



City of
Peterborough

To: Members of the General Committee

From: Sheldon Laidman, Commissioner, Community Services

Meeting Date: November 6, 2023

Report: Multi-Use Sport and Event Center Update to Feasibility Study, Report CSAC23-009

Subject

A report to provide council with an update to the feasibility study of the Multi-Use Sport and Event Centre (MUSEC) and recommended next steps.

Recommendations

That General Committee approve the recommendations outlined in Report CSAC23-009, dated November 6, 2023, of the Commissioner of Community Services as follows:

- a) That the presentation from Sierra Planning and Management be received for information;
- b) That staff be directed to engage Seirra Planning and Management at an estimated cost of up to \$65,000 in the next portion of Phase 3 of their original work plan for a new Multi-Use Sport and Event Centre to include an analysis of potential sites in the downtown with the intention of confirming a preferred site; and
- c) That the Mayor appoint a steering committee to advise the Commissioner of Community Services as it relates to this project.

Executive Summary

- In June of 2023 a staff report provided Council with the scope of work completed to date for a new Multi-Use Sport and Event Centre.
- This report was deferred to allow for an update to the original project feasibility study to provide new estimates of capital work necessary to the Peterborough Memorial Centre (PMC), a review of venue competition in the region, a review of project financial projections, and a revisiting of the scope of the project.
- This report provides the updated information requested by Council.

Background

The Multi-Use Sport and Event Centre (MUSEC) project was initiated in 2018 and divided into two phases. [Report CSAD18-003](#), Major Sport and Event Centre Feasibility Study Phase One Executive Summary and Presentation detailed the Phase One Feasibility Study which included stakeholder and community consultation to determine market and community needs to justify a MUSEC for the City and broader region beyond what is provided currently in the existing (PMC). Analysis and highlights included:

- Proposed capital costs with seating expected to be 5800 in an approximate 155,000 sq ft overall building.
- Expected project timeline.
- Functional assessment of the PMC along with a cost benefit analysis of upgrades to the PMC versus a new building and when construction should occur.
- Market definition, current status of the market and future market opportunities.
- Potential components of a new facility.
- Existing financial performance of the PMC versus a new facility's potential financial performance.
- Locational considerations for a new facility and potential economic impacts.

[Report CSAD18-005](#), Major Sport and Event Centre Feasibility Study Phase Two Final Report and Presentation detailed the Phase Two Business Case and provided specific recommendations on the requirements for a new Major Sport and Event Centre based on the information gathered in Phase One including the development of location criteria and an assessment of possible site options for further consideration in Phase Three. The Locational Analysis included in this phase included a long list of candidate sites which were reduced to the prime locations to be considered including a privately owned property on the east side of George Street South, Morrow Park, City Public Works

Garage/Mall on Townsend and extending to George Street, and James Stevenson Park.

Given the scope of work involved several additional reports have been generated on this project and are provided here for reference to ensure Council understands the full scope of work undertaken to date on this project.

- [Report CSD15-004, Arena Development Update](#)
- [CSAD18-001 Major Sport and Event Centre Feasibility Study Presentation](#)
- [CSAD19-001 Major Sport and Event Centre Project Evaluation](#)

At the June 19, 2023 meeting, [Report CSACH23-002](#) provided an update for Council on the history of the project and the following motion was passed:

That Council approve the recommendations outlined in Report CSACH23-002, dated June 19, 2023, of the Commissioner, Community Services as follows:

- a) That an update on the status of the Multi-Use Sport and Event Centre Study Project be received for information.
- b) That the preferred location of a Multi-Use Sport and Event Centre shall be in the Central Area in accordance with the "Downtown First" public investment strategy described in Section 4.3.1 x. of the Official Plan.
- c) That a reassessment of the original September 2018 Feasibility Study be undertaken to include
 - i. Updating capital works completed and providing new estimates of future capital needs that will be required at the Peterborough Memorial Centre:
 - ii. A review of the changing landscape of competitive venues with a smaller project scope given a community ice pad is no longer necessary:
 - iii. Review and revisions of financial operating projections;
 - iv. An update to the economic impact model of operations and spending multipliers to the regional economy;
 - v. Revisiting the scope of the project and updating the current cost analysis.
- d) That Council approves the award of a single source consulting assignment for the next phase of the Multi-Use