to modernize the old New Hamburg Arena, built in 1949, and bring it up to current building standards from a building code, fire code and AODA perspective. The reconstruction, supported by a recently completed Engineering Study and Conceptual Design, will create a hybrid facility that will accommodate warm floor multi-purpose uses for part of the year, and ice usage for the remainder of the year. Most importantly, this project will also consolidate the operations of our Performing Arts community into one facility for storage needs, rehearsal and performance space. Our local theatre group (The Community Players) have partnered on the conceptual design and financing of this project. There will be a new addition that will contain accessible change rooms for dryland and ice user groups, as well as theatre storage space (props, equipment, set pieces, seating). The concrete floor slab and underfloor refrigeration piping, rink boards, glass and safety netting will also be replaced, along with HVAC equipment, electrical/wiring panels and plumbing infrastructure, where required for building/fire code compliance. The existing, inaccessible, wooden spectator seating will be removed/replaced with fixed bleacher seating along the west wall. A fully compliant fire alarm system and elevator will be installed to service this updated facility.

1.4 Alternative Options

What alternative options were considered for this project? (Maximum 2000 characters)

Several alternative options were considered for this project, including minor facility repairs for accessibility needs being completed when funding becomes available, and continuing to offer a disjointed space throughout the community for theatre storage, rehearsal space and performance space as available.

From an ice users and dryland perspective, the Township also considered a brand new stand-alone facility.

These alternatives are not preferred from both a cost and community need perspective. The ICIP funding program presents an excellent opportunity for our municipality to rejuvenate an existing space, and service a diverse set of user groups from the Recreation and Cultural service areas.

The partnership with TCP made our decision clear to proceed with an application to share costs on this important community culture and recreation project.

A. What are the benefits of your CCR Project?

Choose at least one benefit

☐ Improved access to services

☑ Improved quality of services

☑ Improved integration of services

☑ Achieves greater accessibility

☐ Focuses on vulnerable communities and/or Indigenous Peoples

☐ Other Please describe:

B. Criteria for Assessment

1. Provide a description of the asset characteristics in terms of:

   Estimated use of facility

   The facility will be used year-round for dryland sport usage, ice sport usage and cultural event space. 2 major theatre productions will occur in the updated space, with approximately 4,550 patrons and 1,440 students/ children attending.

   Communities served by facility (e.g. municipalities)

   This project will serve residents of Wilmot Township and visiting participants and approximately 6,000 audience members from the Region of Waterloo and along the Highway 7/8 corridor to Stratford and Perth County.

2. If there is an existing facility in place, provide the current Facility Condition Index (FCI) value and description of existing condition of the facility. Please attach any relevant documents to your submission.

Index level: 44.8%

Description

The existing facility is in 'generally good condition' from a structural perspective; however, many internal components and systems have reached end-of-life or are beyond. A recently completed Structural Condition Assessment Report was completed by NA Engineering Associates, and has been attached as part of this application package.

3. Provide a description of proposed/anticipated operating plan of the facility including details of revenue, costs, and funding received from all levels of government to operate the facility.

Staff have completed cost projections to operate the facility based off actual cost information from when the building was last in full operation. From that analysis, factoring in inflationary adjustments, and efficiencies from new technologies, the following cost/funding projections were reached.

Expenses ($529,250)
- Administration - $304,250.00
- Operating Expenses - $225,000.00

Funding ($529,250)
- User Fees - $250,000.00
- Advertising/Sponsorships - $20,000.00
- Municipal Levy Funding - $259,250.00

For reference purposes, the impact of $259,250 in new levy funding would be an approximate increase of 3.24%. Staff will work to achieve additional process efficiencies and alternate revenue streams to minimize the impact from a general levy perspective.

4. Provide details of the readiness of the project, including but not limited to: operational plan between joint partners, details of design work underway, expected completion date.

As noted, a Structural Condition Assessment Report has been completed and received by Wilmot Council. In addition, conceptual designs were completed by a consulting architect (G.B. Architect) in consultation with our project partners (The Community Players). Project commencement is contingent upon confirmation of ICIP funding support from the Provincial and Federal Governments. An agreement in principle has been made with The Community Players regarding the operational use of this facility to meet their needs for performance, storage and rehearsal space, including a commitment from the Township to reserve the facility for their dedicated usage. In return, the TCP have committed to support this project from a funding perspective, for the additional proposed storage space. The anticipated completion would be approximately 12 months from project commencement.

5. Provide details of the plan to meet the funding requirement as outlined in the Program Guidelines (e.g. commitments in place, plan to fundraise cost-shared amount.

The Township utilizes a 10-year Capital Forecast to ensure funding availability to proceed with works as proposed in the plan. The Township provided for some funding under our recently updated Development Charges Background Study, and subject to the approval of ICIP funding, the Township will commit approximately $1.6M in funding from a mix of Development Charges, Infrastructure Reserve Funds and the annual Capital Levy to ensure our portion of project costs are covered. The Community Players have also committed to raise their share of project costs ($250,000) prior to project completion.

6. Provide details of the accessibility of the facility, including whether existing and new components of the facility will comply with the *Accessibility for Ontarians with Disabilities Act* (AODA) and Ontario Building Code.

All elements of the project will be AODA compliant, including change rooms, building egress, motion activated sliding front door entrance, motion activate plumbing fixtures, etc.
A new elevator will be installed to replace the existing non-compliant lift at the front of the facility.

7. Provide details of any ineligible components of the facility, including details of how ineligible components will be funded.

The only ineligible costs for this project would be the consulting fees incurred prior to the approval of ICIP funding, and internal staffing costs to oversee the project from kick-off to completion. The Structural Condition Assessment Report and Conceptual Designs were funded under the 2018/2019 Capital Program, while internal staffing costs to-date and throughout the project will be funded through our general levy funded operating

budgets for Facilities and Recreation Services and Financial Services.

8. List the distance between the facility and the nearest facility providing similar services.

   The nearest facility servicing the ice user groups and dryland sports would be the Wilmot Recreation Complex, located approximately 3.6km away along Highway 7/8.

   The nearest performing arts spaces would be the Centre in the Square (27.0 kms away) and the Stratford Festival Theatre (23.2 kms away)

9. Upload to Grants Ontario any supporting documentation (e.g., studies, assessments, engineering plans, design reports, safety reviews and/or photographs).

New Hamburg Arena
Re-commissioning Study

New Hamburg, Ontario

Prepared for:
Scott Nancekivell,
Director of Facilities & Recreation Services
Township of Wilmot
60 Snyder's Road West,
Baden, Ontario N3A 1A1

Prepared by:
NA Engineering Associates Inc.
107 Erie St., Suite 2
Stratford, ON N5A 2M5

Date: 2019APR11

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N5A 2M5
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TABLE OF CONTENTS

ABSTRACT OF REVISIONS

REV. NO.	DATE	REVISION
A	2018DEC14	ISSUED FOR CLIENT REVIEW
B	2019APR11	ISSUED FOR CLIENT REVIEW

1. INTRODUCTION

1.1 TERMS OF REFERENCE

NA Engineering Associates Inc. was retained by Mr. Scott Nancekivell, Director of Facilities & Recreation Services at the Township, of Wilmot to complete a visual review of the Arena portion of the New Hamburg Arena and Community Centre. The visual review was completed to determine the necessary renovations required to recommission the arena portion as either a warm floor multi-purpose space or as a third arena for the township. Findings of the review are outlined in section 3 of this report. Conceptual drawings for the ice rink and warm facility were prepared by Guy R. Bellehumeur of GB Architect Inc. and the plant refrigerant system was reviewed by Jay Szeto of Cimco Refrigeration.

1.2 DESCRIPTION OF BUILDING

The New Hamburg Arena and Community Centre was originally constructed in 1949 and has approximately 40,000 square feet in gross floor area. The facility includes general offices, meeting rooms, change rooms, storage areas, kitchenettes, service rooms, washrooms and an arena.

Item	Description
Building Name	New Hamburg Arena and Community Centre
Building Use	Group A-4
Year Built	1949 Based on owner information
Number of Storey	2 Storey Community Centre and 1 storey Arena
Gross Building	~40,000 ft^2

The existing facility was previously used as an ice rink, but has been used as a warm interior pad facility for several years.

Other parts of the building include a second level multi-purpose auditorium, a private theatre tenant space, meeting rooms, a common entry foyer, public washrooms and other ancillary spaces. There is an existing freight (not for public use) elevator between the main and second floor levels. There is a small service basement.

Work included in this upgrade concentrates on 2 options for the interior ice pad area: 1) a third ice pad with seating and amenity space, and 2) a multi-purpose warm pad interior space with no public seating. Other work includes façade upgrades to the South and East sides of the building. Both options include new additional space created on the East side of the ice pad area.

1.3 SCOPE OF WORK

The Scope of Work is to investigate the necessary renovation works and estimated costs associated with re-commissioning the New Hamburg Arena as:

a) A third ice pad
b) A permanent “warm floor” multi-purpose space.

The following items are included as required in RFP 2018-24.

a) Base drawings of the existing floor plan of the New Hamburg Arena (Appendix A)
b) Review of New Hamburg Arena Usage statistics for the past 5 years (provided by the Township), focusing on type and frequency of use
c) Undertake and produce a structural review / report for the existing arena portion of the facility, bearing the stamp of a professional structural engineer licensed to practise in the Province of Ontario
d) Undertake a condition assessment of the arena portion of the facility to determine the extent of work necessary to re-commission the space as:
    a. A seasonal artificial ice facility
    b. A permanent “warm floor” multi-purpose space
e) Provide a preferred concept (including floor plan drawings), as well as itemized construction cost estimates to re-commission the New Hamburg Arena as:
    a. A seasonal artificial ice facility
    b. A permanent “warm floor” multi-purpose space
f) Produce and deliver a document relating to the full scope of services contained in the study, outlining the findings, cost estimates, professional opinion.

It should be understood that because of the extensive nature of the building components, the work carried out in this survey can only be considered as preliminary as no design activities were undertaken to verify the suitability of the existing building systems (i.e. Heat loss, heat gain, structural analysis). The assessments obtained are based on visually observed defects and our experience with similar types of buildings. Therefore, results obtained in the survey, are for planning purposes and cannot be used to prepare specifications. Deficiencies may exist in areas not referenced in this report which may not have been visually apparent during our visual review. Therefore, NA Engineering Associates Inc. will not accept liability for any costs incurred by the subsequent discovery of deficiencies not identified in this report.

2. METHODOLOGY/ PREAMBLE

On September 30, 2018, Mary Ferenc, Anna Gkalimani and Mike Wolowich of NA Engineering Associates Inc. completed a visual review of The New Hamburg Arena. Access to the building was provided by Mrs. Amber Schenck of the Township of Wilmot. Subsequently on November 22, 2018 Jay Szeto of Cimco Refrigeration was on site to review the existing plant room equipment. Access was provided by Jason Falk of the Township of Wilmot.

It should be noted that the condition assessment was conducted for only the arena portion of the building, however many services cross over from the arena to the Community Centre. In areas that services do cross over and deficiencies were noted we have included them in this report.

Mechanical equipment within the Arena area were limited and what was present has surpasses their life expectancy. Seeing that the mechanical needs between an ice rink and warm facility vary, we have not included replacement cost within the condition assessment portion of the report, but rather included all mechanical cost under the construction options.

Concept floor plan drawings are provided herein. These drawings are diagrammatic, but the layouts presented do meet the intent of the Ontario Building Code and the Ontario Fire Code regulations. The final layouts can be modified to suit Owner and major user group requirements.

The following assessment has divided the building's major components or systems using the uniformat method. Uniformat is a standard for classifying building specifications, cost estimating, and cost analysis in the U.S. and Canada. The elements are major components common to most buildings. The system can be used to provide consistency in the economic evaluation of building projects.

Component Rating	
Rating for Building Systems and Components	**Definition**
Very Good	Asset is physically sound and is performing its function as originally intended. Required maintenance costs are well within standards and norms. Typically, asset is new or recently rehabilitated.
Good	Asset is physically sound and is performing its function as originally intended. Required maintenance costs are within acceptable standards and norms. Typically, asset has been used for some time but is within mid-stage of its expected life.
Fair	Asset is showing signs of deterioration and is performing at a lower level than originally intended. Some components of the asset are becoming physically deficient. Required maintenance costs exceed acceptable standards and norms are increasing. Typically, asset has been used for a long time and is within the later stage of its expected life.
Poor	Asset is showing significant signs of deterioration and is performing to a much lower level than originally intended. A major portion of the asset is physically deficient. Required maintenance costs significantly exceed acceptable standards and norms. Typically, asset is approaching the end of its expected life.
Expired	Asset is physically unsound and/or not performing as originally intended. Asset has higher probability of failure or failure is imminent. Maintenance costs are unacceptable and rehabilitation is not cost effective. Replacement/major refurbishment is required.
Maintenance	Cost associated with components condition that are required to ensure the component continues to perform as intended and meets it service life expectancy.

Building systems useful life is based on Building Owners and Managers Association (BOMA) publication of "Preventive Maintenance; Best Practices to Maintain Efficient and Sustainable buildings. The following list of systems and average useful life years is based on regular preventive maintenance properly performed at prescribed frequencies. Many factors can affect the average useful life and like any average individual system and/or component will have lifetime far from average. Lifetimes can often be extended significantly through robust maintenance programs that go beyond the norm.

Climate conditions and challenging environments will often shorten life expectancies. Whereas selecting equipment with heavy duty features will lengthen the components life expectancies.

The following table is based on BOMA and general industry standards.

Building Elements	Typical Useful Life
A-B Substructure & Shell	
A 1010 Standard Foundations	Life of Building
A 4010 Slab on Grade	Life of Building
B1010 Floor Construction	Life of Building
B1020 Roof Construction	Life of Building
B1030 Structure Support	Life of Building
B2010 Exterior Walls	35-50
B3010 Roof Coverings	20-30
D Services	
D2010 Domestic Water Distribution	20-30
D2020 Sanitary Waste	30
D2050 General Service Compressed Air	20
D3020 Heat Generating Systems	25
D3030 Cooling Generating Systems	20
D3040 Distribution Systems	30
D3060 Ventilation	25
D4010 Fire Suppression	25-40
D4020 Standpipes	25-40
D5020 Electrical Service & Distribution	20-40
D5040 Lighting & Branch Wiring	20
D5080 Miscellaneous Electrical Systems	25
D7050 Detection and Alarm	10-15
G2020 Parking Lot Pavement	30

2.1 AVAILABLE DRAWINGS/DOCUMENTATION

No drawings were used as reference to conduct our visual observations.

2.2 COSTING

Costing for the condition assessment and proposed options of the report are based on a Class "3" budget estimates only with variances of -20% to +30% which is defined under the American Association of Cost Engineers, as estimates that are generally prepared to form the basis for budget authorization, appropriation, and/or funding.

These are quoted in 2018 dollars and are based on Yardsticks for Costing Cost Data for the Canadian Construction Industry using Toronto as the base city for costing. Actual costs may vary depending on the scope of work performed, who undertakes the work and the quantity of work requested through a tender process.

3. COMPONENT ASSESSMENT

The replacement of the existing refrigerant plant, piping and concrete slab will be required if the new ice rink option is selected. The existing plant equipment, piping and concrete slab are over thirty years old and have exceeded their life expectancy.

It was noted that the system still contains Ammonia and Calcium Chloride. The Ammonia has been isolated to the shell and tube chiller. Based on a visual review it appears that there might be a rink floor leak as staining on the slab was noted. The system needs to be flushed and fluid material properly disposed of regardless of which option is selected.

A SUBSTRUCTURE SYSTEM

Refer to Appendix B for the New Hamburg Arena Structural Condition Assessment that reviewed the following items:

- Foundation Walls
- Load Bearing Exterior Walls
- Arena Roof Structure and Supporting Columns
- Wood Seating
- Guards and Walkways
- Rear Exit Stairs

B SHELL SYSTEMS

B20 EXTERIOR VERTICAL ENCLOSURES

Item	Description
B2010 Exterior Walls	B2010 Exterior Walls – Varies
Component Condition	Fair / Good
Replacement Year / Replacement Cost	2029 / $301,500

Component Description:

Based on our review, the North and West facades were replaced a few years ago with Kingspan insulated wall panels. The East and South facades appear to be the original uninsulated siding.

Component Condition:

Observations for the exterior wall system were conducted from the ground level; as such they are limited to areas that were visible. The current condition of the exterior walls along the North and West facades is noted to be good.

However the South and East facades appear to be in fair condition with minor areas that are in need of repair.

Component Recommendation:

It is recommended that the areas of prefinished metal wall panels that are corroded be cleaned and painted with a zinc rich paint to prolong their service life. Areas of prefinished metal wall panels that have been damaged should be repaired and/or sealed to prevent water infiltration. All of these costs can be part of a maintenance budget over the next year. The expected useful life of prefinished insulated metal wall panels are typically 35-50 years with proper maintenance.

However, if it is decided to proceed with the expansion of the arena, we recommend that the South and East metal siding be replaced with the same Kingspan insulated wall panels as the North and West facades. This will provide a consistent appearance of the building and increase in insulated value reducing operating utility costs. However, if no expansion is planned then the wall system along the South and East should be replaced to match the rest of the building. There is no immediate need to replace the wall system as it is functioning as intended.

B2050 Exterior Doors

Item was reviewed under structural report.

B2050 Exterior Overhead Doors

Item was reviewed under structural report.

Item	Description
B3010 Roofing	B3010 Roofing – 2000/2001
Component Condition	Fair
Replacement Year / Replacement Cost	2026 / $450,000

Component Description:

Based on discussions with personnel from the Township, the existing roof was replaced in 2000/2001 with a 2-ply modified bitumen membrane.

Component Condition:

We were unable to access the barrel roof to provide an in depth review. However, based on conversation no issues were reported or noted and based on past experiences with this type of roof and its current age we estimate that the roof is in fair condition.

No leaks were identified or reported, therefore the roof is functioning as intended.

Component Recommendation:

Typically 2-ply modified bitumen membrane style roofs have an expected service life between 20-25 years depending on factors such as maintenance and varying environmental condition. Given the current age and condition of the roof, we estimate that its expected life is between 5-10 years at which point will need to be replaced. We recommend that the roof be inspected twice a year to review all penetrations for broken seals. This may prolong the life of the roof beyond the typical life expectancy. Minor repairs should be completed as needed and repair costs can be part of the annual maintenance budget.

D SERVICES

D20 PLUMBING

Item	Description
D2010 Domestic Water Distribution	D2010 Domestic Water Distribution
Component Condition	Fair
Replacement Year / Replacement Cost	2018 / $7,000 (Backflow Preventer)

Component Description:

The area has no domestic water services in this portion of the building. The water main is located in the basement of the Community Centre area and is split into the domestic water and the sprinkler water systems. This main services the arena and the Community Centre.

Component Condition:

The water main, which is outside of the arena, is aged and in fair condition. There was no backflow preventer noted at the water main.

Component Recommendation:

Domestic water plumbing has an average life expectancy of about 30 years. If there is a renovation or expansion done to the arena that requires plumbing, we recommend that an inspection of the piping be done to see its compliance with the latest OBC and requirements from the Authority having Jurisdiction. We also recommend that a new backflow preventer be installed to comply with current regulations.

Item	Description
D2020 Sanitary Drainage	D2020 Sanitary Drainage
Component Condition	Unknown

Component Description:

There is no domestic water plumbing in the arena; therefore there is no sanitary drainage. However, there are floor drains located within the arena. The floor drain piping is located underground, hence are inaccessible and not visible to provide comments on.

Component Condition:

Due to not being able to access the sanitary piping, the condition of the piping is unknown.

Component Recommendation:

Sanitary drainage piping systems have a typical life expectancy between 25 to 30 years. If there is a renovation or expansion done to the arena that requires plumbing, we recommend to scope the existing sanitary with a camera to see its condition and that the sanitary drainage piping system be flushed and inspected semi-annually. Any floor drains and clean outs should be inspected semi-annually.

D30 HEATING, VENTILATION, AND AIR CONDITIONING (HVAC)

Item	Description
D3050 Heating Systems	D3050 Facility HVAC Distribution Systems – Varies
Component Condition	Poor

Component Description:

There are various gas fired unit heaters in the building. The gas fired unit heaters service the arena and are located at high level.

Component Condition:

The units are old and in poor condition.

Component Recommendation:

The heaters have an average expected life span of 13 years. These heaters are in poor condition and are much older; therefore replacement upon new use of the building is recommended. The new heaters will be a direct replacement with the type of existing heater.

The gas line is already in place and appears to be old but in fair condition. It is recommended to review the gas line to see if they are up to B149 codes and assess their condition for reuse.

Item	Description
D3060 Ventilation	D3060 Ventilation – Varies
Component Condition	Good – Ductwork Poor - Louvers

Component Description:

The building has simple intake louvers and a duct running along the peak of the roof inside the building. This is the main ventilation system for the arena.

The louvers are simple wooden planks with a simple bird screen. The ducting is steel ductwork that is supported from the roof beams and has grilles on the bottom face of the ducting.

Component Condition:

The louvers are wall mounted old wooden boards in poor condition that are not weather proofed and well-sealed in the wall. There was also water damage on the boards.

The ducting is in good condition with no apparent signs of rust or damage.

Component Recommendation:

Louvers have an expected life span of 20-30 years. The louvers are constructed from wood and are showing signs of damage. It is recommended to immediately replace the existing louvers with new ones that are weather and snow proof and come complete with a bird screen.

The exhaust ducting is relatively new and should have an expected life span of 30 years.

D40 FIRE PROTECTION

Item	Description
D4010 Fire Suppression	D4010 Fire Suppression –
Component Condition	Good

Component Description:

The sprinkler system for the arena consists of piping and various types of sprinkler heads that serve for the protection for the arena and are located throughout the building including under the bleachers (they are supported off of the bottom of the bleachers).

Component Condition:

Both systems are in fair condition with no damage and no leakage. There is rust on a significant portion of the sprinkler piping.

Component Recommendation:

The sprinklers have an expected life span of 25 years and the piping has an expected life span of 40 years. It is recommended that the sprinkler and piping remain if they, upon inspection, meet building and NFPA 13 compliance.

All sprinklers and sprinkler piping that are under the bleachers will need to be replaced if the bleachers are replaced due to how the sprinklers are being supported from the bottom of the bleachers.

D50 ELECTRICAL

Item	Description
D5020 Electrical Service and Distribution	2007 mostly upgraded new items
Component Condition	
Replacement Year / Replacement Cost	2018-20 / $110,000

Component initial observations suggest that any of the older equipment serving the area portion of the building is original equipment, essentially over 60 years old. It does not appear that any has been replaced. Considering that this equipment, including the dry transformers which are well beyond their serviceable life, we recommend funds be allocated and an equipment replacement program be put in place to minimize the risk of aging components failing.

The remainder of the electrical equipment services the “front of house” additions are in good condition and should yield another 20 years with regular maintenance.

The Main Electrical Room and the Ice Making Plant service areas are in lockable rooms, however the theatrical distribution and 208V distribution components are in unsecured corridors. This includes the arena lighting control.

Normal Power Distribution:

The electrical service for the building is provided via the 347/600V 400A disconnect switch '018-53410-DS3-22' located in the Main Electrical Room that feeds the Splitter Trough '018-53410-PL16-20' rated 400A 347/600V 3Ph 4W. This distribution point services the entire building.

Component Condition:

The existing electrical distribution system was installed during the original building construction; however many components including the theatrical services and the renovated front building addition were replaced within the last 10 years. Electrical distribution system has a life cycle of approximately ±30 years. It was noted that many of the existing distribution equipment has not been tagged to identify the available power systems ID. Tags and panel schedules need to be updated to identify the equipment being fed or serviced by the existing panel-boards.

Component Recommendation:

The electrical distribution system for the New Hamburg Arena is in working condition and some components have been upgraded/replaced. The components that were installed when the building was erected shall be replaced with new equipment due to exceeding their life expectancy of ±30 years.

It should also be noted that it is mandatory by the Ontario Electrical Safety Code (OESC) requirements that the existing major power distribution equipment shall be tested and maintained regularly (recommended every 5 years). Accordingly, provisions shall be taken to frequently maintain the installation and to properly field mark equipment of the potential electric shock hazards.

Item	Description
D5040 Arena Floor Lighting	Installed in 2014
Component Condition	Good

Component Description:

The existing lighting system that illuminates the Arena Floor area within the building consists of a mixture of 2'x4' T8 suspended fluorescent fixtures and single-tube industrial surface mounted fluorescent fixtures illuminating the corridors above and below the stands.

T8 Arena Fluorescent Lighting has been replaced in 2014 and are in good condition. We expect that the existing original lamps have experienced (based upon an estimated 40% utilization) approximately 30% of their forecast life. Accordingly, some 70% life should remain. Please note that we did not observe any aging of the lamps during our site visit. The actual remaining lamp life will be recalculated upon a review of electrical utility billings (NOTE: T8 lamp life cycle = approx. 20,000hrs).

Lighting is 120V powered by the power panel and controlled by a programmable lighting control system.

Lighting Controls:

Normal interior lighting is controlled by conventional switches located in accessible locations. Many of the rooms in the most recent addition have occupancy sensors to control light operation. A time clock is used to control the exterior light fixtures. The arena floor area is controlled by a programmable panel with different light (output) settings based upon the requirements of the event.

Exterior Lighting:

The exterior light fixtures are flood lights affixed to the exterior walls of the building. During the time of our visit we were unable to confirm the lamp type.

Exit and Emergency Lighting:

Most of the exit signs are relatively new and use the green running man pictogram and a LED lamp source. A few older compact fluorescent exit signs remain in service spaces. Emergency lighting battery and lamp packs were deployed in the front-end renovated areas.

Lamp Types:

Lamps are LED or T8 fluorescent lights for indoors, metal halide / high pressure sodium flood lights for outdoors.

Component Condition:

With few exceptions, most of the light fixtures were functioning and in good condition.

Component Recommendation:

Plan for any future modifications or upgrades to the lighting system to meet the latest OBC/ SB10/ ASHRAE 90.1 standards for energy management. It is recommended that all original light fixtures and all remaining lamps, including the T8 arena lights, be replaced with new LED for even better life expectancy and energy savings.

Similarly, the exterior lights are to be replaced with new LED fixtures. The new exterior lights will remain under the control of a photocell and time clock.

Item	Description
D5080 Miscellaneous Electrical Systems	1979 Original
Component Condition	Expired
Replacement Year / Replacement Cost	2018-20 / $40,000

Component Description:

Wiring in the original building utilizes copper conductors in rigid conduit dating back to the original installation. Wiring within the renovated portions of the building use R90 conductors in EMT raceway.

Component Condition:

The original wiring is in excess of 60 years old. The wiring insulation has deteriorated excessively to warrant replacement coincident with the electrical components of the distribution system.

Similarly, the switches and receptacles within the main arena should be replaced. Consider using GFCI receptacles throughout most of the arena and service spaces.

Component Recommendation:

It is recommended that the wiring system be coincident with the replacement of the major electrical components of the distribution system.

D60 COMMUNICATIONS

A Public Address System is present in the arena portion of the building only.

G SITEWORK

G20 SITE IMPROVEMENTS

Item	Description
G2020 Parking Lot Pavement	G2020 Parking Lot Pavement –
Component Condition	Poor
Replacement Year / Replacement Cost	2018-20 / $48,000

Component Description:

The Arena and Community Centre has a parking location of approximately 25 parking spots along the front of the building. The parking area along the Eastern side of the property appears to be newer than the area directly in front of the Community Centre.

Component Condition:

The current condition of the parking lot located directly in front of the Community Centre is in poor condition, it has several cracks that have been previously repaired and need further repairs. It was also noted that several areas showed signs of alligator cracking. Cracks will deteriorate further as de-iced during winter months causing increased freeze thaw action.

Component Recommendation:

It is our recommendation that approximately half the parking lot be replaced within the next few years.

4. RE-COMMISSIONING

4.1 FUTURE DESIGN ELEMENTS

The items listed below were provided to NA Engineering Associates Inc. by the Township as items that would be required to be considered in conceptual layout and costing of the options:

ICE ARENA

- Snow pit (bunker)
- 4 main change rooms + 2 accessible change rooms (smaller in size)
- Mechanical room vestibule (code)
- Gas sensors/alarms (code)
- Roll-up door on refrigeration room
- Consolidation of electrical (separate room preferred)
- Remove/replace floor slab (30-years old)
- New rink boards/glass
- Automatic sliding glass doors on arena side front entrance
- Desiccant dehumidification system
- Tiered bleacher seating (west side only)
- Player benches, penalty/timekeeper boxes on east side
- Large storage room for minor hockey (portable half-ice boards, etc.)
- Music/sound room
- Proper ventilation
- Remove upper windows on east side

WARM FLOOR SPACE

- Air conditioning and heating
- Ceiling fans
- Additional power/electrical outlet access points
- Lots of Storage

4.2 FACILITY USAGE

The New Hamburg Arena is available for use approximately 6,680 hour per calendar year. The busiest months of the year are March, April and May. In 2018 most evenings in April were fully booked with events. For the months of October, November and December the facility is mostly used for free events such as Remembrance Day celebrations and Christmas Hamper programs. The slowest months of the year were reported as January, February and June. Most special events are held in July, August and September.
The below table was provided by the Township and illustrates the usage hours per year and the major categories that uses the facility.

Floor Activity	2014 Hrs. of Usage	2015 Hrs. of Usage	2016 Hrs. of Usage	2017 Hrs. of Usage	2018* Hrs. of Usage
Day Camp	14	94	94	296	72
ndoor Sports	428.5	390.5	197	180	193
Rehearsal (TCP)	127	0	24	60	70
Setup (TCP)	96	0	14	104	14
Theatrical Production (TCP)	56	0	0	75	80
Special Events	186.5	515.5	515.5	540.5	310.5
Youth Activities (events)	0	0	0	1	0
Drop-in Youth Activities	317	383.5	341.5	144.5	46
Sale/Auction/Misc.	0	36	57	0	495
Total	**1225**	**1419.5**	**1243**	**1401**	**1280.5**
	18.3%	**21.3%**	**18.6%**	**21.0%**	**19.2%**

* switched from CLASS to ActiveNet Facility scheduling software

Over the past five years the facility is used on average approximately 20% of the total available time. For the purpose of comparing year over year categories we will use 2014 as the base year and compare it to 2017 as the most current year. The reason for excluding 2018 from the category comparison is that in 2018 the Township switched from CLASS to ActiveNet facility scheduling software, which may have realigned categories and potentially skewed the results. In 2014 day camps accounted for 13% of the total usage hour and in 2017 accounted for 21% of 2017 usage hours. The Community Player (TCP), which is the local theatre group, accounted for 17% of usage hours in 2017, down from 2014 usage percentage of 23%. Other main categories that had significant decreases of usage hours from 2014 were indoor sports which accounted for 35%. In 2014, youth activities dropped from 26% in 2014 to 10% usage on 2017. Special events accounted for 15% of 2014 usage hours and in 2017 represented 39% of the total hours.

4.3 OPTION 1 ICE RINK – NEW (7,200 SQ. FT. ADDITION)

The intent is to provide a "3rd" rink facility for the Township of Wilmot, which will operate as an overflow arena for the 2 existing arenas. As an ice arena it will primarily operate between September and February as a seasonal facility, as such it is our understanding that no more than 150-200 spectators will be present at any given time during sporting events.

Wooden seating on numerous sides of the ice pad area are past due for replacement and they do not currently meet related design Codes and Regulations. The existing wooden seating also serves as support for the fire suppression system of the area under the seating. As such a portion of the fire suppression system will need to be removed and upgraded. All existing stairways serving the old wooden seating area will be entirely removed.

The existing South stairwell addition and existing plant addition located along the South East corner of the arena will be removed.

The existing rink pad (concrete and piping) and refrigeration plant will be replaced given its current age and condition. A new rink slab complete with a new refrigeration plant is to be provided. The new rink size and location will reflect the current parameters. The rink board assembly will be replaced with a current standard, including new player benches, penalty boxes and time keeper box on the East side of the new ice pad area (i.e. away from the public seating areas).

New electrical equipment to support the new refrigerant plant will be installed in addition to upgrading the existing distribution system that has surpassed its life expectancy. A new dehumidification system capable of removing 263 lbs of water per hour will be installed.

New bleacher seating (+/- 200 person capacity) will be added to the West side of the new ice pad using concrete block walls supporting concrete pre-cast hollow core slabs and wooden/plastic bench seats. The area below these bleacher seats will be used entirely for general storage rooms.

Two new enclosed exit stairways will be constructed inside the current building to serve the new floor areas and bleacher seats.

The available space left over after the ice pad and West bleacher seating is created does not allow for enough space to plan for new dressing rooms and referee rooms which are needed for a proper ice-pad use. A new 7,200 sq. ft. lean to roof addition to the East of the building will house 4 new full-size dressing rooms, 2 smaller accessible/adaptable dressing rooms, and 2 new referee rooms. A new 5 ton air conditioning unit and base board heaters will be supplied to ensure the change rooms and washroom can be used during any season. A new sprinkler system will be required along with modifying the existing sprinkler system for the new rooms within the existing building. The existing specialized sprinkler system needed for the Theatre tenant will remain as is. The addition is to be constructed with exterior block walls supported on concrete footing. An insulated Kingspan panel system will be used along the exterior of the addition to match the West façade. The interior walls are to be load bearing block walls supported by concrete footings. The roof system is to comprise of open web steel

joist complete with a metal deck and 2 ply roof membrane. The new roof will support the new top unit. All dressing rooms, referee rooms and all skate pathways and spaces will be completed with rubber skate flooring. All remaining flooring to be complete with anti-slip concrete sealer.

Upgrades and modifications to the existing building are required. These include new exit stairs, landing and railings, overhead doors, new man doors, insulated Kingspan paneling along the south façade, painting the interior rink wall areas, but leaving the wooden ceiling structures as untouched to retain 'heritage' value.

A new common electrical room will be provided in the North East corner of the rink area – this will permit most electrical service operations to be confined to one single room. A sound booth and surveillance room will be added to the top of the new corner electrical room.

A portion of the existing parking requires replacement along with a new parking lot to increase the parking spaces from 30 parking spaces to 60.

New automatic sensor-activated glazed sliding entry doors (exterior and vestibule) will be provided at the existing main North building entrance. Additional new automatic sensor-activated glazed sliding doors will be installed between the arena and Community Centre.
The following table summarizes the estimated cost required to modify the existing arena and to build a 7,200 sq. ft. addition.

CATEGORY	COST
Preparation	$30,000
Demolition of existing system / building components	$280,000
Ice Plant, slab, boards, safety netting and dehumidifier	$1,475,000
Construction, Modification to existing building	$775,000
New East Addition	$640,000
Stairs, Doors and Windows	$130,000
Building Services, New, Modified and extended services	$365,000
Finished, furniture and Fitments	$135,000
Subtotal Construction Costs	**3,830,000**
Exterior Work	$185,000
Contingency 15%	$602,250
Contractor Administration (Overhead, Profit, etc.) 8-12% use 10%	$401,500
Other Soft Costs (Engineering, fees, etc.) 7.5-15% use 10%	$441,000
New Elevator	$250,000
HST	$743,000
TOTAL PROJECT COST ESTIMATE	**$6,452,750**

Pros

- There is no need to acquire additional land for the addition of the arena.
- The Community Centre and front lobby were recently upgraded.
- Roof truss “appearance” of the arena will remain.
- Cost for upgrade is typically less than new building which requires land acquisition and amendments associated with them that the current building already has, ie. Office rooms, meeting rooms, public washrooms and commercial kitchen.

Cons

- Capital cost needed for a facility that would be used as overflow, potentially 4-5 months of the year.
- Building is land locked.
- Addition may be within the flood plain, which if approved would require additional cost for engineering and construction.
- The existing columns supporting the roof are offset 6 feet within the building exterior walls, therefore they are physical obstacles to any addition for renovation.
- The roof will require replacement within the next 5-10 years. The existing 2 ply modified bitumen roof was installed during the 2000/2001 renovation and has a typical life expectancy of 25 years.
- Additional Parking is needed. The cost to double the parking is included, however the location of the additional parking needs to be determined.
- The months that the facility is used as a rink will require the events that are currently held during those month be relocated.

4.4 OPTION 2 ICE RINK – NEW (5,200 SQ. FT. ADDITION)

This option contains all of the upgrades listed under option 1, however the east addition will be reduced to 5,200 sq. ft. The addition in this option reduces the plumbing fixtures from 8 fully functional change rooms in option 1 down to 6 change rooms in option 2. In option 2 there are a total of 8 change rooms however only 6 have plumbing capabilities. As a result of the smaller area the air condition unit size decreases from 5 tons to 3 tons. In this option we have reduced the mechanical room size which will ultimately depend on the plant design that is not fully known at this time.

The following table summarizes the estimated cost required to modify the existing arena and to build a 5,200 sq. ft. addition.

CATEGORY	COST
Preparation	$30,000
Demolition of existing system / building components	$280,000
Ice Plant, slab, boards, safety netting and dehumidifier	$1,475,000
Construction, Modification to existing building	$775,000
New East Addition	$485,000
Stairs, Doors and Windows	$130,000
Building Services, New, Modified and extended services	$310,000
Finished, furniture and Fitments	$105,000
Subtotal Construction Costs	**3,590,000**
Exterior Work	$180,000
Contingency 15%	$565,500
Contractor Administration (Overhead, Profit, etc.) 8-12% use 10%	$377,000
Other Soft Costs (Engineering, fees, etc.) 7.5-15% use 10%	$414,500
New Elevator	$250,000
HST	$665,500
TOTAL PROJECT COST ESTIMATE	**$6,042,500**

The pros and cons for this option are the same as indicated in the first option.

4.5 OPTION 3 PERMANENT WARM FACILITY – NEW (2,500 SQ. FT. ADDITION)

The intent is to provide a permanent interior multi-purpose concrete pad facility to house any number of events and situations such as indoor lacrosse, roller skating and Civic events.

The wooden seating on numerous sides of the ice pad area are past due for replacement. They do not currently meet related design Codes and Regulations – they will be entirely demolished. All existing stairways serving the old wooden seating area will be entirely removed. No new permanent seating will be provided as most of the interior area has been converted to storage rooms with sloped truss ceilings. However, optional portable bleacher seating could be added at the North end of the arena. A total of 3,700 sq. ft. of interior storage space will be provided. Two new referee change rooms, complete with washrooms, will be added along the west side of the arena.

The existing South stairwell addition and existing plant addition located along the South East corner of the arena will be removed.

The existing rink pad (concrete and piping) and boards are to remain, however the refrigeration plant will be removed and all piping flushed and properly capped. The rink board will need to be modified accordingly, including new player benches, penalty and time keeper boxes on the East side of the boards.

Since the arena will be a permanent warm facility, a new 40 ton air handling unit will be installed to ensure humidity is controlled and occupants are comfortable during the summer months. The new unit will also have the capability to provide tempered heating during the winter months, gas heaters will also be supplied to provide additional perimeter heating.
A new 2,500 sq. ft. lean to roof addition to the East of the building will house 4 new full-size dressing rooms. Cooling for the addition will be provided by the new air handling unit that feeds the arena and base board heaters will be supplied to ensure the change rooms and washrooms can be used during any season. An insulated Kingspan panel system will be used along the exterior of the addition to match the West façade. The interior walls are to be load bearing block walls supported by concrete footings. The roof system is to comprise of open web steel joists complete with a metal deck and 2 ply roof membrane. The new roof will support the new top unit. All dressing rooms, referee rooms and all skate pathway and spaces will be completed with rubber skate flooring. All remaining flooring to be sealed concrete.

Upgrades and modifications to the existing building are required. These include new man doors and insulated Kingspan paneling along the south façade, painting the interior rink wall areas, leaving out the wooden ceiling structures as untouched to retain ‘heritage’ value.

A new common electrical room will be provided in the North East corner of the rink area; this will permit most electrical service operations to be confined to one single room. A sound booth and surveillance room will be added to the top of the new corner electrical room.

A portion of the existing parking requires replacement. However no new parking is required under this option because the facility would not have significant spectator seating within the arena.

New automatic sensor-activated glazed sliding entry doors (exterior and vestibule) will be provided at the existing main North building entrance. Additional new automatic sensor-activated glazed sliding doors will be installed between the arena and the Community Centre.

The following table summarizes the estimated cost required to modify the existing arena and to build a 2,500 sq. ft. addition to the warm facility.

CATEGORY	COST
Preparation	$30,000
Demolition of existing system / building components	$214,000
Ice Plant, slab, boards, safety netting and dehumidifier	$0
Construction, Modification to existing building	$688,000
New East Addition	$272,000
Stairs, Doors and Windows	$75,000
Building Services, New, Modified and extended services	$325,000
Finished, furniture and Fitments	$60,500
Subtotal Construction Costs	**1,664,500**
Exterior Work	$94,000
Contingency 15%	$263,000
Contractor Administration (Overhead, Profit, etc.) 8-12% use 10%	$175,000
Other Soft Costs (Engineering, fees, etc.) 7.5-15% use 10%	$194,000
New Elevator	$250,000
HST	$310,000
TOTAL PROJECT COST ESTIMATE	**$2,950,500**

Pros

- There is no need to acquire additional land for the addition to the building.
- No refrigerant plant, slab, boards, dehumidification system needed.
- The Community Centre and front lobby were recently upgraded.
- Roof truss “appearance” of the arena will remain.
- Provides ample storage for various purposes.
- Improves comfort for summer usage with new air conditioning system.

Cons

- Building is land locked.
- Addition may be within the flood plane, which if approved would require additional cost for engineering and construction.

- The existing columns supporting the roof are offset 6 feet within the building exterior walls, therefore they are physical obstacles to any addition for renovation.
- The roof will require replacement within the next 5-10 years. The existing 2 ply modified bitumen roof was installed during the 2000/2001 renovation and has a typical life expectancy of 25 years.

5. STAND ALONE 3RD ICE PAD

We have provided a cost estimate to construct a new basic stand-alone 3rd ice pad similar in size to that of the existing New Hamburg Arena. The cost estimate is based on a pre-engineered building with 4-tiered raised/sloped seating plus storage rooms underneath, lockers, referee rooms, washroom, entry area and mechanical/electrical rooms. The arena will include an 85' x 200' ice rink completed with under slab refrigeration, plant and rink/dasher boards and lighting. The total estimated cost does not include site work, site services, land acquisition and other soft costs and includes basic facades and cosmetic entrances. The total estimated fee is approximately $265/ft^2 or $8,500,000.

Other Costs:

- In general, using $600,000 *per acre* to pay for site development, parking, landscape, site services, lighting, landscaping, etc., assuming flat site, good soil, no contaminants, it is estimated that the stand alone arena will need (+/-) 2 acres. Therefore an additional cost of $1,200,000 is required as a minimum to cover site costs.

6. STAND ALONE WARM FACILITY

We have provided a cost estimate to construct a new basic stand-alone warm facility building similar in size to that of the existing New Hamburg Arena. The cost estimate is based on a pre-engineered building with washrooms, offices, storage rooms and mechanical/electrical rooms. The building will include an 85' x 200' hall type area. The total estimated cost does not including site work, site services, land acquisition and other soft costs and includes basic facades and cosmetic entrances. The total estimated fee is approximately $250/ft^2 or $8,000,000.

Other Costs:

- In general, using $600,000 *per acre* to pay for site development, parking, landscape, site services, lighting, landscaping, etc., assuming flat site, good soil, no contaminants, it is estimated that the stand alone arena will need (+/-) 2 acres. Therefore an additional cost of $1,200,000 is required as a minimum to cover site costs.

7. SUMMARY

Based on the requirements to investigate the necessary renovation works and estimated costs associated with re-commissioning the New Hamburg Arena as either a third ice pad or a warm floor multi-purpose space, below is a summary table.

	Option 1	Option 2	Option 3	New Facility
Re-commissioning New Hamburg Arena	$6,452,750	$6,042,500	$2,950,500	
New stand-alone 3rd ice pad				$8,500,000
New stand-alone warm facility				$8,000,000

New Hamburg Arena
Structural Condition Assessment

Prepared for:

Township of Wilmot
60 Snyder's Road West
Baden, ON
N3A 1A1

Prepared by:
NA Engineering Associates Inc.
90 Albert Street
London, ON
N6A 1L8

Date: 2019APR11

Project Number: 18-3091

ABSTRACT OF REVISIONS

REV. NO	DATE	REVISION
A	2018DEC07	ISSUED FOR CLIENT REVIEW
0	2019APR11	ISSUED FOR USE

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1. INTRODUCTION

1.1 Terms of Reference

NA Engineering Associates Inc. has been retained by the Township of Wilmot to conduct a structural condition assessment of the arena portion of the New Hamburg Arena and Community Centre, located at 251 Jacob Street in New Hamburg, Ontario. The purpose of the assessment is to determine the existing condition of the arena structure and to provide recommendations to repair items that were noted to be deficient.

1.2 Description of Building

The New Hamburg Arena and Community Centre was originally constructed in 1949. The arena was developed through the acquisition of a World War II aircraft hangar from the Jarvis Air Base, which was dismantled by volunteers and re-assembled at its current location. The arena is approximately 26,000 square feet in size.

There is a two storey area along the north end of the arena. The main floor has a large lobby area, offices, meeting room, washrooms, change rooms, storage areas, a concession area and a lift to the second level. The second floor includes a community centre with a large hall, kitchen facilities, washrooms and a cloak room area.

There is a small basement area located in the north-west section of the building. The basement area houses the sprinkler system pumps for the entire building and a sump pump. There are also hot water tanks and gas furnaces for the community centre, front lobby and associated offices and rooms.

The arena contains an artificial ice surface that was used by hockey and figure skating clubs on a seasonal basis (late September to mid-April). During the remainder of the year the floor was used to host local sports leagues, cultural and community events. The arena has change rooms at the north end with an enclosed viewing area above on a second level. The south end has access to exit stairs from the upper level.

Since 2008 the arena has not been used as an artificial ice arena. However it has been used for dryland sports and events such as those described above.

Various upgrades of the facility have been undertaken throughout the years:

- In 1979: upgrades to bring the facility up to compliance with the prevailing codes
- In 1984: an addition to the front and back of the building was completed to improve public access to both the community centre and the arena
- In 2000-2001: structural reinforcement work of the roof structure over the arena and replacement of the existing roofing with a 2-ply modified bitumen membrane roofing system.

The roof structure over the arena consists of bowstring wood trusses that have a span of 104'-0". The trusses are installed at 20'-0" spacing and are 10 in total. The trusses are supported by built-up wood columns which bear on poured concrete foundations.

There are wood purlins installed at 18" spacing on the roof trusses which support the wood roof deck. The wood purlins and wood roof deck are exposed. At the first, middle and last bay there is steel bar horizontal bracing at the top and bottom chord and vertical wood bracing between the trusses.

A wood catwalk spans the length of the arena and is supported on top of the bottom chords of the trusses. The walkway provides access for maintenance of the electrical and mechanical equipment installed on the roof trusses.

The arena walls are of concrete block and are approximately 6' beyond the main columns supporting the trusses along the sides and 18' from the last truss at the north and south ends. The roof above is stick framed. On the exterior, the block wall is covered with siding.

The rink floor is concrete slab on grade. The foundations supporting the main columns are cast in place. The foundation supporting the concrete block are also cast in place. The area beyond the rink floor is dirt in many areas with walkways made of plywood. Some areas on the east side have concrete walkways.

1.3 Scope of Work

The Scope of Work is to complete a visual structural condition assessment of the arena of the New Hamburg Arena and Community Centre facility and provide recommendations to repair items found to be deficient. The structural condition assessment includes only the area of the arena. No other areas are included in the assessment.

The following drawings were provided to our office for reference:

- Community Center O.B.C part 10 Upgrades, by gb architect inc. dated, December 8, 2014, including:
  - Drawing A1 - Matrix and Notes
  - Drawing A2 - Plans
  - Drawing A3 - Plan Details

2. METHODOLOGY/ CONDITION

2.1 Condition Survey

On October 30, 2018, Anna Gkalimani and Mary Ferenc of NA Engineering Associates Inc. conducted a visual review of the structure of the arena at the New Hamburg Arena and

Community Centre. Also present during the review was Amber Schenck of the Township of Wilmot. A motorized lift was used for the review of the wood roof trusses.

2.2 Observations and Recommendations

2.2.1 Exterior Façade

The exterior of the arena has various finishes. The west side is clad with insulated pre-finished metal panels from the eave down to approximately 18" from the finish grade covering all of the load bearing concrete block. The finish grade along this side is asphalt and provides some parking. There is an overhead door which leads from the ring to the exterior.

The south side of the arena has parging, and architectural concrete block. The architectural concrete block appears to be in good condition except where water is allowed to continually drip over it staining it black. The parging is generally in good condition but does require some maintenance where there are cracks and chips. The upper section of the south wall is covered with metal siding therefore, the block was not visible. There is an old wood door on the south side, west end which should be replaced.

The large double door that leads from the arena to the exterior should have new weather stripping installed. The doors leading from the south stairs should be replaced as there is a large gap between leafs.

The east side of the arena has an extension at the south end which houses the ice making equipment. This extension is constructed of load-bearing concrete block supporting steel roof beams and metal deck. Much of the east side has the same metal siding as the top of the south wall therefore the block could not be reviewed from the exterior. The metal siding is not continuous across the facade, but has 48" gaps, typically at locations where there are windows in the top section of the wall. The foundation walls are exposed for about 36-48" along this wall but have been parged. It was noted that there were some cracks in the parging and one large crack which extended from the bottom right up to the window. The parging along the base of the wall also had black staining indicating that there is a lot of moisture. Damage to the parging was also noted on the south side, with paint flaking away and pitting of the stucco in some areas.

The east side has an exit in the form of an overhead door which has a covered extension that sits on a large concrete landing which is above grade. This covered extension is constructed of wood which was noted to be deteriorated along the roof line. The concrete landing has galvanized metal stairs leading to grade. The galvanized metal stairs appear to be newer and in good condition. The piers supporting the concrete landing was also noted to have black staining indicating constant moisture but otherwise appeared in good condition.

On the east side, some of the siding flashing was missing where the siding met the stucco.

2.2.1.1 Recommendations - Exterior Façade

- The covered extension at the overhead door should be removed and a new one constructed.
- Consideration should be made to try to lead water away from the building. This may require new guttering with a series of down spouts which lead the water away from the building base.
- Black staining on the stucco must be removed.
- Existing stucco should be cleaned, repaired and painted.
- Missing flashing at siding edges on east side must be replaced.

2.2.2 Foundation walls

The foundation walls are cast in place concrete. The walls were reviewed from the exterior. The grade around the building slopes down from west to east. Along the west side only a small section of foundation wall is visible and appeared in good condition. Along the south and west sides, the foundation walls were parged. The parging appeared to be generally in good condition. One large crack was noted on the east side of the building. This crack extended up into the block wall toward a window high on the wall. The parging on the east side had a black film along the grade, indicating that the parging remains wet over a long period of time.

The foundation walls were reviewed from the interior. Where visible, they appeared to be generally in good condition. There is a basement area in the north-west end of the arena building. The basement walls were reviewed from the interior. The basement consists of three rooms. One room has stairs and a large sump. A second room has two gas furnaces and hot water heaters. The third room has piping and pumps for the sprinkler system. The west wall in the sprinkler room is parallel to the street and it is our understanding that during rain storms, a lot of water infiltrates into this basement area. This is evidenced by the visible efflorescence on the wall and by the dried mud on the floor. Other than the water infiltration, the concrete basement walls appeared to generally be in good condition.

The rink slab is a concrete slab-on-grade. The slab on grade also includes the change rooms along the north end, the main entrance into the arena and the area between the rink slab and the exterior at an overhead door on the west side. Most of the remaining areas are dirt. Over the basement, there is a suspended concrete slab. The suspended concrete slab has steel beams cast into it as viewed from below. The basement area also has a number of steel tele-posts installed. It was not clear what the purpose of these tele-posts is. No cracks were noted in the suspended slab from the underside. Where visible, the concrete slab-on-grade in rink, change rooms and entrance area appeared to be in good condition. The slab at the overhead door on the west side had a crack across its width. The area under the

seating is dirt with a plywood walkway along the wall. A deep hole in the dirt was noted to the north of the overhead door that leads to the street, near a column. It was not clear what caused this hole.

The wood seating and walkway at the upper level appear to be original to the building. The seating was noted to have had some reinforcing completed to it previously. The reinforcing appears to be random, and most likely done as needed. It is our understanding that this seating is to be replaced in the future with metal bleacher or pre-cast concrete type seating.

2.2.2.1 Recommendations - Foundation wall

- The area along the west side of the building must be investigated to understand when and how the water enters the basement. From a review on the exterior the grade on the west side of the building may need to be reviewed and changed to slope away from the building. It was also noted that there is no guttering at the roof level and water from the roof may be running down the walls and increasing the amount of water along the building edge.

- If new metal bleacher type seating is to be installed, the area under the existing seating and up to the exterior walls will need to have a concrete slab installed to support the new seating.

2.2.3 Load bearing exterior walls

Concrete block exterior walls extend from the top of foundation to the roof line around the arena. The block along the sides is located approximately 6'-0" past the main wood columns which support the arena roof trusses. Along the north and south ends of the arena, the block walls are located approximately 18'-0" from the last set of columns supporting the arena roof trusses. The block was first reviewed from the exterior. The block along the west side is completely covered with a pre-finished metal insulated panels and therefore could not be reviewed. The block on the south end and east sides is partially covered with a non-insulated metal siding with some areas that are exposed having been parged. It was noted that the parging on some areas of the south wall and along the base of the east wall had mold on the surface from constantly being wet. On the east side a vertical crack was noted extending from the foundation up to the block with step-cracking visible through the parging. The block on two exit stairs on the south side of the building is a split face architectural concrete block similar to block on the main entrance on the north side of the building. It was noted that the block at the corners near the stair exit doors is black from water spilling over the roof. This moisture was noted on the interior of the stair wells.

The concrete block in the interior of the arena area was inspected. The walls were exposed and could be reviewed from the upper walkway that extends around the front, back and sides of the arena. The lower section of block could be viewed from a walkway that runs under the seating area. Most of the west wall was exposed, as was some of the east wall. The north and south walls could not be properly reviewed except in the upper level. Step cracking was

noted near some of the small arena windows located on the west and east elevations. Horizontal cracks were noted in a number of locations.

2.2.3.1 Recommendations - Load bearing exterior wall

- The block walls appear to be generally in good condition but will require repointing at the step cracks and horizontal cracks. It is our understanding that the seating in the arena may be removed and new installed. The removal of the seating and associated framing may reveal additional repairs which will be required. It should also be noted that the walkway around the arena at the upper level may be providing lateral support to the exterior block walls.

- Once repairs are made, the block should be cleaned and painted.

2.2.4 Arena roof structure and supporting columns

The main structure of the arena was a World War II aircraft hangar from the Jarvis Air Base, which was dismantled by volunteers and re-assembled at its current location. It was observed that there are many pieces of the wood framing that had evidence of previous connections using split rings and bolts and that during reassembly, the wood framing was to some extent rearranged.

The roof within the arena area consists of bow string trusses spanning 104'-0" and spaced at 20'-0" o.c. Wood purlins span between the trusses and these support wood decking. The roof extends approximately 6'-0" past the trusses on the sides and approximately 18'-0" past the last truss on each end. The roof in these areas is stick framed. In 2000-2001 the roof structure was reinforced.

Our observations on site found that the bolts at the truss connections had surface rust but appeared to be tight and well secured. Some of the members of the roof trusses had shrinkage cracks which occurs in large wood framing members. The vertical wood bracing between the trusses appears to be in good condition. New horizontal bracing was installed along the bottom chords of the bow string trusses during the structural reinforcement work at 2000-2001. Threaded rods are to be tightened every 2-3 years.

The roof trusses are supported by built-up wood columns. The roof trusses bear on bolster blocks which are installed on top of the built-up wood columns. The wood columns supporting the bow string trusses of the arena roof were inspected. The columns appear to be in good condition, with some shrinkage of the members noted throughout. The bolster blocks were noted to have split in a few locations. The split appears at locations where pipe hangers had been added to the bolster blocks to support a sprinkler system.

These columns where viewed at the base, under the seating area. The columns were noted to have reinforcing installed but generally appeared in good condition. The columns bear on individual concrete footings.

Four new HSS steel columns were installed at the first and last roof truss supporting the bottom chord. The column installation was part of the reinforcing completed in 2000-2001. The steel columns appear to be in good condition.

2.2.4.1 Recommendations - Arena roof structure and supporting columns

- It is recommended to clean and remove rust from the bolts at the truss connections. Paint bolts with rust inhibitor paint to protect from further rust.

- The threaded rods that are installed along the bottom chords as horizontal bracing must be tightened every 2-3 years. It is recommended that a log book be set up and used to record dates when the bracing was tightened. It is not clear if any tightening had been completed since the horizontal bracing was installed.

- The bolster blocks above the columns were found to be cracked and/or broken as a result of mechanical pipes hanging from them. It is recommended to remove the hangers and support the mechanical pipes in a different manner. The bolster blocks that were noted to be broken must be repaired with additional steel angles once the pipes and pipe hangers are removed.

2.2.5 Wood seating, guards and walkways, rear exit stairs

The existing seating is of wood construction. When viewed from the underside, it was noted that reinforcing to various areas has been added over the years. The reinforcing does not appear to be the same throughout or at regular intervals so was likely completed on an as needed basis. The existing seating is very steep, making access difficult. The seating appears to be from the same time as when the arena was erected or shortly thereafter. The walkway and guard rails along the top of the seating appears to be from the same time as the seating. It is our understanding that the seating in the arena may be replaced with metal bleacher type seating in the future.

The walkway along the top of the seating area is accessed via stairs located from the lobby area. The walkway runs around the perimeter of the arena and is supported by the exterior block walls and by wood beams between the wood columns.

There are two emergency exit stairs located at the back or south side of the building which are accessed from the walkway. These stairwells appear to have been added at the same time the 1984 addition at the front of the building. The stair enclosures are split faced architectural block with a sloped roof constructed of steel and metal deck. The flat area at the bottom of the stairs was wet both on the exterior and interior of the wall and on the floor. Rainwater runs down each stair roof and onto the flat roof area above the exit doors.

This roof has a gutter and downspout which may, during heavy rain storms, be overwhelmed with water, spilling over the block. It also appears that there is a gap between the roof and the gutter where water that may be on the roof, leaks down over the block. The block on the

outside corner was black both on the interior and exterior indicating that water if from all the moisture. Trees in the area prevent sunlight from drying out the roof and block, leaving black staining over the surface of the block.

2.2.5.1 Recommendations - Wood seating, guards and walkways, rear exit stairs

- The existing roof over the rear exit stairs, specifically at the bottom of the stair must be reviewed and revised to direct water off the roof and not allow it to run down over the block. This may involve adding a parapet, better guttering and downspouts.

- Masonry block both on the interior and exterior should be cleaned of the black staining.

- If the wood seating is replaced with metal bleacher type seating, the area below the existing seating areas, extending from the rink slab to the exterior block walls will need to have a new concrete slab poured to support the new seating. Currently, there is dirt in a majority of the area.

3. SUMMARY

The New Hamburg Arena and Community Centre is located at 251 Jacob Street in New Hamburg, Ontario and was originally constructed in 1949. A number of upgrades of the facility have been undertaken throughout the years including:

- In 1979: upgrades to bring the facility up to compliance with the prevailing codes
- In 1984: an addition to the front and back of the building was completed to improve public access to both the community centre and the arena
- In 2000-2001: structural reinforcement work of the roof structure over the arena and replacement of the existing roofing with a 2-ply modified bitumen membrane roofing system.
- replacement of the roofing over the arena
- renovations of the main floor and lobby area
- insulated siding installed on west and part of the north facades.

The New Hamburg Arena and Community Centre facility includes the arena, entrance lobby, offices, meeting room, washrooms, change rooms, storage areas, a concession area and a lift to the second level. The second floor includes a community centre with a large hall, kitchen facilities, washrooms and a cloak room area. There is a small basement area that includes the sprinkler system pumps, hot water tanks, gas furnaces and a sump pump.

Since 2008 the arena has not been used as an artificial ice arena but has been used to host various community events.

On October 30, 2018, Anna Gkalimani and Mary Ferenc of NA Engineering Associates Inc. conducted a visual review of the structure of the arena at the New Hamburg Arena and Community Centre. Also present during the review was Amber Schenck of the Township of Wilmot. A motorized lift was used for the review of the wood roof trusses. The structure of the arena, including, roof trusses and purlins, exterior concrete block walls, foundations (where visible) and wood framing (where visible) was reviewed to determine the existing condition of the structure and provide recommendations for repair.

The building appears to be generally in good condition. Repairs that are required are typical of a building of this age. Come of the interior finishes such as the seating are dated and are not easily accessed because of how steep they are constructed. Some reinforcing of the seats as viewed from the underside show that the reinforcing was completed on an as needed basis. The concrete block walls could only be viewed from the interior and not all of the areas were exposed. As noted, additional deficiencies may be hidden behind existing finishes. From the review around the exterior it is recommended that a review of how to move water away from the building is required. The south and east sides have evidence of moisture by the staining on the stucco and masonry blocks. Additional guttering and downspouts leading water away from the building may be required. Recommendations for repairs or replacement have been provided in the report.

Appendix A includes general photographs of the arena space. Appendix B includes photographs of deficiencies which were noted on site. Appendix C includes costs for the various repairs mentioned in the report.

Prepared by:

[redacted]

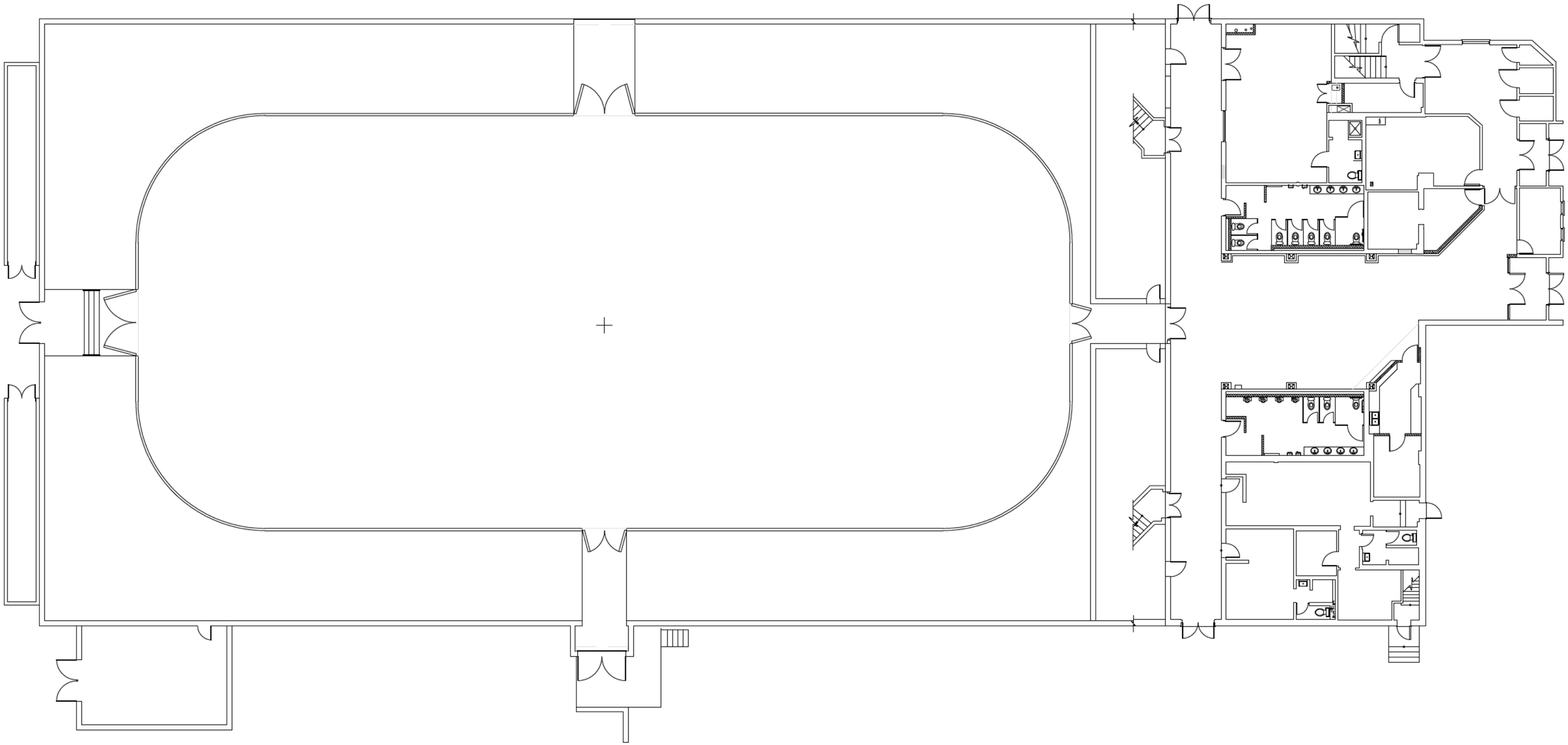
Anna Gkalimani, P.Eng

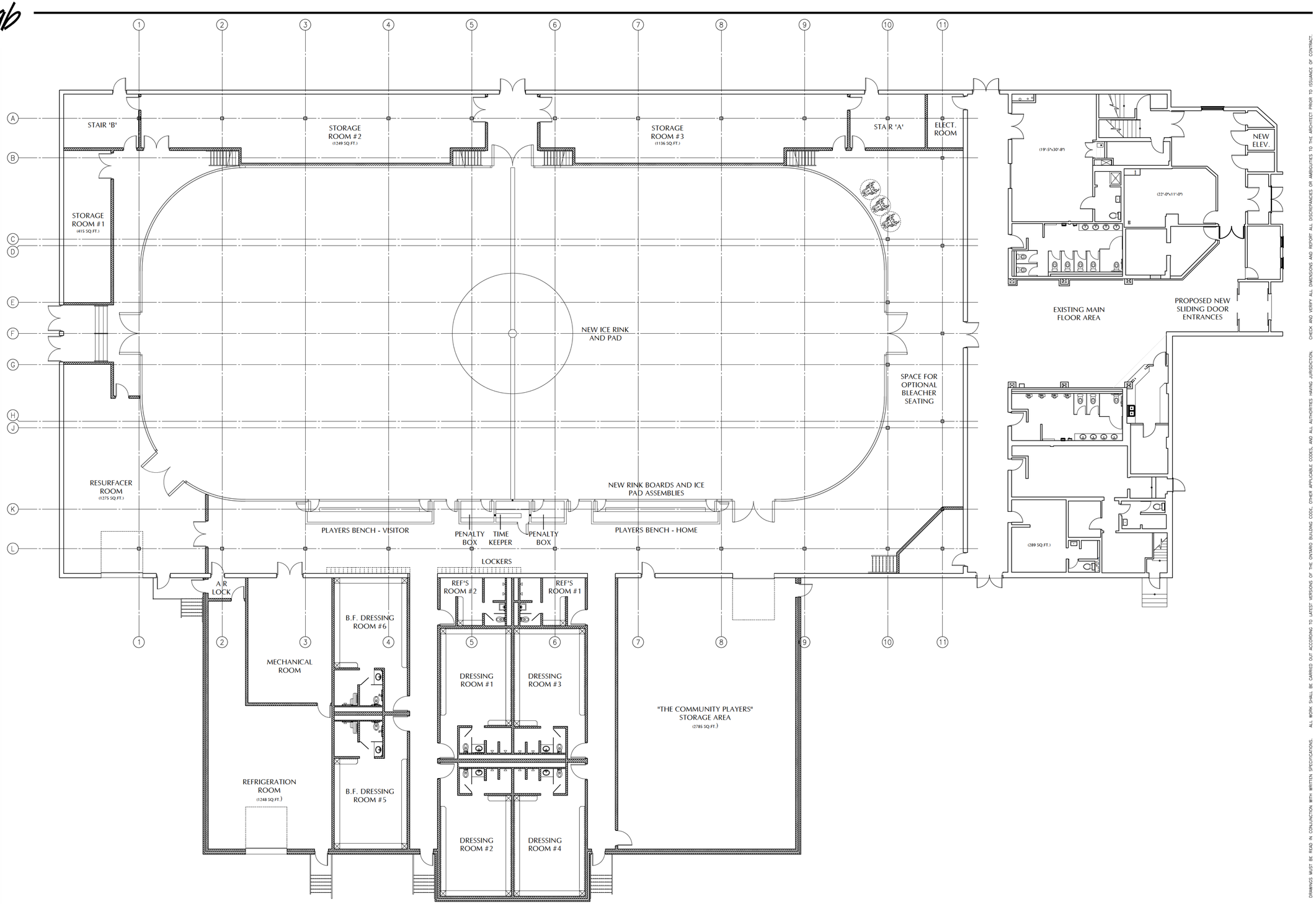
Reviewed by:

[redacted]

Mary Ferenc, P.Eng

LICENSED PROFESSIONAL ENGINEER
M. M. FERENC
PROVINCE OF ONTARIO





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BCDN 4127
as per requirements of the Ministry of Municipal Affairs & Housing Bill 124 "

The Architect above has exercised responsible control with respect to design activities The Architect's seal number is their BCDN number

No.	DATE	REVISION

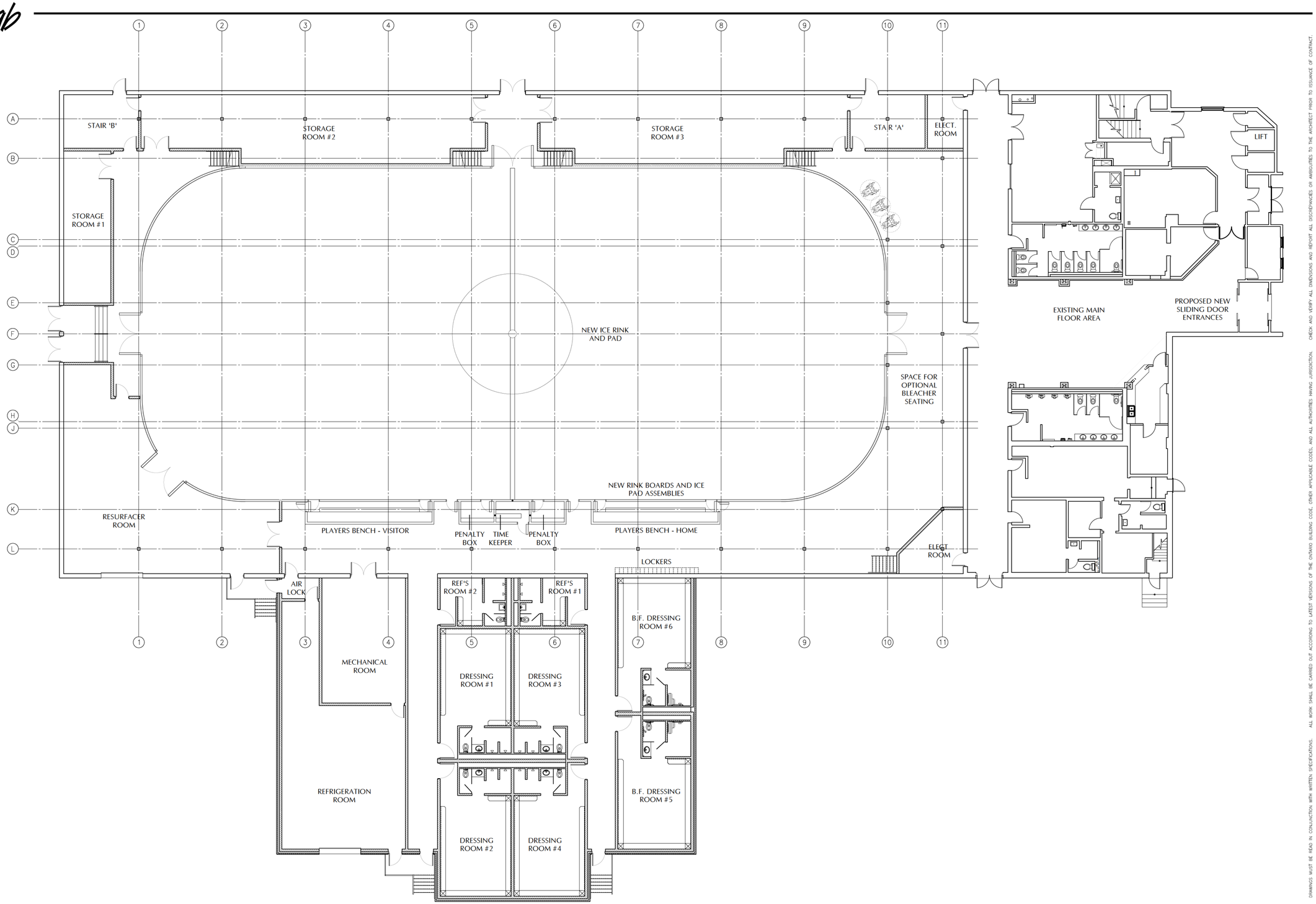
NEW HAMBURG COMMUNITY CENTRE

251 JACOB STREET
NEW HAMBURG, ONTARIO

PRINT DATE:	November 6, 2019
DATE:	November 6, 2019
DRAWN BY:	
CHECKED BY:	G.R.B.
SCALE:	3/32"= 1'-0"
PROJECT No.:	1871

THE HYBRID FACILITY - MAIN FLOOR CONCEPT

A2.1



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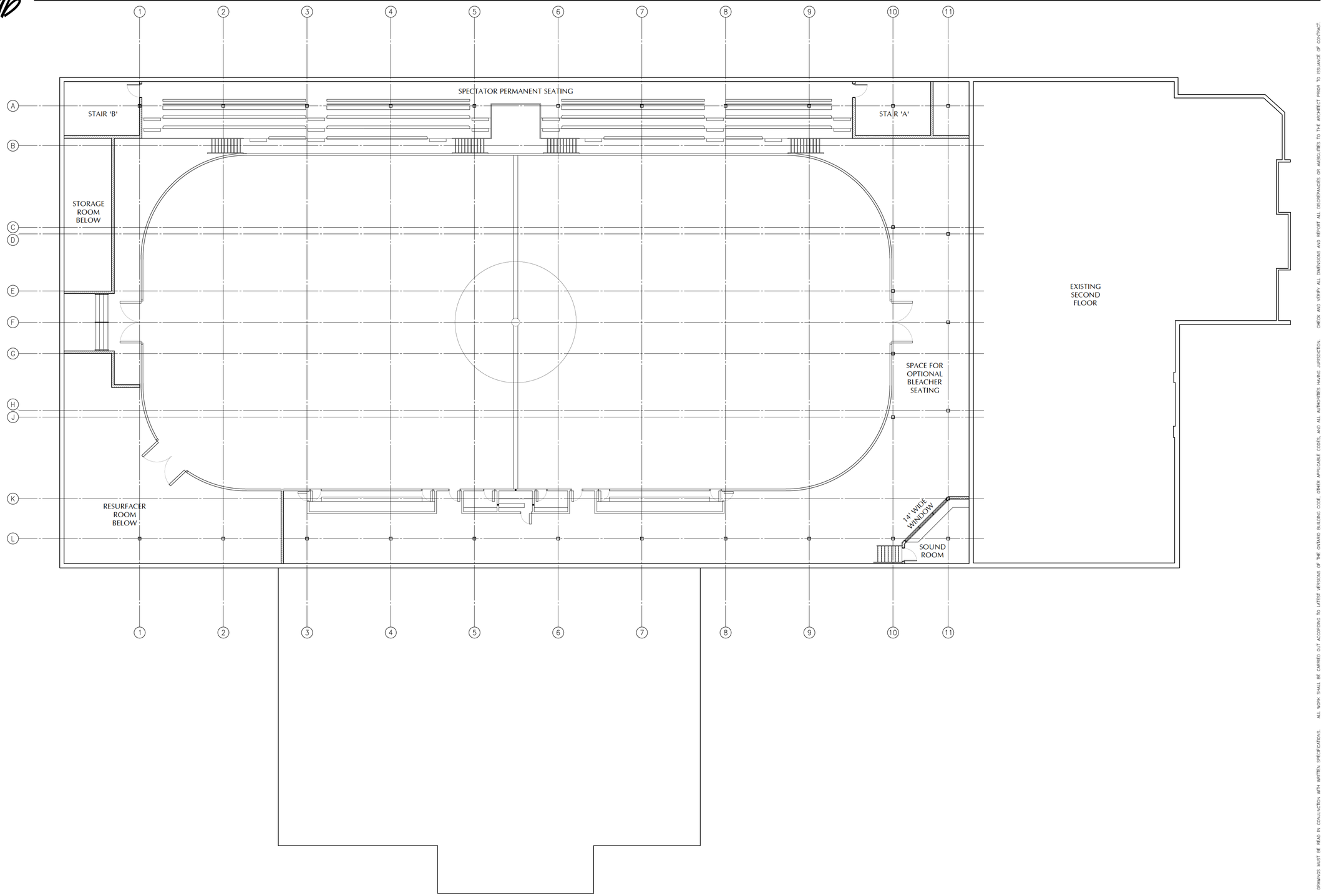
No.	DATE	REVISION

NEW HAMBURG COMMUNITY CENTRE
251 JACOB STREET
NEW HAMBURG, ONTARIO

PRINT DATE:	April 4, 2019
DATE:	April 4, 2019
DRAWN BY:	
CHECKED BY:	G.R.B.
SCALE:	3/32"= 1'-0"
PROJECT No.:	---

ICE FACILITY
MAIN FLOOR

A2.1



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NEW HAMBURG, ONTARIO

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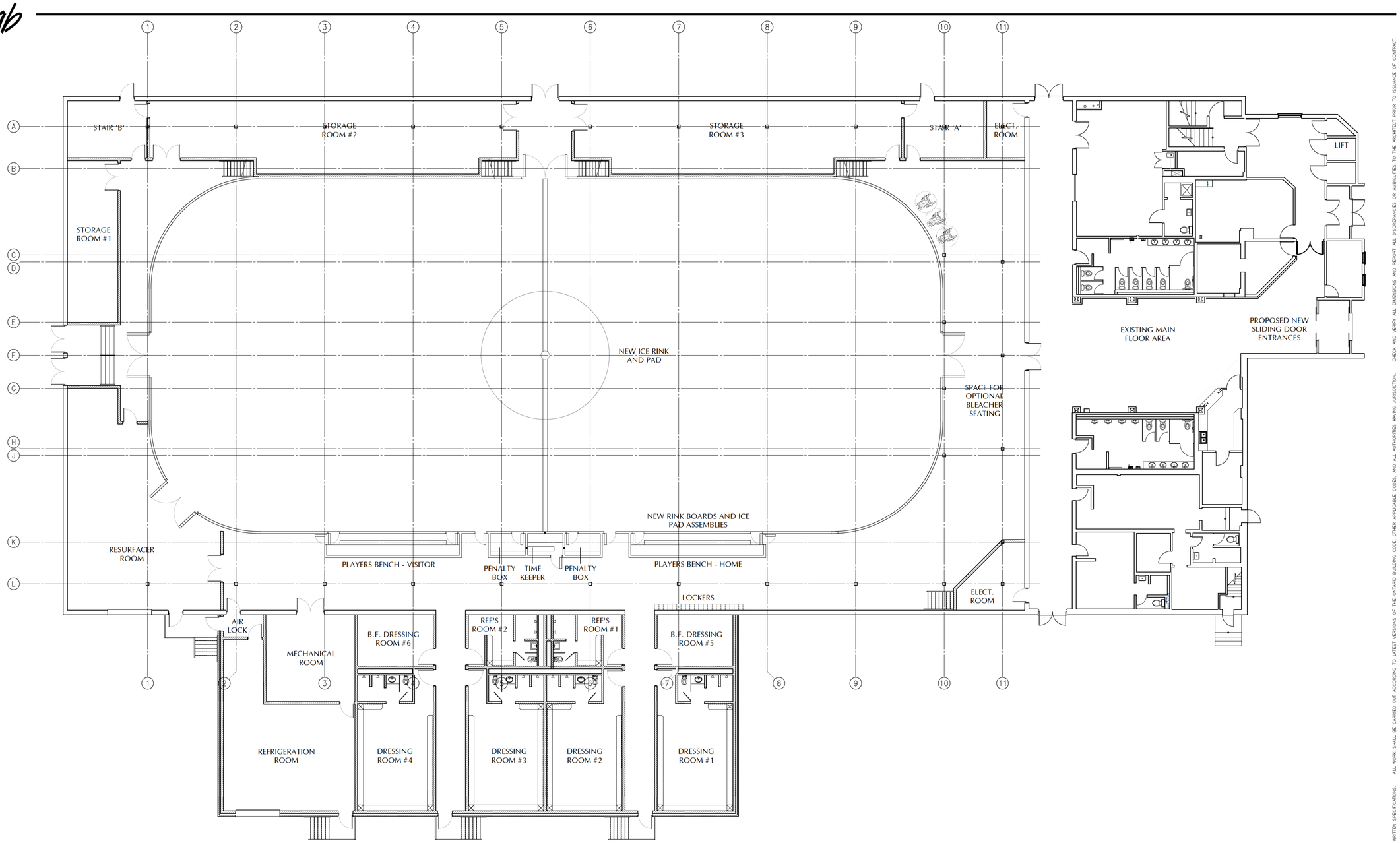
PROJECT No.:	---

ICE FACILITY
BLEACHER LEVEL

A2.2



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NEW HAMBURG, ONTARIO

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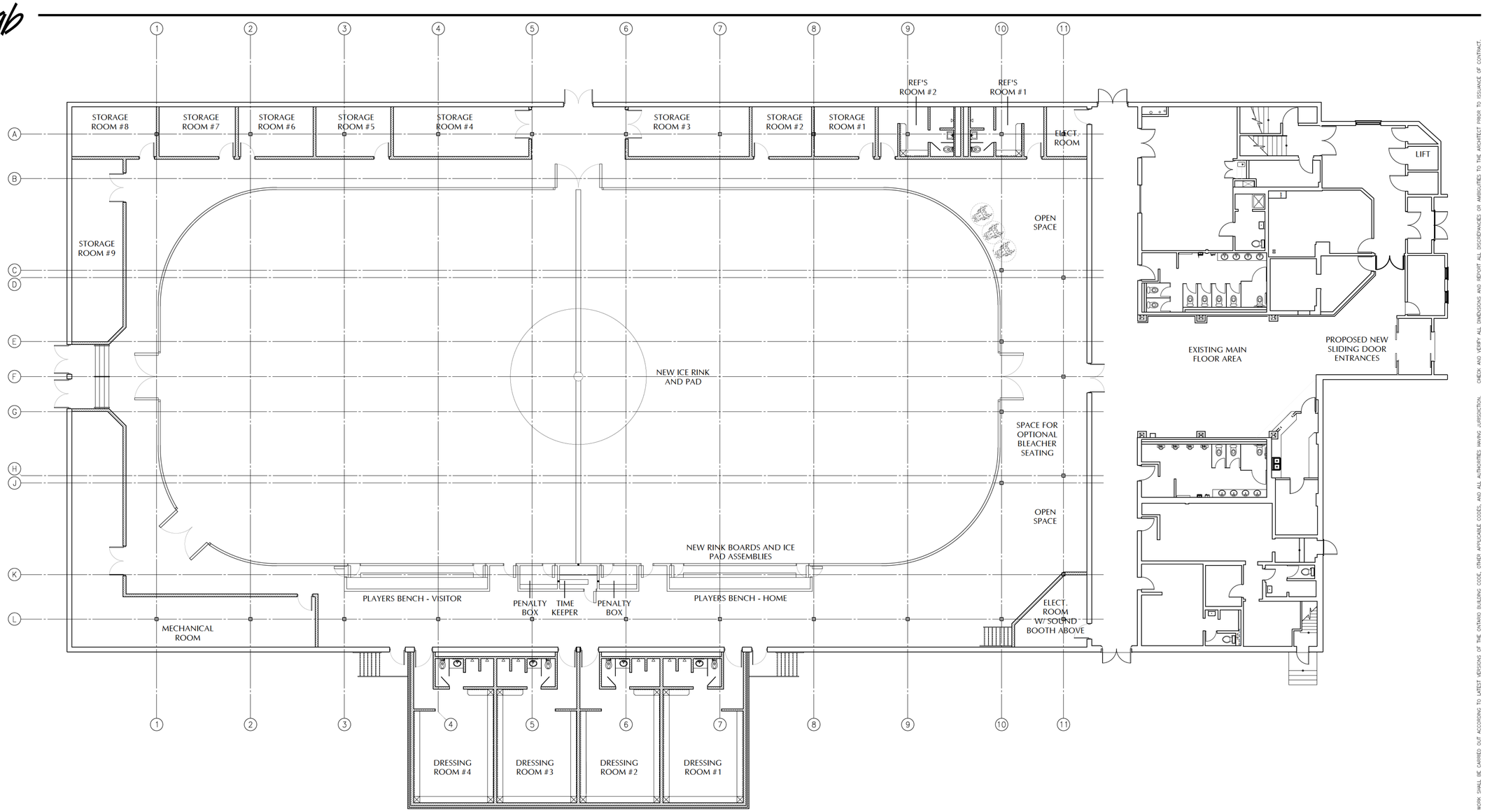
SCALE:	3/32"= 1'-0"
PROJECT No.:	---

ICE FACILITY
MAIN FLOOR
ALTERNATE

A2.3



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251 JACOB STREET
NEW HAMBURG, ONTARIO

PRINT DATE:	April 4, 2019
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SCALE:	3/32"=1'-0"
PROJECT No.:	---

NEW PERMANENT "WARM" ICE FACILITY

A2.4

Stage 1-2 Archaeological Assessment
Part of 251 Jacob Street, New Hamburg

Part of Lot 22, German Block North of Bleams Road
Geographic Township of Wilmot,
Historical County of Waterloo,
now the Regional Municipality of Waterloo, Ontario

Submitted to:
Township of Wilmot
60 Snyder's Road West
Baden, Ontario
N3A 1A1

and

Ontario's Ministry of Citizenship and Multiculturalism

Submitted by:

196 Westheights Drive, Kitchener, Ontario, N2N 1J9
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Licensee: Walter McCall
License Number: P389
PIF Number: P389-0667-2023
CP Number: 2023-07

ORIGINAL REPORT

September 7, 2023

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Amber Schenck of the Township of Wilmot ('the Proponent') to conduct a Stage 1-2 archaeological assessment on part of Lot 22, German Block North of Bleams Road, within the Geographic Township of Wilmot, in the historical County of Waterloo, now in the Regional Municipality of Waterloo. This assessment was undertaken in advance of future development on part of the property at 251 Jacob Street, New Hamburg (the 'Assessment Property'; Figure 6).

The assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario, 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (Government of Ontario, 1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet these conditions, a Stage 1-2 assessment was conducted prior to the application phase of the development process under archaeological consulting license P389 issued to Dr. Walter McCall by the Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MCM's *Standards and Guidelines for Consultant Archaeologists* ('*Standards and Guidelines*'; Government of Ontario, 2011).

The Assessment Property is irregular in shape, measures 9.64 hectares ('ha'), and consists of a recreational property including two baseball diamonds, a track, the New Hamburg Community Centre and Arena, the New Hamburg Grand Stands, as well as associated sheds, dirt and gravel laneways and parking areas, concrete pads, concrete sidewalks, concrete stairs, and asphalt parking areas, which are surrounded by manicured lawn with mature trees bordering the eastern edge and some trees surrounding the arena. The Assessment Property is bound to the northwest by Boullee Street, Asmus Street, and the Royal Canadian Legion Branch 532, and a vacant parcel, to the southwest by Jacob Street, and to the southeast, east, and northeast by the Nith River.

As per the Township of Wilmot, only the portion of the Assessment Property to be subject to development and ground disturbance required an archaeological assessment (Figures 4 and 5). This reduced Study Area measures 0.732ha and comprises a rectangular-shaped parcel on the western side of the Assessment Property. The Study Area includes the New Hamburg Community Centre and Arena, a portion of the New Hamburg Grand Stands, two sheds, a concrete pad, an asphalt parking lot, concrete sidewalks and stairs, gravel laneways and parking areas, all surrounded by manicured lawn with some mature trees to the southeast and northeast of the arena. The Study Area is bound to the northwest by Boullee Street, to the southwest by Jacob Street, and to the northeast, east, and southeast by the remainder of the Assessment Property.

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. A Stage 2 field assessment was recommended for the Study Area.

The Stage 2 field assessment was conducted on July 20th, 2023. This investigation began with a property inspection, conducted according to Section 2.1.8, which is informed by Section 1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). A judgemental test pit survey of the gravel areas conducted according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011) determined that these areas were in fact disturbed.

Additionally, the inspection revealed the paved parking lot, concrete sidewalks, concrete stairs, concrete pad, and extant structures were determined to retain no or low archaeological potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011).

The remainder of the Study Area comprised manicured grass with mature trees throughout, which showed visible signs of surface disturbance in the form of gravel and revealed no original topsoil within the test pits. The grass area was assessed by means of a judgmental test pit survey,

conducted according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011), to confirm the degree and extent of the disturbance (Figure 4). The manicured grass was determined to retain no or low archaeological potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011).

The entire Study Area was determined to be previously disturbed, as confirmed during the Stage 2 property inspection and judgmental test pit survey. These areas were mapped and photo documented as per Section 2.1, Standard 2a, Standard 6, and Section 7.8.1, Standards 1a and 1b of the *Standards and Guidelines* (Government of Ontario, 2011). This investigation resulted in the identification of no archaeological material; therefore, no further archaeological assessment of the Study Area is recommended.

This recommendation applies to the portion of the Assessment Property to be subject to developmental impacts, which was included within the current Study Area (Error! Reference source not found.). If in the future, the portion of the Assessment Property not included within the current Study Area will be impacted by development, then a Stage 1 archaeological assessment is required, conducted according to Section 1.1 of the *Standards and Guidelines* (Government of Ontario, 2011). This investigation will assess the development area's potential for the recovery of archaeological resources and will provide specific direction for the protection, management and/or recovery of these resources, as per Sections 1.3 and 1.4 of the *Standards and Guidelines* (Government of Ontario, 2011).

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.

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Project Personnel

Project Manager:	Walter McCall, P389
Field Director:	Jon Cousins, R296
Field Technician:	Torben Russo
First Nations Representatives:	Olivia Sardine, Mississaugas of the Credit First Nations Bill Lucas, Six Nations of the Grand River Phil Henry, Haudenosaunee Institute of Development
Report Preparation	Jessie Rae; Amanda McCall, R470
Mapping and GIS:	Jessie Rae; Amanda McCall, R470
Licensee Review:	Walter McCall, P389

Acknowledgments

Generous contributions by Amber Schenck of the Township of Wilmot made this report possible.

1.0 Project Context

1.1 Development Context

Detritus Consulting Ltd. ('Detritus') was retained by Amber Schenck of the Township of Wilmot ('the Proponent') to conduct a Stage 1-2 archaeological assessment on part of Lot 22, German Block North of Bleams Road, within the Geographic Township of Wilmot, in the historical County of Waterloo, now in the Regional Municipality of Waterloo, Ontario. This assessment was undertaken in advance of future development on part of the property at 251 Jacob Street, New Hamburg (the 'Assessment Property'; Figure 6).

The assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario, 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (Government of Ontario, 1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet these conditions, a Stage 1-2 assessment was conducted prior to the application phase of the development process under archaeological consulting license P389 issued to Dr. Walter McCall by the Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MCM's *Standards and Guidelines for Consultant Archaeologists* ('*Standards and Guidelines*'; Government of Ontario, 2011).

The purpose of a Stage 1 Background Study is to compile all available information about the known and potential archaeological heritage resources within the Study Area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario, 2011), the objectives of the following Stage 1 assessment were:

- To provide information about the Study Area's geography, history, previous archaeological fieldwork, and current land conditions;
- to evaluate in detail, the Study Area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- to recommend appropriate strategies for Stage 2 survey.

To meet these objectives Detritus archaeologists employed the following research strategies:

- A review of relevant archaeological, historic, and environmental literature pertaining to the Study Area;
- a review of the land use history, including pertinent historic maps; and
- an examination of the Ontario Archaeological Sites Database ('ASDB') to determine the presence of known archaeological sites in and around the Study Area.

The purpose of a Stage 2 Property Assessment is to provide an overview of any archaeological resources within the Study Area, to determine whether any of the resources might be archaeological sites with cultural heritage value or interest ('CHVI'), and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario, 2011), the objectives of the following Stage 2 assessment were:

- To document all archaeological resources within the Study Area;
- to determine whether the Study Area contains archaeological resources requiring further assessment; and
- to recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

The licensee received permission from the Proponent to enter the land and conduct all required archaeological fieldwork activities, including the recovery of artifacts.

1.2 Historical Context

1.2.1 Post-Contact Aboriginal Resources

Prior to the arrival of European settlers, much of the central and southern Ontario was occupied by Iroquoian speaking linguistic groups that had united to form confederacies, including the Huron-Wendat, the Neutral (or Attawandaran), and the Petun in Ontario, as well as the Five Nations Iroquois Confederacy in Upper New York State (Warrick, 2013; Birch, 2010). Of these groups, the Huron-Wendat established themselves to the east of the Niagara escarpment and the Neutral, to the west (Warrick, 2000).

Throughout the middle of the 17th century, the Iroquois Confederacy sought to expand upon their territory and to monopolize the fur trade between the European markets and the tribes of the western Great Lakes region. A series of bloody conflicts followed known as the Beaver Wars or the French and Iroquois Wars, contested between the Iroquois Confederacy and the Algonkian speaking communities of the Great Lakes region. Many communities were destroyed including the Huron, Neutral, Susquehannock and Shawnee leaving the Iroquois as the dominant group in the region. By 1653 after repeated attacks, the Niagara peninsula and most of Southern Ontario had been vacated (Heidenreich, 1990).

At this same time, the Anishinaabeg Nation, an Algonkian-speaking community situated inland from the northern shore of Lake Huron, began to challenge the Haudenosaunee for dominance in the Lake Huron and Georgian Bay region in order to advance their own role in the fur trade (Gibson, 2006). The Algonkian-speaking groups that settled in the area bound by Lake Ontario, Lake Erie, and Lake Huron were referred to by the English as the Chippewas or Ojibwas. By 1680, the Ojibwa began expanding into the evacuated Huron-Wendat territory, and eventually into Southern Ontario. By 1701, the Haudenosaunee had been driven out of Ontario completely and were replaced by the Ojibwa (Gibson, 2006; Schmalz, 1991).

The late 17th and early 18th centuries also mark the arrival of an Ojibwa band known as the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes. 'The Mississaugas' is the name that the Jesuits had used in 1840 for the Algonquin community living near the Mississagi River on the northwestern shore of Lake Huron (Smith, 2022). The oral traditions of the Mississaugas, as recounted by Chief Robert Paudash and recorded in 1904, suggest that the Mississaugas defeated the Mohawk Nation, who retreated to their homeland south of Lake Ontario. Following this conflict, a peace treaty was negotiated between the two groups (Praxis Research Associates, n.d.).

From the beginning of the 18th century until the end of the Seven Year War in 1763, the Ojibwa nation, including the Mississaugas, experienced a golden age in trade holding no alliance with either the French or the British (Schmalz, 1991). At the end of the 17th century, the Mississaugas' settled permanently in Southern Ontario (Praxis Research Associates, n.d.). Around this same time, in 1722, the Five Nation Iroquois Confederacy adopted the Tuscarora in New York becoming the Six Nations (Pendergast, 1995).

The Study Area first entered the Euro-Canadian historical record on December 7th, 1792 as part of Treaty No. 3, which included land acquired in the 'Between the Lakes Purchase' dating to May 22, 1784. According to the terms of the treaty, the Mississaugas ceded to the Crown approximately 3,000,000 acres of land between Lake Huron, Lake Erie, and Lake Ontario in return for trade goods valued at £1180.

The limits of the Treaty 3 lands are documented as comprising,

> *Lincoln County excepting Niagara Township; Saltfleet, Binbrook, Barton, Glanford and Ancaster Townships, in Wentworth County; Brantford, Onondaga, Tusc[a]r[o]ra, Oakland and Burford Townships in Brant County; East and West Oxford, North and South Norwich, and Dereham Townships in Oxford County; North Dorchester Township in Middlesex County; South Dorchester, Malahide and Bayham Township in Elgin County; all Norfolk and Haldimand Counties;*

> *Pelham, Wainfleet, Thorold, Cumberland and Humberstone Townships in Welland County.*
>
> Morris, 1943, pp. 17-8

One of the stated objectives of the Between the Lakes Purchase was "to procure for that part of the Six Nation Indians coming into Canada a permanent abode" (Morris, 1943, p. 17). Shortly after the transaction had been finalised in May of 1784, Sir Frederick Haldimand, the Governor of Québec, made preparations to grant a portion of land to those Six Nations who remained loyal to the Crown during the American War of Independence. More specifically, Haldimand arranged for the purchase of approximately 550,000 acres of land adjacent to the Treaty 3 limits from the Mississaugas. This tract of land, referred to as either the Haldimand Tract or the 1795 Crown Grant to the Six Nations, was provided for in the Haldimand Proclamation of October 25th, 1784 and was intended to extend a distance of six miles on each side of the Grand River from mouth to source (Weaver, 1978). By the end of 1784, representatives from each constituent nation of the Six Nations, as well as other allies, relocated to the Haldimand Tract with Joseph Brant (Weaver, 1978; Tanner, 1987).

Throughout southern Ontario, the size and nature of the pre-contact settlements and the subsequent spread and distribution of Aboriginal material culture began to shift with the establishment of European settlers. By 1834 it was accepted by the Crown that losses of portions of the Haldimand Tract to Euro-Canadian settlers were too numerous for all lands to be returned. Lands in the Lower Grand River area were surrendered by the Six Nations to the British Government in 1832, at which point most Six Nations people moved into Tuscarora Township in Brant County and a narrow portion of Oneida Township (Page, 1879; Weaver, 1978; Tanner, 1987). Following the population decline and the surrender of most of their lands along the Credit River, the Mississaugas were given 6000 acres of land on the Six Nations Reserve, establishing the Mississaugas of New Credit First Nation, now the Mississaugas of the Credit First Nation, in 1847 (Smith, 2022)

Despite the encroachment of European settlers on previously established Aboriginal territories, "written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought" (Ferris, 2009, p. 114). As Ferris observes, despite the arrival of a competing culture, First Nations communities throughout Southern Ontario have left behind archaeologically significant resources that demonstrate continuity with their pre-contact predecessors, even if they have not been recorded extensively in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

The Study Area is located part of Lot 22, German Block North of Bleams Road, within the Geographic Township of Wilmot, in the historical County of Waterloo, which is now the Regional Municipality of Waterloo, Ontario.

On July 24, 1788, Sir Guy Carleton, the Governor-General of British North America, divided the Province of Québec into the administrative districts of Hesse, Nassau, Mecklenburg, and Lunenburg (Archives of Ontario, 2012-2015). Further change came in December 1791 when the former Province of Québec was rearranged into Upper Canada and Lower Canada under the provisions of the Constitutional Act. Colonel John Graves Simcoe was appointed as Lieutenant-Governor of Upper Canada; he spearheaded several initiatives to populate the province including the establishment of shoreline communities with effective transportation links between them (Coyne, 1895).

In July 1792, Simcoe divided Upper Canada into 19 counties, including Waterloo County, stretching from Essex in the west to Glengarry in the east. Later that year, the four districts originally established in 1788 were renamed as the Western, Home, Midland and Eastern Districts (Archives of Ontario, 2012-2015).

The township of Wilmot was surveyed in 1842. Mennonites from Waterloo County and the Amish from Europe began claiming lots and clearing roadways and farms. The first three roads of the township were Upper Street, Middle Street, and Lower Street, now referred to as Erb's Road, Snyder's Road and Bleams Road. Most early settlers of the area were of German descent, although some Scottish, English, and Irish were also amongst the first settlers. The village of New Hamburg was founded and established between 1834 to 1835. It was originally named Cassel, after one of the original settlers native city in Hesse. New Hamburg was officially incorporated as a Village in 1857 and as a town in 1966 (The Corporation of the Township of Wilmot, 2015).

Tremaine's Map of the County of Waterloo, Canada West ('*Tremaine's Map*') depicts the Study Area within Lot 22, German Block North of Bleams Road in the eastern half of the Town of New Hamburg (Tremaine & Tremaine, 1861). No landowners are listed within this portion of the town; however, a school house is illustrated within the Study Area, on the southeastern corner of what is now the intersection of Jacob Street and Boullee Street (Figure 2). The Nith River is illustrated traversing through the Town of New Hamburg, abutting the eastern edge of the Assessment Property. The Grand Trunk Railway is also depicted running southwest to northeast through the northern half of New Hamburg.

The *Illustrated Historical Atlas of Waterloo and Wellington Counties* ('*Historical Atlas*'), demonstrates the extent to which Wilmot Township had been settled by 1877 (Walker & Miles, 1877; Figure 2). An increasing population throughout the late 19th century is evident from the number of villages and small towns indicated and the town lots for the early communities of Baden, New Hamburg, and Petersburg.

The *Historical Atlas* map of Wilmot lists no landowners and illustrates no structures for Lot 22, German Block North of Bleams Road. The school house formerly visible on the *Tremaine's Map*, is no longer illustrated within the Study Area. Additionally, the early community of Baden is illustrated to the northeast of the Study Area. The Grand Trunk Railway transects New Hamburg and runs north of the Study Area from southwest to northeast, connecting the early communities of Baden and New Hamburg.

Although significant and detailed landowner information is available on *Tremaine's Map* and the *Historical Atlas* of Wilmot Township, it should be recognised that historical county atlases were funded by subscriptions fees and were produced primarily to identify factories, offices, residences and landholdings of subscribers. Landowners who did not subscribe were not always listed on the maps (Caston, 1997). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore & Head, 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Assessment Property is irregular in shape, measures 9.64 hectares ('ha'), and consists of a recreational property including two baseball diamonds, a track, the New Hamburg Community Centre and Arena, the New Hamburg Grand Stands, as well as associated sheds, dirt and gravel laneways and parking areas, concrete pads, concrete sidewalks, concrete stairs, and asphalt parking areas, which are surrounded by manicured lawn with mature trees bordering the eastern edge and some trees surrounding the arena. The Assessment Property is bound to the northwest by Boullee Street, Asmus Street, and the Royal Canadian Legion Branch 532, and a vacant parcel, to the southwest by Jacob Street, and to the southeast, east, and northeast by the Nith River.

The Study Area measures 0.732ha and comprises a rectangular-shaped parcel on the western side of the Assessment Property. The Study Area includes the New Hamburg Community Centre and Arena, a portion of the New Hamburg Grand Stands, two sheds, a concrete pad, an asphalt parking lot, concrete sidewalks and stairs, gravel laneways and parking areas, all surrounded by manicured lawn with some mature trees to the southeast and northeast of the arena. The Study Area is bound to the northwest by Boullee Street, to the southwest by Jacob Street, and to the northeast, east, and southeast by the remainder of the Assessment Property.

The majority of the region surrounding the Study Area has been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the mid-19th century. Much of the region today continues to be used for agricultural purposes.

The Study Area is located within the Waterloo Hills physiographic region (Chapman and Putnam, 1984). This is a region of sandy hills and ridges broken by the alluvial terrace system of the Grand River spillway.

The closest source of potable water is Nith River located approximately 226 metres ('m') to the east of the Study Area, directly following the eastern boundary of the Assessment Property.

1.3.2 Pre-Contact Aboriginal Land Use

This portion of southwestern Ontario was occupied by people as far back as 11,000 years ago as the glaciers retreated. For the majority of this time, people were practicing hunter gatherer lifestyles with a gradual move towards more extensive farming practices. Table 1 provides a general outline of the cultural chronology of Wilmot Township (Ellis & Ferris, 1990)

Table 1: Cultural Chronology for Wilmot Township

Time Period	Cultural Period	Comments
9500–7000 BC	Paleo Indian	first human occupation hunters of caribou and other extinct Pleistocene game nomadic, small band society
7500–1000 BC	Archaic	ceremonial burials increasing trade network hunter gatherers
1000–400 BC	Early Woodland	large and small camps spring congregation/fall dispersal introduction of pottery
400 BC–AD 800	Middle Woodland	kinship based political system incipient horticulture long distance trade network
AD 800–1300	Early Iroquoian (Late Woodland)	limited agriculture developing hamlets and villages
AD 1300–1400	Middle Iroquoian (Late Woodland)	shift to agriculture complete increasing political complexity large, palisaded villages
AD 1400–1650	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3 Previous Identified Archaeological Work

In order to compile an inventory of known archaeological resources in the vicinity of the Study Area, Detritus consulted the ASDB. The ASDB, which is maintained by the MCM (Government of Ontario, n.d.), contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometres ('km') east to west and approximately 18.5km north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The Study Area lies within block AgGt.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario, 1990c) The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MCM will provide

information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

According to the ASDB, 12 archaeological sites have been registered within a 1km radius of the Study Area (Table 2). Included in this list are six pre-contact Aboriginal sites, one of which dates to the Early Archaic period, five Euro-Canadian sites, and one Neutral post-contact Aboriginal village site.

Table 2: Registered Archaeological Sites within 1km

Borden Number	Site Name	Time Period	Affinity	Site Type
AiHe-7	NEW HAMBURG 1	Post-Contact	Neutral	village
AiHe-14	BERGEY I AND 2	Archaic	Aboriginal	camp/campsite
AiHe-15	NEW HAMBURG 2	Archaic	Aboriginal	camp/campsite
AiHe-20	Boehler Pottery	Post-Contact	Euro-Canadian	-
AiHe-28	Bearinger	Post-Contact	Euro-Canadian	midden
AiHe-29	Nader	Post-Contact	Euro-Canadian	house
AiHe-30	Nevill	Post-Contact	Euro-Canadian	midden
AiHe-31	Good Enough	Pre-Contact	Aboriginal	-
AiHe-35	Helmuth	Pre-Contact	Aboriginal	-
AiHe-36	Nuhrgang	Pre-Contact	Aboriginal	unknown
AiHe-473	-	Archaic, Early	Aboriginal	scatter
AiHe-471	-	Post-Contact	Euro-Canadian	dump

To the best of Detritus' knowledge, no additional assessments have been conducted on adjacent properties, nor have sites been registered within 50m of the Study Area.

1.3.4 Archaeological Potential

Detritus applied archaeological potential criteria commonly used by the MCM to determine areas of archaeological potential within the Study Area. According to Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario, 2011), these variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, when considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site locations and types to varying degrees. As per Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario, 2011), water sources may be categorized in the following manner:

- Primary water sources lakes, rivers, streams, creeks;
- secondary water sources intermittent streams and creeks, springs, marshes and swamps;
- past water sources, glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- accessible or inaccessible shorelines high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

As was stated above, the closest source of potable water Nith River located approximately 226m to the east of the Study Area, directly following the eastern boundary of the Assessment Property.

Soil texture is also an important determinant of past settlement, usually in combination with other factors such as topography. The primary soils within the Study Area have been documented as being suitable for pre-contact Aboriginal practices. Considering also the length of occupation of Wilmot Township prior to the arrival of Euro-Canadian settlers and the six pre-contact Aboriginal sites registered within 1km of the Study Area, and the pre-contact and post-contact Aboriginal archaeological potential of the Study Area is judged to be moderate to high.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario, 1990b) or property that local histories or informants have identified with possible historical events.

The *Tremaine's Map* (Tremaine & Tremaine, 1861) and the *Historical Atlas* (Walker & Miles, 1877) demonstrates that Wilmot Township was occupied by Euro-Canadian farmers by the late 19th century (Figures 2 and 3). Much of the established road system and agricultural settlement from that time is still visible today. The Study Area is located within the early Town of New Hamburg. The Town of Baden is illustrated to the northeast of the Study Area. Furthermore, the Grand Trunk Railway is illustrated to the north of the Study Area. Considering also the five Euro-Canadian site and one post-contact Neutral site registered within 1km of the Study Area, the potential for the recovery of archaeological resources is deemed to be moderate to high.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area, as outlined in Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario, 2011). As was discussed above in Section 1.3.1, recent aerial imagery of the region revealed several potential disturbance areas within the Study Area, including the concrete and asphalt areas as well as the extant buildings (Figure 3). It is recommended that these areas be subject to visual inspection and documentation during a Stage 2 property inspection conducted as per Section 2.1.8 of the *Standards and Guidelines* (Government of Ontario, 2011) to confirm and document the level of disturbance.

2.0 Field Methods

The Stage 2 field assessment was conducted on July 20th, 2023, under archaeological consulting license P389 issued to Dr. Walter McCall by the MCM. Buried utility locates were obtained prior to initiating fieldwork.

During the Stage 2 assessment, the weather was sunny and 25°C. Assessment conditions were excellent; at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 1 to 11 demonstrate the land conditions at the time of the survey throughout the Study Area including areas that met the requirements for a Stage 2 archaeological assessment, as per Section 7.8.6, Standard 1a of the *Standards and Guidelines* (Government of Ontario, 2011). Figure 4 provides an illustration of the Stage 2 survey methods and includes all photograph locations and directions. Figure 5 provides an illustration of the Stage 2 survey methods in relation to the property mapping available from the Regional Municipality of Waterloo.

The limits of the Study Area were established in the field using a georeferenced shapefile produced using QGis and uploaded to a hand-held GPS device running Qfield.

The Stage 2 field assessment began with a property inspection conducted as per Section 2.1.8, of the *Standards and Guidelines* (Government of Ontario, 2011), complete with judgemental test pitting as per Standard 2 of this section. According to the results of this inspection, approximately 70% of the Study Area comprised the possible disturbance areas identified on the current aerial imagery of the Study Area (see Section 1.3.4 above). Of the 70%, 10% comprised gravel laneways and parking areas along the northern and northeastern edge of the Study Area and 60% comprises the disturbed areas observed on the current aerial imagery, which includes the New Hamburg Community Centre and Arena, a portion of the New Hamburg Grand Stands, two sheds, a concrete pad, an asphalt parking lot, and concrete sidewalks and stairs. The remaining 30% of the Study Area comprises manicured grass, which was inaccessible to ploughing and showed some evidence or surface disturbance in the form of gravel.

The gravel areas were subject to judgemental test pitting according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011) to confirm the limits. No traces of the original topsoil were encountered across the gravel area; no artifacts were encountered.

Test pits in the manicured grass revealed no traces of original topsoil, therefore, the manicured grass was also subject to a judgmental test pit, in accordance with Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011), to confirm the degree and extent of the disturbance. No artifacts were encountered during the judgemental test pit survey of the manicured grass.

The manicured grass (Photos 1 to 9), the gravel areas (Photos 5, 6, 9), and the disturbed areas (Photos 2 to 11) observed on the current aerial imagery, which includes the New Hamburg Community Centre and Arena, a portion of the New Hamburg Grand Stands, two sheds, a concrete pad, an asphalt parking lot, and concrete sidewalks and stairs, were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources, as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011). The areas of previous disturbance observed within the Study Area were mapped and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario, 2011).

3.0 Record of Finds

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 3 below.

Table 3: Inventory of Document Record

Document Type	Current Location	Additional Comments
1 Page of Field Notes	Detritus' office	Stored digitally in project file
1 Map provided by the Proponent	Detritus' office	Stored digitally in project file
1 Field Map	Detritus' office	Stored digitally in project file
18 Digital Photographs	Detritus' office	Stored digitally in project file

No archaeological resources were identified within the Study Area, therefore, no material culture was collected. As a result, no storage arrangements are required.

4.0 Analysis and Conclusions

Detritus was retained to conduct a Stage 1-2 archaeological assessment in advance of future development on part of the property at 251 Jacob Street, New Hamburg.

The Stage 1 background research indicated that the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. A Stage 2 field assessment was recommended for the Study Area.

The Stage 2 field assessment was conducted on July 20th, 2023. This investigation began with a property inspection, conducted according to Section 2.1.8, which is informed by Section 1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). A judgemental test pit survey of the gravel areas conducted according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011) determined that these areas were in fact disturbed.

Additionally, the inspection revealed the paved parking lot, concrete sidewalks, concrete stairs, concrete pad, and extant structures were determined to retain no or low archaeological potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011).

The remainder of the Study Area comprised manicured grass with mature trees throughout, which showed visible signs of surface disturbance in the form of gravel and revealed no original topsoil within the test pits. The grass area was assessed by means of a judgmental test pit survey, conducted according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011), to confirm the degree and extent of the disturbance (Figure 4). The manicured grass was determined to retain no or low archaeological potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011).

The entire Study Area was determined to be previously disturbed, as confirmed during the Stage 2 property inspection and judgmental test pit survey. These areas were mapped and photo documented as per Section 2.1, Standard 2a, Standard 6, and Section 7.8.1, Standards 1a and 1b of the *Standards and Guidelines* (Government of Ontario, 2011). This investigation resulted in the identification of no archaeological material.

5.0 Recommendations

No archaeological resources were documented during the Stage 2 assessment of the Study Area. Therefore, no further archaeological assessment of the Study Area is recommended.

This recommendation applies to the portion of the Assessment Property to be subject to developmental impacts, which was included within the current Study Area (Error! Reference source not found.). If in the future, the portion of the Assessment Property not included within the current Study Area will be impacted by development, then a Stage 1 archaeological assessment is required, conducted according to Section 1.1 of the *Standards and Guidelines* (Government of Ontario, 2011). This investigation will assess the development area's potential for the recovery of archaeological resources and will provide specific direction for the protection, management and/or recovery of these resources, as per Sections 1.3 and 1.4 of the *Standards and Guidelines* (Government of Ontario, 2011).

6.0 Advice on Compliance with Legislation

This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

7.0 Bibliography and References

Archives of Ontario. (2012-2015). *The Evolution of the District and County System, 1788-1899.* Retrieved January 24, 2022, from http://www.archives.gov.on.ca/en/maps/ontario-districts.aspx

Birch, J. (2010). *Coalescence and Conflict in Iroquoian Ontario.* Retrieved January 20, 2022, from http://uga.academia.edu/JenniferBirch/Papers/183903/Coalescence_and_Conflict_in_Iroquoia n_Ontario

Caston, W. A. (1997). Evolution in the Mapping of Southern Ontario and Wellington County. *Wellington County History, 10*, 91-106.

Chapman, L. J., & Putnam, D. F. (1984). *The Physiography of Southern Ontario. Ontario Geological Survey. Special Volume 2* (3rd ed.). Toronto: Ontario Ministry of Natural Resources.

The Corporation of the Township of Wilmot. 2015. *History of Wilmot Township.* Electronic Source: https://www.wilmot.ca/en/living-here/History-of-Wilmot-Township.aspx#. Last accessed, August 28, 2020.

Coyne, J. H. (1895). *The Country of Neutrals (As Far as Comprised in the County of Elgin): From Champlain to Talbot.* St. Thomas: The St. Thomas Print.

Ellis, C. J., & Ferris, N. (1990). *The Archaeology of Southern Ontario to A.D. 1650. Occasional Publication No. 5.* London: Ontario Archaeology Society, London Chapter.

Ferris, N. (2009). *The Archaeology of Native-Lived Colonialism: Challenging History in the Great Lakes.* Tuscon: University of Arizona.

Gentilcore, L. R., & Head, G. (1984). *Ontario's History in Maps.* Toronto: University of Toronto Press.

Gibson, M. M. (2006). *In the Footsteps of the Mississaugas.* Mississauga: Mississauga Heritage Foundation.

Government of Ontario. (1990a). Retrieved 01 24, 2022, from Ontario Planning Act, R.S.O. 1990, CHAPTER P. 13. Last Amendment: 2021, c. 25, Sched. 24: https://www.ontario.ca/laws/statute/90p13

Government of Ontario. (1990b). Retrieved 01 24, 2022, from Ontario Heritage Act, R.S.O. 1990, CHAPTER O.18. Last amendment: 2021, c. 4, Sched. 6, s. 74: https://www.ontario.ca/laws/statute/90o18

Government of Ontario. (1990c). Retrieved 01 24, 2022, from Freedom of Information and Protection of Privacy Act, R.S.O. 1990, CHAPTER F.31. Last amendment: 2021, c. 4, Sched. 11, s. 11: https://www.ontario.ca/laws/statute/90f31.

Government of Ontario. (2011). *Standards and Guidelines for Consultant Archaeologists.* Toronto: MCM.

Government of Ontario. (n.d.). *Archaeological Sites Database Files.* MCM.

Heidenreich, C. (1990). History of the St. Lawrence–Great Lakes Area to 1650. In C. J. Ellis, & N. Ferris (Ed.), *The Archaeology of Southern Ontario. Occasional Publication No. 5*, pp. 475–492. London: Ontario Archaeological Society, London Chapter.

Morris, J. L. (1943). *Indians of Ontario (1964 reprint).* Ontario Department of Lands and Forests.

Page, H. R. (1879). *The Illustrated Historical Atlas of the County of Haldimand, Ontario.* Toronto: H. R. Page & Co.

Pendergast, J. (1995). The Identity of Jacques Cartier's Stadaconans and Hochelagans: The Huron-Iroquois Option. In A. Bekerman, & G. Warrick (Ed.), *Origins of the People of the*

Longhouse: Proceedings of the 21st Annual Symposium of the Ontario Archaeological Society (pp. 106-118). Ontario Archaeological Society.

Praxis Research Associates. (n.d.). *The History of the Mississaugas of the New Credit First Nation.* Hagersville: Lands, Research, and Membership, Mississaugas of the New Credit First Nation.

Schmalz, P. S. (1991). *The Ojibwa of Southern Ontario.* Toronto: University of Toronto Press.

Smith, D. (2022). Their Century and a Half on the Credit: The Mississaugas. In F. Dieterman (Ed.), *Mississauga: The First 10,000 Years* (pp. 107-122). Mississauga: Eastendbooks.

Tanner, H. (Ed.). (1987). *Atlas of Great Lakes Indian History.* Norman: University of Oklahoma Press.

Tremaine Geo. R. & G.M. Tremaine. 1861. *Tremaine's Map of the County of Waterloo, Canada West*. Geo. R. Tremaine & G.M. Tremaine.

Walker & Miles. 1877. *Illustrated Historical Atlas of the County of Waterloo, Ont.* Toronto: Walker & Miles Co.

Warrick, G. A. (2000). The Precontact Iroquoian Occupation of Southern Ontario. *Journal of World Prehistory, 14*(4), 415-66.

Warrick, G. A. (2013). The Aboriginal Population of Ontario in Late Prehistory. In M. K. Munson, & S. M. Jamieson (Eds.), *Before Archaeology: The Archaeology of a Province* (pp. 62-76). McGill-Queen's University Press.

Weaver, S. (1978). Six Nations of the Grand River, Ontario. In B. Trigger (Ed.), *Handbook of North American Indians* (Vol. 15: Northeast, pp. 525-536). Washington: Smithsonian Institute Press.

8.0 Maps

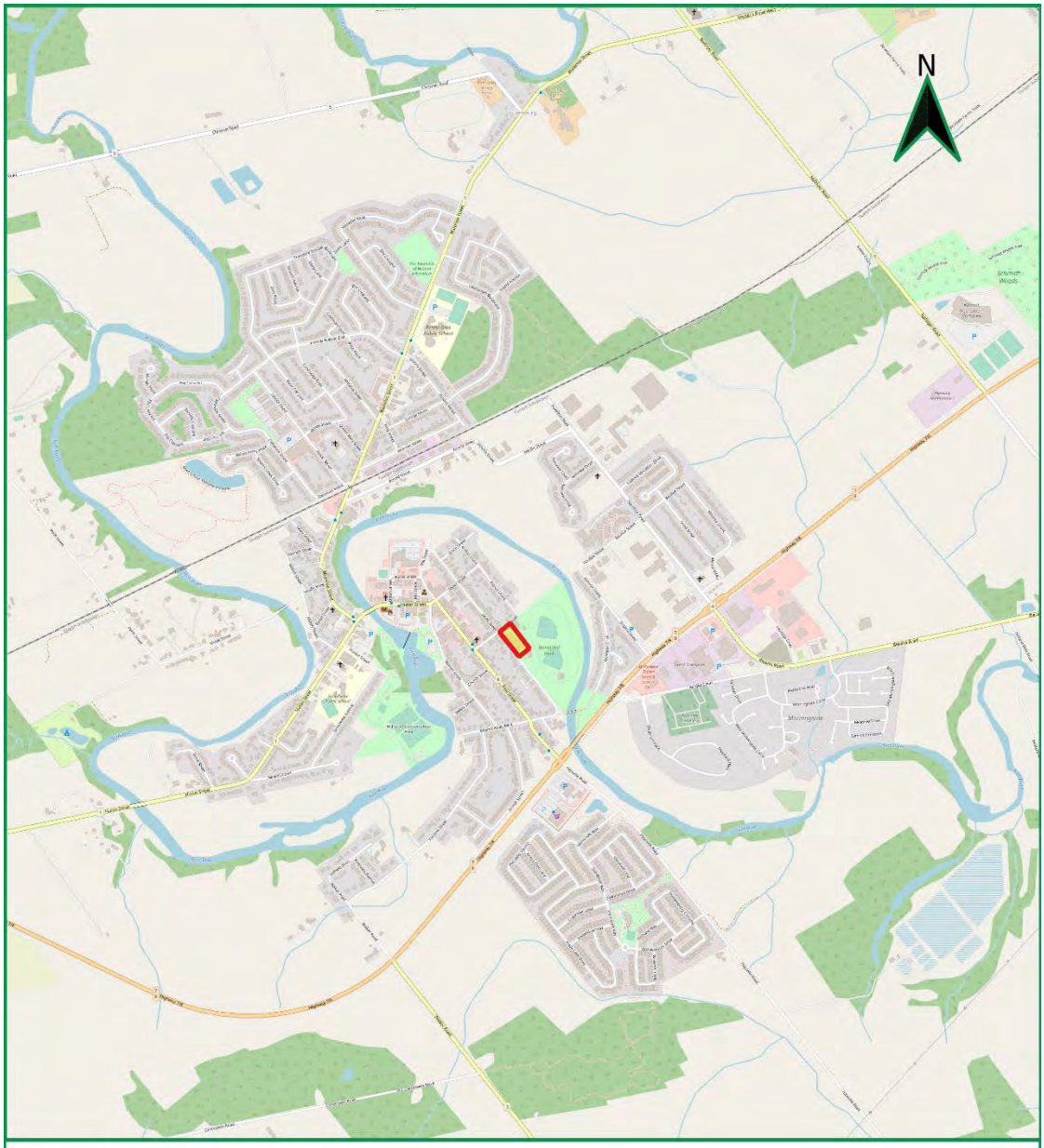


Figure 1: Study Area

Map Creator: Jessie Rae
CRS: WGS 84 NAD 17N
Baselayer: Open Street Maps

Figure 2: Portion of the 1861 *Tremaine's Map of the County of Waterloo, Canada West*

Figure 3: Portion of the 1877 *Historical Atlas* Map of Wilmot Township

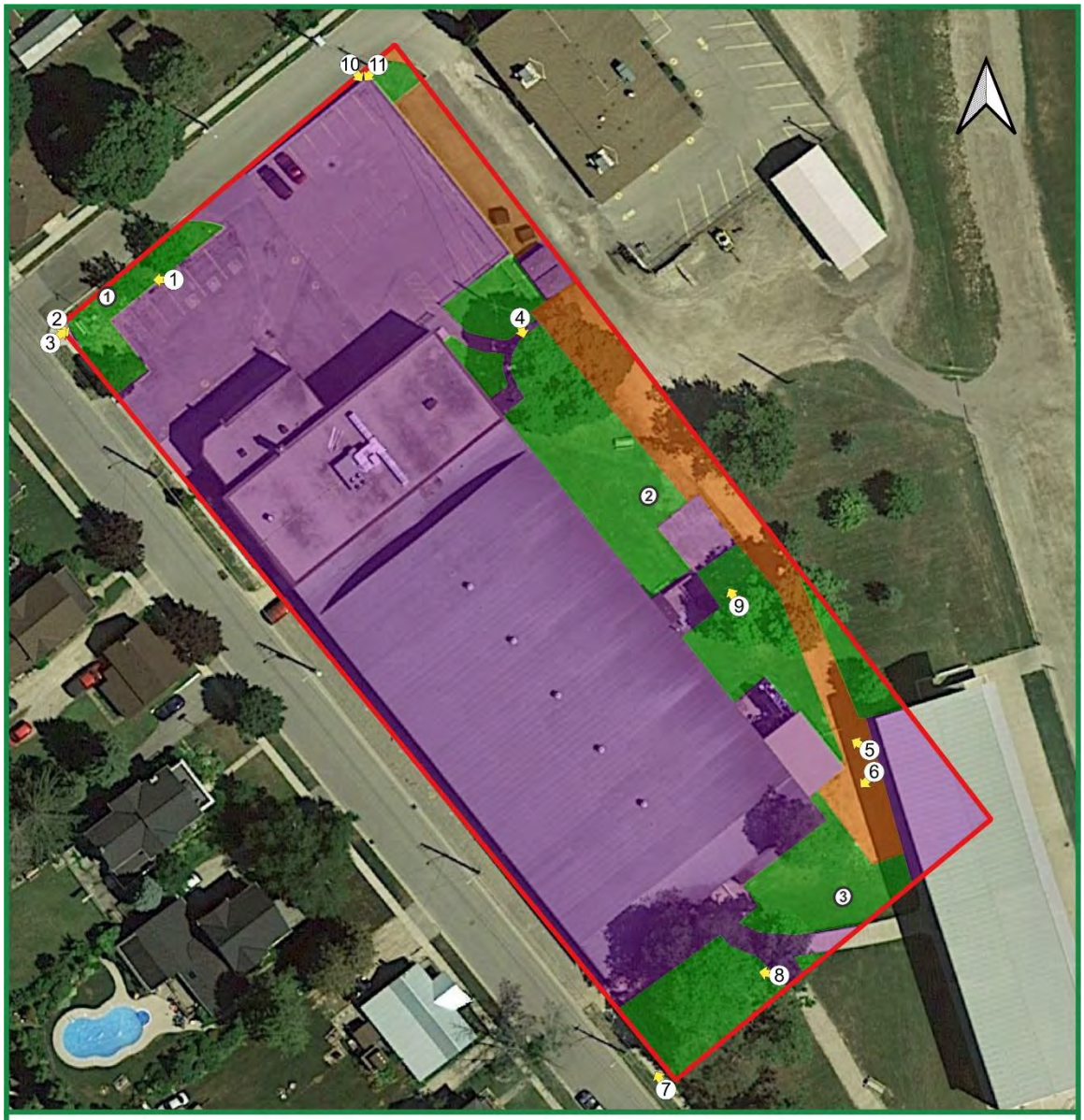
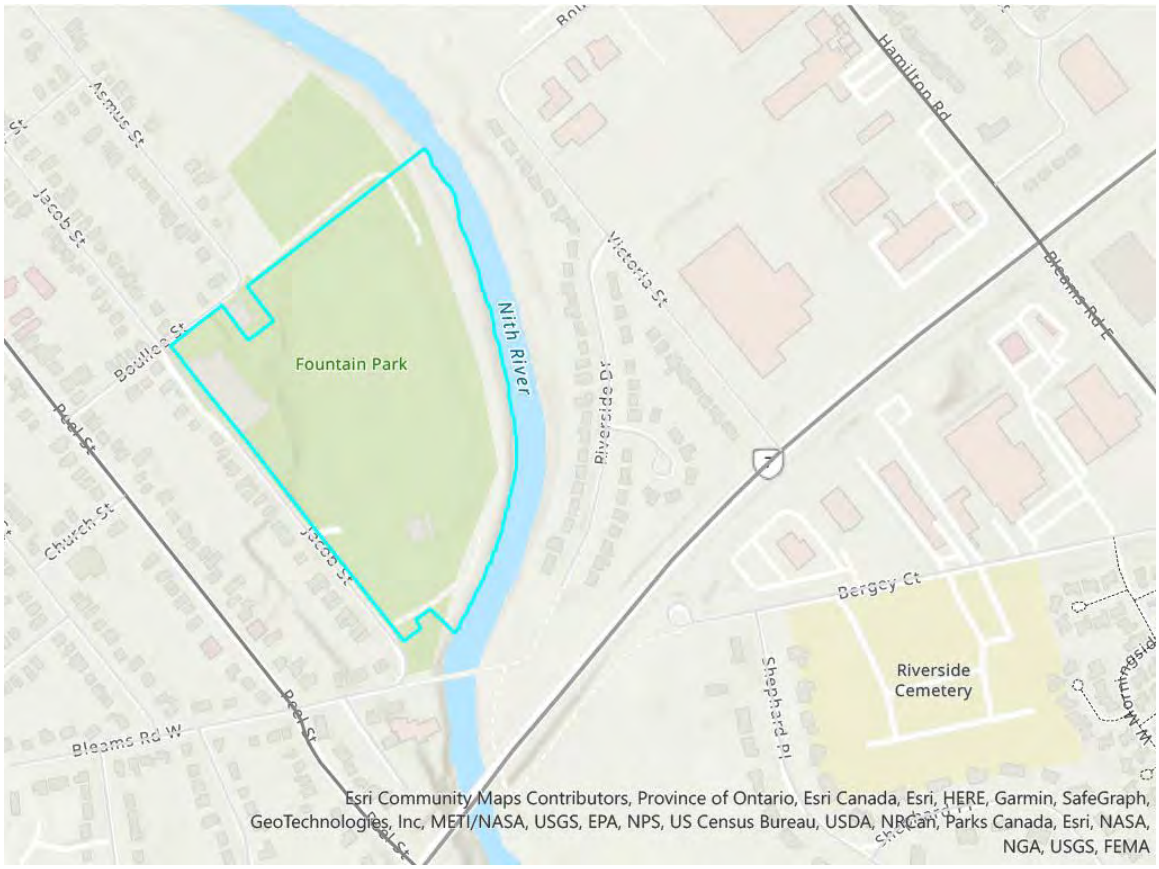


Figure 4: Stage 2 Survey Methods

Figure 5: Stage 2 Survey Methods in Relation to the Property Boundaries

Figure 6: Property Boundary Map



9.0 Images

Photo 1: Manicured Lawn Judgemental Test Pit Surveyed, Confirmed Disturbed; facing northwest

Photo 2: Manicured Lawn Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Community Centre and Arena Building and Asphalt Parking Lot; facing south

Photo 3: Manicured Lawn Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Asphalt Parking Lot, facing east

Photo 4: Manicured Lawn Judgemental Test Pit Surveyed (visible gravel on surface), Confirmed Disturbed; Disturbed Concrete Sidewalk and Stairs, facing south

Photo 5: Manicured Lawn and Gravel Laneway Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Arena Building, Concrete Sidewalk, facing north

Photo 6: Manicured Lawn and Gravel Laneway Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Arena and Concrete Sidewalk, facing west

Photo 7: Manicured Lawn Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Concrete Sidewalk Near Arena Building, Arena Building, and Asphalt Parking Area, facing north

Photo 8: Manicured Lawn Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Building and Concrete Sidewalk facing west

Photo 9: Manicured Lawn and Gravel Laneway Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Concrete Pad, Concrete Stairs, and Building facing north

Photo 10: Gravel Parking Lot Judgemental Test Pit Surveyed, Confirmed Disturbed; Disturbed Asphalt Parking Lot and Building, facing south

Photo 11: Disturbed Asphalt Parking Lot and Building; facing west

Photo 12: Sample Test Pit #1

Photo 13: Sample Test Pit #6

Photo 14: Sample Test Pit #7

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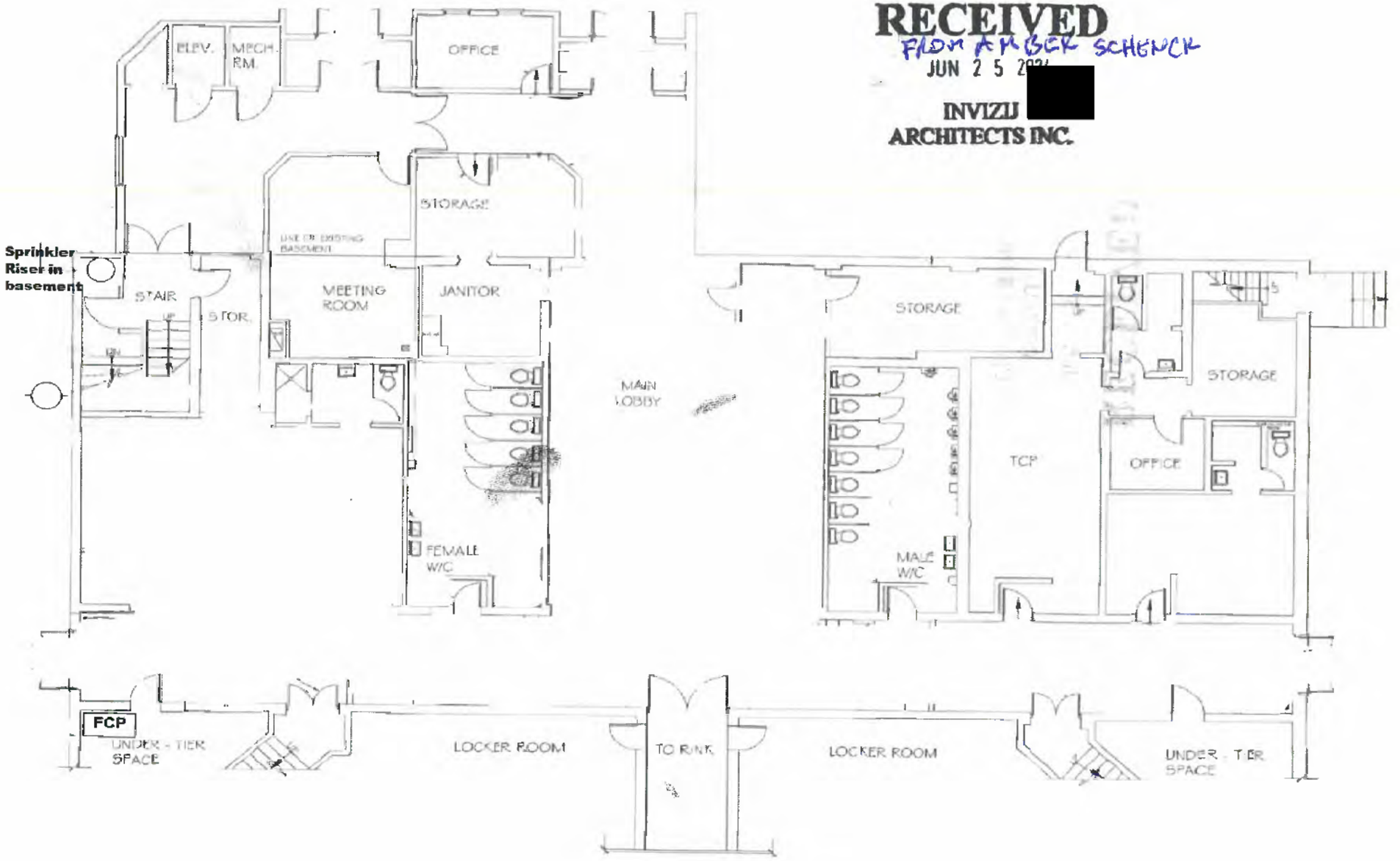


New Hamburg Arena

Roof Membrane Replacement

Stantec

1 GENERAL

1.1 INSTRUCTIONS

.1 Information for Tenderers, Supplementary General Conditions and Division 1 shall apply to and form part of this Section.

1.2 WORK INCLUDED

.1 This Contractor shall provide all labour, materials, equipment, transportation and incidentals noted, specified or required, to complete the work of this Section to the full extent of the contract drawings and specifications.

.2 This Section specifies caulking and sealants not specified in other Sections.

.3 Refer to other sections for other caulking and sealants.

1.3 REFERENCE STANDARDS

.1 The latest editions of the following codes and standards shall apply unless otherwise indicated:

CAN/CGSB-19.13	Sealing Compound, One-component, Elastomeric, Chemical Curing.
CGSB 19-GP-17M	Sealing Compound, One Component, Acrylic Emulsion Base.
CAN/CGSB-19.18	Sealing Compound, One Component, Silicone Base, Solvent Curing.
CGSB 19-GP-22M	Sealing Compound Mildew Resistant, for Tubs and Tile.
CAN/CGSB-19.24	Sealing Compound, Multi-component, Chemical Curing.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact. Protect from freezing, moisture and water.

1.5 ENVIRONMENTAL AND SAFETY REQUIREMENTS

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada.

.2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

2 PRODUCTS

2.1 SEALANT MATERIALS

.1 Sealants acceptable for use on this project must be listed on CGSB Qualified Products List issued by CGSB Qualification Board for Joint Sealants. Where sealants are qualified with primers use only these primers.

2.2 SEALANT COMPOUND

.1 Multi-Part Polyurethane Sealant: Non-sag type, per CAN2-19.24M, Type II, Class A. Furnish in standard colours as selected.

- Products Research and Chemical Corp. "PRC Rubber Calk 210 Sealant and 270 Sealant"
- Mameco International "Vulkem 227"
- Tremco "Dymeric"
- W.R. Meadows "Dualthane 7900-232" (12.5%)

.2 One-Part Polyurethane Sealant: Non-sag type per CAN2-19.13-M82, Type II, Class 25, Class A. Furnish in standard colours as selected.

- Mameco International "Vulkem 116" or "Vulkem 118"
- Products Research and Chemical Corp. "PRC Rubber Calk 6000 Sealant"
- Sika Canada Inc. "Sikaflex-la"

.3 Silicone Sealant: Non-sag type, per CAN2-19.13-M82, Type II, Class A. Furnish in standard colours as selected.

- Dow Corning Corp. '790 Building Sealant"
- General Electric Silicone Products Department "1200 Series Sealant"
- Pecora Corp. "862 Architectural Silicone Sealant"

2.3 CAULKING COMPOUND

.1 Caulk: Non-sag, one-part polyurethane base caulk. Furnish in standard colours as selected.

- Tremco "Dymeric"

2.4 BACK-UP MATERIALS

.1 Polyethylene, Urethane, Neoprene or Vinyl Foam

Extruded closed cell foam backer rod.

.2 Bond Breaker Tape

Polyethylene bond breaker tape which will not bond to sealant.

2.5 JOINT CLEANER

.1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.

.2 Primer: as recommended by manufacturer.

3 EXECUTION

3.1 PREPARATION OF JOINT SURFACES

.1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.

.2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair work.

.3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.

.4 Ensure joint surfaces are dry and frost free.

.5 Prepare surfaces in accordance with manufacturer's directions.

3.2 PRIMING

.1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.

.2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.3 BACKUP MATERIAL

.1 Apply bond breaker tape where required to manufacturer's instructions.

.2 Install joint filler to achieve correct joint depth and shape.

3.4 MIXING

.1 Mix materials in strict accordance with sealant manufacturer's instructions.

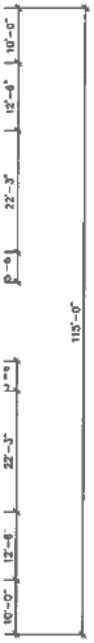
3.5 APPLICATION

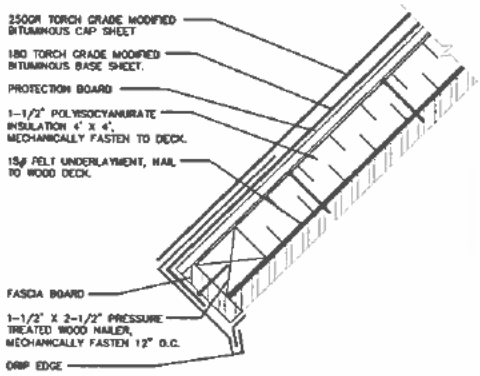
.1 Sealant.
- .1 Apply sealant in accordance with manufacturer's instructions.
- .2 Apply sealant in continuous beads.
- .3 Apply sealant using gun with proper size nozzle.
- .4 Use sufficient pressure to fill voids and joints solid.
- .5 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.
- .6 Tool exposed surfaces to give slightly concave shape.
- .7 Remove excess compound promptly as work progresses and upon completion.

.2 Curing.
- .1 Cure sealants in accordance with sealant manufacturer's instructions.
- .2 Do not cover up sealants until proper curing has taken place.

.3 Cleanup.
- .1 Clean adjacent surfaces immediately and leave work neat and clean.
- .2 Remove excess and droppings, using recommended cleaners as work progresses.
- .3 Remove masking tape after initial set of sealant.

END OF SECTION





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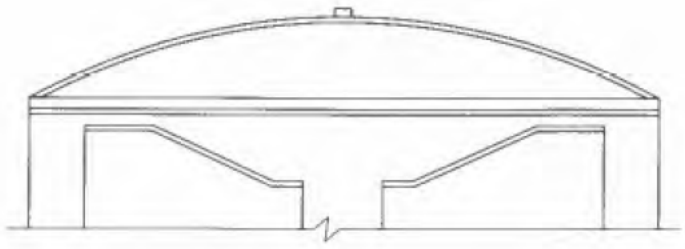

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871 Victoria Street North
Kitchener ON Canada
N2B 3S4
Tel 519.579.4410
Fax 519.579.6733
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Notes

Revision	By	Appd.	YY.MM.DD
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Seal

Client/Project

NEW HAMBURG ARENA
ROOF MEMBRANE REPLACEMENT
New Hamburg ON Canada

Title
ROOF PLAN, ELEVATIONS AND DETAILS

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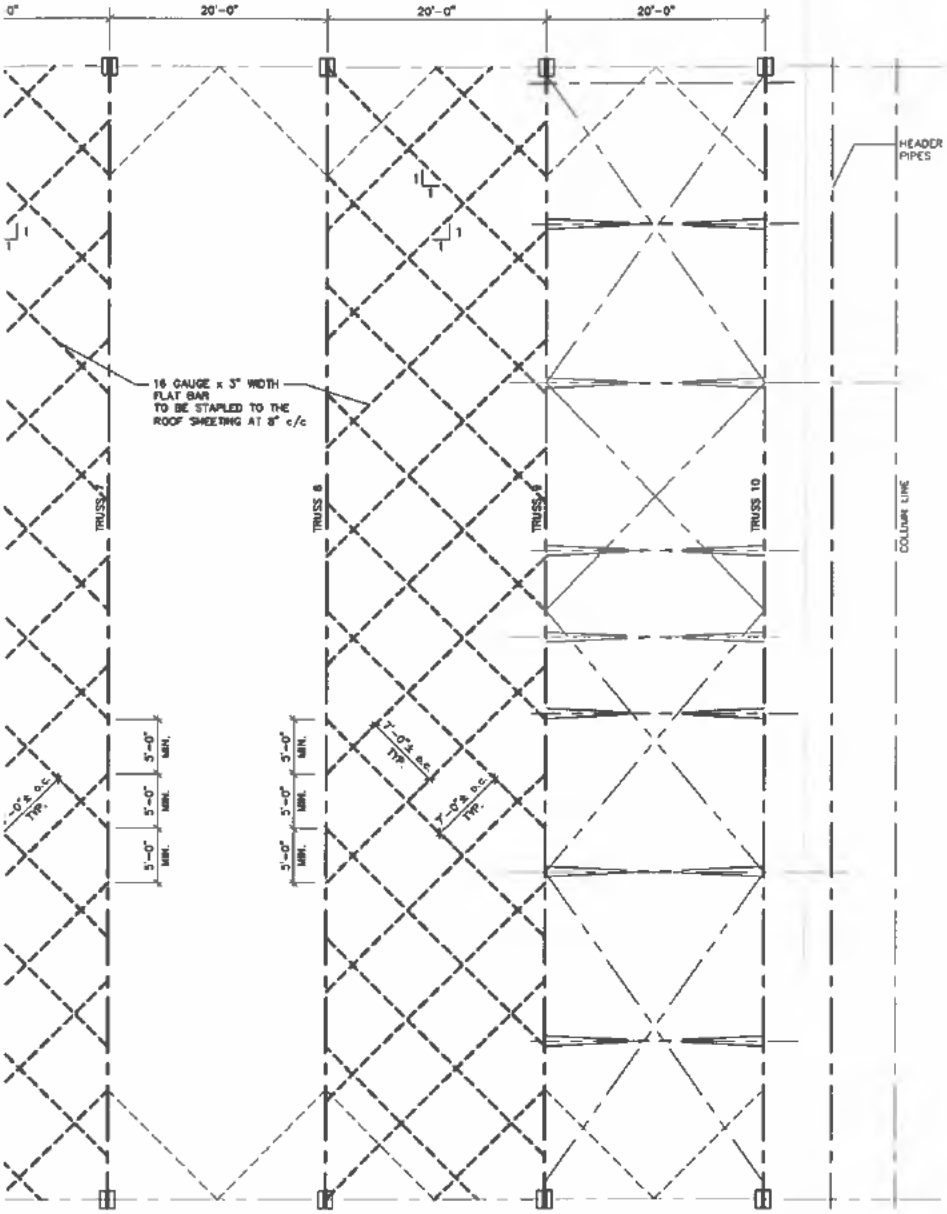

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NEW HAMBURG ARENA
ROOF MEMBRANE REPLACEMENT
New Hamburg ON Canada

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GAUGE METAL LATERAL DIAPHRAGM TIES

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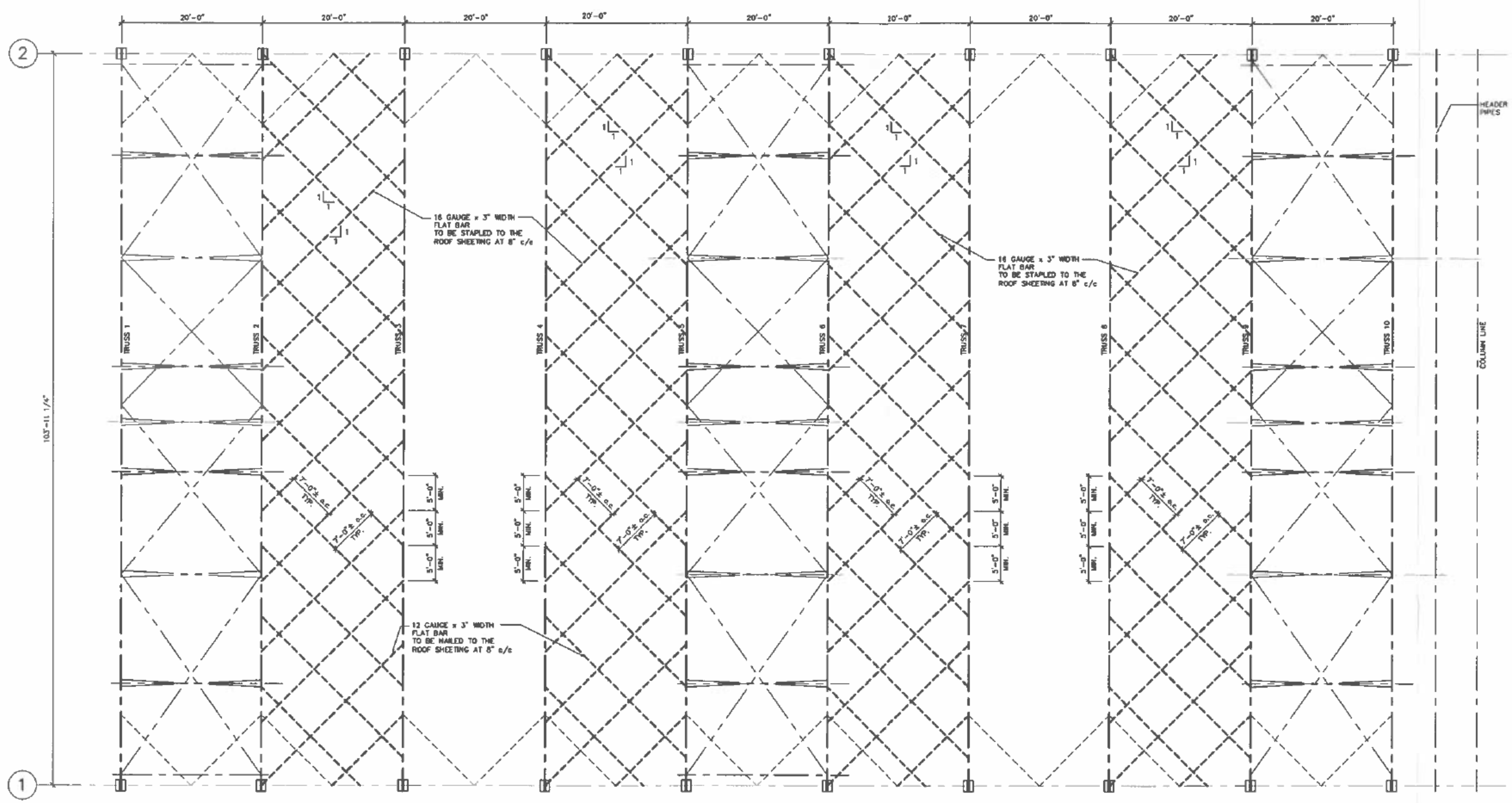

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NEW HAMBURG ARENA
ROOF MEMBRANE REPLACEMENT
New Hamburg ON Canada

Title

GAUGE METAL LATERAL
DIAPHRAGM TIES

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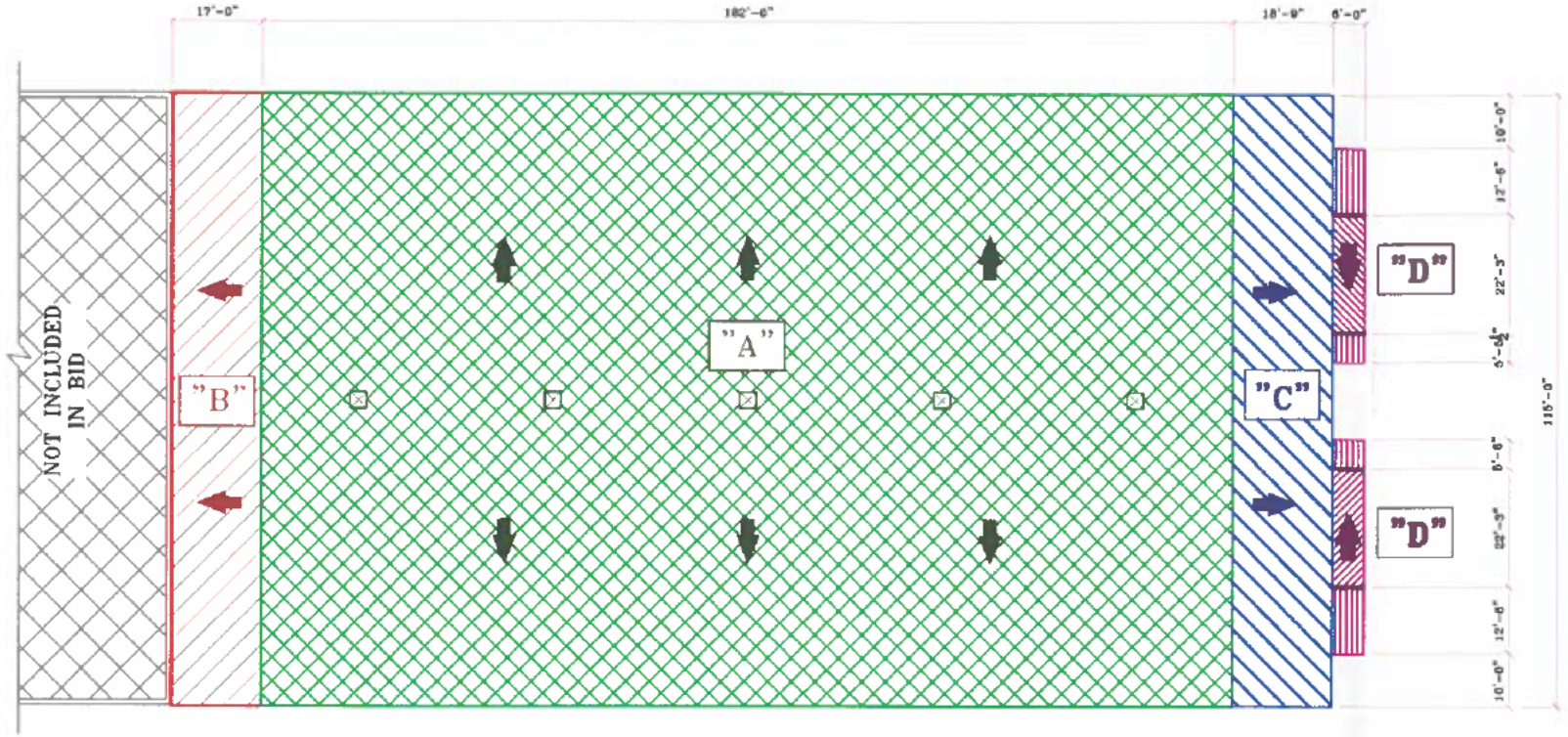

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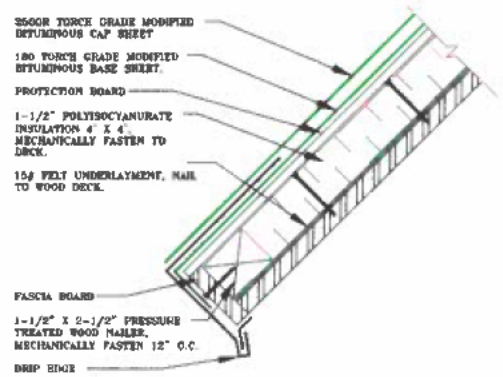

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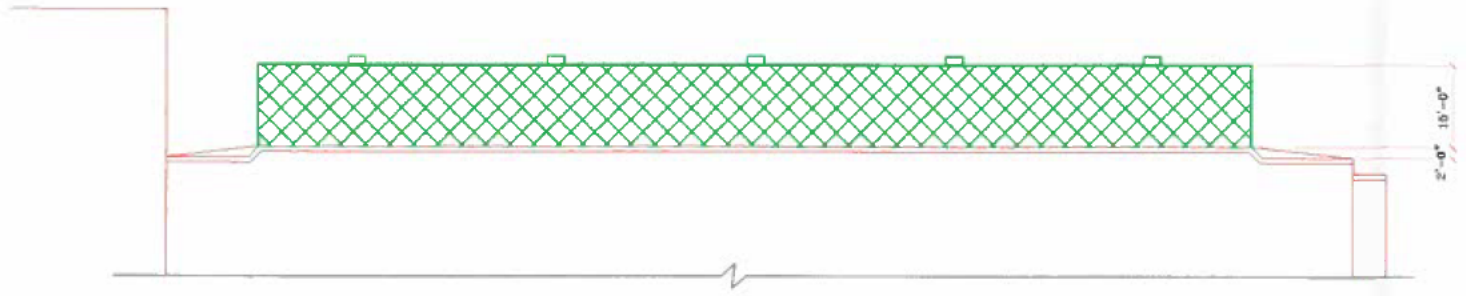

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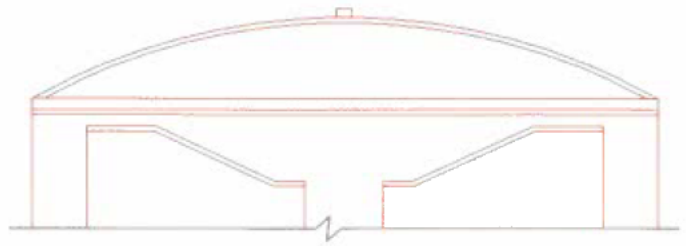

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ROOF MEMBRANE REPLACEMENT
New Hamburg ON Canada

Title
ROOF PLAN, ELEVATIONS AND DETAILS

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ORIGINAL SHEET - ARCH D

New Hamburg Arena

Roof Membrane Replacement

Prepared for:
Township of Wilmot

Prepared by:
Stantec Consulting Ltd.

June 2001

610-00122

Stantec

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

TENDERER'S CHECK LIST

Before submitting your tender, check the following points:

1. Has your tender been signed, sealed and witnessed? _____
2. Have you completed all schedules and prices in the Form of Tender? _____
3. Have you indicated the number of addenda included in the tender price? _____
4. Have you indicated completion date on Construction Schedule in the Form of Tender? _____
5. Have you listed your Sub-Contractors and major suppliers? _____
6. Have you provided required alternate prices in the Form of Tender? _____
7. Are the documents complete? _____

Note: Your tender will be informal and may be disqualified if ANY of the foregoing points (if applicable) have not been complied with.

MAKE SURE THAT YOU SEAL THE TENDER IN THE ENVELOPE.

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

CONTRACT DOCUMENTS

GENERAL INDEX

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

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INFORMATION FOR TENDERERS

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MEMBRANE REPLACEMENT

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TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION A

INFORMATION FOR TENDERERS

IT 1. PRIME CONTRACTOR

.1 For this project, roofing contractor shall be the prime contractor. Roofing contractor shall be responsible for coordination, scheduling and performance of all trades required for the successful completion of this project. The term "the contractor" in this specification shall refer to the roofing (prime) contractor.

IT 2. PREPARATION OF PLANS AND SPECIFICATIONS AND SUPERVISION OF WORK

.1 The plans and specifications for the work have been prepared for the owner, Township of Wilmot, by the Engineer, Stantec Consulting Ltd., who will, pursuant to GC3 of the General Conditions, inspect and monitor the work to be done under this contract.

.2 Should a Tenderer find discrepancies, omissions, or ambiguities, or not agree that the materials and methods specified or designed will provide an installation which meets the requirements of the intended works, he shall notify the engineer prior to the Tender opening date. The Engineer may choose to issue a written addendum. Addenda issued during the tendering period shall be allowed for by the Tenderer in submitting his Tender. No oral interpretation made by the Owner or the Engineer will be effective to modify any aspect of the Contract Drawings, Specifications or Documents.

.3 Clarifications may be issued in the form of an addendum, a copy of which will be forwarded to known prime contract bidders.

.4 All work must be completed on an agreed upon date between the Owner and the successful bidder.

.5 The Owner may request the submission of ALTERNATE PRICES and SEPARATE PRICES. An itemized list will be requested in the tender form only.

.6 For the purpose of this contract, the Engineer, Stantec Consulting Ltd. shall perform the following functions:

- releasing, recording, and receiving bids
- opening, recording and checking of bids
- answering queries of prospective bidders
- considering extensions of time
- reviewing bids received
- ruling of the acceptance of those not completely meeting the bid requirements

IT 3. EXAMINATION OF SITE

.1 The Tenderer shall visit the site of the work before submitting his Tender. He shall make his own estimate of the facilities and difficulties that may be encountered and the nature of the concealed conditions. He shall not claim at any time after submission of his Tender that there was any misunderstanding of the terms and conditions of the Contract related to site conditions.

.2 Immediately notify the engineer upon finding design errors, inconsistencies or omissions in the Bid Documents and site examination. The Owner's representative and consultants will not accept claims for extras from the contractor, based on his failure to detect and report same found in the Bid Documents, and site examination before tender closing.

.3 The New Hamburg Arena, located at Jacob Street, New Hamburg, Ontario. Contractors can visit the arena during normal business hours. Site contact is Mr. Pad Kelly, 519-662-2410.

.4 The contractor is expected to be totally familiar with site conditions and shall assume full responsibility for the cost involved in repairing any damage to services, city property, adjacent buildings, etc., during general construction, regardless of the extent of the damage.

IT 4. GOODS AND SERVICES TAX

.1 The total tender price shall include all Government customs duties and excise taxes applicable at the time of execution of the contract.

.2 The unit prices shall not include the Goods and Services Tax. The applicable amount of Goods and Services Tax for the entire Contract is to be entered as a separate item on the Tender Summary Page.

.3 Prior to execution of the Contract, the Contractor shall provide his GST Registration Number to the Owner.

IT 5. ONTARIO RETAIL SALES TAX

.1 Tenderers shall include in the tendered price(s) all Provincial Sales Taxes on applicable materials.

.2 If, subsequent to the award of the Tender, the Ontario Retail Sales Tax Act is changed so that tax must be paid on items previously exempt or items on which tax was paid become exempt, the Contractor shall ensure that the correct amount of tax is paid; when a tax is decreased or eliminated, a corresponding credit will accrue to the Owner; when a tax is increased or added, the Owner will pay such increase in tax or additional tax upon submission of appropriate documentation by the Contractor.

.3 If the Contractor is non-resident in Ontario, he shall, immediately upon execution of the agreement, obtain from the Retail Sales Tax Branch a certificate showing that the Contractor has registered with the Retail Sales Tax Branch and shall submit such certificate to the Owner prior to commencing work under this contract.

IT 6. ITEMS

.1 The parts of the work have been divided into items, in order to enable the Tenderer to tender for the different portions of the work in accordance with his estimate of cost for each portion. The intent is that for each item of work, the actual quantity executed may be paid for at the rate stated for that particular item of work in the Form of Tender, subject to the basis of payment laid down for each item in the Specifications.

IT 7. PROVISIONAL ITEMS AND CASH ALLOWANCES

.1 When it is expected that certain specific items of Work may be required during the course of construction, but the exact requirements of those items of Work will depend on ground conditions or other uncertain factors encountered, such items are shown in the Form of Tender as Provisional Items and cash allowances. The quantities may vary significantly, or the item may not be used at all, at the sole discretion of the Engineer. The Tenderer shall price these items accordingly and shall not claim any anticipated loss of profit or increased overhead if any or all of these items is deleted altogether, or the quantities are significantly amended.

IT 8. CONTINGENCY ALLOWANCES

.1 Where the Owner and/or Engineer considers it advisable, under the circumstances of the Project, to provide additional Lump Sum allowance(s) to pay for Work which is completely unforeseen, such allowance(s) are reflected in the Form of Tender as Contingency Allowance(s). The Contractor is not entitled to payment from such allowances except for extra or additional Work carried out by him in accordance with the Contract and only to the extent of such extra or additional Work as authorized in advance by the Engineer in writing.

IT 9. RIGHT TO ACCEPT OR REJECT TENDERS/SUBCONTRACTORS

.1 The Owner reserves the right to reject any or all Tenders or to accept any Tender should it be deemed in the interest of the Owner to do so. In particular, if only one Tender is received, the Owner reserves the right to reject it. Further, the Owner may decide not to award a contract to any bidder, pending budget, timing and other considerations. In that event, compensation will not be made to any bidder for the costs of preparing the tender.

.2 In particular, the Owner reserves both the right to reject a Tender from any person or corporation with whom the Owner is in litigation, and the right to prevent (in accordance with GC10) such person or corporation from performing any supply or subcontract function on this project.

.3 Accordingly, the Tenderer's attention is specifically directed to GC10 for conditions respecting the naming and use of subcontractors. This clause may have an effect on the Owner's decision to award the contract.

.4 The Owner reserves the right to reject a proposed sub-contractor for reasonable cause.

.5 The Owner reserves the right to name the pre-qualified sub-trades.

.6 The contractor is to submit with his bid, a list containing the names of all sub-contractor firms carried (See tender form.).

.7 Sub-contractors named in the Contractor's Bid Form shall be engaged for work of this contract, and shall not be replaced by the contractor except with the Owner representative's prior consent.

IT 10. ABILITY AND EXPERIENCE OF TENDERER

.1 It is not the purpose of the Owner to award this Contract to any Tenderer who does not furnish satisfactory evidence that he has ability and experience in this class of work and that he has sufficient capital and plant to enable him to prosecute the work successfully and to complete it in the time required by the Contract. By prequalification the Owner has accepted the contractor's abilities as being adequate. The Owner may wish additional information at the time of tender.

IT 11. INFORMAL TENDERS

.1 Tenders which are incomplete, conditional or obscure, or which contain additions not called for, erasures, alterations or irregularities of any kind, may but shall not necessarily be rejected as informal.

IT 12. UNBALANCED OR INCORRECT TENDERS

.1 The unit price quoted in the Form of Tender shall be a reasonable unit price for each item. The Owner shall be the sole judge of such matters. Any Tender considered by the Owner to be unbalanced may, but shall not necessarily, be rejected by the Owner.

.2 Where the amount for an item does not agree with the extension of the estimated quantity and the tendered unit price, the unit price shall govern and both the item amount and the total tender price shall be corrected accordingly. If both the unit price and the total price for an item are left blank, then both shall be considered a zero. If the unit price is left blank, but a total price is shown for the item, then the unit price shall be determined by dividing the total price by the estimated quantity.

IT 13. TENDER LEFT OPEN

.1 The Tenderer shall keep his Tender open for acceptance for sixty (60) days after its submission.

IT 14. DELIVERY AND OPENING OF TENDERS

.1 Submit sealed tenders to the office of Stantec Consulting Ltd., complete in every respect, sealed in an envelope, which shall be clearly marked with New Hamburg Arena Roof Membrane Replacement.

Attention: Terry Warne
Stantec Consulting Ltd.
871 Victoria Street North
Kitchener, Ontario N2B 3S4

NO LATER THAN: 3:00 PM (Eastern Daylight Savings Time) on Monday July 9, 2001.

.2 Tender envelopes shall be plainly marked only with **"New Hamburg Arena Roof Membrane Replacement"** and shall bear no other identifying marks.

.3 Tenders shall be submitted in duplicate on the supplied separate Form of Tender. The Form of Tender shall be completed in every respect, with all blanks filled in by typewriter or legibly printed in ink. Tenders must be properly signed, sealed and witnessed or signed and sealed if the Tenderer is a corporation; otherwise the Tender may, but shall not necessarily, be declared "Informal" and rejected.

.4 Tenders may be withdrawn by written notice filed at any time prior to the opening of the first Tender. Tenders are irrevocable thereafter.

.5 Tenders will not be accepted if submitted by facsimile transmission (fax).

IT 15. INSURANCE

.1 Prior to execution, of the contract documents, the successful tenderer shall provide to the Owner a Certificate of Insurance or a certified copy of Insurance policy, in accordance with GC11 as amended by SGC5.

IT 16. WORKER'S COMPENSATION BOARD

.1 Prior to execution of the Contract Documents, the successful Tenderer shall provide to the Owner a Certificate from the Worker's Compensation Board stating that all assessments have been paid and that the Contractor is in good standing with the Workers Compensation Board.

.2 A similar certificate shall be provided by the Contractor on completion of the work and before either the final payment or any release of holdback is made.

IT 17. AWARD AND EXECUTION OF CONTRACT

.1 If the Owner decides to proceed with the project, the Contract shall be deemed to have been awarded on the date when formal notice of award was served by the Owner upon the Tenderer. Such notice may be made by registered mail or courier, in which cases the date of mailing or shipping shall be the date referred to above; or by facsimile transmission ("fax"), in which case the date of transmission will be the date of award.

.2 To summarize the requirements of other paragraphs of the Information for Tenderers, the following documentation is required from the Contractor prior to or upon execution of the Contract:

(i) the Contractor's GST Registration Number (IT 4);
(ii) the proof of insurance (IT 16); and
(iii) the Workers' Compensation Board Certificate (IT 17).

.3 It is understood that the successful bidder of this trade package will enter into a contract with the Owner by signing, at the discretion of the Project Manager, either a CCDC Document 2, 1994 stipulated sum contract or a Stantec Consulting Ltd. form of agreement contract as per enclosed.

.4 If the Tenderer refuses or fails to execute the Contract within ten (10) working days after award, it will be considered that the Tenderer has abandoned all rights and interests in the Contract. The Owner shall, in such event, be free to award the Contract to another Tenderer or to re-tender the work.

IT 18 CONTRACT PRICE BREAKDOWN

.1 Prior to the execution of the contract documents, the successful tenderer shall provide to the Owner a contract price breakdown schedule by work order number in accordance with the Owner's format.

IT 19 WORK/RESOURCE SCHEDULE

.1 Prior to the pre-construction meeting and execution of the contract documents, the successful tenderer shall provide to the Owner a work/resource schedule for the work of this contract.

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION B

FORM OF TENDER

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION B

FORM OF TENDER

- INDEX -

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

FORM OF TENDER

Tender by: _____
(Name)

Residing at or place of Business: _____

Having Head Office at: _____

hereinafter called the Tenderer, hereby offers to the Owner:

TOWNSHIP OF WILMOT

We, the undersigned, having carefully examined the site of the work, investigated the conditions pertaining to the work, the Information for Tenderers, the Form of Agreement, the Special Provisions, the General and Supplementary General Conditions, the Specifications and the Drawings, including *Addenda No. ____ to ____, (herein collectively called the "Contract" or "Contract Documents") for **New Hamburg Arena Roof Membrane Replacement.**

(herein called the "work") will provide and pay for all materials, labour, water, tools, equipment, plant, light and power necessary for the execution of the work as called for by the said Contract Documents in the manner prescribed therein and in accordance with the requirements of the Engineer (as defined in the Agreement) under them for the amount of **_____

DOLLARS ($_____).

The unit prices set out in the Schedule of Unit Prices are to be used for any extra work authorized by the Engineer and for computing payments. We understand that the quantities of Work as shown in the Schedule of Unit Prices are subject to increase or decrease, and are approximate only; and we offer to do the Work, whether the quantities are increased or decreased, at the unit prices stated in the Schedule of Unit Prices.

The Owner reserves the right to add or delete items listed under "Schedule of Alternate Prices" from the Tender Prices..

---

* Insert number of Addenda, if any.
** Bring forward total tender price from page FT- 2 of the Form of Tender.

BREAKDOWN OF TENDER PRICES

DESCRIPTION	
Roof membrane replacement on barrel roof and above bleacher access ways	$_____
Placement of diagonal gauge metal lateral diaphragm ties	$_____
SUBTOTAL TENDER	$_____
Plus 7% GST	$_____
TOTAL TENDER	$_____

(transfer amount to Page FT-1)

HOURLY RATES

The Contractor shall include hourly labour rates for skilled trades which may be used for additions or deletions from the contract.

Hourly rates shall include workers wage, payroll burden, mark-ups for contractor, overhead and profit.

Description	Unit	Add/Deduct
Foreperson Regular Hourly Rate	HR	$_____
Journeyperson Regular Hourly Rate	HR	$_____
Foreperson Overtime Hourly Rate	HR	$_____
Journeyperson Overtime Hourly rate	HR	$_____

MARK-UP PERCENTAGES

For extra work added to the contract, the contractor shall be entitled to the following mark-ups. Mark-ups shall not be permitted on sub-contractors deemed to be under the same corporate umbrella.

Mark-up on materials for Overhead and Profit	10%
Mark-up on Subcontractors	5%

ALTERNATE PRICES

The following are our prices for the alternative work listed hereunder. Such alternative work and amounts are NOT included in our Bid Price and are to reflect the net change to the stipulated price. These prices for the alternative work do NOT include Value Added Taxes.

Description of Alternate Work	Effect on Stipulated Price ($)	
	Addition	Deduction
1.		

NOTE: .1 The above prices include all contractor overhead, profit, project administration, provincial sales taxes, and costs.

SEPARATE PRICES

The following are our prices for the separate work listed hereunder. Such separate work and amounts are NOT included in our Bid Price. These prices for the separate work do NOT include Value Added Taxes.

	Description of Separate Work	Addition to Stipulated Price ($)
.1	Extra to replace roof membrane on the North lean-to-roof.	
.2	Extra to replace roof membrane on the South lean-to-roof	
.3	Extra to replace upgrade to 15 year material and workmanship warranty	
.4	Extra to replace existing wood deck planks/L.F.	
.5	Extra to replace existing plywood deck/S.F.	

NOTE: .1 The above prices include all contractor overhead, profit, project administration, provincial sales taxes, and costs.

SCHEDULE OF PROVISIONS, PLANS, STANDARD DRAWINGS, SPECIFICATIONS AND CONDITIONS

The work specified in this Contract will be performed in strict accordance with the following Provisions, Plans, Specification and Conditions. In reading, interpreting and applying these specifications, the words "Owner", or "Corporation" are substituted for "**Township of Wilmot, Baden, Ontario**", where they appear in these documents. "Engineer" means Stantec Consulting Ltd. and its authorized representative. In all cases, the proper context shall apply.

1. INFORMATION FOR TENDERERS (Abbreviated as IT)

   Attached as Section A.

2. FORM OF TENDER (Abbreviated as FT)

   Attached as Section B.

3. FORM OF AGREEMENT (Abbreviated as FA)

   Attached as Section C.

4. DEFINITIONS and GENERAL CONDITIONS (abbreviated as GC)

   Attached as Section D.

5. SUPPLEMENTARY GENERAL CONDITIONS (Abbreviated as SGC)

   Attached as Section E.

6. TECHNICAL SPECIFICATIONS

   Attached as Section F.

7. DRAWINGS

   Attached as Section G.

8. TIME SCHEDULE

   Attached as Section H.

LIST OF PROPOSED SUB-CONTRACTORS

We shall subcontract the following parts of the Work to the sub-contractor or supplier listed for such part. We agree not to make changes in the following list without the written consent of the Contract Administrator and the Owner. In our opinion the sub-contractors named hereunder are reliable and competent to perform that part of the Work for which each is listed; however, we agree that the Owner may make changes pursuant to GC3.8. We understand that if we name alternative sub-contractors, or if we fail to name sub-contractors, or if we fail to mention that the Work will be done by our own forces where applicable, our Tender is subject to disqualification.

Part of Work	**Sub-Contractor or Supplier**	**Address**

TIME FOR COMPLETION

The work of this Contract shall be completed fully either before the following date or within the following number of working days, as applicable:

a) Stipulated Completion Date: Friday August 24, 2001

b) Working Day Allowance: N/A

If any of the above spaces are left blank, the Contractor shall fill in either the Stipulated Completion Date or the Working Day Allowance, but not both, and the Contract Time for Completion shall be so governed.

The definitions, provisions and requirements of SGC 2 "Time", of Section 'F' - Supplementary General Conditions, shall apply.

The dates as detailed in (a) above will be extended if:

i)

ii)

iii)

TENDER EXECUTION

The Contractor agrees that, if this Tender is accepted by the Owner:

1) this Tender will be irrevocable until the expiry of the acceptance period stipulated in the Information for Tenderers; and
2) notification of acceptance of this Tender shall be in writing, and may be sent by prepaid post; and if sent by prepaid post, acceptance shall be deemed to have been made on the date of mailing of such notification; and
3) commence the work as specified, proceed continuously, and complete all work within the time provided for in the above "Time For Completion" beginning seven (7) calendar days after the notice of the award of the Tender has been given the Contractor, and
4) the Contract work shall be performed in accordance with the terms and the requirements of the Contract Documents which pertain to this Contract; and
5) carry out any additional or extra work (including the supply of any additional materials or equipment pertaining thereto) or will delete any work as may be required by the Owner in accordance with the Contract.

We declare that:

1) this Tender is made without any connection, comparison of figures or arrangements with, or knowledge of, any other corporation, firm or person making a Tender for the same work and is in all respects fair and without collusion or fraud; and
2) The Surety Company named in the "Agreement to Bond" form enclosed herewith is a company lawfully doing business in the Province of Ontario; and
3) no officer or employee of the Owner, is or will become interested directly or indirectly as a contracting party, partner, shareholder, surety or otherwise in or in the performance of the Contract or in the supplies, work or business to which it relates, or in any portion of the profits thereof, or in any of the monies to be derived therefrom.

Dated at _____ this _____ day of _____, 20___.

Name of Witness

_____
NAME OF TENDERER

Signature of Witness

_____
AUTHORIZED SIGNATURE OF TENDERER

_____
TITLE

(Affix Corporate Seal)

Note: If the Tender is submitted by or on behalf of a corporation, it must be signed in the name of such corporation by the duly authorized officers and the seal of the corporation must be affixed. If the Tender is submitted by or on behalf of an individual or a partnership, a seal must be affixed opposite the signature of the individual or partnership.

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION C

FORM OF AGREEMENT

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

THIS AGREEMENT made in quadruplicate this _____ day of_____, 2001.

BETWEEN:

TOWNSHIP OF WILMOT
(hereinafter called the Owner)

OF THE FIRST PART

AND

_____
(hereinafter called the Contractor)

OF THE SECOND PART

WITNESSETH:

That the Owner and the Contractor, in consideration of the fulfilment of their respective promises and obligations herein set forth, covenant and agree with each other as follows:

ARTICLE 1

The Contractor shall:

a) provide all the materials and perform all the Work for New Hamburg Arena, New Hamburg, Ontario (the "Work") shown on the drawings and described in the Contract Documents titled "New Hamburg Arena Structural Roof Membrane Replacement" and which were prepared and caused to be prepared by **Stantec Consulting Ltd.** acting as, and herein titled the "Engineer";

b) do and fulfil everything indicated by this Contract;

c) commence the Work within seven days of the date of a written order to do so from the Contract Administrator to the Contractor,

d) fully complete, as certified by the Consultant, all of the Work within the time for completion allowed in the Contract.

ARTICLE 2

In case of any inconsistency or conflict between the provisions of this Agreement and the Plans or Specifications or General Conditions or Tender or any other document or writing, the provisions of such documents shall take precedence and govern in the following order, namely:

1) This Agreement
2) Addenda
3) Information for Tenderers
4) Special Provisions
5) Supplementary General Conditions
6) General Conditions
7) Definitions
8) Technical Specifications
9) Contract Drawings
10) Form of Tender

ARTICLE 3

The Owner covenants with the Contractor that the Contractor, having in all respects complied with the provisions of this Contract, will be paid for and in respect of the works the sum of

_____

DOLLARS ($_____)

subject to Article 6 hereof and subject to such additions and deductions as may properly be made under the terms hereof, subject to the provision that the Owner may make payments on account monthly or otherwise as may be provided in the General Conditions attached hereto.

ARTICLE 4 PAYMENT

a) Subject to applicable legislation and the provisions of the Contract Documents, and in accordance with legislation and statutory regulations respecting holdback percentages and, where such legislation or regulations do not exist or apply, subject to a holdback of 10 percent (10%).

(1) Make monthly payments in Canadian funds to the contractor on account of the contract price. The amounts, if such, payments shall be as certified by the consultant, and

(2) upon Substantial Performance of the Work as certified by the Consultant pay to the Contractor the unpaid balance of holdback monies then due, and

(3) upon Total Performance of the Work as certified by the Consultant pay to the Contractor the unpaid balance of the Contract Price then due.

b) In the event of loss or damage occurring where payment becomes due under the property and boiler insurance policies, payments shall be made to the Contractor in accordance with the provisions of GC11.1 - INSURANCE.

c) If the Owner fails to make payments to the Contractor as they become due under the terms of this Contract or in an award by arbitration or court, interest of six and three-quarters percent (6¾ %) per annum on such unpaid amounts shall become due and payable until payment. Such interest shall be calculated and added to any unpaid amounts monthly.

ARTICLE 5

a) The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

b) No action or failure to act by the Owner, Consultant or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

ARTICLE 6

In the event that the Tender provides for and contains Contingency Allowances, Provisional or like items, it is understood and agreed that the Contractor is not entitled to payment thereof except for extra or additional work carried out by him in accordance with the Contract and only to the extent of such extra or additional work as authorized by the Consultant in writing.

ARTICLE 7

It is agreed, without restricting in any way the provisions of the General Conditions attached hereto, that the Contractor shall not, without the consent in writing of the Owner, make any assignment of any part or the whole of any monies due or to become due under the provisions of this Contract.

ARTICLE 8

Where any notice, direction or other communication is required to be or may be given or made by one of the parties hereto to the other or to the Consultant or to his agent, it shall be deemed sufficiently given or made if mailed or delivered in writing to such party or the Consultant at the following addresses:

The Consultant: Stantec Consulting Ltd.
871 Victoria Street North
Kitchener, Ontario
N2B 3S4

Attention: Mr. Terry Warne

The Contractor:

The Owner: Township of Wilmot
60 Snyder's Road West
Baden, Ontario
N0B 1G0

Attention: Mr. Scott Nancekivell, B.Sc.

Where any such notice, direction or other communication is given or made to the Consultant, a copy thereof shall likewise be delivered to any agent of the Consultant appointed in accordance with the General Conditions of this Contract and where any such notice, direction or other communication is given or made to such agent, a copy thereof shall likewise be delivered to the Consultant.

ARTICLE 9

A copy of each of the Information for Tenderers, Form of Tender, Definitions and General Conditions, and Supplementary General Conditions, are hereto annexed and, together with the Plans, and Technical Specifications relating thereto and listed in the Form of Tender, are made part of this Contract as fully to all intents and purposes as though recited in full herein.

ARTICLE 10

No implied Contract of any kind whatsoever by or on behalf of the Owner shall arise or be implied from anything in this Contract contained, nor from any position or situation of the parties at any time, it being clearly understood that the express covenants and agreements herein contained made by the Owner shall be the only covenants and agreements upon which any rights against the Owner may be founded.

ARTICLE 11

Time shall be deemed to be the essence of this Contract.

ARTICLE 12

The Contractor declares that in tendering for the works and in entering into this Contract he has either investigated for himself the character of the work and all local conditions that might affect his Tender or his acceptance of the work, or that not having so investigated, he is willing to assume and does hereby assume all risk of conditions arising or developing in the course of the work which might or could make the work, or any items thereof, more expensive in character or more onerous to fulfil than was contemplated or known when the Tender was made or the Contract signed. The Contractor also declares that he did not and does not rely upon information furnished by any methods whatsoever by the Owner or its officers or employees of the Consultant, being aware that any information from such sources was and is approximate and speculative only, and was and is not in any manner warranted or guaranteed by the Owner or Consultant.

ARTICLE 13

This Contract shall apply to and be binding on the parties hereto and their successors, administrators, executors and assigns.

ARTICLE 14

The law of the Place of the Work shall govern the interpretation of the Contract.

IN WITNESS WHEREOF the parties hereto have hereunto set their hands and seals the day and year first above written or caused their corporate seals to be affixed, attested by the signature of their proper officers, as the case may be.

OWNER

Witness

Signature: _____

Print Name: _____

Print Address: _____

_____

_____

(affix Corporate Seal)

CONTRACTOR

Witness

Signature: _____

Print Name: _____

Print Address: _____

_____

_____

_____

(affix Corporate Seal)

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION D

DEFINITIONS AND GENERAL CONDITIONS

This contract shall be governed by the Definitions and General Conditions of the Stipulated Price Contract (Part 1 to Part 12), as outlined in the Stipulated Price Contract, CCDC-2-1994, issued by the Canada Construction Documents Committee and as amended by the Supplementary General Conditions (Section E).

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION E

SUPPLEMENTARY GENERAL CONDITIONS

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION E

SUPPLEMENTARY GENERAL CONDITIONS

- INDEX -

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION E

SUPPLEMENTARY GENERAL CONDITIONS

SGC 1. TIME

1.1 Time is of the essence of this Contract.

1.2 The Contractor shall diligently prosecute the Work of this Contract to completion on or before the completion date stipulated in the Form of Tender.

1.3 It is the Contractor's responsibility to ensure that sufficient manpower is provided to meet the scheduled dates.

1.4 A time schedule for this project is attached in H.

1.5 If the time limit specified above is not sufficient to permit completion of the work by the Contractor working a normal number of hours each day or week on a single shift basis, it is expected that additional and/or augmented shifts will be used as required throughout the life of the Contract to the extend deemed necessary by the Contractor to ensure that the work will be completed within the time limit specified. Any additional costs occasioned by compliance with these provisions will be considered to be included in the prices bid for the various items of work and no additional compensation will be allowed therefore.

Note: All premium time required to meet the time for completion dates shall be included in the tender price.

All necessary premiums for material delivery (i.e. air freight, fast delivery premiums, etc.) and overtime as required to meet this schedule are to be included in the tender price.

1.6 Extensions of time will be considered in accordance with GC 6.5 - Delays and as noted in the Form of Tender, Time for Completion.

1.7 Working time shall be charged until the date of acceptance of the work by the Owner at which time all work required on the Contract, including all final clean-up shall be completed.

1.8 Daily working time shall be at the contractor's discretion.

SGC 2. DOCUMENTS

2.1 The contract documents shall be signed in quadruplicate by the Owner and the Contractor.

SGC 3. CONTRACT ADMINISTRATION

3.1 The Owner has appointed Stantec Consulting Ltd. to provide Contract Administration of this Contract.

SGC 4. PERMITS, FEES, INSPECTIONS

4.1 Submission of Drawings and Specifications

The Contractor shall submit to the Regulatory Authorities, including building permit all drawings and information necessary for their review, registration and acceptance, and in accordance with any Municipal requirements. (Not applicable)

4.2 Contractor shall pay for all permits including building permit and fees associated with drawing submissions, reviews, inspections, and certifications. (Not applicable)

4.3 Copies of all approved drawings, inspection certificates, permits, licenses, etc. will be turned over to the Owner.

SGC 5. INSURANCE

5.1 GC 11.1 Insurance

5.1 (a) General Liability Insurance

Revise completed operation coverage to a period of not less than twelve (12) months from the date of Total Performance of the Work. Delete the requirement to maintain this coverage for a further four (4) years.

Revise the limits of general liability insurance to be not less than $2,000,000.00 with a property damage deductible of an amount to be decided upon by the Contractor. The Contractor's comprehensive liability insurance must also cover the Contractor's contingent liability in respective of the operations of subcontractors.

5.1 (b) Automobile Liability Insurance

The phase limits of not less than $1,000,000.00 inclusive per occurrence in this clause is amended to read "limits of not less than $2,000,000.00 inclusive per occurrence".

SGC 6. CO-ORDINATION MEETINGS

6.1 The Contractor shall attend such meetings as may be required by the Engineer to co-ordinate services affected by the Contract and work to be done under the Contract.

SGC 7. SETTING OUT THE WORK

7.1 The Contractor shall be responsible for all construction associated with this project; all related layout costs shall be included in the Contractor's total tender prices.

SGC 8. WARRANTY

8.1 The following are added as Paragraphs 12.3.7, 12.3.8 and 12.3.9 of GC .12.3

12.3.7) The decision of the Contract Administrator as to the nature, extent and cause of such imperfections and the necessity for remedying the same shall be final. Should the Contractor fail to comply with the direction of the Contract Administrator, the Owner may, after giving the Contractor seven (7) days written notice, perform the necessary work, provided that in the event of an emergency, of which the Contract Administrator shall be the sole judge, the Owner may forthwith without notice perform the necessary work and the cost of such work in either event may be deducted or collected from the Contractor by the Owner.

12.3.8) If the Contract Administrator shall have notified the Contractor in writing of imperfections prior to the termination of the warranty period, the Contractor shall make good the imperfections as specified above notwithstanding that the work of making good may commence after or extend beyond the end of the warranty period. In such case, the warranty period shall expire on the date of final acceptance of the work by the Owner, on which date all known deficiencies and imperfections shall have been corrected.

12.3.9) The Contract Performance Security, as required by IT 12 of the Information for Tenderers, shall be endorsed to include the period of warranty as required herein and shall remain in force until the expiration of such warranty period.

SGC 9. LABOUR AND PRODUCTS

9.1 Further to - General Conditions, GC 3.9 - Labour and Products, this Contract is subject to the most recent versions of the Industrial Standards Act, the Employment Standards Act, and the regulations made thereunder. Any increase in costs incurred by a change in the wage rates shall be borne by the Contractor.

9.2 Further to - General Conditions GC-3.9 Labour and Products, the Contractor shall employ only orderly, competent and skilful workers to do the work. Whenever the Contract Administrator shall inform the Contractor in writing that any worker on the work is, in the opinion of the Contract Administrator, incompetent, unfaithful or disorderly, such worker shall be discharged from the work and shall not again be employed on the work without the consent in writing of the Contract Administrator.

SGC 10. DUST CONTROL

10.1 Further to - General Conditions GC 3.14 – Cleanup, Contractor shall take such steps daily as may be required to prevent dust nuisance resulting from his operations at all times.

SGC 11. REVIEW OF SHOP DRAWINGS

11.1 The Engineer shall stipulate the procedure for submittal of shop, working or setting drawings.

11.2 The Contractor shall submit to the Engineer in accordance with the above procedure all shop, working or setting drawings required in order to make clear the work proposed.

11.3 A Sub-contractor or equipment supplier may submit drawings on behalf of the Contractor.

11.4 The Contractor shall make such changes in the drawings, and subsequently in the work, as the Engineer may reasonably require.

11.5 When submitting such drawings, the Contractor shall notify the Engineer in writing of all respects in which such drawings differ from the requirements of the Contract or from previously notified requirements of the Engineer. The Engineer's review of such drawings shall not be construed as approval of such differences unless the Contractor has complied with the preceding sentence hereof and unless the Engineer has specifically approved of such drawings. Such review and/or approval shall not relieve the Contractor from responsibility for the correctness of the drawings or the adequacy of the details shown on the drawings.

11.6 Work shall not be carried out before the Engineer has reviewed the shop, working or setting drawings relating to such work.

SGC 12. ACCESS TO PROPERTIES ADJOINING THE WORK

12.1 During construction, any operations on and around the construction site shall be coordinated with the Owner. In the event of conflicting traffic movements, all construction vehicles and personnel shall give way to pedestrians and traffic. The Contractor shall also ensure the areas outside of the building are free of debris and equipment, so as to provide safe pedestrian movements following completion of each working day.

12.2 Where the Contractor's equipment causes damage to surrounding areas the Contractor shall make good these areas at his own expense.

12.3 It is the Contractor's responsibility to make the necessary arrangements to control the parking of private vehicles owned and operated by those workers employed by the Contractors.

SGC 13. POSTING OF SIGNS

13.1 Post all signs required by CSA B52 and the governing authorities.

SGC 14. PUBLIC USE OF ARENA

14.1 Public use of the arena during the normal daily working hours assigned to the contractor will not be permitted.

SGC 15. SUBMISSION OF WORK SCHEDULE

15.1 The contractor shall submit a work schedule immediately after award of the contract. The purpose for this requirement is to allow the owner to schedule ongoing activities inside the arena. The contractor shall co-ordinate his work schedule in consultation with the Arena Manager Pad Kelly (662-2410).

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION F

TECHNICAL SPECIFICATIONS

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION G

LIST OF DRAWINGS

S1 Gauge Metal Lateral Diaphragm Ties
A1 Roof Membrane Replacement Plan and Details

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

SECTION H

PROJECT SCHEDULE

TOWNSHIP OF WILMOT

NEW HAMBURG, ONTARIO

NEW HAMBURG ARENA ROOF
MEMBRANE REPLACEMENT

PROJECT SCHEDULE

.1 Tender Closing: July 9, 2001, 3:00 PM.

.2 Award of Tender: July 13, 2001-06-26

.3 Completion of Work: August 24, 2001

1 GENERAL

1.1 INSTRUCTIONS

1. Information for Tenderers, General and Supplementary Conditions and Division 1 shall apply to and form part of this Section.

1.2 WORK INCLUDED

.1 This Contractor shall provide all labour, materials, equipment, transportation and incidentals noted, specified or required, to complete the work of this Section to the full extent of the contract Drawings and Specifications.

.2 The work to be performed by this Contractor shall be obtained by a careful examination of the detail Drawings and the Specifications.

.3 Without limiting the generality of the foregoing, this work includes but is not limited to the following:

.1 Wood nailers and blocking

1.3 RELATED WORK

- Structural Steel 05121

1.4 REFERENCE STANDARDS

.1 The latest editions of the following codes and standards shall apply unless otherwise indicated:

CSA B111	Wire Nails, Spikes and Staples.
CSA B34	Miscellaneous Bolts and Screws.
CAN/CSA-G164	Hot Dip Galvanizing of Irregularly Shaped Articles.
CSA O112 Series	CSA Standards for Wood Adhesives.
CSA O121	Douglas Fir Plywood.
CSA O141	Softwood Lumber.
CSA O151	Canadian Softwood Plywood.
CAN/CSA-O325.0	Construction Sheathing.
CAN3-O437.0/O437.1	Waferboard and Strandboard/Test Method for Waferboard and Strandboard.

.2 National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber.

1.5 QUALITY ASSURANCE

.1 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.2 Plywood identification: by grade mark in accordance with applicable CSA standards.

2 PRODUCTS

2.1 LUMBER MATERIAL

.1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% or less in accordance with following standards:

.1 CSA 0141.
.2 NLGA Standard Grading Rules for Canadian Lumber.

.2 Framing and board lumber: in accordance with NBC, except as follows:

.1 Lumber shall be SPF species, NLGA SS, NO1 and 2 grade as noted on the contract drawings.

.3 Machine stress-rated lumber is acceptable for all purposes or as noted.

.4 Furring, blocking, nailing strips, grounds, rough bucks, cants, curbs, fascia backing and sleepers:

.1 Board sizes: "Standard" or better grade.
.2 Dimension sizes: "Standard" light framing or better grade.
.3 Post and timbers sizes: "Standard" or better grade.

2.2 PANEL MATERIALS

.1 Panel standards: type, grade and thickness as indicated, in accordance with following standards:

.1 Douglas fir plywood (DFP): to CSA 0121, standard construction.
.2 Canadian softwood plywood (CSP): to CSA 0151, standard construction.
.3 Structural oriented strandboard (OSB): to CAN3-O437.0, standard construction.

.2 Construction sheathing: to CAN/CSA-O325.0.

2.4 FASTENERS

.1 Nails, spikes and staples: to CSA B111.

.2 Bolts: 12.5 mm (1/2") diameter A307 or better, unless indicated otherwise, complete with nuts and washers. Provide fastening to concrete, masonry, structural steel, and other metal parts with bolts.

.3 Anchor Bolts: 16 mm (5/8") diameter A307 or better, unless indicated otherwise, complete with nuts and washers.

.4 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, hangers, screws and lead or inorganic fibre plugs, recommended for purpose by Manufacturer.

.5 Galvanizing: to CSA G164, use galvanized fasteners for all work, interior highly humid areas treated lumber.

2.5 DELIVERY AND STORAGE

.1 Deliver, store and protect materials and work of this section at all times.

.2 Keep materials under waterproof cover protected from the weather, moisture absorption, and impairment of structural or aesthetic properties.

3 EXECUTION

3.1 CONSTRUCTION

.1 Arrange all members true to lines, levels, and elevations, plumb, and uniformly spaced as required.

.2 Comply with requirements of OBC Part 9 supplemented by following paragraphs.

.3 Install members true to line, levels and elevations.

.4 Construct continuous members from pieces of longest practical length.

.5 Install spanning members with "crown-edge" up.

.6 Untreated lumber shall not be in direct contact with concrete or masonry.

.7 All nails shall be long enough so that not less than half of the required length penetrates into the member.

.8 All nailers embedded in roofing shall be pressure treated.

3.2 ROOF SHEATHING

.1 Replace all damaged or rotting deck sheathing boards at the unit price quoted in the tender form.

.2 Determination of boards to be replaced will be determined in consultation and approval of the engineer.

3.3 SURFACE- APPLIED WOOD PRESERVATIVE

.1 Treat surfaces of material with wood preservative, before installation.

.2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.

.3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.

.4 Treat all material as indicated:

.1 Wood cants, fascia backing, curbs, nailers, sleepers on roof deck.

1 GENERAL

1.1 RELATED WORK

Section 06100 Carpentry Blocking [and continuity strips for vapour retarders
Section 07620 Sheet metal flashing and trim
Section 07900 Sealants

1.2 ALTERNATES

.1 All requests for alternates on specified products in this section must be submitted to the Engineer, in writing, at least ten [10] days before bid closure. These requests must be accompanied by written proof of the manufacturer's ISO 9001 and ISO 14 001 Certifications, as well as technical data sheets describing proposed product equivalency. An example of the manufacturer's warranty certificate ensuring conformity to this document and the present specifications must also be submitted.

1.3 REFERENCE STANDARD(S)

.1 Roofing and sheet metal work will be performed in conformance with the roofing manufacturer's written recommendations as well as the requirements of the ULC laboratories Class C, Factory Mutual 1-60 Classification.

.2 CSA A123.4- M1979, Bitumen for Use in the Construction of Built-Up Roof Coverings and Dampproofing and Waterproofing Systems.

.3 CAN/CSA-A247- M86, Insulating Fibreboard.

.4 CSA B35.3-1962, Tapping and Drive Screws (Slotted and Recessed Head, Thread Forming and Thread Cutting Screws, and Metallic Drive Screws).

.5 CSA O151-M1978, Canadian Softwood Plywood.

.6 CGSB 37-GP-56M-80, Membrane Modified, Bituminous, Prefabricated, and Reinforced for Roofing.

.7 CAN/CGSB-51-26-M86, Thermal Insulation, Isocyanurate, Board, Faced.

1.4 COMPATIBILITY

.1 All waterproofing materials will be provided by the same manufacturer. Provide a written declaration to the Engineer that all roofing materials and components are compatible.

1.5 TECHNICAL DOCUMENTS

.1 Submit two (2) copies of the most current technical data sheets. These documents must describe the materials' physical properties and explanations about product installation, including installation techniques, restrictions, limitations and other manufacturer recommendations.

1.6 QUALITY ASSURANCE AND ENVIRONMENTAL MANAGEMENT

.1 The manufacturer of elastomeric bitumen products will provide proof of ISO 9001 and ISO 14001 Certifications.

1.7 CONTRACTOR QUALIFICATIONS

.1 The roofing contractor and his subcontractors, throughout the bid and installation periods, must own a business license and must be officially recognised as an approved contractor by the roofing product manufacturer.

.2 Only skilled trade persons, officially employed by a roofing contractor operating adequate and necessary equipment, will be authorised to perform all roofing work.

.3 The roofing contractor and subcontractors must also be members of the OIRCA and provide Stantec Consulting Ltd. with a written declaration to this effect before roofing installation begins.

1.8 MANUFACTURER'S REPRESENTATIVE

.1 The roofing product manufacturer can delegate a representative to visit the work site at the start of roofing installation.

.2 The contractor must at all times enable and facilitate access to the work site by said representative.

1.9 INSPECTION

.1 Roofing installation inspection will be done by Stantec Consulting Ltd. and Hawkins Building Technologies Inc..

.2 All inspection fees will be paid by the owner.

1.10 PRE-INSTALLATION MEETING

.1 Hold a pre-installation meeting prior to start of waterproofing works, with the roofing contractor's representative, the Engineer and the owner. The purpose of this meeting is to review particular installation conditions to each project. Establish a report for this meeting.

1.11 STORAGE AND DELIVERY

.1 All materials will be delivered and stored in conformance with the requirements described in the Manufacturers Manual; they must remain in their original packaging, displaying the manufacturer's name, product name, weight, and reference standards, as well as all other indications or references considered standard.

.2 At all times, materials will be adequately protected and stored in a dry and properly ventilated area, away from any welding flame or spark and sheltered from the elements or any harmful substance. Only materials destined for same-day use can be removed from this storage area. In cold weather, these materials should be stored in a heated area at a minimum temperature of +100°C and removed prior to application . If rolls cannot be stored in a heated environment, they may be pre-conditioned before installation. For precise description, please consult the Manufacturers "Material Installation Guide" on membrane application procedures.

.3 Store adhesives and emulsion-based waterproofing mastics at a minimum +50°C. Store adhesives and solvent-based mastics at sufficiently high temperatures to ensure ease of application.

.4 Materials delivered in rolls will be carefully stored upright; flashing will be stored to avoid creasing, buckling, scratches or any other possible damage.

.5 Avoid material overloads which may affect the structural integrity of specific roof areas.

1.12 FIRE PROTECTION

.1 Respect safety measures described in the Manufacturers Manual as well as OIRCA recommendations.

.2 At the end of each work day, use a heat detector gun to spot any smouldering or concealed fire. Job planning must be organised to ensure workers are still on location at least one hour after torch application.

.3 Never apply the torch directly to old and dry wood surfaces. Please read the fire safety recommendations of the manufacturer and the CRCA.

.4 Throughout roofing installation, maintain a clean site and have one approved ABC fire extinguisher within 6 meters of each roofing torch. Respect all safety measures described in technical data sheets. Torches must never be placed near combustible or flammable products.

1.13 GUARANTEES

.1 The product manufacturer will issue a written and signed document in the owner's name, certifying all product performance properties for a period of ten (10) years, starting from the date of acceptance. The warranty required for bituminous elastomeric membranes must wholly and completely cover the specified warranty period.

.2 The contractor will issue a written and signed document in the owner's name, certifying that the work executed will remain in place and free of any workmanship defect for a period of 2 Years, starting from the date of acceptance.

2 PRODUCTS

2.1 PRIMER

.1 Description: ÉLASTOCOL 500: A blend of elastomeric bitumen, volatile solvents and adhesive enhancing additives used to prime concrete or metal substrates to enhance the adhesion of torch-applied waterproofing membranes.

.1 Specified product[s]: ÉLASTOCOL 500 by SOPREMA or Approved Equal.

2.2 ADHESIVES

.1 Description: Cold adhesive-mastic composed of a bituminous binder, added to bonding agents and solvents.

.1 Specified product: SOPRACOLLE 300 N by SOPREMA.

.2 Kraft laminated vapour retarder in conformance with CAN/CGSB-51.33-M89 type II and Factory Mutual requirements as Class 1 component having windlift factors of 1-60 & 1-90.

2.3 CARPENTRY

.1 Description: Pressure treated lumber

2.4 CANT STRIPS

.1 Cant strips cut from pressure-treated wood; sloped side must measure 140 mm in width. Wood must be perfectly dry and true before use.

.2 Cant strips of wood fibre; made from 38 mm-thick wood fibre; sloped side must measure 140 mm in width.

2.5 INSULATION

.1 Isocyanurate insulation

2.6 FASTENERS

.1 Roofing fasteners to steel decking: Cadmium-plated flat-headed, self-tapping screws, N012 of Type A or AB, in conformance with CSA B35.3.

.2 Insulation and FR board fasteners to decking: Screws and plates in conformance with Factory Mutual's standard No. 4470 on corrosion and wind lift factors.

2.7 INSULATION OVERLAY

.1 Bituminous panels:
- .1 Description: Multi-ply, semi-rigid asphaltic roofing substrate board composed of a mineral fortified asphaltic core formed between two asphaltic saturated fibreglass liners. Length 1200 mm x width 1200 x thickness 3.2 mm.

.2 Specified product: SOPRABOARD by SOPREMA or IKO Industrial Products.

2.8 MEMBRANES

.1 Roof membrane base sheet:
- .1 Description: Roofing membrane with non-woven polyester reinforcement and elastomeric bitumen. The top face is covered with a thermofusible plastic film, the underside is covered with a thermofusible plastic film. The top face must be marked with three (3) distinctive blue chalk lines to ensure proper roll alignment.
- .2 Components:
  - .1 Reinforcement: Non-woven polyester.
  - .2 Elastomeric bitumen: Mix of selected bitumen and SBS polymer.
  - .3 CGSB 37-GP-56M Classification: type 1a, class A, grade 2.
  - .4 Specified products: Sopralene Flam 180 by SOPREMA or IKO Industrial Products.

.2 Roof membrane base sheet flashing:
- .1 Description: Roofing membrane with non-woven polyester reinforcement and elastomeric bitumen. Both sides are covered with a thermofusible plastic film. The top face must be marked with three (3) distinctive blue chalk lines to ensure proper roll alignment.

.2 Components:
.1 Reinforcement: Non-woven polyester.
.2 Elastomeric bitumen: Mix of selected bitumen and SBS polymer.
.3 CGSB 37-GP-56M Classification: type 1a, class A, grade 2.
.4 Specified product(s): SOPRALÈNE FLAM 180 or IKO Industrial Products.

.3 Roofing membrane cap sheet
.1 Description: Roofing membrane with non-woven polyester reinforcement and elastomeric bitumen with flame-retarding agent. The top face is protected by coloured granules, the underface is covered with a thermofusible plastic film.

.2 Components:
.1 Reinforcement: Non-woven polyester.
.2 Elastomeric bitumen: Mix of selected bitumen and SBS polymer.
.3 Protection: Coloured granules

.3 Specified products: Sopralene Flam 180GR by SOPREMA or IKO Industrial Products.

.4 Roofing membrane cap sheet flashing

.1 Description: Roofing membrane with [non-woven polyester reinforcement and elastomeric bitumen with flame-retarding agent. The top face is protected by coloured granules, the underface is covered with a thermofusible plastic film.

.2 Components:
.1 Reinforcement: Non-woven polyester.
.2 Elastomeric bitumen: Mix of selected bitumen and SBS polymer.
.3 Protection: Coloured granules

.3 Specified products: Flam 180 by SOPREMA or IKO Industrial Products.

.5 Colour choices:
.1 Roofing membrane granular finishes will be of the following colour(s):
.1 For regular surfaces: brown, sienna, red, black, green, blue, grey. Contractor to include for choice of all stock colours.

2.9 WATERPROOFING MASTICS

.1 Waterproofing products: Mastic made of synthetic rubbers, plasticized with bitumen and solvents. Aluminium pigments are added to SOPRAMASTIC ALU to provide greater resistance to U.-V.
.1 Specified product: SOPRAMASTIC 200 ALU by SOPREMA or IKO Industrial Products.

.2 Waterproofing products in conformance with CAN/CGSB-19.13-M87.

.3 Blend made of synthetic rubber, fibers, bitumen and solvent, with aluminium pigments added for a greater resistance to U.-V. Designed for pitch box filling.
.1 Specified product: MAMMOUTH PITCH POCKET FILLER by SOPREMA or IKO Industrial Products.

3 EXECUTION

3.1 SURFACE EXAMINATION AND PREPARATION

.1 Surface examination and preparation must be completed in conformance with recommendations in the Manufacturers Manual, particularly for fire safety precautions.

OR

.2 Before roofing work begins, the owner's representative and roofing foreman will inspect and approve deck conditions (including slopes and wood blocking) as well as upstands and parapets, construction joints, roof drains, plumbing vents, ventilation outlets and others.

If necessary, a non-conformity notice will be issued to the contractor so that required corrections can be made. The start of roofing work will mean roofing conditions are acceptable for work completion.

.3 Do not begin any work before surfaces are smooth, dry, exempt of ice and debris. Use of calcium or salt is forbidden for ice or snow removal.

.4 Be sure plumbing, carpentry and all other work has been duly completed.

.5 No materials will be installed during rain or snowfall.

3.2 METHOD OF INSTALLATION

.1 Prepare surfaces and complete waterproofing work in conformance with the Manufacturers requirements, and the "Material Installation Guide"

.2 Install roofing elements on clean and dry surfaces, in conformance with manufacturer's instructions and recommendations.

.3 Roofing work must be completed in a continuous fashion as surfaces are readied and weather conditions permit.

.4 Preferably seal all seams which are not covered by a cap sheet membrane in the same day. The cap sheet cannot be installed if any moisture is present at/in the base sheet seams.

.5 Whenever membranes are torch applied, a continuous and even bead of molten bitumen must be visible as the membrane is unrolled and torched.

.6 Ensure waterproofing conditions for roofs at all times, including protection during installation work by other trades and progressive protection as work is completed (e.g. vents, drains, etc.).

.7 Complete all work (temporary supports for equipment and bases, disconnection and connection of equipment as needed, moving and lifting of bases, etc.) required for waterproofing beneath equipment and bases as shown on drawings; use qualified trade persons as required. Temporary supports for waterproofing beneath air-conditioning units must be designed to hold supported loads and distribute these loads to avoid structural damage. Avoid interruption of functioning equipment during roofing. Unavoidable interruptions must be planned with the owner and may be scheduled outside normal working hours.

3.3 SITE PROTECTION

.1 Protect finished work to avoid damage during roof installation and material transportation. Install protective boardwalks over installed roofing materials to enable passage of people and products. Assume full responsibility for any damage.

3.4 CLEANING

.1 The work site must be routinely cleared of rubbish and other materials which may hinder roof installation, performance, or present a fire hazard.

3.5 EQUIPMENT FOR WORK EXECUTION

.1 Maintain all roofing equipment and tools in good working order.

.2 Use torches recommended by the Manufacturer.

3.6 APPLICATION OF ASPHALT PRIMER

.1 Roofing substrates of wood, metal, concrete, masonry or gypsum board surfaces will receive a coat of asphalt primer at a rate of 0.15 to 0.25 l/m2 (none required for factory-painted metals). All surfaces to be primed must be free of rust, dust or any residue that may hinder adherence. Cover primed surfaces with roofing membrane as soon as possible (ideally same day coverage for self-adhesive membranes.

3.7 INSULATION INSTALLATION

.1 Attach insulation mechanically in conformance with manufacturer's recommendations, and Factory Mutual standards 1-60. Also see Factory Mutual requirements for preliminary anchoring of insulation where applicable.

.2 Respect Factory Mutual standards 1-60 pertaining to number and placement of fasteners, namely Bulletin I-28 for fastening to roof perimeters and corners. Fasteners must be attached to wood deck and shall not be visible from below.

.3 All vertical joints between level boards and sloped modules two rows of insulation board will be staggered.

.4 Install only as much insulation as can be covered in the same day.

3.8 INSTALLATION OF SOPRABASE FR BOARDS

.1 Fasten SOPRABASE FR boards mechanically in conformance with illustrations in specification manual.

.2 Apply SOPRABASE FR boards to insulation with specified adhesive, in conformance with adhesive manufacturer's written recommendations. Submit a copy of these recommendations to the engineer before roofing work begins.

.3 All vertical joints between substrate and SOPRABASE FR boards will be staggered vertically and horizontally.

3.9 INSTALLATION OF MEMBRANES

.1 Install membrane in strict conformance with Manufacturers installation instructions.

.2 During installation, avoid overheating the membrane and creating excessive bitumen bleed-out at joints.

3.10 INSTALLATION OF TORCH-APPLIED BASE SHEET

.1 Unroll base sheet and allow to relax set first sheet on roof surface perpendicular to the barrel running from eaves to centre of roof.

.2 Torch base sheet entirely onto prepared substrate. Overlap side laps by 75 mm along lines provided to this end, and overlap end laps by 150 mm. Stagger end joints by a minimum of 300 mm.

.3 Torch sufficiently and continuously to avoid wrinkles, air pockets or fishmouths. In cold weather, adjust welding time to obtain homogenous seam (it may be necessary to slow down in certain cases.)

3.11 BASE-SHEET FLASHING INSTALLATION

.1 Apply base sheet flashing only once primer coat is dry.

.2 Install base sheet flashing in one-(1) metre widths to cover roofing substrate over 100 mm up to 40 mm beyond roof base sheet fasteners overlap side laps by 75 mm. Stagger side laps by at least 100 mm from base sheet overlaps on roof to avoid excessive layering.

.3 Torch base sheet flashing from top to bottom directly onto previously prepared substrate. This will soften base-sheet underside without overheating to ensure an entire and homogenous surface adherence. When possible, nail base sheet 300 mm o/c onto substrate at about 25mm from edge.

3.12 ROOFING CAP SHEET INSTALLATION (TORCH APPLIED MEMBRANE)

.1 Once base sheet is applied and no defects are apparent, proceed with cap sheet installation.

.2 Weld cap sheet onto base sheet with torch recommended by membrane manufacturer. During application, simultaneously melt both designated contact surfaces so a bead of bitumen is apparent as cap sheet unrolls.

.3 Avoid overheating.

.4 Unless overlap widths differ between cap and base sheets, make sure joints between the two layers are staggered by at least 300 mm.

.5 Overlap cap sheet side laps by 75 mm and end laps by 150 mm. Cut off corners at end laps to be covered by next roll. All overlap surfaces must be granule-free or degranulated.

.6 Complete perfect welds between two membranes. Leave no zone unwelded. In cold weather, adjust welding time to obtain homogenous seam (it may be necessary to slow down in certain cases.)

.7 Once cap sheet is installed, carefully check all overlapped joints.

.8 During installation, care should be taken to avoid excessive bitumen bleed-out at joints.

3.13 CAP SHEET FLASHING INSTALLATION (TORCH APPLIED MEMBRANES)

.1 Install cap sheet in one (1) -metre widths. Overlap side laps by 75 mm. Stagger base and cap sheet overlaps on roof by at least 100 mm to avoid excessive layering. Roof overlaps will have 50 mm more than those of base sheet flashing.

.2 Draw parallel chalk line at 50 mm beyond the base sheet flashing.

.3 Sink surface granules into bed of hot bitumen with torch and round-nosed trowel from chalk line on roof to upstand or parapet base as well as] over granulated vertical parts to be overlapped.

.4 Torch weld cap sheet directly onto base sheet from top to bottom to soften both membranes and obtain homogenous seal.

.5 During installation, avoid overheating membrane and excessive bitumen bleed-out at joints.

3.14 SHEET METAL FLASHING AND TRIM

.1 Complete flashing work using specified materials described on plans and details. See Section 07620.

.2 Unless otherwise specified, nails, staples, screws, bolts, washers and all other metal fasteners, will be made of compatible and rust-proof metals, of same colour as surfaces with which they are in contact.

.3 Shaping:
- .1 Take special care when shaping sheet metal with a permanent finish.
- .2 Bend sheet metal using sheet metal break. When possible, use bench and appropriate tools for all shaping, bending and welding work.
- .3 Fold back all exposed edges by 12 mm to hide and strengthen edges.
- .4 All corners, fasteners, angles and joint covers must be of same metal, gauge and finish as metal being shaped.

.4 Installation:
- .1 All sheet metal work must conform to details, with plumb profiles exempt of all deformities or defects which may hinder appearance.
- .2 Space angles and fasteners (seams) to allow for normal expansion and contraction.
- .3 No nail or screw can be apparent. All metalwork must be fastened and all corners and angles must be perfectly aligned.
- .4 Caulk all sheet metal joints and all junctions with other materials.
- .5 At junctions between roof and masonry surfaces, scrape out joints to a 25-mm depth, insert flashing, fasten and seal with specified sealer.
- .6 Install appropriate flashing, cap sheet, counterflashing, casings and other accessories to vents, pipes and other ducts to ensure perfect sealing.

3.15 Installation of Wood Blocking

.1 Install pressure treated 2" x 3" wood blocking along the perimeter prior to installing insulation.

END OF SECTION

1 GENERAL

1.1 INSTRUCTIONS

.1 Information for Tenderers, Supplementary General Conditions and Division 1 shall apply to and form part of this Section.

1.2 WORK INCLUDED

.1 This Contractor shall provide all labour, materials, equipment, transportation and incidentals noted, specified or required, to complete the work of this Section to the full extent of the contract drawings and specifications.

.2 Without limiting the generality of the foregoing, this work includes but is not limited to the following:

- Miscellaneous metal flashings on roof
- Caulking
- Flashing around roof openings

1.3 RELATED WORK

Section 03300	Cast-in-Place Concrete
Section 06100	Rough Carpentry
Section 07500	Roofing
Section 09900	Painting

1.4 REFERENCE STANDARDS

.1 The latest editions of the following codes and standards shall apply unless otherwise indicated:

ASTM A526M	Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, Commercial Quality.
CAN/CGSB-51.32	Sheathing, Membrane, Breather Type.
CGSB 93.1	Sheet, Aluminum alloy, Prefinished, Residential.

Aluminum Association Designation System for Aluminum Finishes.
Aluminum Association Aluminum Sheet Metal Work in Building Construction.

1.5 SAMPLES

.1 Submit duplicate 50 x 50 mm samples of each type of sheet metal material, colour and finish.

1.6 WARRANTY

.1 This Contractor shall warrant the application of the flashings against any actual leakage for a period of 1 year from the date of Substantial Performance of the work, and agrees to make good promptly any defects which occur or become apparent within the warranty period. Warranty shall be on the Canadian Roofing Contractors Association standard form of guarantee.

2 PRODUCTS

2.1 SHEET METAL MATERIALS

.1 Zinc coated steel sheet: 24 gauge, commercial quality to ASTM A526, with Z275 designation zinc coating.

2.2 PREFINISHED STEEL SHEET

.1 Finish: factory applied coating to CGSB 93-GP-3M supplemented and amended as follows:

.1 Stelcolour Series 5,000.
.2 Thickness specified for prefinished steel sheet applies to base metal.

2.3 ACCESSORIES

.1 Isolation coating: alkali resistant bituminous paint.

.2 Plastic cement: to CGSB 37-GP-5Ma.

.3 Sealants: See Section - 07900 - Sealants

.4 Cleats: of same material, and temper as sheet metal, minimum 50 mm wide. Double the thickness of sheet metal being secured.

.5 Fasteners: of same material as sheet metal, to CSA B111, ring thread flat head roofing nails of length and thickness suitable for metal flashing application.

.6 Washers: of same material as sheet metal, 1 mm thick with rubber packings.

.7 Touch-up paint: as recommended by metal flashing and trim manufacture.

2.4 FABRICATION

.1 Fabricate metal flashings and other sheet metal work in accordance with applicable CRCA 'FL' series specifications or otherwise indicated on drawings.

.2 Breakform supplied prepainted sheet material to form copings shown on drawings.

.3 Form pieces in 2400 mm maximum lengths. Make allowance for expansion at joints.

.4 Hem exposed edges on underside 12 mm. Mitre and seal corners with sealant.

.5 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.

.6 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

2.5 METAL FLASHINGS

.1 Form flashings, copings and fascias to profiles indicated of 24 gauge prefinished steel.

3 EXECUTION

3.1 INSTALLATION

.1 Install sheet metal work in accordance with Aluminum Sheet Metal Work in Building Construction and CRCA FL series.

.2 Use concealed fastenings except where approved before installation.

.3 Install continuous starter strips where indicated or required to provide a true, non waving, leading edge. Anchor to back up with 4mm screws to provide rigid secure installation. Screw to be long enough to penetrate metal and spaced at 600 mm on centre.

.4 End joints where adjacent lengths of metal flashing meet shall be made using an S-lock joint. Execute by inserting end of 1 coping length in a 25mm deep S-lock formed in the end of the adjacent length. Extend concealed portion of the S-lock 25mm outwards and nail to substrate. Face nailing of joints will not be permitted.

.5 Caulk where required to form a weathertight seal between flashing and adjoining surfaces.

END OF SECTION

TOWNSHIP OF WILMOT

60 Snyder's Road West, Baden, Ontario N3A 1A1

* CHANGE OF USE REQUIREMENTS UNDER PERMIT 14-393 STILL IN EFFECT, ASIDE FROM CHANGES APPROVED UNDER THIS PERMIT (20-003)

PROFESSIONAL ENGINEER IS REQUIRED TO REVIEW CONSTRUCTION AND TO PROVIDE A REPORT TO THE BUILDING DEPARTMENT/INSPECTOR AT SIGNIFICANT STAGES IN CONSTRUCTION

THE ONTARIO BUILDING CODE REQUIRES THAT A COPY OF THE DRAWINGS AND SPECIFICATIONS, WHICH HAVE BEEN REVIEWED BY THE BUILDING DEPARTMENT, BE KEPT AT THE CONSTRUCTION SITE AT ALL TIMES

NOTE: IT IS THE CONSTRUCTOR'S RESPONSIBILITY TO ENSURE THAT ALL CONSTRUCTION CONFORMS TO THE REQUIREMENTS OF THE ONTARIO BUILDING CODE. NOTATIONS MADE ON THESE DRAWINGS ARE FOR YOUR INFORMATION AND ASSISTANCE ONLY AND DO NOT NECESSARILY COMMENT ON ALL AREAS OF CONSTRUCTION

TOWNSHIP OF WILMOT

DEVELOPMENT SERVICES

OFFICE

[redacted]0-003

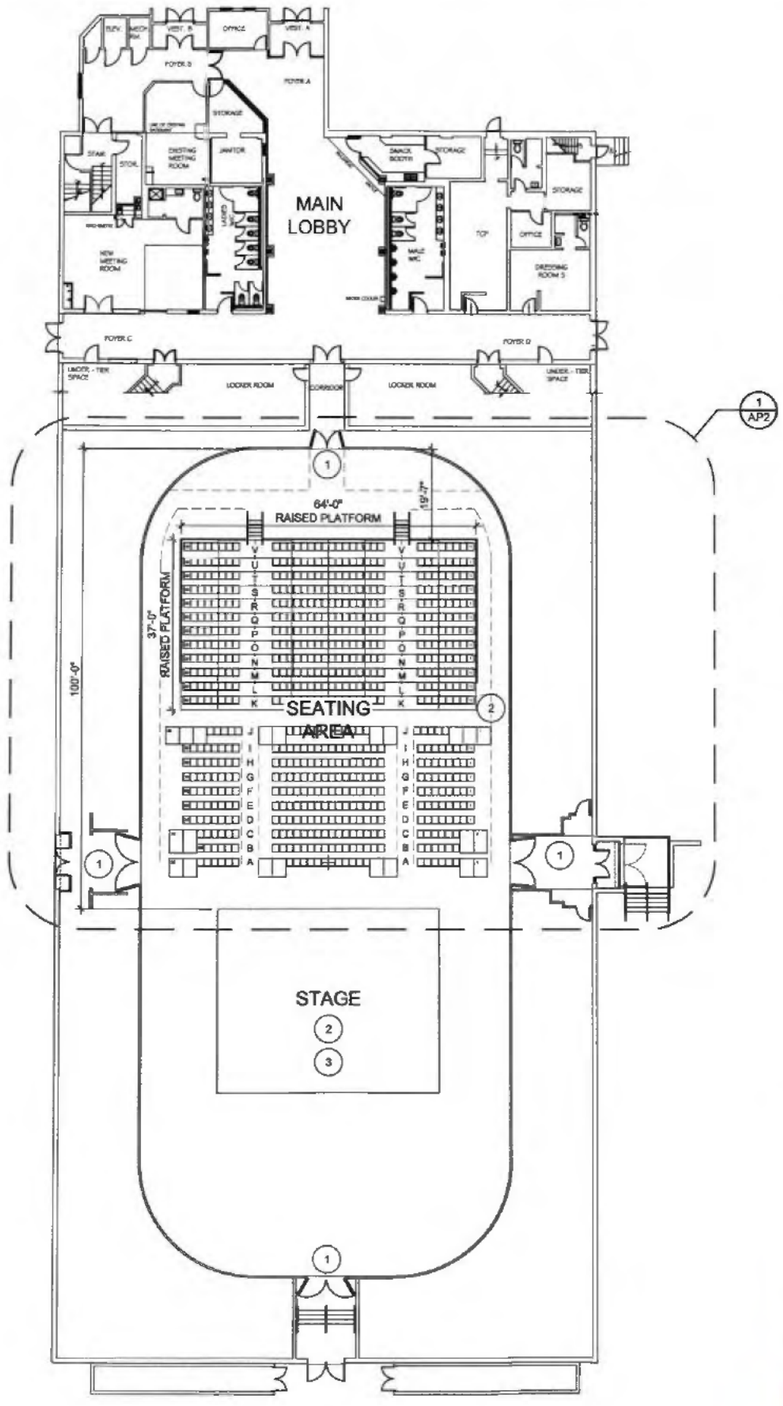
ALL ELECTRICAL [illegible] INSPECTED BY THE ELECTRICAL [illegible] AUTHORITY. SEPARATE INSPECTION APPLICATIONS (PERMITS) MUST BE FILED. FOR MORE INFORMATION PLEASE CALL:

KITCHENER PROCESSING CENTRE

PHONE FAX:

CODE COMPLIANCE NOTE:

1. EXITS TO BE REINSTATED AS PER THE ORIGINAL PERMIT 14-493
2. MAX. FLAME SPREAD RATING OF ALL MATERIAL IS 150. TCP TO PROVIDE ALL INFORMATION TO MUNICIPALITY.
3. STORAGE OF ANY KIND (MATERIALS, PROPS, BOXES, ETC.) BELOW THE STAGE IS NOT PERMITTED.
4. RAISED PLATFORM TO BE PROVIDED BY STAGING CANADELL, ENGINEERED SHOP DRAWINGS TO BE PROVIDED TO ARCHITECT AND MUNICIPALITY FOR REVIEW.



1 AP1 FLOOR PLAN
SCALE: 1/32" = 1'-0"

	Firm Name: R. Ritz Architect Certificate of Practice Number: 1262 Address: 322 Ontario Street, Stratford, Ontario N5A 3H8 The Certificate of Practice Number of the holder is the holder's BCDN The architect noted above has exercised responsible control with respect to design activities. The architect's seal number is the architect's BCDN. Name of Project: TCP NEW HAMBURG Address: 251 Jacob Street, New Hamburg										
Item	Ontario Building Code Data Matrix Parts 3 & 9									OBC Reference	
1	Project Description: ☐ New ☐ Addition ☐ Change of Use ☒ Alteration							☒ Part 11 11.1 to 11.4		☒ Part 3 2.1.1	☐ Part 9 2.1.1 9.10.1.3
2	Major Occupancy(s)	Group A Div. 1 (Temporary 14-393) Group A Div. 2 & Group A Div. 3								3.1.2.1.(1)	9.10.2
3	Building Area (m)²	Existing 3,089		New 0		Total 3,089				1.1.3.2	1.1.3.2
4	Gross Area	Existing 3,851		New 0		Total 3,851				1.1.3.2	1.1.3.2
5	Number of Storeys	Above Grade 2				Below Grade 1				3.2.1.1 & 1.1.3.2	2.1.1.3
6	Number of Streets/Fire Fighter Access	2								3.2.2.10 & 3.2.5	9.10.19
7	Building Classification	Group A Division 2 (Worse Case)								3.2.2.20 - .83	9.10.4
8	Sprinkler System Proposed	☒ entire building ☐ not required ☐ selected compartments ☐ selected floor areas ☐ basement only ☐ in lieu of roof rating								3.2.2.20 - .83 3.2.1.5 3.2.2.17	9.10.8
9	Standpipe Required	☐ Yes ☒ No								3.2.9	N/A
10	Fire Alarm Required	☐ Yes ☒ No								3.2.4	9.10.17.2
11	Water Service/Supply is Adequate	☒ Yes ☐ No								3.2.5.7	N/A
12	High Building	☐ Yes ☒ No								3.2.6	N/A
13	Permitted Construction Actual Construction	☐ Combustible ☐ Non-combustible ☒ Both ☐ Combustible ☐ Non-combustible ☒ Both								3.2.2.20 - .83	9.10.6
14	Mezzanine(s) Area (m)²									3.2.1.1.(3)-(8)	9.10.4.1
15	Occupant Load Based on	☐ m²/ person ☒ design of building 700 PERSONS + 75 CREW & STAFF TOTAL FOR BUILDING								3.1.17	9.9.1.3
16	Barrier-free Design	☒ Yes ☐ No (Explain)								3.8	9.5.2
17	Hazardous Substances	☐ Yes ☒ No								3.3.1.2. & 3.3.1.19	9.10.1.3(4)
18	Required Fire Resistance Rating (FRR)	Horizontal Assemblies FRR (Hours)					Listed Design No. or Description(SG-2)			3.2.2.20 - .83 3.2.1.4	9.10.8 9.10.9
		Floors 2.0 Hours					N/A				
		Roof 0.0 Hours					N/A				
		Mezzanine 1.0 Hours					N/A				
		FRR of Supporting Members					Listed Design No. or Description(SG-2)				
		Floors 2.0 Hours					N/A				
		Roof 0.0 Hours					N/A				
		Mezzanine 1.0 Hours					N/A				
19	Spatial Separation - Construction of Exterior Walls									3.2.3	9.10.14
	Wall	Area of EBF (m²)	L.D. (m)	L.H. or H.I.	Permitted Max. % of Openings	Proposed % of Openings	F.R.R. (Hours)	Listed Design or Description	Comb. Const.	Comb. Constr. Nonc. Cladding	Non-comb. Const.
	North	NO CHANGE TO EXISTING									
	South	NO CHANGE TO EXISTING									
	East	NO CHANGE TO EXISTING									
	West	NO CHANGE TO EXISTING									
20	Maximum Travel Distance to Exit Ground Floor: 45 m Proposed: 36 m									3.4.2.5.	
21	Exit Width Required Ground Floor: 4,728 mm Proposed: 7,010 mm									3.4.3.4.	
22	Water Closets Required: Men: 6 Women: 11 Water Closets Proposed: Men: 12 Women: 11 STAFF: 5 REMAINING FIXTURES AVAILABLE									3.7.4.3.B.	

CODE MATRIX HAS BEEN COMPLETED WITH INFORMATION PROVIDED ON 2014 PERMIT PREPARED BY GB ARCHITECT, WITH THE EXCEPTION OF THE OCCUPANT LOAD AND THE SEATING LAYOUT THERE ARE NOT CHANGES TO THE BUILDING.

THIS PERMIT ACCOMPANIES THE ORIGINAL REQUIREMENTS OF THE PART 10 CHANGE OF USE PERMIT AND BUILDING PERMIT 14-393 ARE REQUIRED TO BE REINSTATED.

ACCESS TO COMMUNITY HALL WASHROOMS REQUIRED DURING PERFORMANCES.

GENERAL NOTES:

1. Seal & Signature are by the person that has reviewed and taken responsibility for design activities.
2. Do not scale the drawings.
3. Check and verify all dimensions and report any discrepancies, contradictions, or ambiguities to the architect prior to issuance to contract.
4. All work to be carried out according to the Ontario Building Code, other applicable codes and standards, and any other authority having jurisdiction.

ONTARIO ASSOCIATION OF ARCHITECTS
[redacted]
LICENCE
JAN. 31/20

NO.	REVISIONS	DATE
1	ADDRESS BP COMMENTS	20-01-31

R·RITZ ARCHITECT
322 ONTARIO STREET
STRATFORD · ONTARIO
N5A 3H8 (519) 271-4603

PROJECT
The Community Players of New Hamburg
251 JACOB STREET
REVISED SEATING

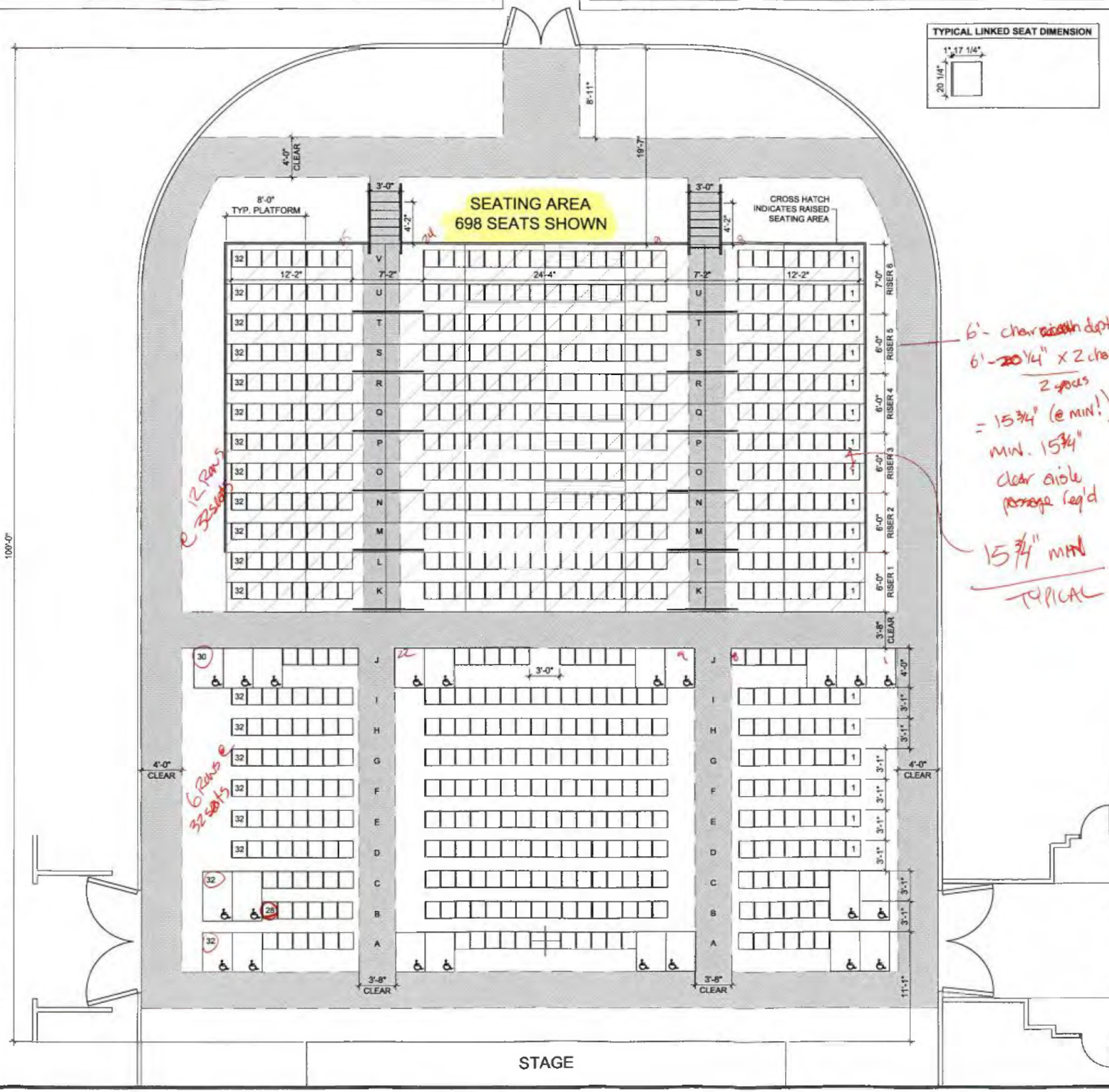
NEW HAMBURG, ONTARIO

TITLE
FLOOR PLAN & CODE MATRIX

DRAWN BY	L. AYLSWORTH
DATE	DEC. 16/19
SCALE	AS NOTED
FILE NO.	19P827-TCPWD.dwg
PROJECT NO.	19-P827

AP1

[redacted]



TYPICAL LINKED SEAT DIMENSION

RAISED SEATING AREA

	MIN. HEIGHT		MAX. HEIGHT
RISER 1	4 3/8"	7 1/2"	7 7/8"
RISER 2	8 3/4"	15"	15 3/4"
RISER 3	13 1/8"	22 1/2"	23 5/8"
RISER 4	17 1/2"	30"	31 1/2"
RISER 5	21 7/8"	37 1/2"	39 3/8"
RISER 6	26 1/4"	45"	47 1/4"

1. O.B.C. 3.3.2.4.(21) DETERMINES THE MIN. / MAX HEIGHT
2. RAISED SEATING AREA TO BE SUPPLIED BY STAGING CANADELL.
3. CANADELL TO PROVIDE SHOP DRAWING WITH TECHNICAL DATA AND LOADING CERTIFICATIONS.
4. P. ENG TO BE RETAINED TO REVIEW INSTALLATION HAS BEEN COMPLETED AS PER SPECIFICATIONS.
5. EACH RISER TO BE ILLUMINATED & BE PROVIDED WITH CONTRAST STRIP.
6. GUARD REQUIREMENTS (BELOW) TO BE FOLLOWED ONCE PLATFORM IS MORE THAN 23 5/8" A.F.F.

MINIMUM STANDARDS STAIRS, RAILING & GUARDS

STAIR DESIGN DIMENSIONS

RISE MAX = 7-7/8" (200mm) RISE MIN = 5-7/8" (125mm)
RUN MIN = 10" (255mm) TREAD MIN = 11" (279mm)
WIDTH MIN = 3'-0" (914mm)

HANDRAIL
- MAX = 38" (965mm)
- MIN = 34" (865mm)
- MIN. 1.18 - MAX 1.69" DIA.

GUARD
- MIN HGT = 3'-6" (1070mm)
- REQ'D WHEN HEIGHT IS GREATER THAN 24" INCL. STAIR HANDRAILS
- OPENINGS IN GUARD TO HAVE NO OPG. MORE THAN 4" & NOT HAVE HORIZONTAL BETWEEN 5 1/2" - 36"

STAIR NOTES

1. PROVIDE TACTILE INDICATOR AND COLOUR CONTRAST ON LEADING EDGE OF TREADS & LANDINGS.
2. PROVIDE GUARD ON ALL PLATFORMS MORE THAN 7 7/8" A.F.F.
3. GUARD HGT CAN BE REDUCED AT STAIR HANDRAIL TO SUIT.
4. GUARD REQ'D AT ALL PLATFORMS MORE THAN 23 5/8" A.F.F.
5. VARIATIONS SHALL NOT EXCEED 1/4" PER RISER

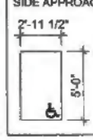
MINIMUM BARRIER FREE SEATING REQUIREMENTS

DESIGNATED WHEEL CHAIR SPACES REQUIRED
21 SPACES REQUIRED 21 SPACES PROVIDED

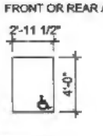
ADAPTABLE SEATING SEATS REQUIRED
35 SEAT REQUIRED 42 SEATS PROVIDED

WHEEL CHAIR SPACES DIMENSIONAL REQUIREMENTS

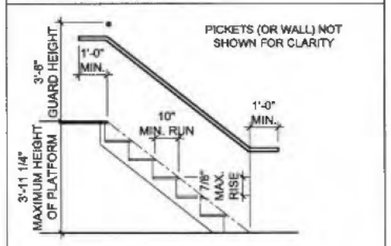
SIDE APPROACH



FRONT OR REAR APPROACH



HAND RAIL EXTENSION DETAIL



GENERAL NOTES:

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ONTARIO ASSOCIATION OF ARCHITECTS
[redacted]
LICENCE
JAN. 31/20

NO.	REVISIONS	DATE
1	ADDRESS BP COMMENTS	20-01-31

R·RITZ ARCHITECT
322 ONTARIO STREET
STRATFORD · ONTARIO
N5A-3H8 (519) 271-4603

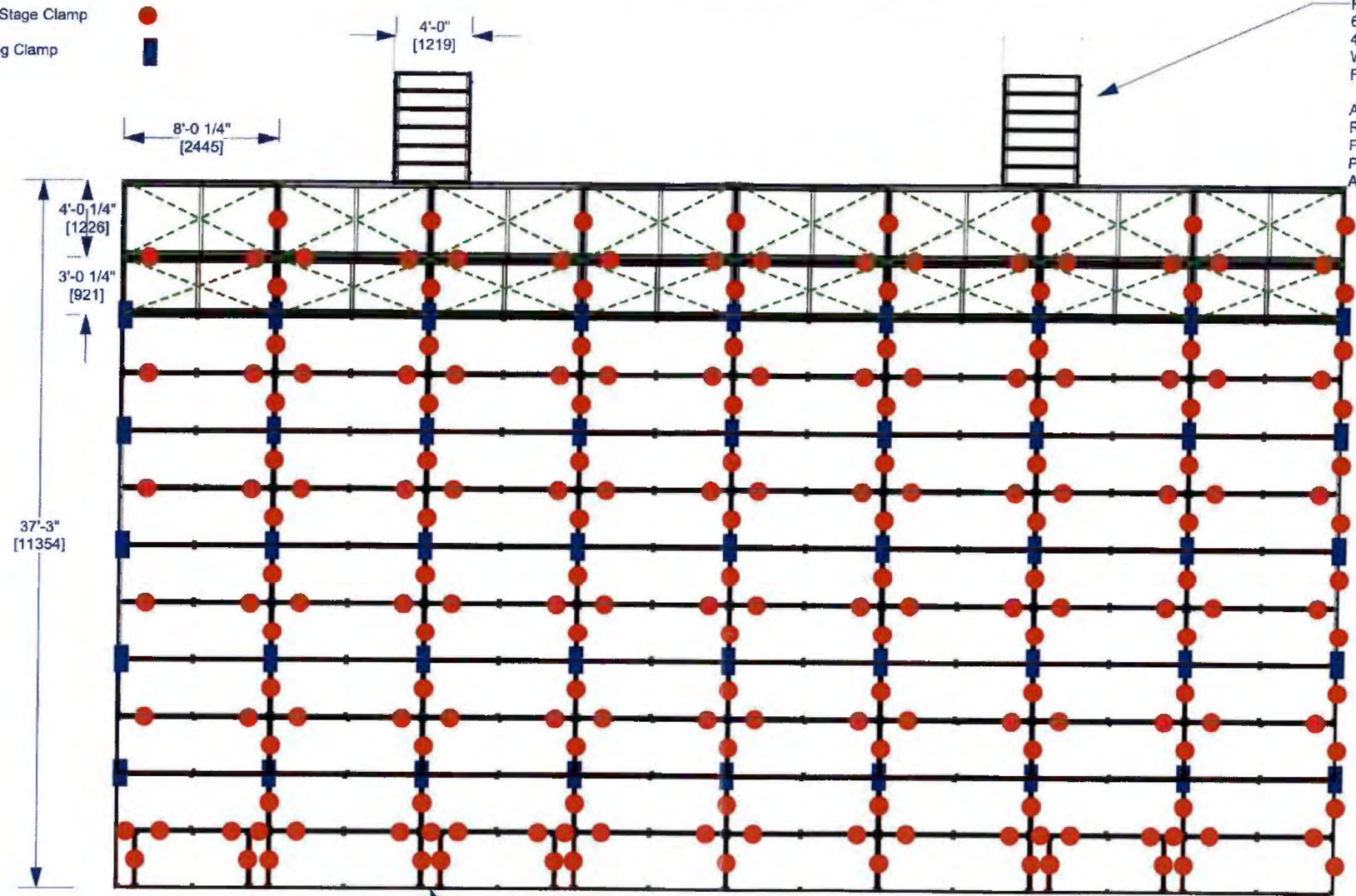
PROJECT
The Community Players of New Hamburg
251 JACOB STREET
REVISED SEATING
NEW HAMBURG, ONTARIO

TITLE
SEATING PLAN

DRAWN BY: L. AYLSWORTH	AP2
DATE: DEC. 16/19	
SCALE: 3/32" = 1'-0"	
FILE NO.: 19P827-TCPWD.dwg	PROJECT NO.: 19-P827

Stage to Stage Clamp

Leg to Leg Clamp



R-FLD-6
6-Step Stair
4'W x 47.25" Stage Height
W/REMOVABLE HAND RAIL
FOLDING

AS PER:
R-RITZ ARCHITECT
FILE NO 19P827-TCPWD
PROJECT NO 19-P827
AP2

Original Layout including 1 step up at 15 3/4" tier. Steps are repurposed at 7 7/8" level.

No Tools Required

All Clamps Included

Uniform Load Rating

250 lbs/sq.ft
8000 lbs/ 4' x 8' Section

8000 LBS

10 Year Warranty

made in CANADA

STAGING CANADELL
PORTABLE STAGING AND MUSIC RISER EXPERTS

DESIGNED FOR

Date: 1/28/20
Time: 9:16:06 AM
File name: Communiy Players of New Hamburg Ph 3 - Top View (3) Clamps.vwx

DATE	REV	DRAWN BY	SCALE	PAGE
DATE	REV	egv QUOTE		1

DR4
Hand Rail w/clamps
4'W x 42"H

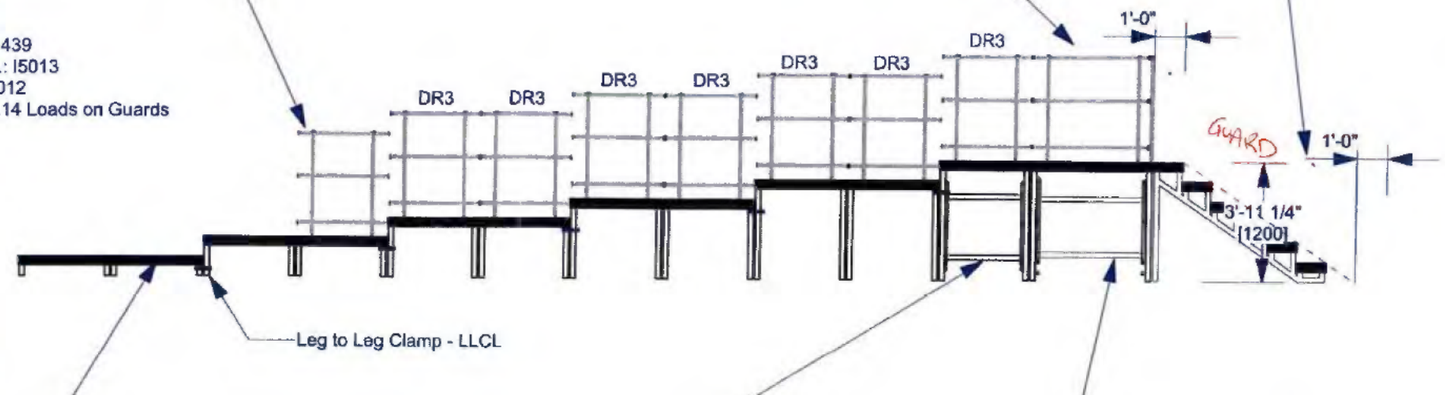
Hand Rail
Cert No.: 439
Project No.: I5013
ICC 300-2012
NBC 4.1.5.14 Loads on Guards

R-FLD-6
6-Step Stair
4'W x 47.25" Stage Height
W/REMOVABLE HAND RAIL/GUARD

AS PER:
R-RITZ ARCHITECT
FILE NO 19P827-TCPWD
PROJECT NO 19-P827
AP2

DR3
Hand Rail w/clamps
3'W x 42"H

Hand Rail
Cert No.: 439
Project No.: I5013
ICC 300-2012
NBC 4.1.5.14 Loads on Guards



ESB38
Executive Stage (Blacktop)
3'W x 8'L

Certified by Westest
250lbs/sq.ft.
61302

ELSF48-36
48" Executive Stage Support Frame (set of 3)
48" x 2" x 34.5"
All 47.25" platforms

Cross Braced Leg
Cert No.: 584
Project No.: I3716
ICC 300-2012
NBC 4.2.5.3 Full and Partial Loading
NBC 4.1.5.10 Sway Forces in Assembly
Occupancies

See Extended Height Leg Set Up Instruction
CPNH.vwx for setup instruction.

ELSF48-48
48" Executive Stage Support Frame (set of 3)
48" x 2" x 46.5"
All 47.25" platforms

Cross Braced Leg
Cert No.: 584
Project No.: I3716
ICC 300-2012
NBC 4.2.5.3 Full and Partial Loading
NBC 4.1.5.10 Sway Forces in Assembly
Occupancies

See Extended Height Leg Set Up Instruction
CPNH.vwx for setup instruction.

No Tools Required

All Clamps Included

Uniform Load Rating

250 lbs/sq.ft
8000 lbs/ 4' x 8' Section

8000 LBS

10 Year Warranty

10 YEAR WARRANTY

made in CANADA

STAGING CANADELL
PORTABLE STAGING AND MUSIC RISER EXPERTS

DESIGNED FOR		Date: 1/3/20 Time: 5:33:38 PM File name: Communiy Players of New Hamburg Ph 3 - Side View (3).vwx	
DATE	REV	DRAWN BY egv	SCALE
DATE	REV	QUOTE	PAGE 1

Specification for Leg to Leg Clamp Placement

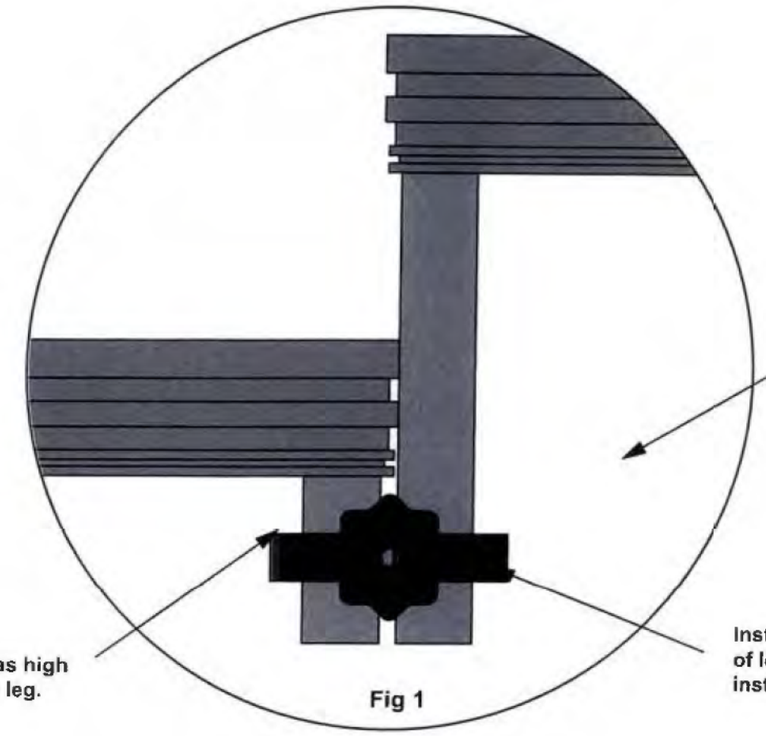
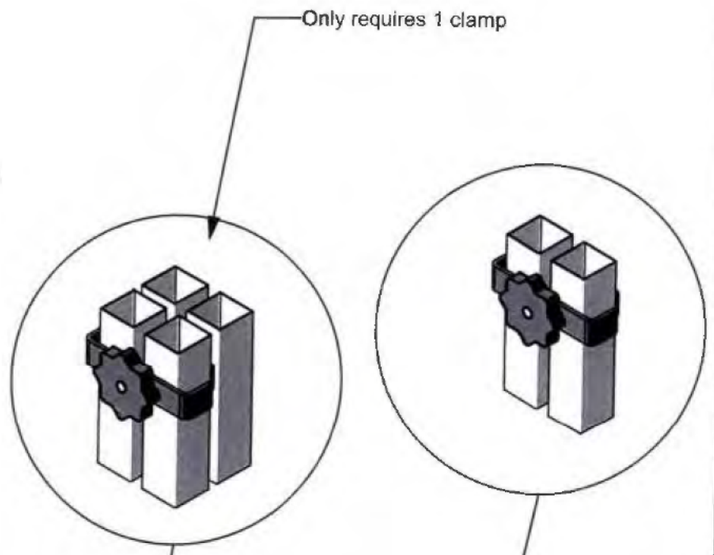


Fig 1

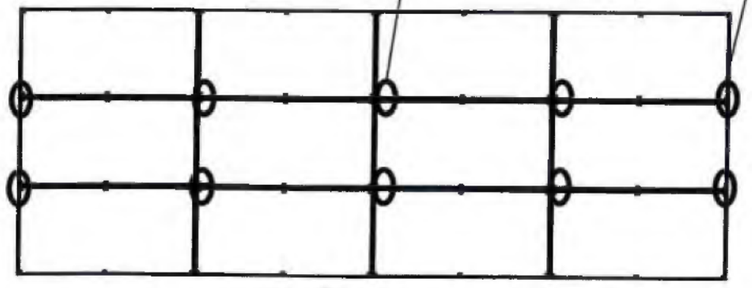


Specifications:

-The executive Stage Leg to Leg Clamp acts as a clamp to secure Executive stage units of different elevations together
-The clamp is constructed of 3/16" formed steel as shown with an easy to grip handle. The metal is finished with a black powder coat finish.
-Clamps should be located as high on the legs as possible to increase stability.

Installation:

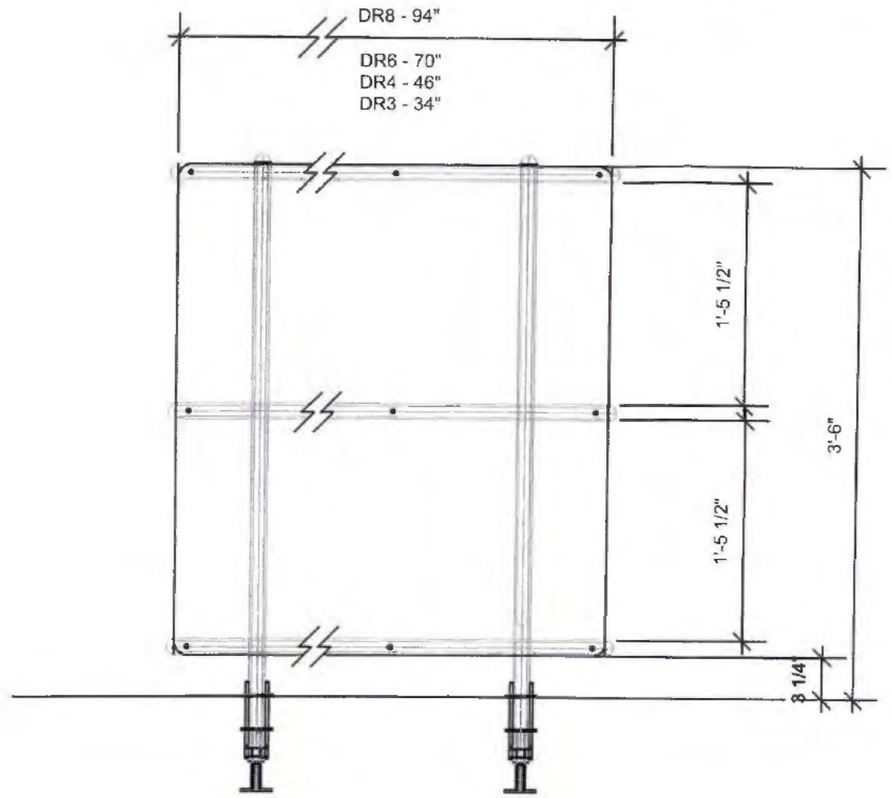
-The clamp is used to secure a leg of one stage to the leg of an adjacent stage. This is commonly used in tiered risers but can be used on single level platforms as well.
-Install the clamp so that it is as close to the top of the legs as possible (see Fig 1)
-Push stages together as tight as possible by hand
-Using the easy to grip plastic knob tighten the clamp to the two legs.
-To remove the clamp reverse the process



Typical Riser configuration. **0** Indicate location of Leg to Leg Clamp.

STAGING CANADELL
PORTABLE STAGING AND MUSIC RISER EXPERTS

TITLE: LLCL - Executive Leg to Leg Clamp				
DATE: October 10th, 2008	REV	DRAWN: Begv	SCALE	PAGE: 1
DATE	REV	DRAWN BY		



1/8" thick clear Lexan covering bolted through top middle and bottom horizontal in 3 locations

1/4" Hardware - precut holes in lexan covering

Materials

Item	Tolerance +/-	Material
A		1.25 x .065 Round PN STL-0467
B		STL1650 Rail Clamp Frame 1/4" HR
C		STL1651 Rail Clamp Plate 3/16" HR
D		STL1652 Rail Clamp Handle 3/16" HR
E		STL1653 Rail Clamp Bolt 3/4"

STAGING CANADELL
PORTABLE STAGING AND MUSIC RISER EXPERTS

TITLE: **DR3, DR4, DR6, DR8, IC 42" rail with Lexan covering**

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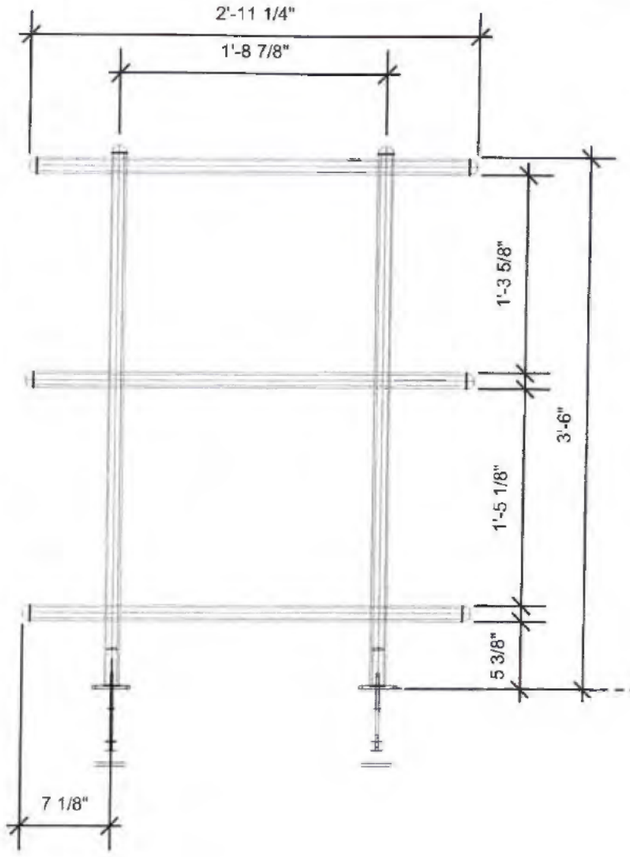
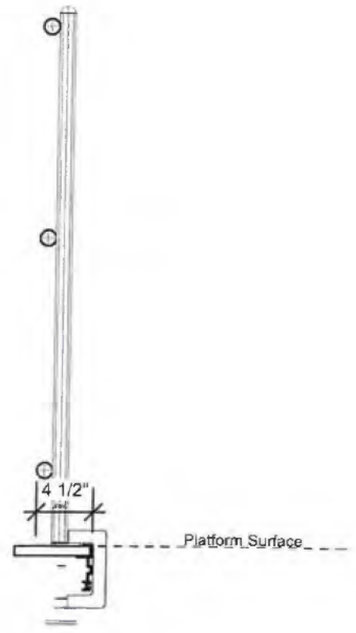
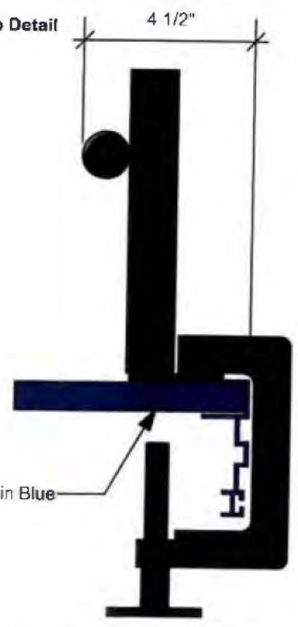
		egv		1
DATE	REV	DRAWN BY		





Rail Clamp Detail



Materials

Item	Tolerance +/-	Material
A		1.25 x .065 Round PN STL-0467
B		STL1650 Rail Clamp Frame 1/4" HR
C		STL1651 Rail Clamp Plate 3/16" HR
D		STL1652 Rail Clamp Handle 3/16" HR
E		STL1653 Rail Clamp Bolt 3/4"

STAGING CANADELL
PORTABLE STAGING AND MUSIC RISER EXPERTS

TITLE: **DR 3 - 3 ft rail with clamp.vwx**

DATE	REV	DRAWN BY	SCALE	PAGE
		egv		1
DATE	REV	DRAWN BY		

ARCHITECTURAL NOTES:

CLARIFICATION OF DRAWING USE:

The architectural drawings have been developed to relate construction for the building and to implement requirements of the Ontario Building Code Part 3.

The Client and Builder shall be solely responsible for notifying GB Architect Inc. of any change in the scope of work contained on these drawings, and, if work performed by other parties affect the work contained on these drawings, and, further, the Client and the Contractor shall jointly be responsible for securing direction in writing from GB Architect Inc. regarding any such changes or modifications.

The Client and Contractor shall jointly be responsible to notify GB Architect Inc. to perform a review of the work at the following stages:

1. First reviews: at completion of all required demolition;
2. Next reviews:periodically during the construction of all rough framing assemblies
3. Next reviews: during roof flashing and membrane work, and, at completion of roofing but before any metal cap flashing work;
4. Next reviews: during installation of and at completion of all rated door/frame installations;
5. Other reviews: periodically during the construction of all other GB Architect Inc. work;
6. Final review: upon completion of all other work noted on these drawings.

DRAWING REFERENCE:

1. THE STRUCTURAL ENGINEERING DRAWINGS ARE SUBMITTED ON SEPARATE DRAWING SHEETS AND UNDER SEPARATE SEAL AND SHALL SUPERCEDE ALL OTHER STRUCTURAL WORK IDENTIFIED ELSEWHERE ON THE ARCHITECTURAL DRAWINGS.
2. MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS ARE SUBMITTED ON SEPARATE DRAWING SHEETS AND UNDER SEPARATE SEAL, AND SHALL SUPERCEDE ALL OTHER MECH./ELEC/PLUMBING WORK IDENTIFIED ELSEWHERE ON THE ARCHITECTURAL DRAWINGS.
3. DRAWINGS, NOTES & DIMENSIONS SHOWN ON GB ARCHITECT INC. DRAWING SHEETS SHALL SUPERCEDE ALL OTHER WORK . CONFIRM ALL DISCREPANCIES BETWEEN ALL DRAWING SHEETS WITH ARCHITECT PRIOR TO PERFORMING AFFECTED WORK.
4. DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER DRAWINGS AND WRITTEN SPECIFICATIONS. CONFIRM ALL DISCREPANCIES BETWEEN DRAWING SHEETS & SHOP DRAWINGS WITH ARCHITECT PRIOR TO PERFORMING AFFECTED WORK.

SHOP DRAWING SUBMITTALS REQUIRED:

SUBMIT THE FOLLOWING SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW:

.1 DOORS AND FRAMES,
.2 DOOR HARDWARE SCHEDULE,
.3 WASHROOM ACCESSORIES & GRAB BARS,
.4 POWER DOORS OPERATOR ASSEMBLIES
.5 ALL FINISHES & PAINT

WALL TYPES:

1. ALL DRYWALL SHALL BE 5/8 " TYPE 'X' AND FINISHED UNLESS OTHERWISE NOTED.
2. ALL STUD WORK SHALL BE PLACED AT 16" O.C. UNLESS NOTED OTHERWISE.
3. ALL RESILIENT METAL FURRING CHANNEL SHALL BE PLACED AT 16" O.C. HORIZONTALLY UNLESS OTHERWISE NOTED.

SITE, ZONING + MUNICIPAL DATA:

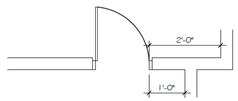
A. ALL ASPECTS RELATED TO ZONING PERMISSION, SURVEY INFORMATION AND THE LIKE REMAIN THE SOLE RESPONSIBILITY OF THE CLIENT.

OBC CLASSIFICATIONS:

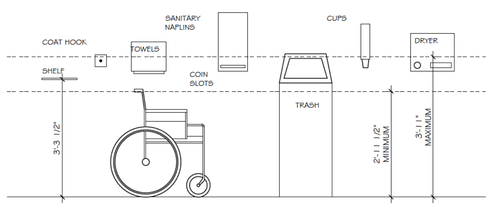
A. REFER TO OBC DATA MATRIX
B. BARRIER FREE ACCESSIBILITY IS REQUIRED TO THIS FACILITY;
C. A FIRE ALARM SYSTEM IS REQUIRED;
D. A STAND PIPE & HOSE ASSEMBLY IS NOT REQUIRED;
E. PANIC RELEASE HARDWARE IS REQUIRED;
F. PROVISION OF FIRE EXTINGUISHERS IS THE SOLE RESPONSIBILITY OF CLIENT AND SHALL MEET WITH APPROVAL OF LOCAL FIRE OFFICIALS (& GOVERNING SECTIONS OF THE ONTARIO FIRE CODE);
G. A MINIMUM OF TWO DESIGNATED EXITS ARE REQUIRED;
H. EXIT SIGNAGE AND EMERGENCY LIGHTING IS REQUIRED - REFER TO M&E ENGINEERED DRAWINGS & SPECIFICATIONS SUBMITTED UNDER SEPARATE SEAL;
I. SEPARATE ALL WOOD IN CONTACT WITH CONCRETE OR MASONRY;
J. ALL DRYWALL SHALL BE 5/8 " TYPE 'X' UNLESS OTHERWISE NOTED;
K. ALL RATED DOOR AND FRAME ASSEMBLIES SHALL BE EQUIPPED WITH A DOOR CLOSER, SELF LATCH HARDWARE, AND UNPAINTED LABELS IDENTIFYING DESIGNED FIRE RATING;
L. "FIRE-STOP" ALL PLUMBING PIPE PASSING THROUGH ANY "FIRE SEPARATION" WALL OR CEILING/FLOOR - UNLESS PIPE IS NON-COMBUSTIBLE;
P . PROVIDE SOLID BLOCKING AT MID HEIGHT OF ALL UN-INSULATED STUD WALLS EXCEEDING A HEIGHT OF 9'-1 0";
Q. FIRE-STOP ALL JUNCTIONS BETWEEN HORIZONTAL & VERTICAL CONCEALED SERVICE SPACES;
R. ALL SERVICE CONTROLS & ELECTRICAL SWITCHES SHALL BE MOUNTED NO HIGHER THAN 3'-1 1" A.F.F.

GENERAL CONSTRUCTION NOTES:

1. ALL DRYWALL SHALL BE 5/8 " TYPE 'X' UNLESS OTHERWISE NOTED.
2. USE NRCA ROOFING AND FLASHING DETAILS TO ALL ROOF/WALL AND CANOPY CONNECTIONS. FLASH AND COUNTER FLASH. TYPICAL ALL LOCATIONS.
3. TYPICAL FIRE SEPARATION WALLS ASSEMBLIES SHALL BE EXTENDED FROM FLOOR LEVELS AND TERMINATED AT UNDERSIDE OF CEILING AND/OR ROOF MEMBRANES.
4. PROVIDE POSITIVE BACKING SUPPORT AND ANCHORAGE FOR ALL INTERIOR STUD WALLS (BEARING OR NONBEARING), FOR ALL WALL ATTACHMENTS, EQUIPMENT BACKING AND THE LIKE.
5. PROVIDE MINIMUM 5/8" TYPE "X" FINISHED DRYWALL AS A FINISHED CEILING WHERE NOTED. SURFACE MOUNTED WIRING, EQUIPMENT AND THE LIKE ARE NOT PERMITTED UNLESS PRIOR APPROVAL IN WRITING IS RECE VED FROM ARCHITECT & OWNER.
6. PROVIDE ADEQUATE ROUGH BUCK SUPPORT FOR NEW DRYWALL BOARD ASSEMBLY. USE 5/8" TYPE "X" FINISHED DRYWALL FOR ALL BULKHEAD AND JAMB WORK.



DOOR CLEARANCES



SERVICE UNIT HEIGHTS

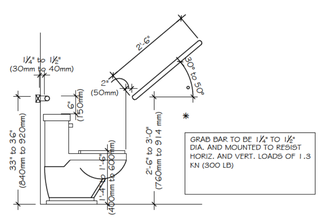
BARRIER FREE DESIGN REQUIREMENTS

BARRIER FREE ENTRY DOOR ASSEMBLY NOTES:

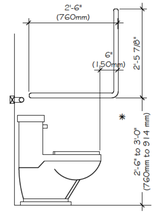
1. NEW POWER OPERATED DOOR SYSTEM TO EXISTING EXTERNAL DOOR & VESTIBULE DOOR

BARRIER FREE ACCESSIBILITY NOTES:

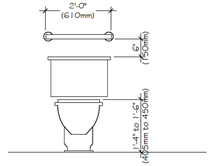
1. WORK & ACCESSORIES REQUIRED TO "ACCESSIBLE" WASHROOMS:
   1.1. PROVIDE ONE TILT MIRROR DESIGNATED AS "ACCESSIBLE";
   1.2. INSULATE WASTE AND HOT WATER SUPPLY PIPING AT s/s OF LAVATORY;
   1.3. WALL HUNG LAVATORY SHALL BE EQUIPPED WITH APPROVED "WING HANDLE 40" TRIM;
   1.4. MOUNT ALL FIXTURES AND ACCESSORIES AT 3'-1 1" A.F.F.;
   1.5. ENSURE MINIMUM 2.4" CLEARANCE FROM JAMB TO INSWING OF DOORS;
   1.6. ENSURE MINIMUM 1 2" TO OUT SWING OF DOORS;
   1.7. PROVIDE ONE COAT HOOK AT 3'-1 1" A.F.F.;
   1.8. PROVIDE UNIVERSAL BARRIER FREE SIGNAGE TO BF WASHROOM DOORS;
2. GRAB BARS TO ACCESSIBLE WASHROOM (ABLE TO SUPPORT 300 LB CAPACITY)
   2.1. SIDE BAR TO BE 1½" DIA. BY 30" STRAIGHT S.S. MOUNTED AT 30-50 DEGREE ANGLE SLOPING UPWARDS AWAY FORM TOILET SEAT. LOW END TO BE MOUNTED 9" ABOVE SEAT AND 2" IN FRONT OF SEAT. PROVIDE SOLID BACK SUPPORT FOR ANCHORS. PROVIDE 1½" CLEAR BETWEEN BAR AND WALL.
   2.2. BACK BAR TO BE 1½" DIA. BY 24" STRAIGHT S.S MOUNTED HORIZONTALLY ON WALL BEHIND TOILET SEAT AT 2'-9" A.F.F OR 5½" ABOVE TOP OF TANK. PROVIDE SOLID BACK SUPPORT FOR ANCHORS. PROVIDE 1½" CLEAR BETWEEN BAR AND WALL.



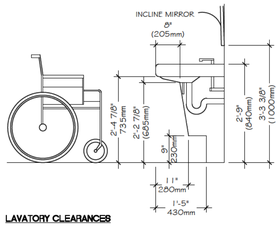
DIAGONAL GRAB BAR



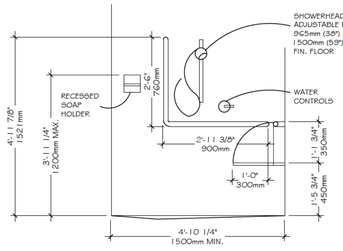
L-SHAPED GRAB BAR



WATER CLOSET GRAB BAR (BACK WALL)



LAVATORY CLEARANCES



BARRIER FREE SHOWER LAYOUT

Firm Name: GB ARCHITECT NC.
Certificate of Practise Number: 4217
430 Ontario Street
Stratford, ON, N5A 3J2

The Certificate of Practise Number of the holder Is the holder's BCDN.

Name of Project:
New Hamburg Arena Renovation

Location:
251 Jacob Street
New Hamburg, Ontario

SCOPE OF WORK:
INTERIOR RENOVATION OF PUBLIC WASHROOMS, FOYER, MEETING ROOM & ENTRY VEST BULE ON THE MA N FLOOR; FLAT ROOF REPLACEMENT; EXTERIOR SID NG REPLACEMENT; OTHER INTERIOR COSMETIC WORK MOD FY HVAC, ELE, PLUMBING, & SPRINKLER SYSTEM AFFECTED WITH N AREA OF WORK.

The Architect above has exercised responsible control with respect to design activities The Architect's seal number is their BCDN number

Ontario's 2006 Building Code Data Matrix Part 3

OBC Reference
References are to Division B unless noted [A] for Division A or [C] for Division C

ITEM						ARTICLE	
1	PROJECT DESCRIPTION: ☐ CHANGE OF USE	☐ NEW ☐ ADDITION ■ ALTERATION		☐ PART 11 11.1 to 11.4	■ PART 3 1.1.2 [A]	☐ PART 9	
2	MAJOR OCCUPANCY(S): GROUP A2 & GROUP A3 (ARENA)				3.1.2.1 (1)		
3	BUILD NG AREA(m^2)EXISTING (ARENA): 2427m^2 EXISTING (NORTH FOYER): 662m^2	NEW: 0m^2	TOTAL: 3089m^2		1.4.1 2[A]		
4	GROSS AREA(m^2)	EXISTING: 3851m^2	NEW: 0m^2	TOTAL: 3851m^2	1.4.1 2[A]		
5	NUMBER OF STOREYS	ABOVE GRADE: 2	BELOW GRADE:1		1.4.1.2[A] & 3.2.1.1		
6	NUMBER OF STREETS/ACCESS ROUTES: 2				3 2.2.10 & 3 2.5		
7	BU LDING CLASSIFICATION: GROUP A2 & GROUP A3 (WORSE CASE)				3 2.2.24 & 31		
8	SPR NKLER SYSTEM PROPOSED	■ ENTIRE BU LDING (EXIST NG) ☐ SELECTED COMPARTMENTS ☐ SELECTED FLOOR AREAS ☐ BASEMENT ☐ IN LIEU OF ROOF RATING ☐ NOT REQUIRED			3 2.2.24 3 2.2.31 3 2.1.5. 3 2.2.17 INDEX		
9	STANDP PE REQUIRED	☐ YES	■ NO CHANGE		3 2.9.1		
10	FIRE ALARM REQUIRED	■ YES	■ NO CHANGE		3 2.4.1		
11	WATER SERVICE/SUPPLY IS ADEQUATE	■ YES	☐ NO		3 2.5.7		
12	HIGH BUILD NG	☐ YES	■ NO		3 2.6.1		
13	CONSTRUCTION RESTRICTIONS ACTUAL CONSTRUCTION	☐ COMBUST BLE ☐ COMBUST BLE	■ NON-COMBUSTIBLE ■ NON-COMBUSTIBLE	☐ BOTH ☐ BOTH	3 2.2.24 3 2.2.31	SEE NOTE 2.0	
14	MEZZAN NE(S) AREA(m) ' NOT APPLICABLE	EXISTING AREA: 0.0	NEW AREA: 0 m²				
15	OCCUPANT LOAD BASED ON : ■ m ²/PERSON- SEE BELOW THERE IS NO CHANGE TO OCCUPANT LOADING. STAFF NG REMAINS UNCHANGED.		☐ DESIGN OF BU LDING		3.1.17.1.		
16	BARRIER FREE DESIGN	■ YES	☐ NO (EXPLAIN)		3 8		
17	HAZARDOUS SUBSTANCES	☐ YES	■ NO		3 3.1.2. & 3 3.1.19		
18	REQU RED F RE RESISTANCE RATING (FRR)	HORIZONTAL ASSEMBL ES FRR (HOURS)	LISTED DESIGN No. OR DESCRIPTION (SG-2)		3 2.2.24 3 2.2.31 3 2.1.4		
		FLOORS 1 HOURS	SEE NOTE 1.0 BELOW		-		
		ROOF 0 0 HOURS	NO CHANGE		-		
		MEZZANINE 1 HOURS	NOT APPLICABLE		-		
		FRR OF SUPPORTING MEMBERS	LISTED DESIGN No. OR DESCRIPTION (SG-2)				
		FLOORS 1 HOURS	SEE NOTE 1.0 BELOW		-		
		ROOF 0 0 HOURS	NO CHANGE		-		
		MEZZANINE 1 HOURS	NOT APPLICABLE		-		
19	SPATIAL SEPARATION - CONSTRUCTION OF EXTERIOR WALLS				3 2.3.		

WALL	AREA OF EBF (m²)	L.D. (m)	L/H OR H/L	PERMITTED MAX. % OF OPEN NGS	PROPOSED % OF OPENINGS	FRR (HOURS)	LISTED DESIGN OR DESCRIPTION	COMB. CONST.	COMB. CONST. NONC. CLADDING	NON-COMB CONST.
NORTH	NOT APPLICABLE - NO CHANGE									
SOUTH	NOT APPLICABLE - NO CHANGE									
EAST	NOT APPLICABLE - NO CHANGE									
WEST	NOT APPLICABLE - NO CHANGE									

20	OTHER		
21	MAXIMUM TRAVEL DISTANCE TO EXIT		
22	GROUND FLOOR: MAX MUM PERMITTED NO CHANGE TO EXISTING	3.4.2.5	
	EXIT W DTH REQUIRED GROUND FLOOR: M N MUM REQUIRED NO CHANGE TO EXIST NG	3.4.3.4	
23	WASHROOMS CLOSETS REQUIRED REPLACEMENT OF EXISTING FIXTURES ONLY WASHROOMS CLOSETS PROVIDED	3.7.4.3 (16)	
24	CONCEALED SPACE (FLOOR OR CEIL NG) USED AS A PLENUM ☐ YES ■ NO		
	NOTE 1: EXISTING MA N FLOOR CE LING ASSEMBLE (2ND FLOOR LEVEL FLOOR ASSEMBLY) IS NON-RATED EXPOSED WOOD TIMBER & PLANKS, SUPPORTED BY WOOD T MBER POST AND BEAM. PROPOSED OS MOD F ED SPRINKLER SYSTEM PROTECT NG EXPOSED EXISTING WOOD STRUCTURE (PAINTED) & NEW STEEL POST & BEAM (6 IN TOTAL) FINISHED WITH NTU,ESCENT PAINT. (PREVIOUSLY NEGOTIATED WITH WILMOT TOWNSH P C B.O		
	NOTE 2: ALTHOUGH OBC 3 2.2 SECTION .24 & 31. REQU RE NON-COMBUST BLE CONSTRUCTION, THE MAJORITY PORTION OF THE EXIST NG BUILD NG IS CONSTRUCTED OF COMBUST BLE CONSTRUCTION		

DO NOT SCALE DRAWINGS. DRAWINGS MUST BE READ IN CONJUNCTION WITH WRITTEN SPECIFICATIONS. ALL WORK SHALL BE CARRIED OUT ACCORDING TO LATEST VERSIONS OF THE ONTARIO BUILDING CODE, OTHER APPLICABLE CODES, AND ALL AUTHORITIES HAVING JURISDICTION. CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL DISCREPANCIES OR AMBIGUITIES TO THE ARCHITECT PRIOR TO ISSUANCE OF CONTRACT.

No.	DATE	REVISION

gb architect inc.
430 ONTARIO STREET
STRATFORD, ONTARIO. N5A 3J2
PHONE (519) 272 0073 FAX (519) 272 1433

"Guy R Bellehumeur, B Arch , OAA, MRAIC, Principal Architect of GB ARCHITECT INC is the designer for this project with respect to all architectural work identified on this drawing sheet The Ontario Association of Architects has assigned Guy R. Bellehumeur & GB ARCHITECT INC
BCDS Number 4217
as per requirements of the Ministry of Municipal Affairs & Housing Bill 124 "

The Architect above has exercised responsible control with respect to design activities The Architect's seal number is their BCDN number

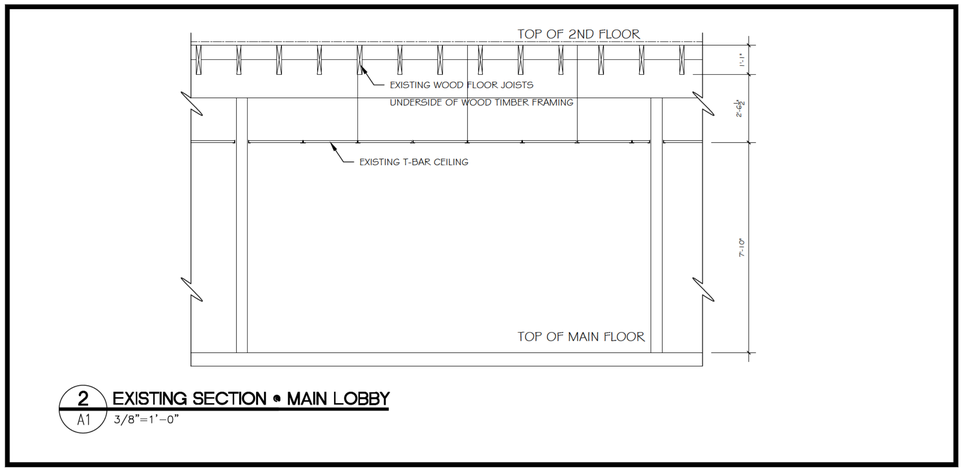
NEW HAMBURG ARENA RENOVATIONS 2013

251 JACOB STREET
NEW HAMBURG,ONTARIO

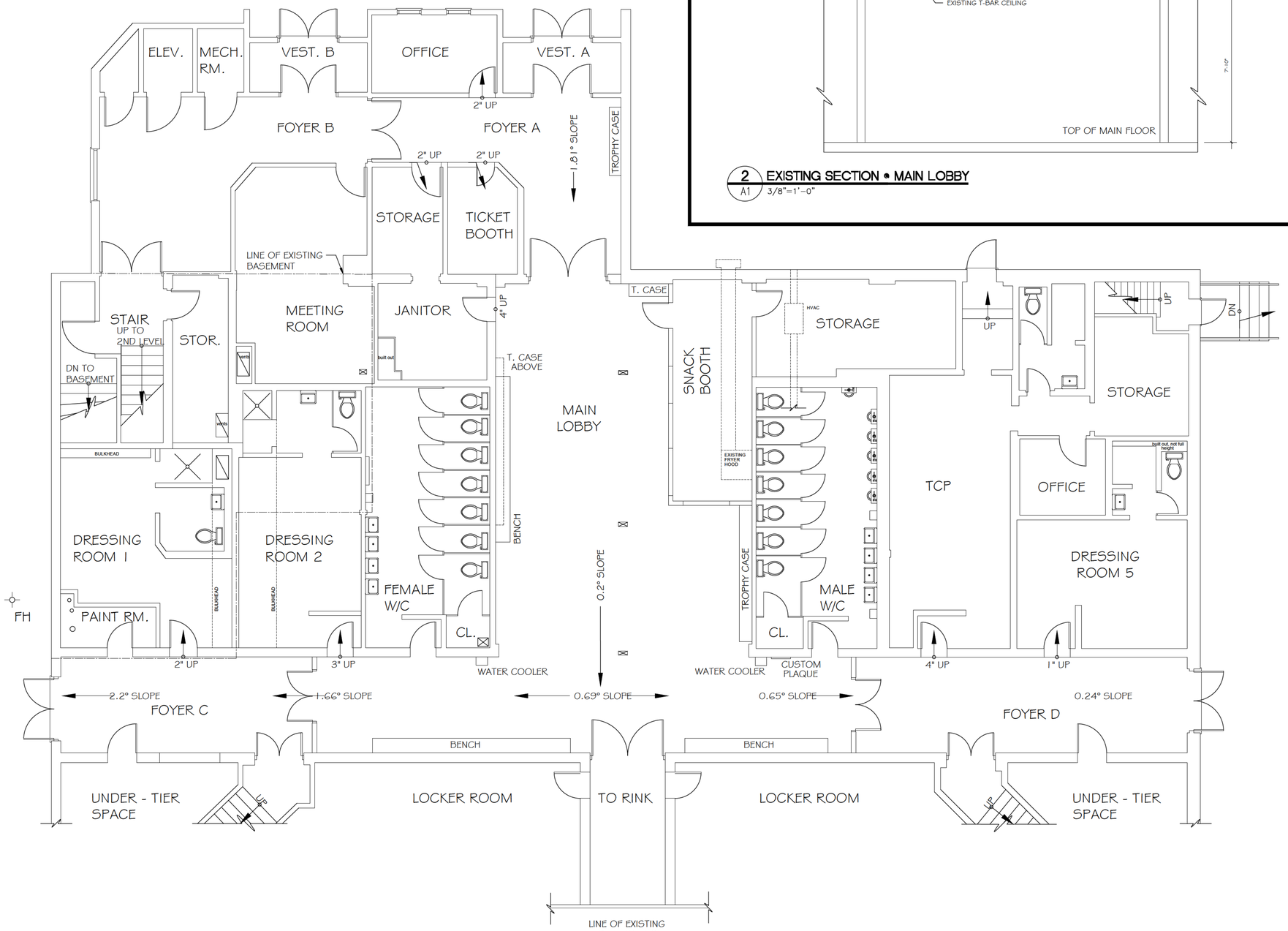
PRINT DATE:	March 5, 2014
DATE:	February 25, 2014
DRAWN BY:	A.C.
CHECKED BY:	G.R.B.
SCALE:	N.T.S.
PROJECT No.:	13-1260

NOTES

A1



2 / A1 EXISTING SECTION • MAIN LOBBY
3/8"=1'-0"



1 / A2.1 PARTIAL EXISTING MAIN FLOOR PLAN
3/16"=1'-0"

DO NOT SCALE DRAWINGS. DRAWINGS MUST BE READ IN CONJUNCTION WITH WRITTEN SPECIFICATIONS. ALL WORK SHALL BE CARRIED OUT ACCORDING TO LATEST VERSIONS OF THE ONTARIO BUILDING CODE, OTHER APPLICABLE CODES, AND ALL AUTHORITIES HAVING JURISDICTION. CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL DISCREPANCIES OR AMBIGUITIES TO THE ARCHITECT PRIOR TO ISSUANCE OF CONTRACT.

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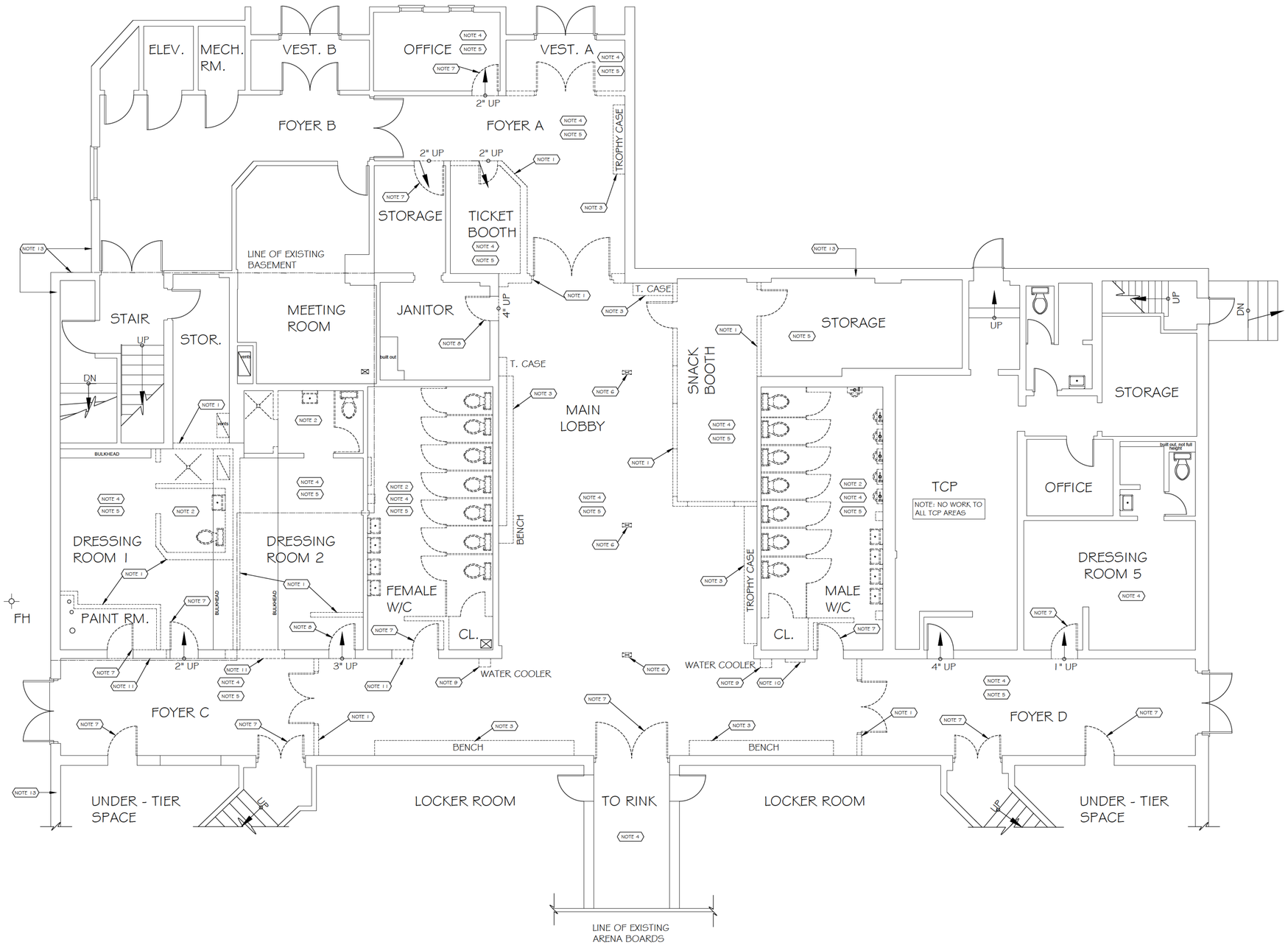
NEW HAMBURG
ARENA
RENOVATIONS 2013

251 JACOB STREET
NEW HAMBURG,ONTARIO

PRINT DATE:	March 5, 2014
DATE:	February 25, 2014
DRAWN BY:	A.M.
CHECKED BY:	G.R.B.
SCALE:	3/16"=1'-0"
PROJECT No.:	13-1260

MAIN FLOOR
EXISTING

A2.1



1 A2.2 **PARTIAL MAIN FLOOR PLAN**
3/16"=1'-0"

DEMOLITION NOTES

NOTE 1 REMOVE AND DISPOSE PORTION OF THE EXIST. CONC. BLOCK PARTITION, DOORS AND FRAME (SHOWN DOTTED). PATCH AND MAKE GOOD ANY FINISHES THAT REMAIN.

NOTE 2 REMOVE AND DISPOSE EXIST. WASHROOM PARTITIONS, VANITIES AND ALL PLUMBING FIXTURES. BREAKOUT EXIST. CONC. FLOOR SLAB TO ACCOMMODATE NEW SANITARY DRAINAGE LINES. CO-ORDINATE WITH MECH. DWGS. CAP OBSOLETE PIPING. PATCH AND MAKE GOOD FLOOR SLAB.

NOTE 3 REMOVE AND DISPOSE EXIST. BENCHES, TROPHY CASES AND OTHER SIMILAR ITEMS. PATCH AND MAKE GOOD ANY FINISHES THAT REMAIN.

NOTE 4 REMOVE AND DISPOSE EXIST. FLOORING. MAKE GOOD EXIST. CONC. SURFACE FOR NEW FLOORING.

NOTE 5 REMOVE AND DISPOSE EXIST. CEILING DRYWALL ASSEMBLIES, CEILING TILE, CEILING GRID AND LIGHT FIXTURES. CO-ORDINATE WITH ELECT. DWGS. MAKE SAFE EXIST. ELECTRICAL SERVICES AS REQUIRED FOR NEW LIGHT FIXTURES.

NOTE 6 REMOVE AND DISPOSE EXIST. COLUMN ASSEMBLIES. PATCH CONCRETE FLOOR AS REQUIRED. COORDINATE WITH STRUCTURAL.

NOTE 7 REMOVE AND DISPOSE EXIST. DOOR AND FRAME. PATCH AND MAKE GOOD ANY FINISHES THAT REMAIN.

NOTE 8 REMOVE AND DISPOSE EXIST. DOOR AND FRAME. INFILL OPENING WITH MASONRY. PATCH AND MAKE GOOD FINISHES THAT REMAIN. MAINTAIN SECURITY TO THEIR TENANT SPACE AT ALL TIMES.

NOTE 9 REMOVE AND DISPOSE EXIST. WATER COOLERS. PATCH AND MAKE GOOD ANY FINISHES THAT REMAIN.

NOTE 10 REMOVE AND RELOCATE EXIST. PLAQUE. SAWCUT CONCRETE BLOCK AROUND PLAQUE ON BYS EXIST. WALL. REMOVE PLAQUE AND BLOCK AS A SINGLE UNIT. DELIVER PLAQUE (STILL ATTACHED TO CONCRETE BLOCK WALL) TO OWNER

NOTE 11 REMOVE EXISTING BLOCK WALL (FLOOR TO CEILING) TO ALLOW FOR NEW OPENINGS. MAKE GOOD ALL FINISHES

NOTE 12 REMOVE ALL FLAT ROOFING (LEVEL INSULATION) & RELATED PARAPET/FLASHING TO ACCOMMODATE NEW ROOFING& PARAPET/FLASHING

NOTE 13 REMOVE EXTERIOR SIDING, STRAPPING WALL, INSULATION & RELATED PARAPET/FLASHING AS REQUIRED TO ACCOMMODATE NEW INSULATED SIDING ASSEMBLIES & NEW PARAPET/FLASHING

REFER ALSO TO DEMOLITION NOTES ON MECHANICAL, ELECTRICAL, SPRINKLER & STRUCTURAL DRAWINGS

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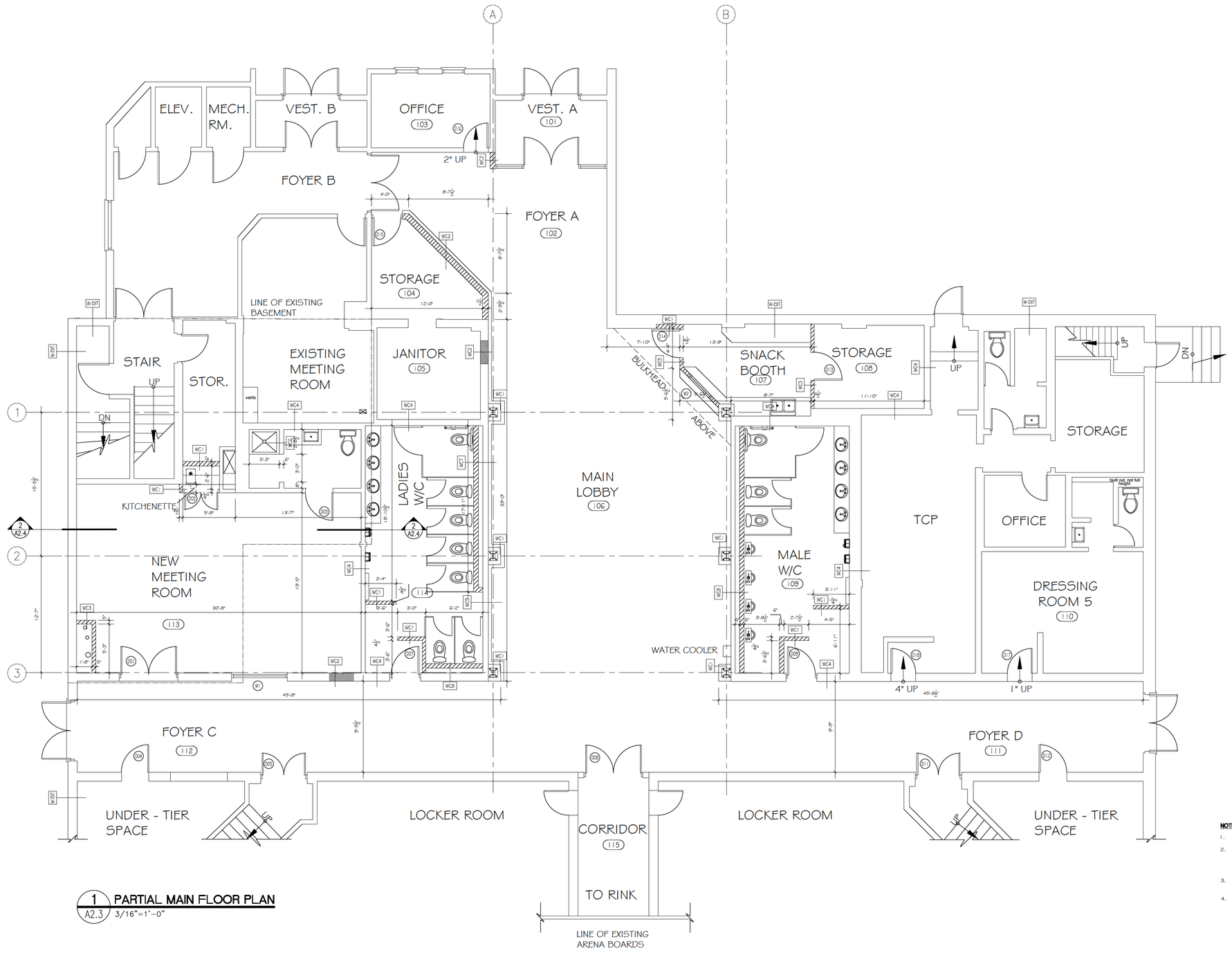
NEW HAMBURG ARENA RENOVATIONS 2013

251 JACOB STREET
NEW HAMBURG,ONTARIO

PRINT DATE:	March 5, 2014
DATE:	February 25, 2014
DRAWN BY:	A.C.
CHECKED BY:	G.R.B.
SCALE:	3/16"=1'-0"
PROJECT No.:	13-1260

DEMOLITION PLAN

A2.2



1 A2.3 **PARTIAL MAIN FLOOR PLAN**
3/16"=1'-0"

TYPICAL CONSTRUCTION ASSEMBLIES

WALL TYPES

- WC1 TYPICAL INTERIOR WALL
  - 6" CONC. BLOCK
- WC2 TYPICAL INTERIOR WALL
  - 6" CONC. BLOCK
- WC3 TYPICAL INTERIOR WALL
  - 3 5/8" METAL STUDS @ 16" O.C.
  - 1/2" GYPSUM BOARD
- WC4 TYPICAL INTERIOR WALL - ABOVE EXISTING CONC. BLK WALL
  - 1/2" GYPSUM BOARD
  - 3 5/8" METAL STUDS @ 16" O.C. CAVITY FILLED WITH INSULATION
  - 1/2" RESILIENT CHANNEL (TO HOLD INSULATION IN PLACE)
- WC5 TYPICAL INTERIOR WALL
  - 1/2" GYPSUM BOARD
  - 3 5/8" METAL STUDS
  - 1/2" GYPSUM BOARD
- WC6 TYPICAL INTERIOR WALL
  - 1/2" GREENBOARD
  - 3 5/8" METAL STUDS @ 16" O.C.
  - 1/2" GREENBOARD
- WC7 INTERIOR STONE WALL
  - 6" CONC. BLOCK WALL
  - 6" AIR SPACE
  - EXISTING CONC. BLOCK WALL
  - METAL STRAPPING @ 16" o.c. HORIZ.
  - 5/8" TAG PLYWOOD
  - STONE VENEER
- WC8 PLUMBING WALL
  - EXISTING CONC. BLOCK WALL
  - 6" AIR SPACE
  - 6" CONCRETE BLOCK WALL
- WC9 TYPICAL INTERIOR STONE WALL
  - EXISTING CONC. BLOCK WALL
  - METAL STRAPPING @ 16 o.c. HORIZ.
  - 5/8" TAG PLYWOOD
  - STONE VENEER
- W-EXT REFACED EXTERIOR WALL
  REMOVE EXISTING METAL SIDING
  - KINGSPAN PANEL
  - MANUFACTURER APPROVED FURRING CHANNEL
  - AIR BARRIER
  - EXISTING EXTERIOR WALL

NOTES

1. ALL EXPOSED MASONRY CORNERS SHALL BE BULLNOSED (TYPICAL).
2. WHERE NON-LOADBEARING WALLS OCCUR BELOW PRECAST SLABS MASON TO FILL SOLID BETWEEN TOP OF BLOCK AND U/S OF PRECAST SLAB OR FILL SOLID BETWEEN TOP OF BLOCK AND U/S OF PRECAST SLAB WITH CONTINUOUS POLY ROPE BACKER ROD AND SEALANT.
3. MASONRY CONTRACTOR TO FILL IN OPENING IN BLOCK WALLS WHERE ANY SERVICES, CONDUIT, OR DUCTWORK IS LOCATED OR REMOVED.
4. GENERAL CONTRACTOR,ELECTRICAL SUBCONTRACTOR AND DOOR SUPPLIER TO FULLY COORDINATE WITH DOOR OPERATOR SUPPLIER FOR PROPER INSTALLATION OF BARRIER FREE OPERATORS.

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No.	DATE	REVISION

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430 ONTARIO STREET
STRATFORD, ONTARIO. N5A 3J2
PHONE (519) 272 0073 FAX (519) 272 1433

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The Architect above has exercised responsible control with respect to design activities The Architect's seal number is their BCDN number

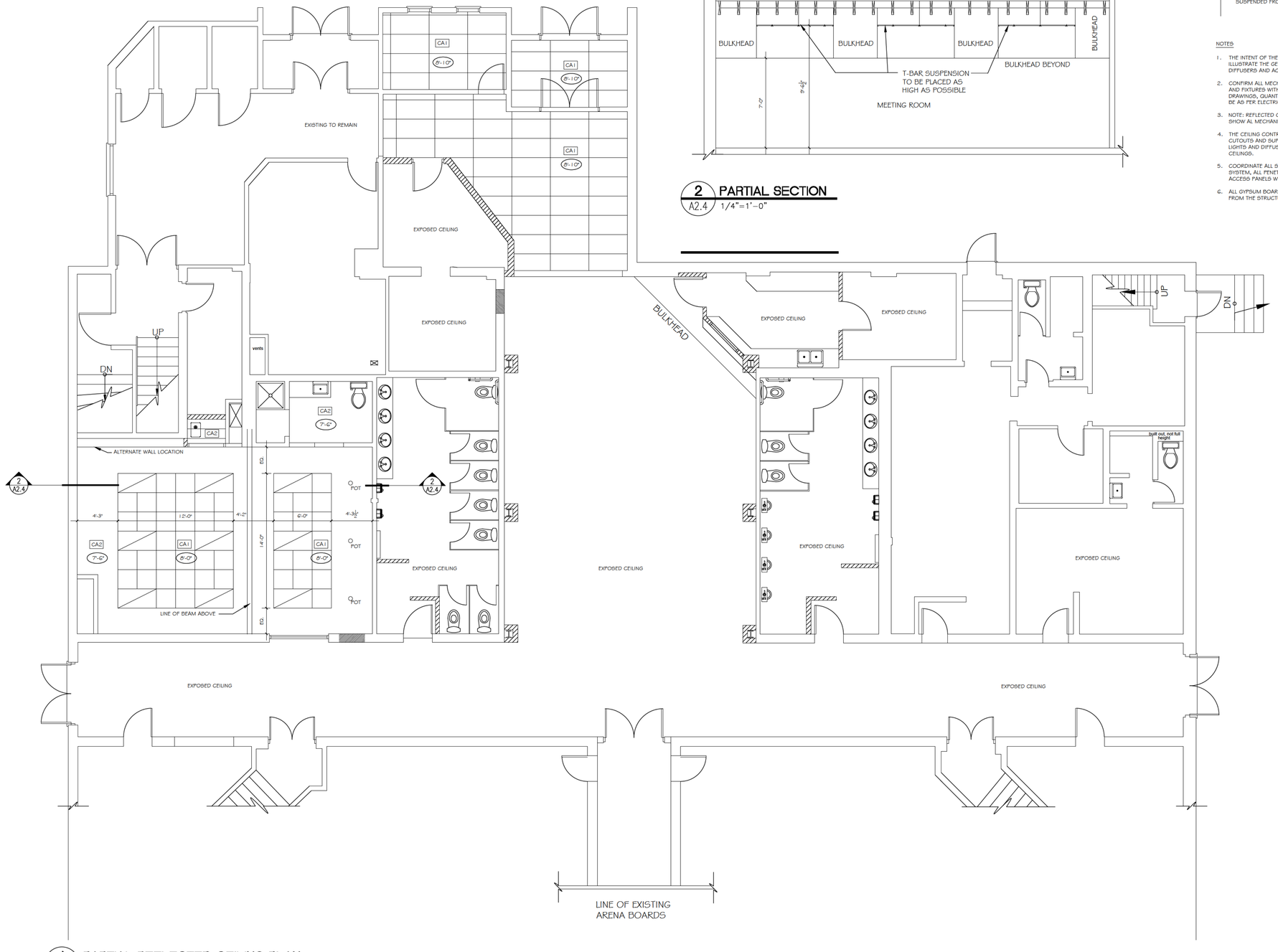
NEW HAMBURG ARENA RENOVATIONS 2013

251 JACOB STREET
NEW HAMBURG,ONTARIO

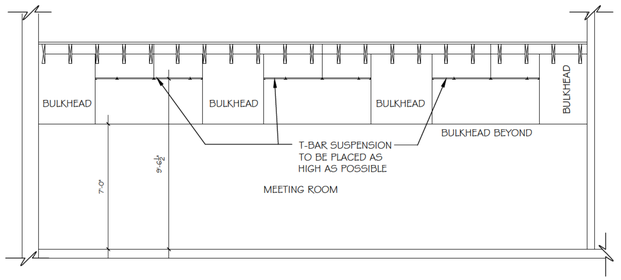
PRINT DATE:	March 5, 2014
DATE:	February 25, 2014
DRAWN BY:	A.M.
CHECKED BY:	G.R.B.
SCALE:	3/16"=1'-0"
PROJECT No.:	13-1260

MAIN FLOOR PROPOSED

A2.3



1 A2.4 **PARTIAL REFLECTED CEILING PLAN**
3/16"=1'-0"



2 A2.4 **PARTIAL SECTION**
1/4"=1'-0"

TYPICAL CONSTRUCTION ASSEMBLIES

CEILING TYPES

CA1 ACOUSTIC TILE CEILING
- 24"x48" LAY-IN ACOUSTIC TILE
- PREFINISHED METAL T-BAR SUSPENSION SYSTEM

CA2 GYPSUM BOARD BULKHEAD
- 5/8" GYPSUM BOARD
- 3 5/8" METAL FURRING @ 16" O.C. SUSPENDED FROM STRUCTURE ABOVE

NOTES

1. THE INTENT OF THE REFLECTED CEILING PLAN IS TO ILLUSTRATE THE GENERAL ARRANGEMENT OF LIGHTS, DIFFUSERS AND ACCESSORIES.
2. CONFIRM ALL MECHANICAL AND ELECTRICAL SERVICES AND FIXTURES WITH THE MECHANICAL AND ELECTRICAL DRAWINGS, QUANTITIES AND TYPES OF FIXTURES SHALL BE AS PER ELECTRICAL AND MECHANICAL DRAWINGS.
3. NOTE: REFLECTED CEILING PLANS DO NOT NECESSARILY SHOW AL MECHANICAL AND ELECTRICAL FIXTURES.
4. THE CEILING CONTRACTORS ARE RESPONSIBLE FOR ALL CUTOUTS AND SUPPORT FRAMING FOR ALL SIDES OF LIGHTS AND DIFFUSERS/GRILLES WHICH PENETRATE THE CEILINGS.
5. COORDINATE ALL SERVICES INSTALLED WITHIN CEILING SYSTEM, ALL PENETRATIONS THROUGH CEILING AND ACCESS PANELS WITH CEILING SUPPORT SYSTEM.
6. ALL GYPSUM BOARD CEILINGS ARE TO BE SUSPENDED FROM THE STRUCTURE ABOVE.

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PARTIAL
REFLECTED
CEILING PLAN

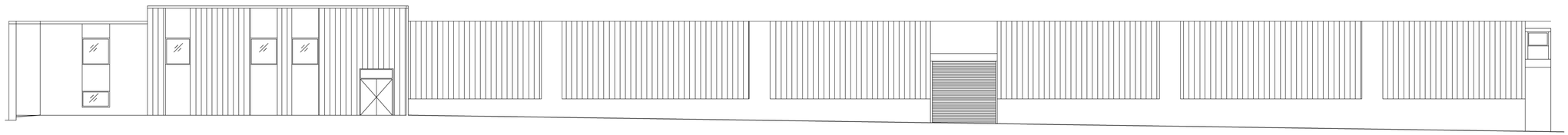
A2.4

1 A2 **NORTH ELEVATION EXISTING**
3/16"=1'-0"

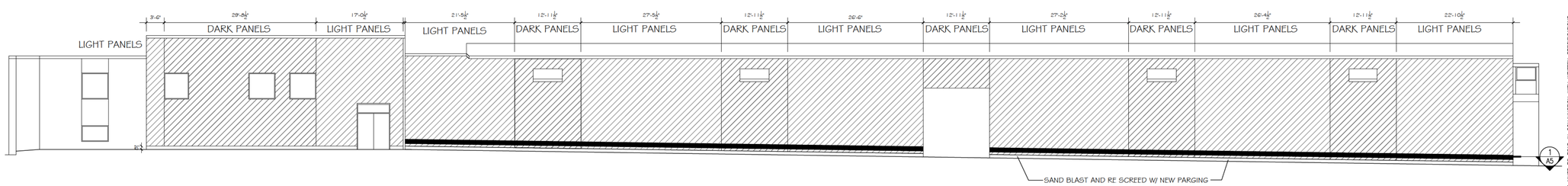
NOTE:
-REMOVE EXISTING METAL SIDING AS SHADED

1 A2 **NORTH ELEVATION PROPOSED**
3/16"=1'-0"

NOTE:
-FRONT ELEVATION CONSISTS OF LIGHT PANELED KINGSPAN. (COLOUR: RAWHIDE)



3 A2 **WEST ELEVATION EXISTING**
3/32"=1'-0"



3 A2 **WEST ELEVATION PROPOSED**
3/32"=1'-0"

NOTE:
-SHADED AREA ON PROPOSED DRAWINGS INDICATES NEW KINGSPAN PANEL SCOPE OF WORK.
-DARK PANELS TO BE TAUPESTONE
-LIGHT PANELS TO BE RAWHIDE

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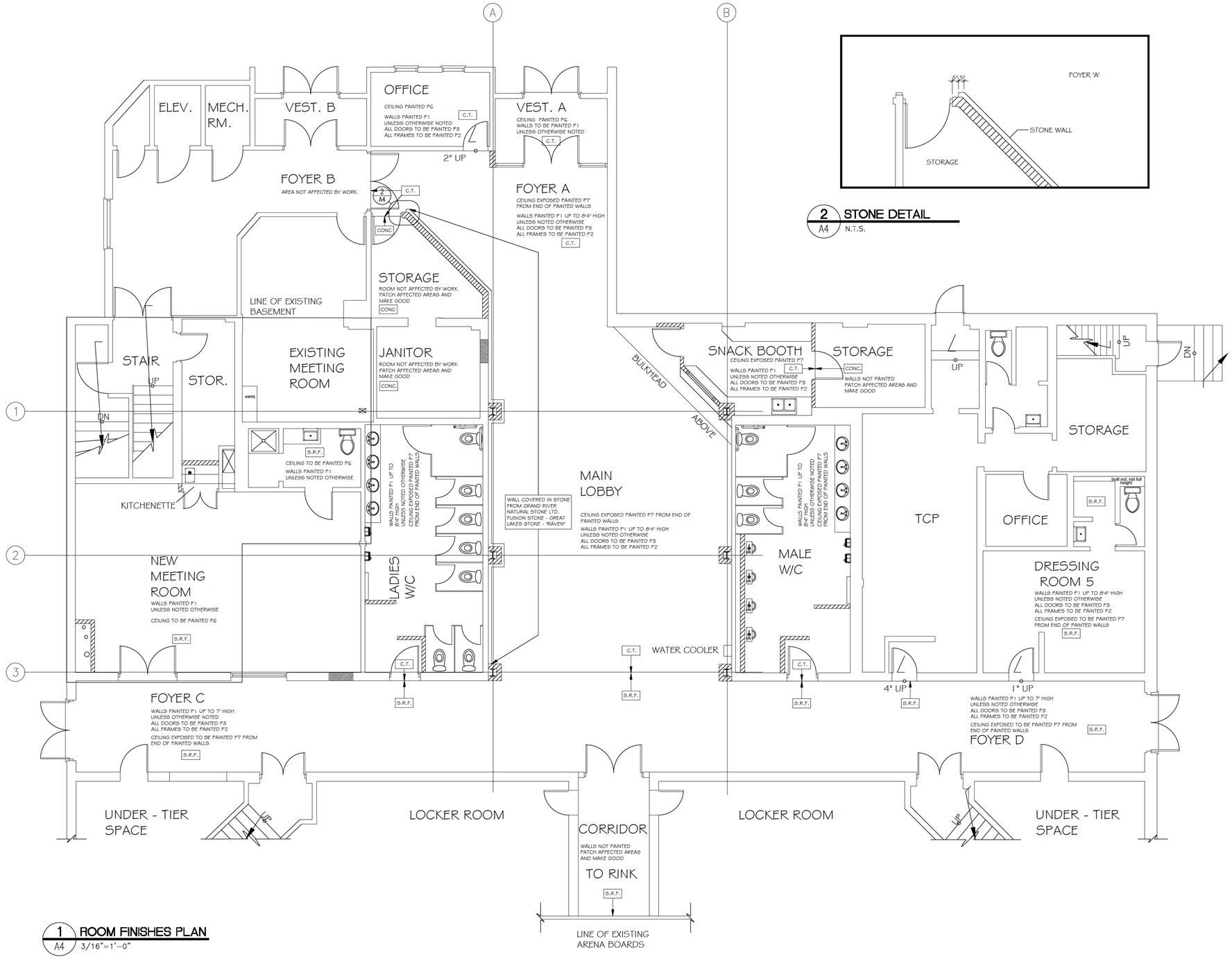
ELEVATIONS

A3



1 A4 **ROOM FINISHES PLAN**
3/16"=1'-0"

2 A4 **STONE DETAIL**
N.T.S.

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FINISHES

A4

DOOR SCHEDULE

DOORS						FRAMES					HARDWARE	REMARKS
MARK	TYPE	SIZE	MATERIAL	FINISH	GLAZING	TYPE	SIZE	MATERIAL	FINISH	RATING		
GROUND FLOOR												
D01	C	(2)3'-0"x7'-0"x1 3/4"	ALUM.	ANODIZ	G.W.G.	F2	6'-4"x7'-2"	ALUM.	ANODIZ	---	A,B,D,K,L,M,N,S,U	
D02	D	(2)1'-10"x7'-0"x1 3/4"	S.C.W.	STAIN	---	F4	4'-0"x7'-2"	H.M.	PAINT	---	A,D,E,I	
D03	A	3'-0"x7'-0"x1 3/4"	S.C.W.	STAIN	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,D,I,J,V,W	
D04	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	60 MIN	A,B,C,D,E,U	
D05	E	(2)2'-4"x7'-0"x1 3/4"	H.M.	PAINT	---	F5	5'-0"x7'-2"	H.M.	PAINT	60 MIN	A,B,C,D,S,U	LOCKABLE FROM FOYER C
D06	C	(2)3'-0"x7'-0"x1 3/4"	H.M.	PAINT	G.W.G.	F2	6'-4"x7'-2"	H.M.	PAINT	60 MIN	A,B,C,S,U	PULL WITH THUMB RELEASE ON FOYER C SIDE
D07	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,B,G,J,V	SIGN TO DESIGNATE LADIES
D08	C	(2)3'-0"x7'-0"x1 3/4"	ALUM.	ANODIZ	---	F2	6'-4"x7'-2"	ALUM.	ANODIZ	---	A,B,C,D,K,L,M,S,U	PULL WITH THUMB RELEASE ON MAIN LOBBY SIDE LOCKABLE FROM MAIN LOBBY
D09	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,B,G,J,V	SIGN TO DESIGNATE MENS
D10	C	(2)3'-0"x7'-0"x1 3/4"	H.M.	PAINT	G.W.G.	F2	6'-4"x7'-2"	H.M.	PAINT	60 MIN	A,B,C,S,U	PULL WITH THUMB RELEASE ON FOYER D SIDE
D11	E	(2)2'-4"x7'-0"x1 3/4"	H.M.	PAINT	---	F5	5'-0"x7'-2"	H.M.	PAINT	60 MIN	A,B,C,D,S,U	LOCKABLE FROM FOYER D
D12	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	60 MIN	A,B,C,D,E,U	
D13	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,D,E,J	
D14	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,B,C,D,E,J	
D15	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,B,C,D,E,J	
D16	F	3'-0"x7'-0"x1 3/4"	ALUM.	ANODIZ	TEMP.	F1	3'-4"x7'-2"	ALUM.	ANODIZ	---	A,D,F,J	
D17	A	3'-0"x7'-0"x1 3/4"	H.M.	PAINT	---	F1	3'-4"x7'-2"	H.M.	PAINT	---	A,B,D,G,J	SIGNAGE BY OWNER
D18	-	EXIST.	---	---	---	-	EXIST.	---	---	---		PAINT EXISTING DOOR AND FRAME FOYER D SIDE ONLY
D19	C	(2)3'-0"x7'-0"x1 3/4"	ALUM.	ANODIZ	TEMP.	F3	12'-2"x7'-2"	ALUM.	ANODIZ	---	A,B,G,N,S	NEW ELECTRONIC B.F. DOOR OPERATER EAST LEAF
D20	-	EXIST.	ALUM.	ANODIZ	---	-	---	ALUM.	ANODIZ	---	N	NEW ELECTRONIC B.F. DOOR OPERATER EAST LEAF

NOTES:

1. ALL HOLLOW METAL FRAMES AND HOLLOW METAL DOORS TO BE METRIC HEIGHTS.
2. PROVIDE MASTER KEY FOR ALL DOORS. PROVIDE INDIVIDUAL KEY PER DOOR LOCK.
3. UNIVERSAL BF SIGNAGE TO DOORS #D01

DOOR HARDWARE

A. BUTT HINGES (B.B.)
B. DOOR CLOSER
C. SELF-LATCHING HARDWARE
D. LOCKABLE
E. PASSAGE SET (KEYED)
F. OFFICE SET
G. PUSH/PULL
H. THUMB LATCH
I. KICK PLATE
J. DOOR STOP
K. WEATHER STRIPPING
L. THRESHOLD
M. SWEEP
N. BARRIER FREE AUTO DOOR OPERATOR
O. HOLD OPEN DEVICE (INTEGRAL W/ CLOSER)
P. JAMB LATCHES TOP AND BOTTOM TO ONE LEAF ONLY
Q. DEAD LOCK
R. CONTINUOUS HINGE
S. PANIC RELEASE HARDWARE
T. PLATE MULLION (ONE DOOR)
U. CONCEALED OVERHEAD DOOR STOP
V. UNIVERSAL BARRIER-FREE WASHROOM SIGN.
W. WASHROOM PRIVACY SET

ABBREVIATIONS:

ALUM. =ALUMINIUM
ANOD. =ANODIZED
H.M. =HOLLOW METAL
S.C.W. =SOLID CORE WOOD
S.D.G. =SEALED DOUBLE GLAZING
TEMP. =TEMPERED GLASS
G.W.G. =GEORGIAN WIRE GLASS
R.S.D. =ROLLING STEEL DOOR
R.A.D. =ROLLING ALUMINUM DOOR

NOTES:

1. FOAM INSULATE ALL EXTERIOR DOORS AND FRAMES.
2. ALL FRAMES TO BE WELDED STEEL.
3. ALL DOORS SHALL BE 3/0x7/0 (UNLESS OTHERWISE NOTED).
4. FINISH HARDWARE TO BE BRUSHED ALUMINUM FINISH.
5. FINISH HARDWARE TO BE HEAVY DUTY QUALITY.
6. ALL HANDLES TO BE BARRIER-FREE LEVER-TYPE SETS EQUAL TO HAGER 2300 SERIES.
7. KICK PLATES TO BE 24" HIGH.

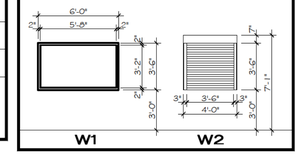
WINDOW SCHEDULE

WINDOW				REMARKS
MARK	SIZE	MATERIAL	FINISH	
W1	SEE WIND. ELEVS	ALUM.	ANOD.	
W1	SEE WIND. ELEVS	ALUM.	BRONZE	ROLLING COUNTER FIRE DOOR (MODEL FRC20) - ACCURATE OVERHEAD LIMITED - SCARBOROUGH, ONTARIO - 416-757-4133

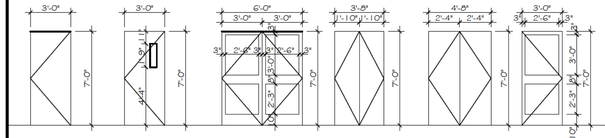
NOTE:

1. GLASS AND GLAZING: SEE SPECIFICATIONS SECTION 08700 AND GENERAL CONDITIONS
2. SEE DOOR SCHEDULE FOR MISCELLANEOUS GLAZING.

WINDOW TYPES

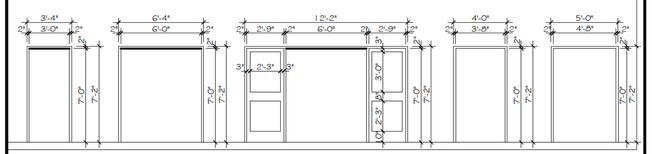


DOOR TYPES

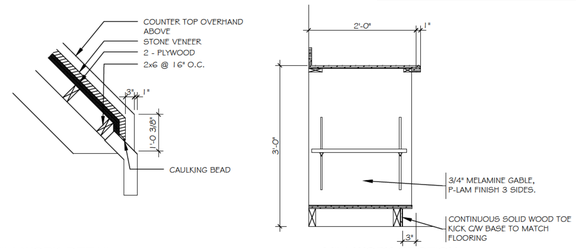


NOTE:
1. ALL GLAZING TO BE TEMPERED.
2. USE GWG TO ALL RATED LITES/DOORS
3. INSULATE ALL EXTERIOR DOORS.

FRAME TYPES / SCREEN TYPES

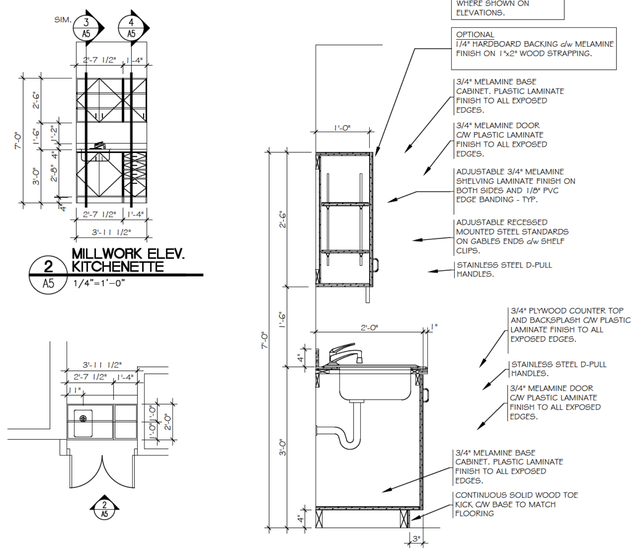


NOTE:
1. ALL STEEL FRAMES TO BE WELDED. DOORS TO BE TACK WELDED.



10 MILLWORK DETAIL SNACK BOOTH
A5 1/4"=1'-0"

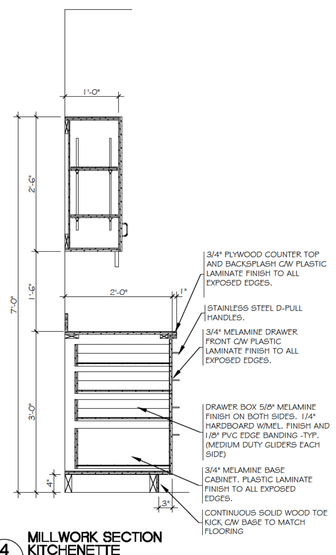
11 MILLWORK SECTION SNACK BOOTH
A5 3/4"=1'-0"



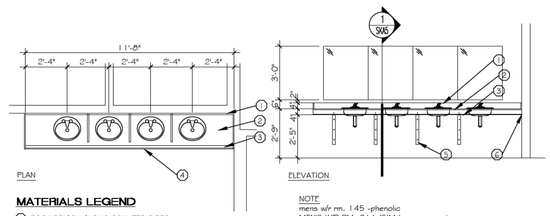
2 MILLWORK ELEV. KITCHENETTE
A5 1/4"=1'-0"

1 MILLWORK PLAN KITCHENETTE
A5 1/4"=1'-0"

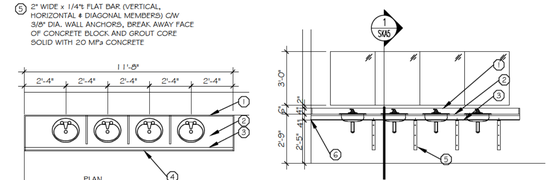
3 MILLWORK SECTION KITCHENETTE
A5 3/4"=1'-0"



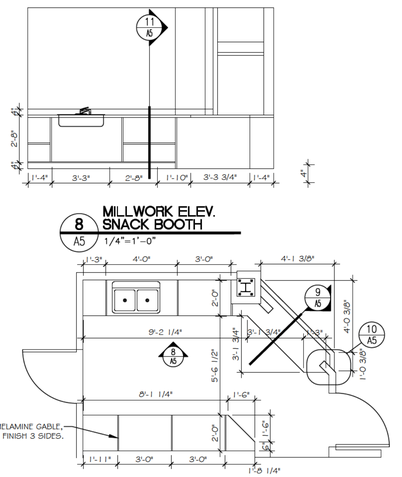
4 MILLWORK SECTION KITCHENETTE
A5 3/4"=1'-0"



6 LADIES WASHROOM RM. 145 - VANITY
A5 1/4"=1'-0"



5 MENS WASHROOM RM. 157 - VANITY
A5 1/4"=1'-0"



8 MILLWORK ELEV. SNACK BOOTH
A5 1/4"=1'-0"

7 MILLWORK PLAN SNACK BOOTH
A5 1/4"=1'-0"

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ONTARIO ASSOCIATION OF ARCHITECTS
GUY ROBERT BELLEHUMEUR
LICENCE 4277
JAN 24 2014

NEW HAMBURG ARENA RENOVATIONS 2013

251 JACOB STREET
NEW HAMBURG,ONTARIO

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DOOR AND WINDOW SCHEDULES, AND MILLWORK

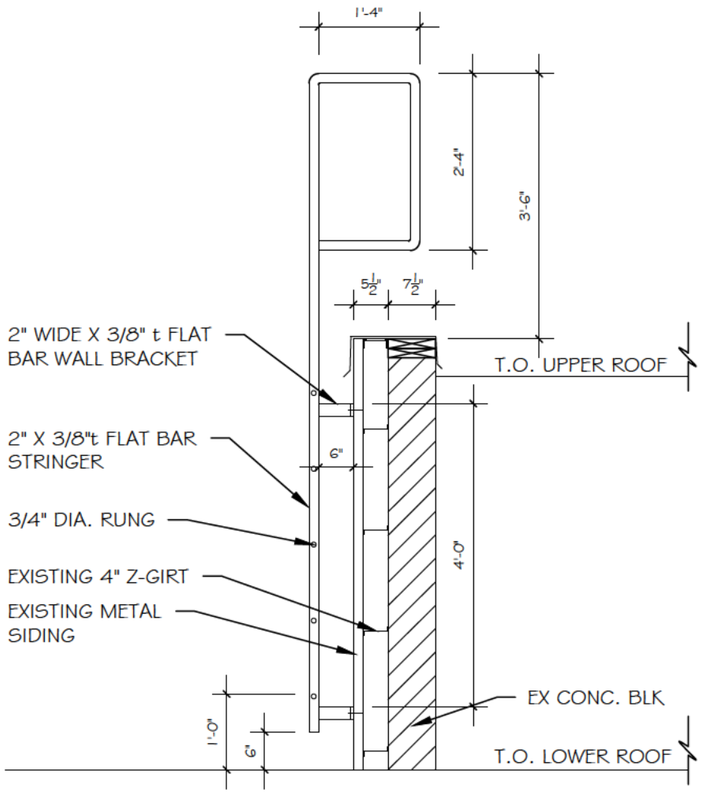
A5

gb

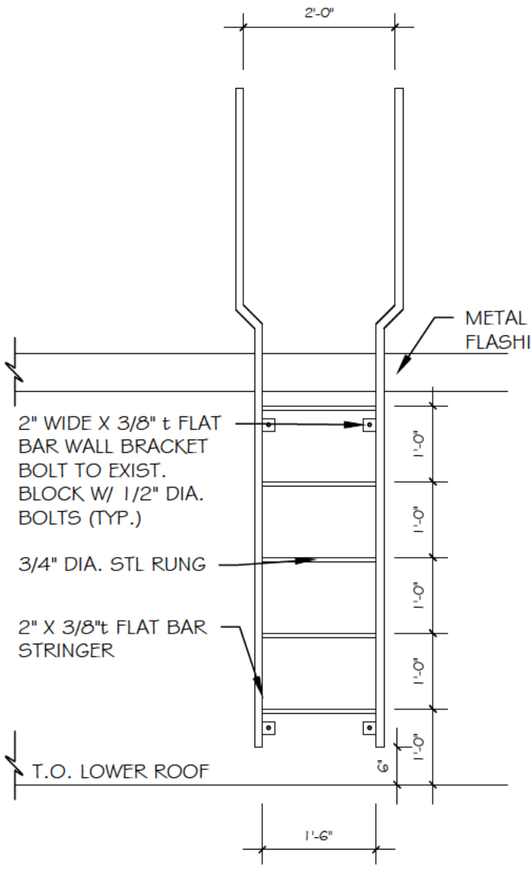
NOTES:

1) PRIME PAINT & 2 COATS FINISH PAINT (BLACK COLOUR)

2) AT ANCHOR LOCATIONS, BREAK AWAY FACE OF CONCRETE BLOCK AND GROUT CORE SOLID WITH 20 MPa CONCRETE



1 SK1 **LADDER SECTION**
1/2"=1'-0"



2 SK1 **LADDER ELEVATION**
1/2"=1'-0"

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gb architect inc.
430 ONTARIO STREET
STRATFORD, ONTARIO. N5A 3J2
PHONE (519) 272 0073 FAX (519) 272 1433

"Guy R. Bellehumeur, B. Arch., OAA, MRAIC, Principal Architect of GB ARCHITECT INC. is the designer for this project with respect to all architectural work identified on this drawing sheet. The Ontario Association of Architects has assigned Guy R. Bellehumeur & GB ARCHITECT INC. [redacted] as per requirements of the Ministry of Municipal Affairs & Housing Bill 124."

The Architect noted above has exercised responsible control with respect to design activities. The Architect's seal number is their BCDN number.

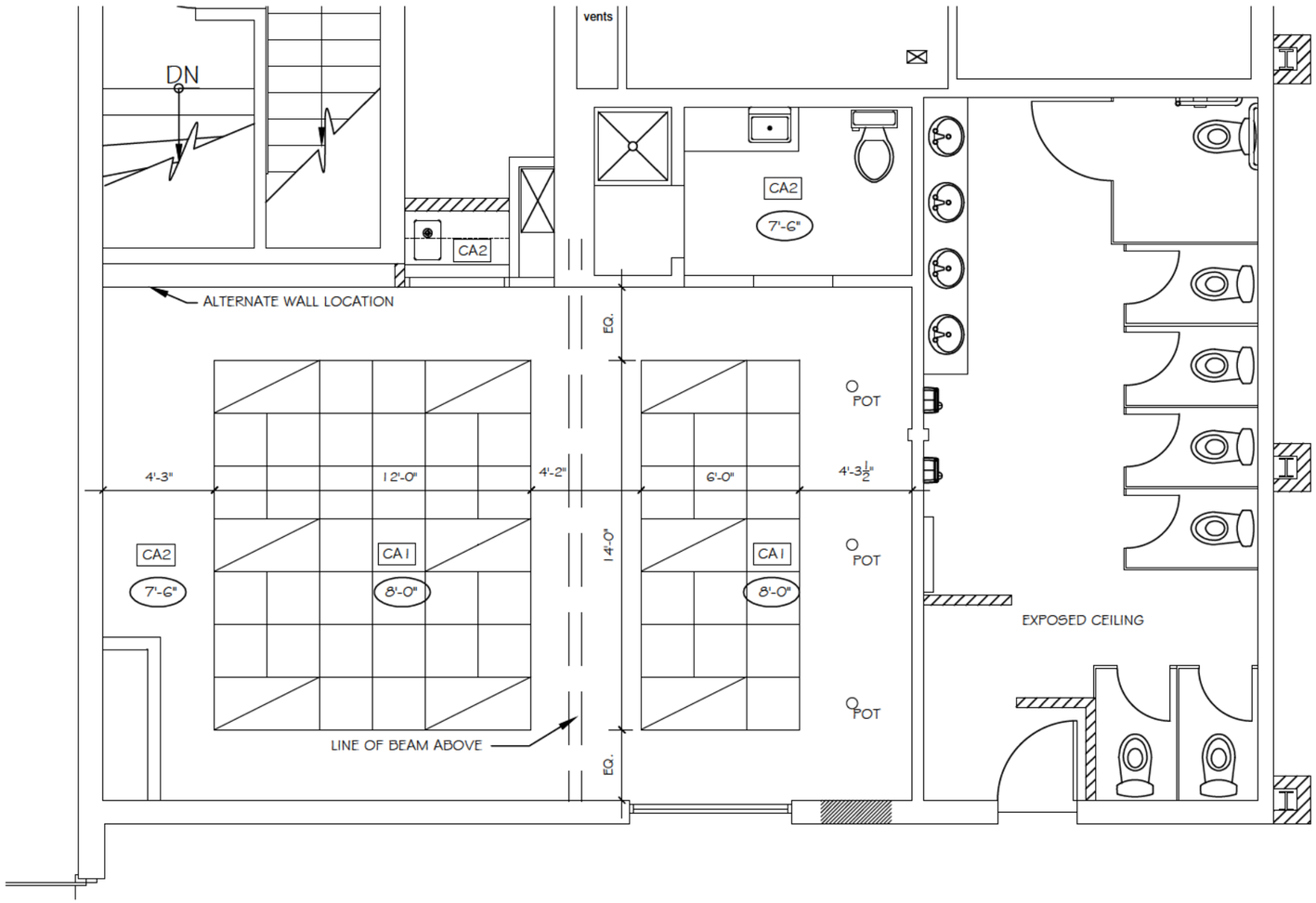
ONTARIO ASSOCIATION OF [redacted] GUY ROBERT BELLEHUMEUF LICENCE 4217 JAN 24 2014

251 JACOB STREET
NEW HAMBURG, ONTARIO

251 JACOB STREET NEW HAMBURG,ONTARIO	
PRINT DATE:	JANUARY 24, 2014
DATE:	JANUARY 24, 2014
DRAWN BY:	A.M.M
CHECKED BY:	G.R.B.
SCALE:	1/2" = 1'-0"
PROJECT No.:	1260

ROOF LADDER

SK1



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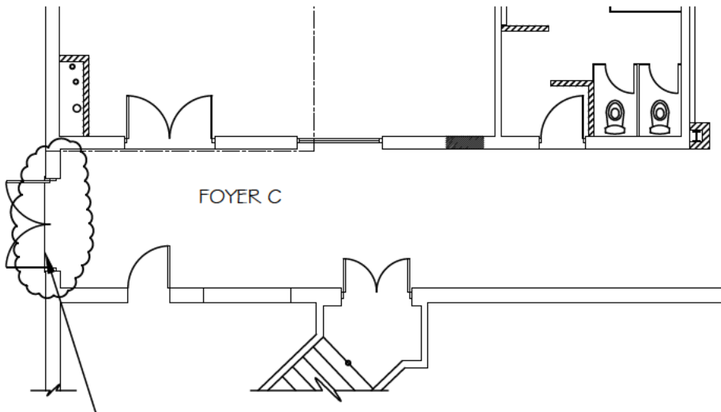
251 JACOB STREET
NEW HAMBURG,
ONTARIO

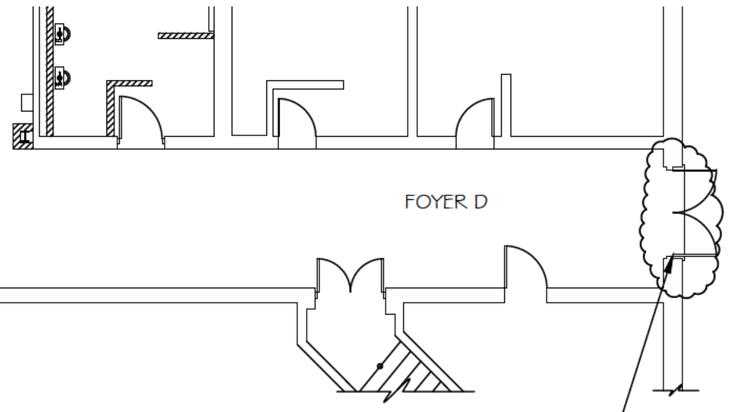
251 JACOB STREET NEW HAMBURG,ONTARIO	
PRINT DATE:	FEBRUARY 4, 2014
DATE:	FEBRUARY 4, 2014
DRAWN BY:	A.M.M
CHECKED BY:	G.R.B.
SCALE:	3/16" = 1'-0"
PROJECT No.:	1260

REVISED CEILING PLAN

SK2



REPLACE C. TILE ON THIS WALL WITH "PEANUT" PAINT



REPLACE C. TILE ON THIS WALL WITH "PEANUT" PAINT

gb architect inc.
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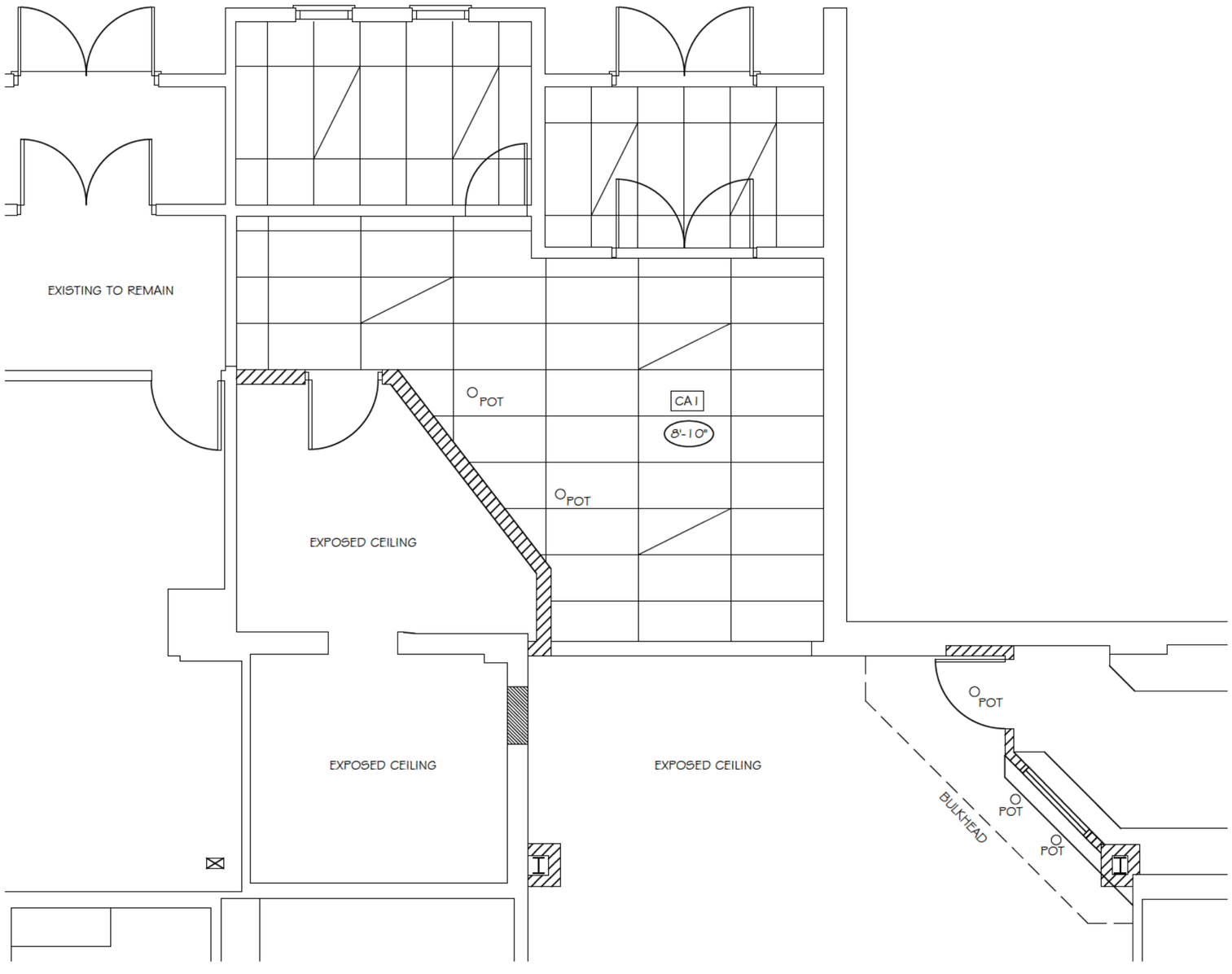
251 JACOB STREET
NEW HAMBURG,
ONTARIO

251 JACOB STREET
NEW HAMBURG,ONTARIO

PRINT DATE:	FEBRUARY 4, 2014
DATE:	FEBRUARY 4, 2014
DRAWN BY:	A.M.M
CHECKED BY:	G.R.B.
SCALE:	3/32" = 1'-0"
PROJECT No.:	1260

REVISED FINISHES

SK3



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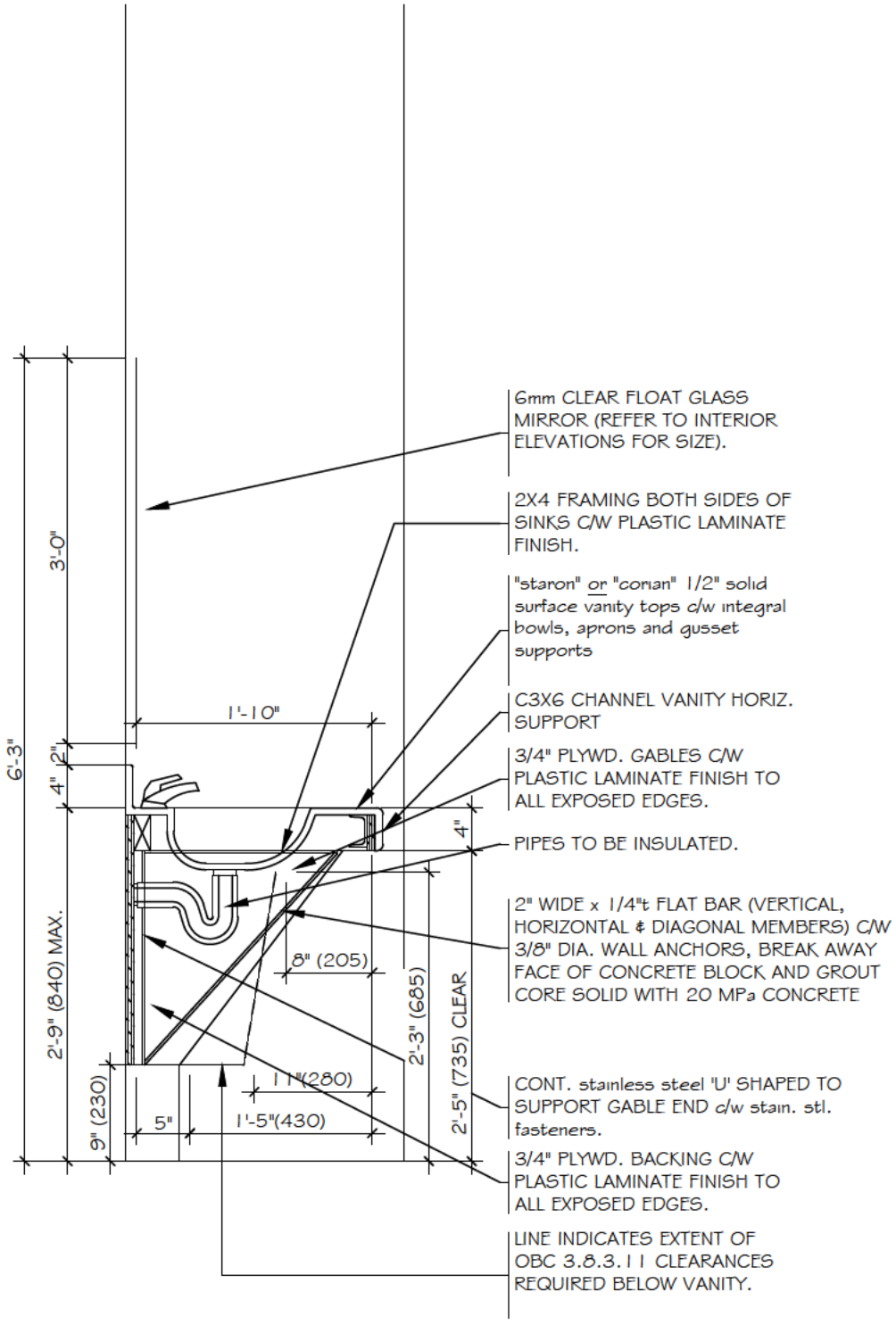
251 JACOB STREET
NEW HAMBURG,
ONTARIO

251 JACOB STREET NEW HAMBURG,ONTARIO	
PRINT DATE:	FEBRUARY 25, 2014
DATE:	FEBRUARY 25, 2014
DRAWN BY:	A.M.C
CHECKED BY:	G.R.B.
SCALE:	3/16" = 1'-0"
PROJECT No.:	1260

REVISED CEILING PLAN

SK4



SECTION THRU WASHROOM VANITY'S

PROJECT

PROPOSED RENOVATION TO RECREATIONAL FACILITY

251 JACOB STREET
NEW HAMBURG, ONTARIO

GB ARCHITECT INC.
430 ONTARIO STREET
STRATFORD, ONTARIO N5A 3J2
PHONE (519) 272-0073 FAX (519) 272 1433

SCALE: 3/4"=1'-0"

DATE JAN. 24/14

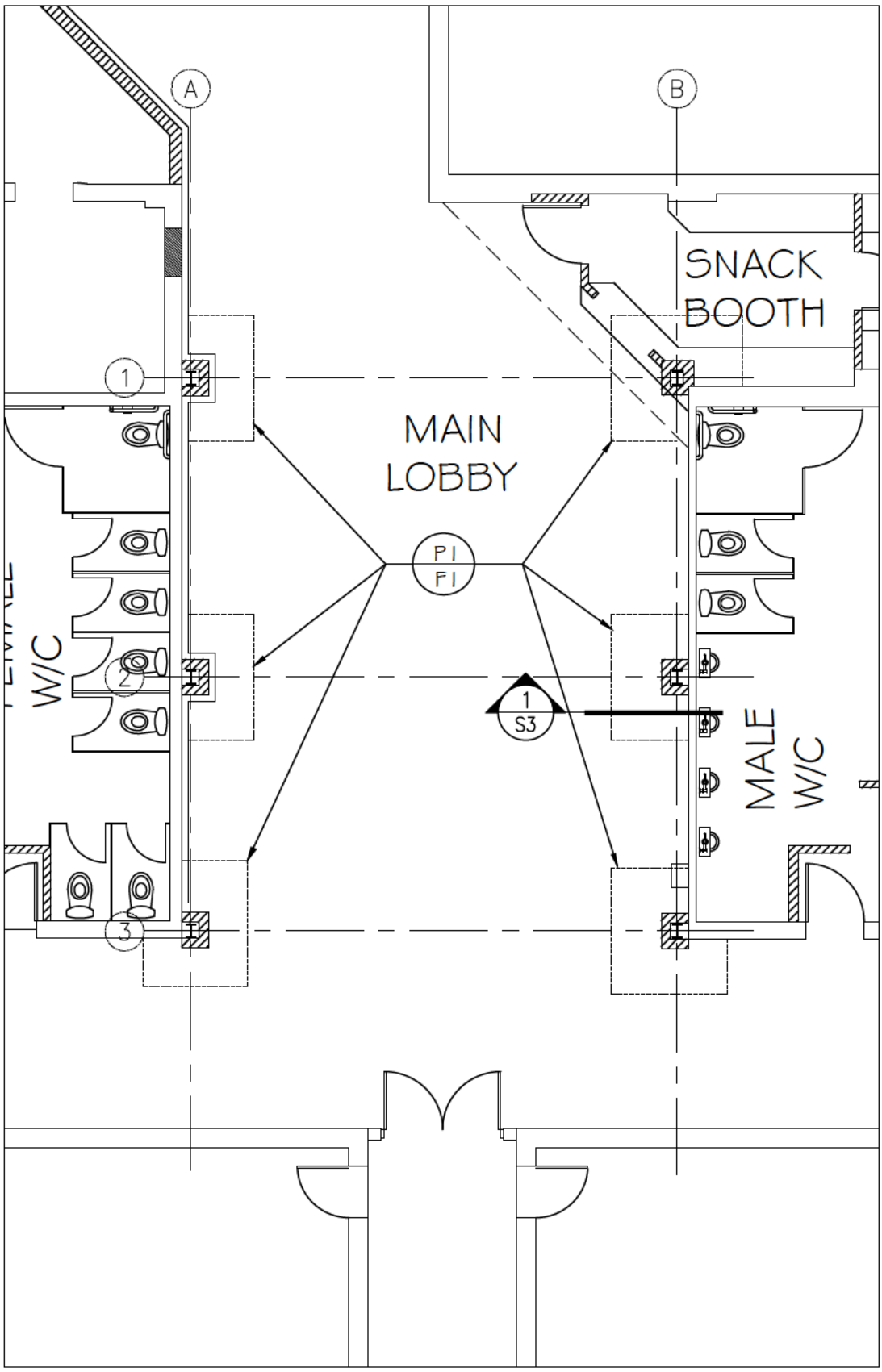
DRAWN BY AMC

PROJECT NO. 12-126[redacted]

SHEET NUMBER

SK A5

STAMP



1 / S1 FOUNDATION PLAN

1/8"=1'-0"

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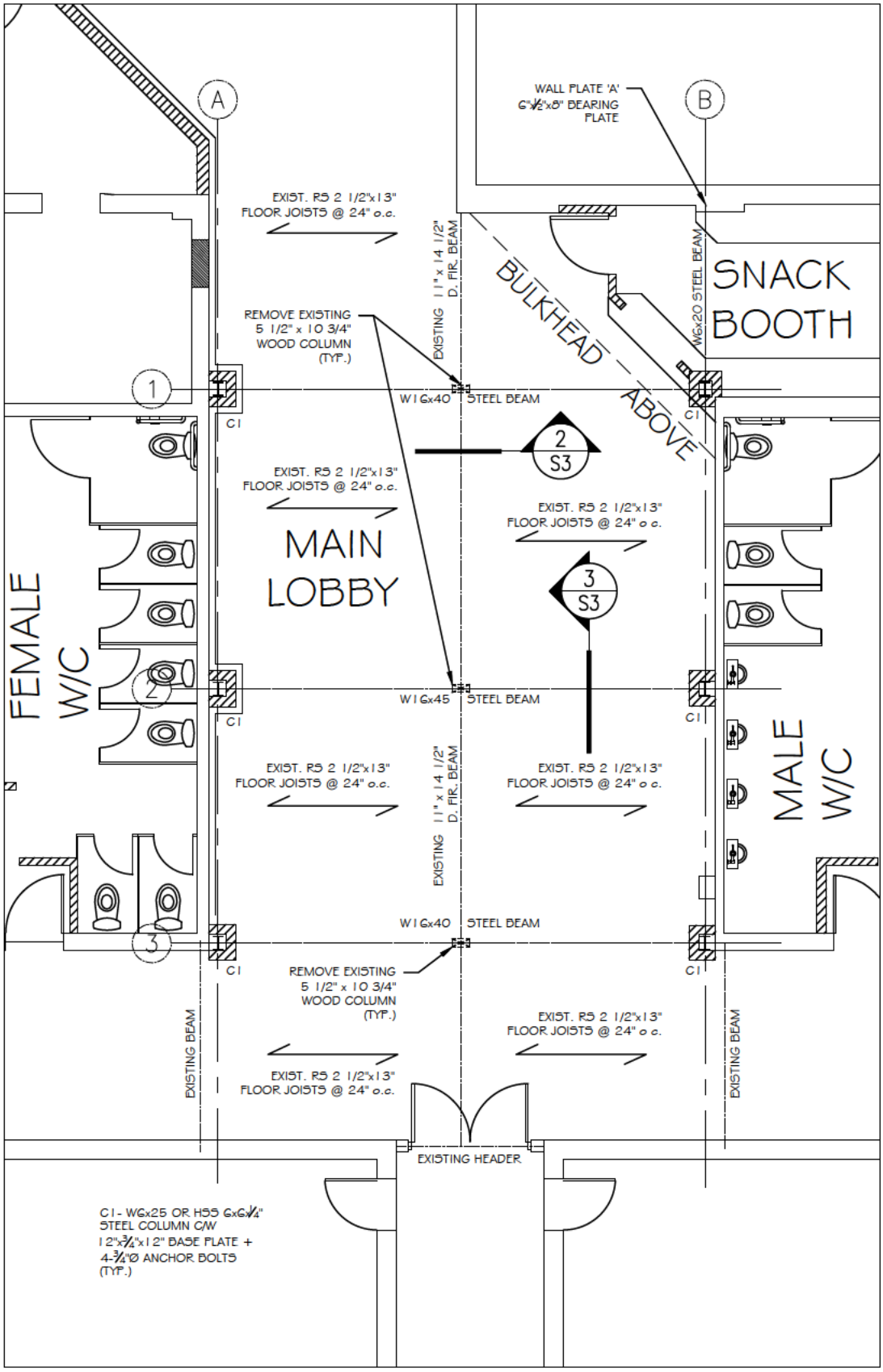
NEW HAMBURG
ARENA
RENOVATIONS

251 JACOB STREET
STRATFORD, ONTARIO

PRINT DATE:	OCTOBER 3, 2013
DATE:	OCTOBER 3, 2013
DRAWN BY:	A.M.C.
CHECKED BY:	G.R.B.
SCALE:	1/8"=1'-0"
PROJECT No.:	1260

STRUCTURAL

S1



1 2nd FLOOR FRAMING PLAN

S2 1/8"=1'-0"

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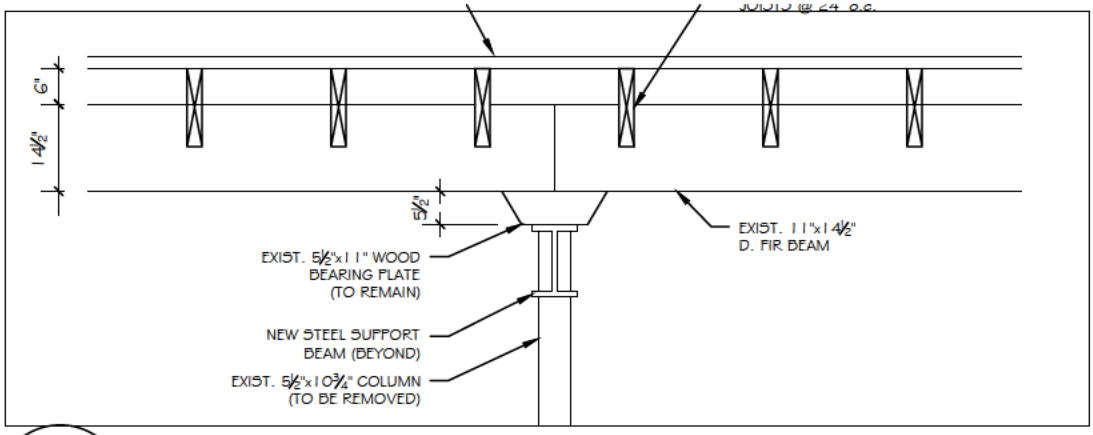
NEW HAMBURG
ARENA
RENOVATIONS

251 JACOB STREET
STRATFORD, ONTARIO

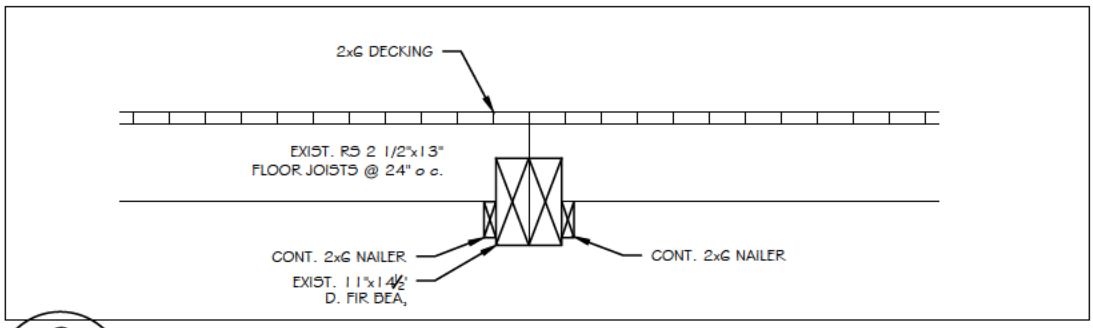
PRINT DATE:	OCTOBER 3, 2013
DATE:	OCTOBER 3, 2013
DRAWN BY:	A.M.C.
CHECKED BY:	G.R.B.
SCALE:	1/8"=1'-0"
PROJECT No.:	1260

STRUCTURAL

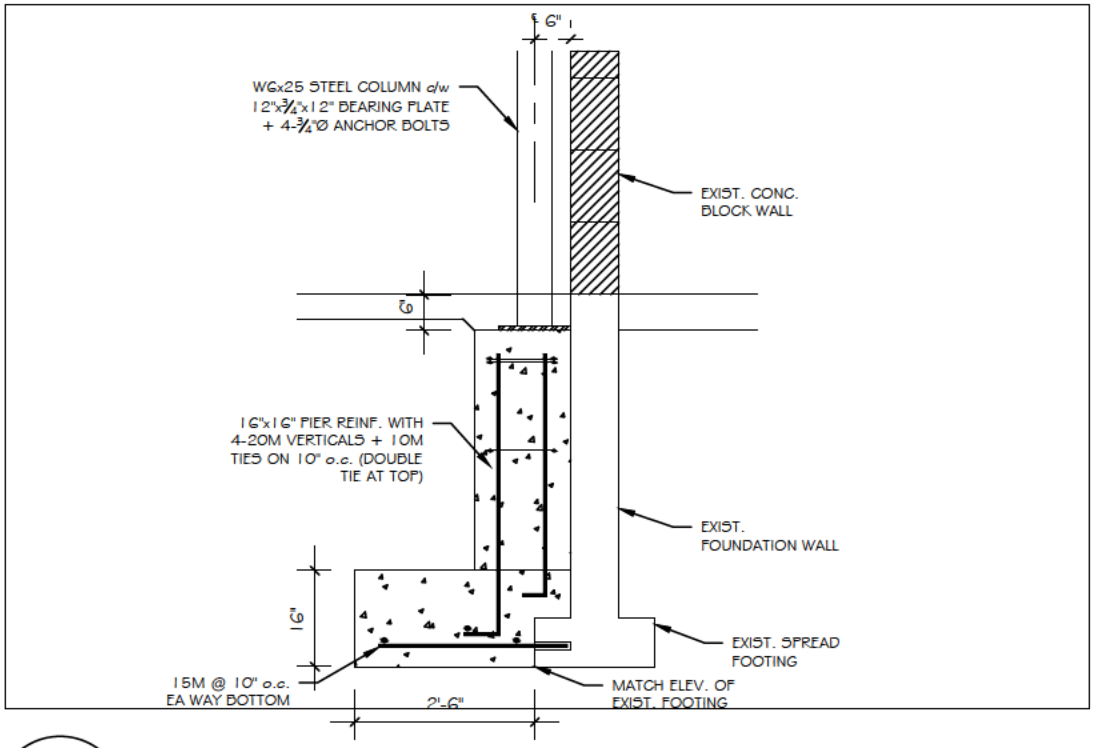
S2



3 SECTION DETAIL
S3 N.T.S.



2 SECTION DETAIL
S3 N.T.S.



1 SECTION DETAIL
S1 N.T.S.

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NEW HAMBURG ARENA RENOVATIONS

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DRAWN BY:	A.M.C.
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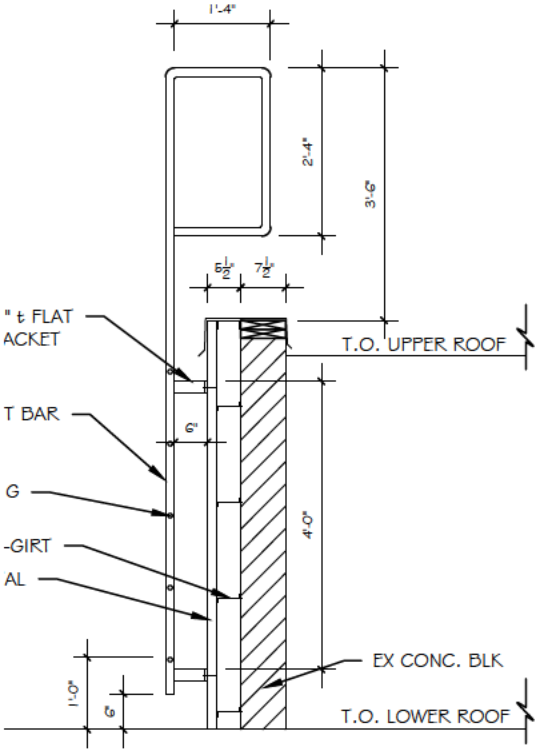
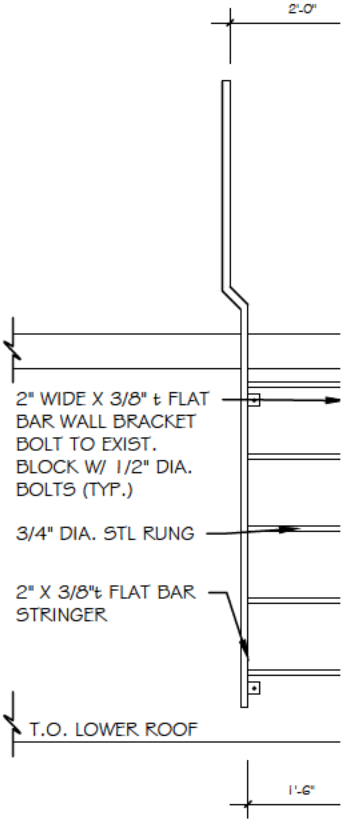
STRUCTURAL DETAILS

S3





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NEW HAMBURG ARENA RENOVATIONS

251 JACOB STREET
STRATFORD, ONTARIO

PRINT DATE:	JANUARY 14, 2014
DATE:	JANUARY 14, 2014
DRAWN BY:	A.M.M
CHECKED BY:	G.R.B.
SCALE:	3/8"= 1'-0"
PROJECT No.:	1260

ROOF LADDER DETAILS

S4

Bob Prince - Invizij Architects

From: Trevor Heywood <theywood@grandriver.ca>
Sent: 10-Jul-24 1:01 PM
To: Amber Schenck
Subject: RE: New Hamburg Arena
Attachments: GRCA Map.pdf

Hey Amber,

I will not attend the meeting given we're short-staffed right now, but happy to review/discuss draft plans, sketches, ideas, whatever.

Attached is the floodplain mapping for the property. Be advised that the following restrictions apply to any development within the floodplain-affected portions of the property:

- Institutional / public buildings can have additions up to 50 percent or less of the original ground floor area to a maximum of 100 m² (1,076 ft²).
- Accessory structures (one or multiple) are permitted up to a maximum ground floor area of 100 m² (1,076 ft²).

These size caps are exclusive; you can have an addition and accessory structure(s). It's also expected that floodproofing is completed to the extent possible. I'll get back to you with an exact floodplain elevation, but it appears to be around 333.5m (CGVD 28).

I hope this helps. Regards,

Trevor Heywood B.Sc.(Env.)
Resource Planner
Grand River Conservation Authority

400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6
Phone: 519-621-2761 ext. 2292
Email: theywood@grandriver.ca
www.grandriver.ca | Connect with us on social media

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Tuesday, July 9, 2024 11:21 AM
To: Trevor Heywood <theywood@grandriver.ca>
Subject: New Hamburg Arena

Hi Trevor,

I hope you are well!

I am working with Invizij Architects to create a long-term plan for the New Hamburg Arena (251 Jacob Street, New Hamburg).
I was just wondering if you may:

a. Be interested in attending our Stakeholder Engagement meeting – Aug 7 @ 10:30am
b. Be able to send me the floodplain drawing for this property

I am just looking to the parameters around the possibility of expanding the footprint of the existing building to accommodate new slab-on-grade storage space, including considerations of what is permissible and what is not permissible… any comments you may have would be greatly appreciated.

Thank you for your time and consideration, Trevor!

Talk soon,
Amber

Amber Schenck, PMP
Project Coordinator
Community Services | Township of Wilmot |
519.634.9225 x **9334**
M | 519.778.1875
Wilmot.ca | **Twitter** | **Facebook** | **LinkedIn** | **YouTube**

My work day may look different than your work day. Please do not feel obligated to respond out of your normal working hours.

Map Centre (X,Y): 523874.71, 4802730.98 | Map Link

This map is not to be used for navigation | 2022 Ortho (ROWG)

Grand River Conservation Authority

Date: Jul 10, 2024
Author: TH

251 Jacob Street, New Hamburg

Legend

- Regulation Limit (GRCA)
- Floodplain (GRCA)
  - Engineered
  - Estimated
  - Approximate
- Floodplain - Special Policy Area (GRCA)
- Slope Erosion (GRCA)
  - Steep
  - Oversteep
  - Toe
- Slope Valley (GRCA)
  - Steep
  - Oversteep
- Regulated Watercourse (GRCA)
- Regulated Waterbody (GRCA)
- Wetland (GRCA)
- Lake Erie Flood (GRCA)
- Lake Erie Shoreline Reach (GRCA)
- Lake Erie Dynamic Beach (GRCA)
- Lake Erie Erosion (GRCA)
- Parcel - Assessment (MPAC/MNRF)
- Conservation Area Boundary (GRCA)

Scale 1:1,633

NAD83 UTM zone 17 (EPSG:26917)

Bob Prince - Invizij Architects

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: 14-Aug-24 11:18 AM
To: Bob Prince - Invizij Architects
Cc: Chris Catania; Justin Carrafiello
Subject: FW: New Hamburg Arena

Hi Bob,

Please see the responses from GRCA below.

It's a start...
A.

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Wednesday, August 14, 2024 10:33 AM
To: Amber Schenck <amber.schenck@wilmot.ca>
Subject: Re: New Hamburg Arena

Hi Amber,

Sorry I haven't got back to you on these items, we're short-staffed so things are hairy right now.

See my responses below in red.

I have no problem with you forwarding this on to the consultant. I'm happy to discuss further.

Regards,

Trevor Heywood B.Sc.(Env.)

Resource Planner

Grand River Conservation Authority

400 Clyde Road, PO Box 729

Cambridge, ON N1R 5W6

Phone: 519-621-2761 ext. 2292

Email: theywood@grandriver.ca

www.grandriver.ca | Connect with us on social media

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Tuesday, August 13, 2024 10:46 AM
To: Trevor Heywood <theywood@grandriver.ca>
Subject: FW: New Hamburg Arena

Hi Trevor,

I was just invited to review the final Community Services Master Plan which will inform and direct the future of the Parks and Facilities in the township. During my initial review, I noticed quite a few instances where the consultants suggest and, in some cases, even recommend, expansion to our existing community centres.

After discussing the New Hamburg Arena with my consultant and seeking clarification from yourself and your team regarding expansion limits with and without active or passive flood mitigation measures, my consultant has stressed the need for our Master Plan consultants to ensure that any proposed expansions are coordinated with the GRCA before making recommendations.

My question: would you grant me permission to forward your comments on the previously posed questions (included below for reference) to our Master Plan consultants once they are available? I think this will help ensure that our messaging to the community about the future of parks and facilities is realistic regarding the limitations of simply 'adding' onto existing structures. I'm not saying that additions aren't possible, but that careful considerations and requirements need to be met to ensure the safety of our buildings, patrons, and surrounding natural environment.

Please let me know your thoughts.

I can be available for a call if that is easier.

Thank you!

Amber

From: Amber Schenck
Sent: Wednesday, July 31, 2024 7:20 PM
To: Trevor Heywood <theywood@grandriver.ca>
Subject: RE: New Hamburg Arena

Hi Trevor,

Earlier today, I spoke with my architect regarding the New Hamburg Arena project, and a few questions arose that I was unable to answer. I have asked Bob, my architect, to compile his questions into an email to clarify his thought process. Could you please review the questions below and provide any clarification you can?

1. It appears that any thoughts of a building addition to this arena would fall within the floodplain area.

The 50% allowance for increased ground floor area within the floodplain that GRCA will allow is up to a maximum of 100 m^2 (1,076 ft^2).

For comparison, the plans included in NA Engineering's "New Hamburg Arena Re-Commissioning Study" showed increased ground floor areas of 5,200 – 7,500 ft2 (depending on the option).

We need to ask the Trevor the question "What would be the process if we needed a larger building addition within the floodplain area? eg. 7,000 ft2"
This would need support of GRCA management to move forward with a permission that does not meet GRCA policy, which would require GRCA staff support and GRCA Board approval. Additional hydraulic modelling will be required as well, demonstrating there are no impacts on the floodplain. Please let me know at your earliest convenience if you intend to move forward with a proposal above what's permitted, so I can arrange necessary discussions. I cannot guarantee this process will be successful or cheap.

2. Trevor also describes the requirement of "floodproofing" for any new development in the floodplain areas.

Can the floodproofing measures be "active"? Eg. at the warning from GRCA of an impending event, the Township is to enact floodproofing measures such as barriers.

Or conversely, do these measures have to be "passive"? Eg. a built wall or grading that essentially protects the building from rising water levels.
Floodproofing cannot be contingent on GRCA flood warnings. It would require elevating the floor or surround grading to the extent possible to reduce property damage. Further discussion can occur on this point.

3. To what elevation do any floodproofing measures need to extend to?

If the geodetic floodplain is at 333.5m, GRCA may require the floodproof measures to extend to 334.1 and may also require an additional buffer or "flood headboard" of 0.3m.
No buffer above the floodplain elevation is required, it only has to match (333.5m).

4. Do we know what the geodetic elevation of the existing arena is? eg. Lobby Finished Floor
That must be determined by a surveyor.

I'm not sure if you have an answer for question 4 but any information you can provide to these questions would be an incredible help. We are at the very preliminary stages of this project – Setting Parameters, and we need to be very transparent about the options available to us to set realistic expectations for our stakeholders including cost/benefit analyses for various options including an expansion that may extend beyond 100m^2, etc. if it is even possible.

Thank you for your time and attention to this request!

Talk soon,

Amber

From: Trevor Heywood <theywood@grandriver.ca>
Sent: Wednesday, July 10, 2024 3:56 PM
To: Amber Schenck <amber.schenck@wilmot.ca>
Subject: RE: New Hamburg Arena

Hey Amber,

Just confirming that my guess at the floodplain elevation was…spot on. 333.5m (CGVD 28).

Regards,

Trevor Heywood

Resource Planner

Grand River Conservation Authority

From: Trevor Heywood
Sent: Wednesday, July 10, 2024 1:01 PM
To: Amber Schenck <amber.schenck@wilmot.ca>
Subject: RE: New Hamburg Arena

Hey Amber,

I will not attend the meeting given we're short-staffed right now, but happy to review/discuss draft plans, sketches, ideas, whatever.

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Resource Planner

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Email: theywood@grandriver.ca

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From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Tuesday, July 9, 2024 11:21 AM
To: Trevor Heywood <theywood@grandriver.ca>
Subject: New Hamburg Arena

Hi Trevor,

I hope you are well!

I am working with Invizij Architects to create a long-term plan for the New Hamburg Arena (251 Jacob Street, New Hamburg).

I was just wondering if you may:

1. Be interested in attending our Stakeholder Engagement meeting – Aug 7 @ 10:30am
2. Be able to send me the floodplain drawing for this property

I am just looking to the parameters around the possibility of expanding the footprint of the existing building to accommodate new slab-on-grade storage space, including considerations of what is permissible and what is not permissible… any comments you may have would be greatly appreciated.

Thank you for your time and consideration, Trevor!

Talk soon,

Amber

Amber Schenck, PMP

Project Coordinator

Community Services | Township of Wilmot | 519.634.9225 x **9334**

M | 519.778.1875
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My work day may look different than your work day. Please do not feel obligated to respond out of your normal working hours.

Bob Prince - Invizij Architects

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: 27-Jun-24 12:54 PM
To: Bob Prince - Invizij Architects; Murray Wickham
Cc: Justin Carrafiello; Chris Catania
Subject: FW: FW: NH Arena

Good afternoon,

TCP has replied to my request for information – their answers can be reviewed below in **blue**.

Please note: '$50,000 towards sound dampening' as this will need to be included within the scope of work as well.

Thank you!
Amber

From: Sherry Robinson <sherry@thecommunityplayers.com>
Sent: Thursday, June 27, 2024 12:44 PM
To: Secretary TCP <secretary@thecommunityplayers.com>
Cc: Amber Schenck <amber.schenck@wilmot.ca>; TCP President <president@thecommunityplayers.com>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Chris Catania <chris.catania@wilmot.ca>; Sherry Robinson <sherry@thecommunityplayers.com>
Subject: Re: FW: NH Arena

Thank you Aaron for looping me in.
I can fill in these answers.

1. how many guests would you say attend a typical TCP performance, both when you host on the Arena floor as well as when you host in the CC? (including all estimated production staff). **Spring arena shows have up to 655 patrons plus another 50-100 performers and crew. Fall CC shows have 140 patrons plus another 25-35 cast and crew**
2. what are the estimated timelines for each performance that require use of either the CC or the Arena floors? (including auditions / set design & fabrication / rehearsals / set-up / performances / take-down) **Total estimated timelines are 3 months in the spring and 2 month in the fall. Our times are broken up over 4.5 months in the spring and 4 months in the fall…meaning we are not in this space full time.**
3. what is the approximate square footage required for your storage needs? (please specify storage requirements that necessitate environment control vs. storage requirements that do not necessitate environment control and please specify which environmental effects you require control of, i.e. mould, heat, cold, moisture, light, etc.) **This answer is a little more of a challenge. To bring everything together in a temperature controlled environment, to prevent mould (windows are not required), we would need about 900sqft. We would require 300sq feet for non temp controlled items. This would make it squishy but we can work with that.**

4. I know TCP had a few ideas for enhancements that could benefit other user groups as well. If you have that list, could you please send it through? I can't promise any of the items can be or will be added at this time, but I certainly appreciate your forward thinking and collaborative efforts! **Friendly reminder; our original agreement was to contribute $200,000 towards the renos and $50,000 towards sound dampening. Other items to consider is specific flooring which would support dancing, dance schools recitals, and or martial arts. A fixed stage would support music performances, music recitals, dance competitions, recitals, art shows, and other creative uses. It would be nice to have retractable seating for such performances.**
5. Any other preliminary comments you would like me to share with our consulting team prior to our Stakeholder Engagement meeting? **You may share our Theatre Assessment report dated August 17, 2021. This is specific to TCP however our intention was to share with multiple user groups to help build a stronger, safe arts presence within Wilmot. Also, we would like to participate in some of the discussions with your consulting team.**

Thank you.

Sherry Robinson
Head of Development, The Community Players of New Hamburg

On Thu, Jun 27, 2024 at 10:14 AM Secretary TCP <secretary@thecommunityplayers.com> wrote:

> Good morning!
>
> Thank you for your email.
>
> I am looping in Sherry Robinson, a member of our leadership team who has been working on this project and will likely be able to better answer these questions.
>
> Aaron

On Thu, Jun 27, 2024, 10:07 a.m. Amber Schenck <amber.schenck@wilmot.ca> wrote:

> Good morning, Aaron,
>
> While Nicole is away on vacation, I wonder if you may be able to help me with my request for information below:
>
> If you would prefer I await Nicole's return, please advise.
>
> Thank you for your help,
>
> Amber

From: Amber Schenck
Sent: Thursday, June 27, 2024 10:05 AM
To: TCP President <president@thecommunityplayers.com>
Cc: Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Chris Catania <chris.catania@wilmot.ca>
Subject: NH Arena

Good morning, Nicole,

I hope your day is going well so far!

I wanted to reach out to you and let you know we have procured the services is Invizij Architects to help us with our next steps in planning for the New Hamburg Arena project. Ahead of our Stakeholder Engagement meeting (you will receive a meeting request email from me the coming days) I would like to have our consultants complete a very thorough and comprehensive building condition assessment as well as gain a very clear understanding of the building's current uses/occupancy for various events/programs.

My questions to you this morning are:

1. how many guests would you say attend a typical TCP performance, both when you host on the Arena floor as well as when you host in the CC? (including all estimated production staff)
2. what are the estimated timelines for each performance that require use of either the CC or the Arena floors? (including auditions / set design & fabrication / rehearsals / set-up / performances / take-down)
3. what is the approximate square footage required for your storage needs? (please specify storage requirements that necessitate environment control vs. storage requirements that do not necessitate environment control and please specify which environmental effects you require control of, i.e. mould, heat, cold, moisture, light, etc.)
4. I know TCP had a few ideas for enhancements that could benefit other user groups as well. If you have that list, could you please send it through? I can't promise any of the items can be or will be added at this time, but I certainly appreciate your forward thinking and collaborative efforts!
5. Any other preliminary comments you would like me to share with our consulting team prior to our Stakeholder Engagement meeting?

Thank you for your time and attention this morning, Nicole.

Talk soon,

Amber

Amber Schenck, PMP

Project Coordinator

Community Services | Township of Wilmot | 519.634.9225 x **9334**

M | 519.778.1875
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Bob Prince - Invizij Architects

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: 16-Jul-24 4:55 PM
To: Bob Prince - Invizij Architects
Subject: FW: question regarding the NH Arena

Categories: Purple Category

Hi Bob,

Please see the response to our parking question in the email below sent from the Township of Wilmot Manager of Planning.

Please disregard any plans to update or renovate the parking lot and instead be sure to mention any upgrades or design changes would be 'preferred'.

Thank you!
Amber

From: Andrew Martin <andrew.martin@Wilmot.ca>
Sent: Monday, July 15, 2024 4:22 PM
To: Amber Schenck <amber.schenck@wilmot.ca>
Subject: RE: question regarding the NH Arena

Hi Amber,
The short answer to your question is that it is an existing Township owned facility and the zoning regulations with respect to parking don't apply.

Certainly if there were to be a substantial change in the building that would increase the occupancy beyond what historically was a possibility, permanent parking solutions would be ideal, but ultimately the building is existing, parking is existing, it is a Township owned facility, so Development Services/the zoning by-law would not dictate parking requirements.

Hope this helps,
Andrew

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Wednesday, July 10, 2024 4:12 PM
To: Andrew Martin <andrew.martin@Wilmot.ca>
Subject: question regarding the NH Arena

Hi Andrew,

I hope you are enjoying your time away! When you return, I am hoping you may be able to help me with some questions.

I'm just working with our consultant team, Invizij Architects, to plan the future of the 'old barn'. During my review of the draft preliminary site assessment report, a comment arose regarding parking.

This is the comment as presented in the draft report:

"On-site parking is limited to approximately 30 spaces in the paved parking area located at the north end of the building. It is not known if any Development Services-recognized agreement exists with neighbouring sites that provides additional off- site over flow parking."

My immediate response to this comment is to state that the overflow parking is located to the east of the Arena (gravel lot), to the east of the Legion (gravel lot), and at the Dead End of Boullee Street (gravel lot) which do not require a 'Development Services-recognized agreement' as these are all Township-owned properties, however, I'm not sure any comments have ever been received from yourself or your department regarding the parking requirements for a building based on its usage/occupancy level. Knowing full-well Norm Hill Park (home of the three over-flow parking lots) experiences highwater and spring snow-melt events annually, begs the following questions:

1. What are our parking requirements for this building should it return to its year-round programming?
2. Does Development Services 'grandfather-in' an existing parking lot until any substantial changes are made to the building it services or the parking lot itself?
3. If there are standards or regulations that must be followed, what are the parameters I should provide to my Design Team?

Could you please let me know your thoughts when you have a free moment?

Thank you!
Amber

Amber Schenck, PMP
Project Coordinator
Community Services | Township of Wilmot |
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Wilmot.ca | **Twitter** | **Facebook** | **LinkedIn** | **YouTube**

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Bob Prince - Invizij Architects

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: 2-Aug-24 2:42 PM
To: Bob Prince - Invizij Architects; Murray Wickham; Felix Martich Vanderhorst
Cc: Chris Catania; Justin Carrafiello; Andrew Mechalko
Subject: FW: 24028 NH Arena - Fire Department Meeting - REVISION 2 - FINAL

Good afternoon, all,

Please see the final version of the meeting notes below, revisions in GREEN.
To ensure accurate and up-to-date record keeping, kindly disregard my previous emails.

Thank you,
Enjoy your long weekend!
Amber

From: Amber Schenck
Sent: Thursday, August 1, 2024 12:36 PM
To: Bob Prince - Invizij Architects <Prince@invizij.ca>; Murray Wickham <murray.wickham@exp.com>; felix.martich@exp.com
Cc: Chris Catania <chris.catania@wilmot.ca>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Andrew Mechalko <andrew.mechalko@wilmot.ca>; Rod Leeson <rod.leeson@wilmot.ca>
Subject: FW: 24028 NH Arena - Fire Department Meeting - REVISION 1

Good afternoon, everyone.

Please review the modifications to item 3 below – in ORANGE
To ensure accurate and up-to-date record keeping, kindly disregard my previous email.

Thank you,
Amber

From: Amber Schenck
Sent: Thursday, August 1, 2024 12:03 PM
To: Andrew Mechalko <andrew.mechalko@wilmot.ca>
Cc: Bob Prince - Invizij Architects <Prince@invizij.ca>; Murray Wickham <murray.wickham@exp.com>; felix.martich@exp.com; Chris Catania <chris.catania@wilmot.ca>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>
Subject: 24028 NH Arena - Fire Department Meeting

Good afternoon, Andrew,

Thank you once again for discussing the concerns related to Fire Prevention and Code Compliance at the New Hamburg Arena with our Consultants.
To ensure our project team comprehensively addresses these issues during the schematic design phase, I would like to reiterate the points raised:

1. The building currently lacks adequate Fire Alarm coverage, with only a single smoke detector installed at the main entrance doors off the arena lobby.

2. The current stairwell that acts as the main entrance/exit to the second-floor community room has containment (fire separation) at the bottom of the stairwell however at the top of the stairs there are no doors or fire separation to isolate it from the rest of the building.
    - Ontario Fire Code reference: 9.2.3.15. (1) Where an **exit** stairway, an escalator or a moving walkway serves as a required **exit**, it shall be separated from the remainder of the **building** in accordance with Sentence 3.4.4.1.(1) of the **1986 Building Code**.
    - (2) Doors in **fire separations** required in Sentence (1) shall be equipped with self-closing devices.
    - (3) An existing **fire separation** having a **fire-resistance rating** not less than 45 min with **closures** having a **fire-protection rating** not less than 45 min is deemed to comply with Sentence (1).
    - (4) Existing wired glass screens set in fixed steel frames are acceptable in **fire separations** required by this Article.
3. The deluge system is not a permanent fixture within the New Hamburg Arena and must be reinstalled by a licensed sprinkler company each time it is needed. This reinstallation process often requires the use of a lift for access, adding both complexity and cost to the process. Given these challenges, we should explore alternative solutions that eliminate the need for frequent reactivation and the associated expenses.
4. ~~Temporary 'Band-Aid' solutions for meeting occupant level requirements during TCP performances are unreliable and at risk of failure.~~
5. Approved seating layouts, although completed by an architect, were inaccurately measured. This has resulted in perimeter performance curtains obstructing egress aisles along the arena dasher boards, compromising their intended purpose.
6. The Jacob St. overhead door is currently fitted with a temporary wall assembly and double crash-bar exit doors during TCP performances. This configuration needs to be made permanent, or alternatively, individual pedestrian emergency exit doors should be added to the wall adjacent to the overhead door.
7. TCP currently utilizes generator backup power for large performances by employing their own generator and using a designated disconnect location. Assess whether generator and/or emergency backup power should be supplied by the Township and determine if it is necessary for other user groups.

Action Items:
Invizij Architects and their project team will investigate these concerns and review the applicable codes and regulations to address each issue in the schematic design phase.
Amber will contact the Township of Wilmot Building Department to request documentation related to fire systems installed to enhance usability for TCP's large performances.
Andrew will inform us of any additional concerns or issues as they arise.

Next Steps:
- Upon completing the investigation of these concerns, Invizij will provide context and resolutions which will be incorporated into the schematic designs of the New Hamburg Arena Modernization project. These designs will be submitted to Wilmot Fire and all relevant regulatory agencies for review and feedback.
- Explore the feasibility of installing distribution panels around the perimeter of the ice surface to provide ice-level power for use by various user groups.

Please let me know if you have any questions, or if I may have missed anything from our conversation.
Thank you all for your support in the New Hamburg Arena Modernization Project.

Enjoy your day,
Amber

Amber Schenck, PMP
Project Coordinator
Community Services | Township of Wilmot |
519.634.9225 x **9334**
M | 519.778.1875
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Bob Prince - Invizij Architects

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: 28-Jun-24 3:01 PM
Subject: New Hamburg Arena - Stakeholder Engagement Session 1

Good afternoon,

I hope your day is going well so far and you are looking forward to the long weekend!

As you may know, the Township has procured the services of Invizij Architects to review the Community Services Master Plan (anticipated completion: late-July), conduct a comprehensive building condition assessment, utility evaluation, and cost-benefit analysis of the ICIP/SPIF Grant requirements for the New Hamburg Arena to best direct our efforts towards a more user-friendly and accessible recreation space.

Invizij will host a Stakeholder Engagement session with all user groups directly connected to the facility for various programs, activities, and events. This session aims to provide each of you with an opportunity to meet with our consultant and project team and share your experiences, feedback, and ideas regarding the successes, shortcomings, and opportunities of the New Hamburg Arena as relates to your own use of the facility for the foreseeable future.

The Stakeholder Engagement Session will take place: **Wednesday, August 7, 2024 @ 10:30am at the New Hamburg Arena** – attendance at this meeting is NOT mandatory.

If you are unable to attend, I would kindly ask that you send a delegate in your place, and if that is not possible, please feel free to send me an email outlining any information you would like to share or you think may be pertinent to this data-gathering initiative.

It is imperative that the data provided be objective and evidence-based to ensure our decisions are informed by accurate, reliable information that reflects the true state of the facility and its usage. By grounding our assessments in measurable facts and data, we can more effectively address the needs and concerns of all stakeholders, leading to a more functional and inclusive recreation space for everyone.

If you are able to attend, please respond to this email and I will forward the calendar invite. If you are unable to attend, but are sending a delegate, please provide their contact information.

Thank you for your time and attention to this important initiative. Your cooperation in the success of this project is invaluable.

Take care,
Amber

Amber Schenck, PMP
Project Coordinator
Community Services | Township of Wilmot |
519.634.9225 x **9334**
M | 519.778.1875
Wilmot.ca | **Twitter** | **Facebook** | **LinkedIn** | **YouTube**

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Community Services

New Hamburg Arena Modernization Project

Stakeholder Engagement Meeting 1

DATE	August 7, 2024
TIME	10:30AM
MEETING CHAIR	Bob Prince, Invizij Architects

IN ATTENDANCE

Bob Prince (Invizij Architects)
Chris Catania (Director of Community Services, Township of Wilmot)
Amber Schenck (Project Coordinator, Township of Wilmot)
Justin Carrafiello (Arena Supervisor, Township of Wilmot)
Sherry Robinson (TCP)
Nancy (TCP)
Stephanie Szusz (Agricultural Society / Fall Fair)
John Reimer (New Hamburg Mennonite Relief)

ABSENT INVITEES

Murray Wickham (EXP)
Felix Martich Vanderhorst (EXP)
Rod Leeson (Wilmot fire Station 3)
Andrew Machalko (Wilmot Fire Station 3)
Ross Eichler (New Hamburg Legion)
Michelle Schertzer (Moparfest)
Kevin Reich (Wilmot Softball)
Ryan Roth (Wilmot Softball)
Trisha Robinson (Wilmot Family Resource Centre)
Abby (Laforme) Lee (Missisaugas of the Credit First Nation)

1. WELCOME AND INTRODUCTIONS

2. PROJECT OVERVIEW

3. STAKEHOLDER FEEDBACK

ITEM	ACTION
Expand On-Site Storage Options: Develop additional storage areas on-site, including both climatized and non-climatized spaces, to accommodate a range of needs and improve storage capacity.	BP
Electronic Signage: Install electronic, customizable signage to enhance visibility and promote community events, ensuring the community stays informed and engaged.	BP
Permanent Staging: Implement a permanent staging solution to eliminate the need for individual user groups to rent, set up, and dismantle temporary staging. The staging can be either permanently installed or readily accessible from a convenient storage area, streamlining the setup process and enhancing efficiency for all events.	BP

Enhance WiFi Coverage and Signal Strength: Upgrade the WiFi infrastructure to improve coverage and signal strength throughout the facility.	BP
Increase the Number of Bottle Filling Stations: Install additional bottle filling stations throughout the facility to enhance convenience and accessibility, encouraging the use of reusable bottles.	BP
Upgrade the Sound System: Modernize and improve the existing sound system to deliver increased audio quality, coverage, and reliability.	BP
Create Six Lockable Changing Rooms with Shower Amenities: Construct six secure changing rooms, each equipped with shower facilities, to provide improved convenience and privacy for users and enhance the overall functionality of the facility.	BP

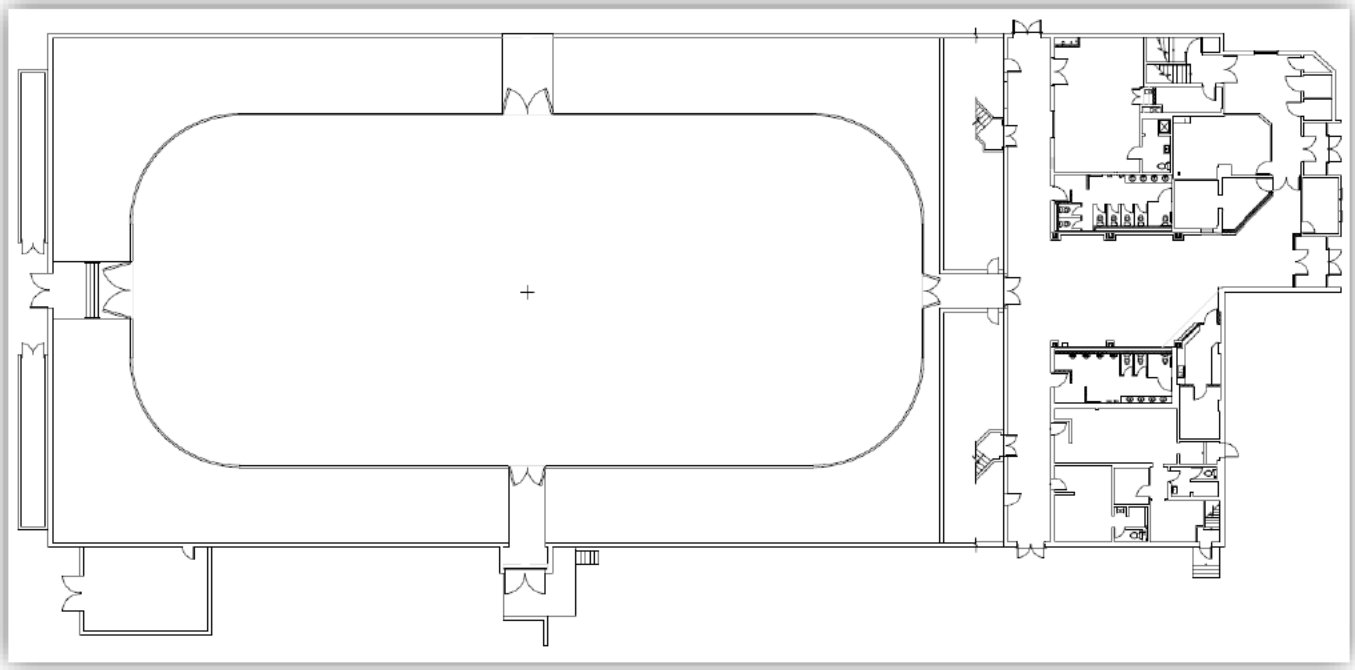
4. STAKEHOLDER DATA INPUT

ITEM	ACTION
Storage Space Requirements: Could you please provide your approximate square footage needs for climatized and non-climatized storage?	ALL SH
Power Requirements: Could you specify your power needs for the arena floor and ceiling?	ALL SH
Spec Sheets: We would appreciate it if you could share the spec sheets for the staging you currently use.	ALL SH
Event/Production Photographs: If possible, please provide pictures of your event/production set ups. **Please use Attachment 1.**	ALL SH
Equipment and machinery: Could you please provide the sizes of any equipment, machinery, vehicles, and any other oversized or heavy items used for the setup and cleanup of your event(s)/production(s)?	ALL SH
Visitor capacity: Could you please provide the standard number of chairs set-up on the arena floor during your event(s)/production(s)?	ALL SH
Facility usage: Could you please provide the dates of your current facility rentals?	ALL SH

5. NEXT STEPS

ITEM	ACTION
Review Feedback and Integrate into Preliminary Report: Thoroughly analyze the feedback received from stakeholders and ensure that all relevant requests are reflected to align the project scope with the requirements outlined by the stakeholders.	BP
Finalize and Distribute Pre-Design Report: Prepare the finalized version of the pre-design report, incorporating any necessary revisions. Distribute this report to stakeholders for their review and feedback. (This step should be completed before proceeding to the creation of concept design layouts to ensure that all stakeholder concerns are addressed and integrated into the design process.)	BP
Provide a Copy of the Approved Grant Application Scope of Work for Review: Township to provide a copy of the approved grant application to stakeholders to clarify and detail the current scope requirements.	ATTACHED

6. ATTACHMENTS



TOWNSHIP OF Wilmot

Community Services

New Hamburg Arena Modernization Project

Ontario

APPLICATION

Case No.: 2019-10-1-1418036029

ICIP: Community, Culture and Recreation Stream – Multi-Purpose Intake

Saved: 11/12/2019 14:00

1.3 Project Description

Provide a technical description of the proposed project. This includes outlining the scope of the project and a full description of all the **infrastructure work** to be undertaken. Do not include any benefits of the project in this section. (Maximum 2000 characters)

The purpose of the project is to modernize the old New Hamburg Arena, built in 1949, and bring it up to current building standards from a building code, fire code and AODA perspective. The reconstruction, supported by a recently completed Engineering Study and Conceptual Design, will create a hybrid facility that will accommodate warm floor multi-purpose uses for part of the year, and ice usage for the remainder of the year. Most importantly, this project will also consolidate the operations of our Performing Arts community into one facility for storage needs, rehearsal and performance space. Our local theatre group (The Community Players) have partnered on the conceptual design and financing of this project. There will be a new addition that will contain accessible change rooms for dryland and ice user groups, as well as theatre storage space (props, equipment, set pieces, seating). The concrete floor slab and underfloor refrigeration piping, rink boards, glass and safety netting will also be replaced, along with HVAC equipment, electrical/wiring panels and plumbing infrastructure, where required for building/fire code compliance. The existing, inaccessible, wooden spectator seating will be removed/replaced with fixed bleacher seating along the west wall. A fully compliant fire alarm system and elevator will be installed to service this updated facility.

1.4 Alternative Options

What alternative options were considered for this project? (Maximum 2000 characters)

Several alternative options were considered for this project, including minor facility repairs for accessibility needs being completed when funding becomes available, and continuing to offer a disjointed space throughout the community for theatre storage, rehearsal space and performance space as available.

From an ice users and dryland perspective, the Township also considered a brand new stand-alone facility.

These alternatives are not preferred from both a cost and community need perspective. The ICIP funding program presents an excellent opportunity for our municipality to rejuvenate an existing space, and service a diverse set of user groups from the Recreation and Cultural service areas.

The partnership with TCP made our decision clear to proceed with an application to share costs on this important community culture and recreation project.

Bob Prince - Invizij Architects

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: 13-Aug-24 11:40 AM
To: Bob Prince - Invizij Architects
Cc: Chris Catania; Justin Carrafiello; Rod Leeson; Andrew Mechalko
Subject: RE: TCP - Fire Drawings
Attachments: NH Arena - Mechanical Drawings - TCP.pdf

Hi Bob,
Please see attached.

The system is a permanent fixture and operates when the Deluge System is engaged.

From: Bob Prince - Invizij Architects <Prince@invizij.ca>
Sent: Tuesday, August 13, 2024 11:07 AM
To: Amber Schenck <amber.schenck@wilmot.ca>
Cc: Chris Catania <chris.catania@wilmot.ca>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Rod Leeson <rod.leeson@wilmot.ca>; Andrew Mechalko <andrew.mechalko@wilmot.ca>
Subject: RE: TCP - Fire Drawings

Thanks Amber,
Amy mentions an attached drawing for the exhaust fan system but I didn't see it attached?
Is this exhaust fan system assembled before every show or, like the deluge system, has been constructed permanently as part of the facility and operated only during performances?

Bob Prince A.Sc.T., Lic. Arch. Tech. OAA, LEED ®AP BD+C
Principal

INVIZIJ ARCHITECTS INC.
185 Young Street, Hamilton, ON Canada L8N 1V9
t: 905 525 9000 x224
invizij.ca | Facebook | Twitter | LinkedIn
My working day or hours may not be yours. Please do not feel obliged to reply to this email outside of your normal working hours.

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Tuesday, August 13, 2024 10:56 AM
To: Bob Prince - Invizij Architects <Prince@invizij.ca>
Cc: Chris Catania <chris.catania@wilmot.ca>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Rod Leeson <rod.leeson@wilmot.ca>; Andrew Mechalko <andrew.mechalko@wilmot.ca>
Subject: FW: TCP - Fire Drawings

Good morning, all,

Further clarification from our Deputy CBO below... please read the full email chain for complete transparency.

The project file has been updated.
A.

From: Amy May <amy.may@wilmot.ca>
Sent: Tuesday, August 13, 2024 9:10 AM
To: Amber Schenck <amber.schenck@wilmot.ca>
Cc: Terry Gerber <terry.gerber@Wilmot.ca>
Subject: RE: TCP - Fire Drawings

Hi Amber,

No worries 😊

The architect is correct - that document was part of the 2020 permit that was revoked. It is not valid. It was revoked in February of this year.

The original 2014 seating layout is the valid layout, with the maximum number of seats listed.

Thanks,

Amy May CBCO
Deputy Chief Building Official / Senior Plans Examiner
Development Services | Township of Wilmot | 519-634-8519 x **9273**

Wilmot.ca | **Twitter** | **Facebook** | **LinkedIn** | **YouTube**

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Tuesday, August 13, 2024 9:00 AM
To: Amy May <amy.may@wilmot.ca>
Cc: Terry Gerber <terry.gerber@Wilmot.ca>
Subject: RE: TCP - Fire Drawings

Hi Amy,

So sorry, I thought I had added it for your review.
Please see attached.

Thank you for your other responses and for providing clarity for us to help move this project along.

Talk soon,
Amber

From: Amy May <amy.may@wilmot.ca>
Sent: Tuesday, August 13, 2024 8:40 AM
To: Amber Schenck <amber.schenck@wilmot.ca>

Cc: Terry Gerber <terry.gerber@Wilmot.ca>
Subject: RE: TCP - Fire Drawings

Hi Amber,

Sorry, I'm not sure what the PDF doc was that is listed as "TCP Permit Requirements" (wasn't attached to this email, and we don't have any files with that same name).

Yes, your comments in purple are correct about the two locations of the overhead doors being temporarily infilled (one east, one west).

For the exhaust vent system, there were two ducts, with exhaust fans actuated by the fire alarm system, in the roof space as shown in the attached drawing.

Please let me know if you have any further questions.

Thanks!

Amy May CBCO
Deputy Chief Building Official / Senior Plans Examiner
Development Services | Township of Wilmot | 519-634-8519 x **9273**

Wilmot.ca | Twitter | Facebook | LinkedIn | YouTube

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Monday, August 12, 2024 1:05 PM
To: Amy May <amy.may@wilmot.ca>
Cc: Terry Gerber <terry.gerber@Wilmot.ca>
Subject: FW: TCP - Fire Drawings

Hi Amy,

I had forwarded your response and the layout to our Consultant and he had a few clarification questions. Just wondering if you may be able to clarify the comments below in green and confirm my reply in purple when you have a moment.

Please and thank you?!
Amber

From: Bob Prince - Invizij Architects <Prince@invizij.ca>
Sent: Monday, August 12, 2024 12:09 PM
To: Amber Schenck <amber.schenck@wilmot.ca>
Cc: Chris Catania <chris.catania@wilmot.ca>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Andrew Mechalko <andrew.mechalko@wilmot.ca>; Rod Leeson <rod.leeson@wilmot.ca>
Subject: RE: TCP - Fire Drawings

Thanks Amber, this is helpful.
I'll presume that the 2020 application Amy describes was being rejected is the .pdf titled "TCP Permit Requirements" from your attached June 28, 2024 e-mail. See attached

Amy mentions other modifications as: "… temporary swing doors within existing overhead door locations, etc. They also altered the building for a sprinkler deluge system and exhaust vent system above the stage (these are activated during TCP's use)."
I know of the infill construction with swing doors for the overhead door leading on to Jacob St. but does this involve other overhead door locations? No, there are two overhead door locations, one on the east (previous ice resurfacer cleanout area) and one on the west (Jacob St. ice resurfacer entrance/exit)
Also is the "exhaust vent system" she describes the type that is similar to roof hatches that automatically open when the fire alarm is activated? I.e. nothing involving additional HVAC ductwork
I'll update the report to clarify this.

Bob Prince A.Sc.T., Lic. Arch. Tech. OAA, LEED ®AP BD+C
Principal

INVIZIJ ARCHITECTS INC.
185 Young Street, Hamilton, ON Canada L8N 1V9
t: 905 525 9000 x224
invizij.ca | Facebook | Twitter | LinkedIn

From: Amber Schenck <amber.schenck@wilmot.ca>
Sent: Monday, August 12, 2024 11:26 AM
To: Bob Prince - Invizij Architects <Prince@invizij.ca>
Cc: Chris Catania <chris.catania@wilmot.ca>; Justin Carrafiello <Justin.Carrafiello@wilmot.ca>; Andrew Mechalko <andrew.mechalko@wilmot.ca>; Rod Leeson <rod.leeson@wilmot.ca>
Subject: FW: TCP - Fire Drawings

Good morning, all,

Please see the attached seating layout and the explanation below from our Deputy CBO clarifying the **current and effective** seating layout permitted in the NH Arena for TCP Performances.

If you require any further information at this time, please reach out.

Thank you!
A.

The project file has been updated.

From: Amy May <amy.may@wilmot.ca>
Sent: Monday, August 12, 2024 10:29 AM
To: Amber Schenck <amber.schenck@wilmot.ca>
Cc: Terry Gerber <terry.gerber@Wilmot.ca>
Subject: RE: TCP - Fire Drawings

Hi Amber,

I've attached the seating layout that was under building permit in 2014. If you need any additional information, please let me know. There were some other requirements during the TCP's use, such as adding temporary swing doors within existing overhead door locations, etc. They also altered the building for a sprinkler deluge system and exhaust vent system above the stage (these are activated during TCP's use).

Some additional background – the TCP had applied for a permit to increase the seating and change the seating layout in 2020. However this did not go ahead and the permit was revoked. The original seating layout and maximum number of seats from 2014 are still in effect.

Please let me know if you have any questions or need additional information.

Thanks,

Amy May CBCO
Deputy Chief Building Official / Senior Plans Examiner
Development Services | Township of Wilmot | 519-634-8519 x **9273**

Wilmot.ca | Twitter | Facebook | LinkedIn | YouTube

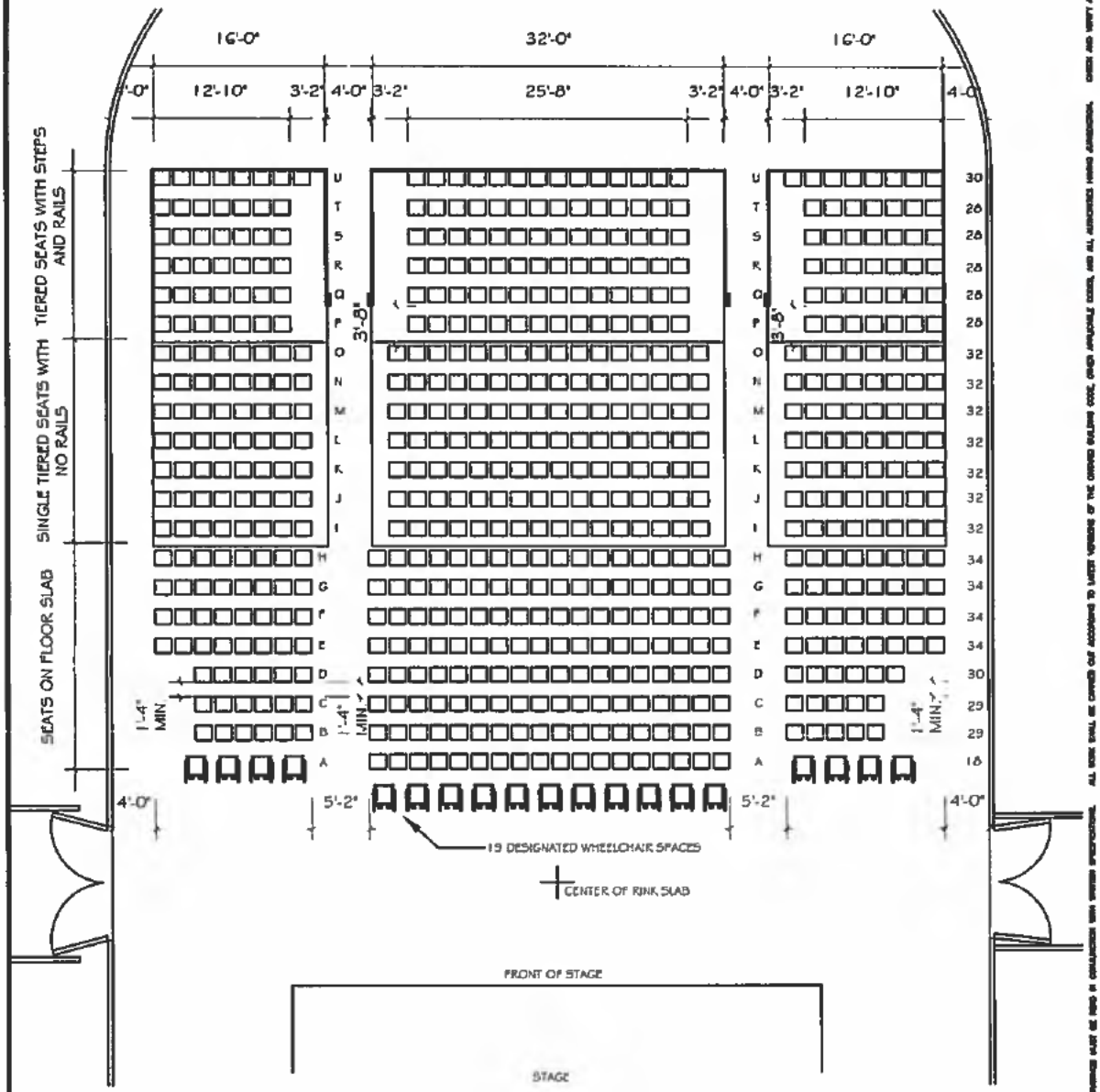
gb

636 NON FIXED SEATS → ~700 MAX OCCUPANT LOAD

BARRIER-FREE SEATING:

AS PER O.B.C. 3.8.2.1.(4) 636 REGULAR SEATS x 3% = 19 WHEELCHAIR SPACES REQUIRED
EXACT SPACE TO BE MINIMUM: 3'-0" WIDE x 4'-0" LONG (3.8.3.6.(1)(b))

LOCATION OF ANY BARRIER-FREE SEATING SPACE MAY OCCUR ALONG THE SIDES OF ALL 4 AISLES BETWEEN FRONT OF STAGE AND BACK TO ROW 'H'.



gb architect inc.
430 ONTARIO STREET
STRATFORD, ONTARIO. N5A 3J2
PHONE (519) 272 0073 FAX (519) 272 1433

"Guy R. Bellehumeur, B. Arch., OAA, MRAIC, Principal Architect of GB ARCHITECT INC. is the designer for this project with respect to all architectural work identified on this drawing set. The Ontario Association of Architects has assigned Guy R. Bellehumeur, GB ARCHITECT INC. BCIN Number 4217 as per requirements of the Ministry of Municipal Affairs & Housing Bill 124."

The Architect noted above has exercised responsible control with respect to design activities. The Architect's seal number is their BCIN number.

[redacted]
LICENCE
4217
FEB 23 2015

251 JACOB STREET
NEW HAMBURG, ONTARIO

PRINT DATE:	February 23, 2015
DATE:	
DRAWN BY:	A.M.C.
CHECKED BY:	G.R.B.
SCALE:	
PROJECT No.:	1402

SEATING LAYOUT

SK2

gb

gb

HVAC EQUIPMENT SCHEDULE

SYMBOL	UNIT	DESCRIPTION	ELEC.	REMARKS	WEIGHT	DIMENSIONS L	W	H
EF.1	EXHAUST FAN	FENNEBARRY SX27BBC 1300 CFM @ 0.4" S.P. @ 912 RPM	575.3.60 3 H.P.	C/W BDD, HANGERS. EXHAUST FAN TO OPERATE UPON ACTIVATION OF FIRE ALARM BY ELECTRICAL. PROVIDE MANUAL OVERRIDE SWITCH IN EXISTING SERVICE ROOM AS SHOWN. COORDINATE ON SITE. NOTE: EXHAUST FAN TO BE POWERED BY EMERGENCY POWER SOURCE, BY ELECTRICAL.	245 LBS			
EF.2	EXHAUST FAN	FENNEBARRY SX27BBC 1300 CFM @ 0.4" S.P. @ 912 RPM	575.3.60 3 H.P.	C/W BDD, HANGERS. EXHAUST FAN TO OPERATE UPON ACTIVATION OF FIRE ALARM BY ELECTRICAL. PROVIDE MANUAL OVERRIDE SWITCH IN EXISTING SERVICE ROOM AS SHOWN. COORDINATE ON SITE. NOTE: EXHAUST FAN TO BE POWERED BY EMERGENCY POWER SOURCE, BY ELECTRICAL.	245 LBS			

GRILLE & DIFFUSER SCHEDULE

SYMBOL	TYPE	MANUFACTURER NAILOR	KRUEGER	TITUS	REMARKS
RG	SURFACE MOUNTED RETURN GRILLE	51 EC	ESG10	350F	1"x1" GRID SPACING, COLOUR SELECTION BY ARCHITECT

HVAC NOTES

H1 COORDINATE DIFFUSER AND GRILLE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLAN AND THE GENERAL CONTRACTOR.

H2 USE DUCT SIZES SHOWN OR EQUIVALENT.

H3 ALL DUCTWORK INSIDE BUILDING IS TO BE COMPLETE WITH 1/2" (13mm) THICK ACOUSTIC INSULATION WHERE SHOWN.

H4 ALL DUCTWORK INCLUDING FITTING, IS TO BE SEALED AS REQ'D BY ASHRAE AND SMACNA STANDARDS.

H5 AIR VOLUMES ARE IN CFM.

H6 EXHAUST LOUVRES - VENTEX OR EQUAL
EXHAUST - HI PRO 2410 C/W BIRD SCREEN
LOUVRES TO BE FACTORY PAINTED. COLOUR SELECTIONS BY ARCHITECT FROM VENTEX COLOR CHART.

HVAC LEGEND

	RETURN OR EXHAUST DUCT
	ACOUSTIC INSULATION 1/2" (13mm)
SIZE-TYPE AIRFLOW	RETURN OR EXHAUST GRILLE
T	THERMOSTAT/ZONE SENSOR
SW	MANUAL OVERRIDE SWITCH

1 BASIC MECHANICAL REQUIREMENTS

THIS CONTRACTOR SHALL FURNISH AND INSTALL MATERIALS AND EQUIPMENT AS SPECIFIED AND AS SHOWN ON THE DRAWINGS FOR THE SATISFACTORY COMPLETION OF THE WORK. TEST AND PUT INTO OPERATION ALL MECHANICAL WORK. CONFORM TO THE APPLICABLE REQUIREMENTS AND CONDITIONS OF THE GENERAL CONTRACT.

THIS CONTRACTOR SHALL SUBMIT A LUMP SUM PRICE BASED ON THE SPECIFICATIONS AND DRAWINGS. IF THIS CONTRACTOR WISHES TO BID ON ALTERNATIVE MATERIALS AND EQUIPMENT, THE BID MUST INCLUDE THE NAME OF THE ALTERNATIVE MANUFACTURER AND THE ADJUSTMENT IN PRICE, IF ANY.

THIS CONTRACTOR, BEFORE BIDDING, SHALL EXAMINE THE SITE. IT IS THE CONTRACTORS' RESPONSIBILITY TO BE FAMILIAR WITH THE BUILDING CONSTRUCTION SO THAT THE BID INCLUDES ALL THAT IS NECESSARY FOR THE PROPER COMPLETION OF THE WORK.

THIS CONTRACTOR SHALL CONFORM TO MINIMUM REQUIREMENTS OR BETTER OF PROVINCIAL AND LOCAL CODES AND TO THE REQUIREMENTS OF LOCAL INSPECTION AUTHORITIES FOR THE EXECUTION OF THE WORK.

THIS CONTRACTOR SHALL OBTAIN PERMITS, PAY FEES AND FURNISH CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF ALL GOVERNING AUTHORITIES HAVING JURISDICTION.

THIS CONTRACTOR SHALL STUDY THE DRAWINGS AND SPECIFICATIONS AND SHALL REPORT ANY ERRORS OR INCONSISTENCIES TO THE ENGINEER BEFORE BIDDING. IN NO CASE SHALL THE CONTRACTOR PROCEED IN UNCERTAINTY.

SHOP DRAWINGS: THIS CONTRACTOR SHALL FORWARD SHOP DRAWINGS OF EQUIPMENT AND FIXTURES. PAXED SHOP DRAWINGS WILL NOT BE ACCEPTED.
CUTTING AND PATCHING: INCLUDE CUTTING AND PATCHING AS REQUIRED FOR WORK IN THIS DIVISION.
EXCAVATING AND BACKFILL: INCLUDE EXCAVATION AND BACKFILL AS REQUIRED FOR UNDERGROUND PIPING IN THIS DIVISION.
SLEEVES, ACCESS DOORS: PROVIDE SLEEVES AND ACCESS DOORS FOR THE INSTALLATION AND SERVICING OF ALL CONCEALED MECHANICAL EQUIPMENT.
ELECTRICAL: CONTRACTOR SHALL PROVIDE EQUIPMENT COMPLETE WITH CONTROLS FOR THE MECHANICAL EQUIPMENT. ALL POWER WIRING SHALL BE BY THE ELECTRICAL CONTRACTOR.
ROOF CURBS AND OPENINGS: THIS CONTRACTOR SHALL SUPPLY ALL ROOF CURBS, STRUCTURAL SUPPORTS FOR ROOF OPENINGS AND COUNTER FLASHING FOR MECHANICAL EQUIPMENT UNLESS SPECIFICALLY INSTRUCTED OTHERWISE BY THE GENERAL CONTRACTOR.
GENERAL WORK: CONCRETE PADS, FURRED IN DUCT SPACES TO BE DONE BY THE GENERAL CONTRACTOR UNLESS SPECIFICALLY INSTRUCTED OTHERWISE.
GUARANTEE: GUARANTEE EQUIPMENT AND SYSTEMS AGAINST DEFECTS OF MATERIAL AND WORKMANSHIP FOR ONE FULL YEAR FROM DATE OF FINAL ACCEPTANCE.

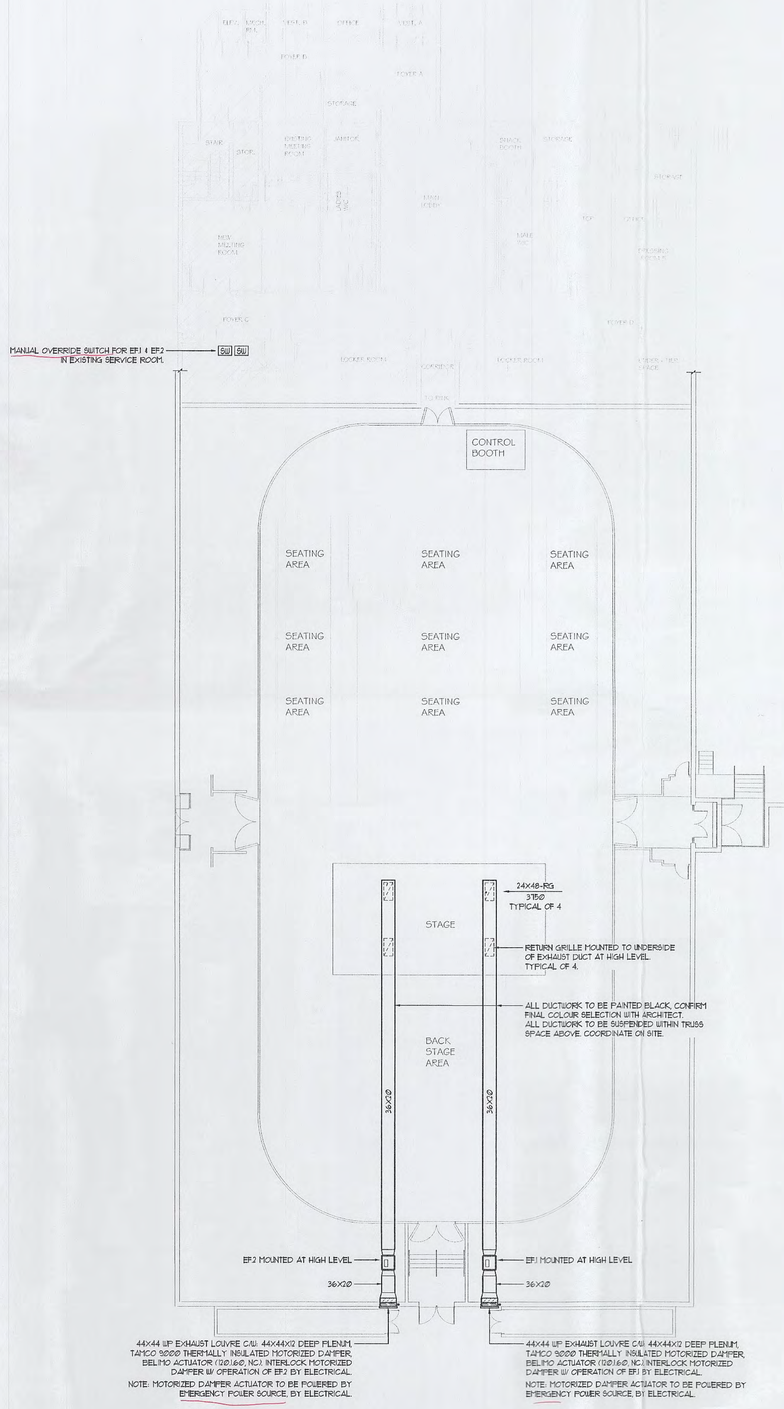
2 HVAC

ALL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH CODE REQUIREMENT, AND TO ASHRAE AND SMACNA STANDARDS. ALL MATERIAL AND EQUIPMENT SHALL BE NEW. DUCTWORK SHALL BE OF GAUGES AS OUTLINED BY SMACNA STANDARDS. EQUIPMENT TO BE AS OUTLINED ON THE DRAWINGS. PROVIDE ALL NECESSARY BALANCING AND VOLUME DAMPERS. BALANCE THE AIR SYSTEMS TO VOLUMES SHOWN. SUBMIT BALANCING REPORT TO THE OWNER IN TRIPLICATE.
DUCT INSULATION:

- ACOUSTIC LINING 1/2" (13mm) THICK SHALL BE MECHANICALLY PINNED AND GLUED TO THE INSIDE OF DUCTWORK. IT IS NOT REQUIRED TO INCREASE THE DUCT SIZE FOR ACOUSTIC INSULATION. INSTALL WHERE SHOWN AND/OR AS NOTED. ALWAYS ACOUSTICALLY INSULATE THE FIRST 10 FEET (3000mm) FROM A FAN OR AN OUTSIDE AIR INTAKE/EXHAUST.
- THERMAL INSULATION SHALL BE 2" (50mm) AND BE SECURED TO THE OUTSIDE OF DUCTWORK. INSULATE AS SHOWN AND/OR AT LEAST THE FIRST 10 FEET (3000mm) FROM AN OUTSIDE AIR INTAKE/EXHAUST.

3 WORK IN EXISTING BUILDING

1. THE CONTRACTOR SHALL VISIT THE SITE AND EXAMINE THE EXISTING CONDITIONS AND MAKE ALLOWANCES IN HIS TENDER PRICE FOR REMOVAL, RELOCATION, RE-ROUTING, RECONNECTION OF EXISTING MECHANICAL EQUIPMENT AS MAY BE NECESSARY FOR THE EXECUTION AND COMPLETION OF THIS PROJECT.
2. EQUIPMENT LOCATED IN AREAS BEING ALTERED OR DEMOLISHED, BUT SERVICING OTHER EQUIPMENT REQUIRED TO REMAIN IN SERVICE SHALL BE RE-ROUTED AS REQ'D TO MAINTAIN CONTINUITY OF SERVICES.
3. SEQUENCE OF REMOVAL AND RELOCATION OF EXISTING EQUIPMENT SHALL BE COORDINATED WITH THE OTHER TRADES AND THE OWNER. SYSTEM INTERRUPTIONS SHALL BE KEPT TO A MINIMUM.
4. ALL EXISTING MECHANICAL EQUIPMENT WHICH IS NOT TO BE RE-USED SHALL BECOME THE PROPERTY OF THE OWNER. IF THE OWNER DECIDES HE DOES NOT WANT IT, THE MECHANICAL CONTRACTOR SHALL DISPOSE OF IT.
5. THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION TO EXISTING EQUIPMENT THROUGHOUT THE PROJECT AND PARTICULARLY WHERE EQUIPMENT HAS BECOME EXPOSED TO MECHANICAL INJURY OR MOISTURE IN THE COURSE OF ALTERATIONS OR NEW CONSTRUCTION.



PROPOSED HVAC PLAN
1/16"=1'-0"

REGISTERED PROFESSIONAL ENGINEER
2.DEC.14
W. E. COLLINS
PROVINCE OF ONTARIO

COLLINS ENGINEERING GROUP INCORPORATED
MECHANICAL ENGINEERING
COLLINSENG.CA

COMMUNITY CENTER O.B.C PART 10 UPGRADES
251 JACOB STREET
NEW HAMBURG, ONTARIO

PRINT DATE:	December 2, 2014
DATE:	December 2, 2014
DRAWN BY:	SEC
CHECKED BY:	JCW
SCALE:	1/16"= 1'-0"
PROJECT No.:	5372

PROPOSED HVAC PLAN

M1

gb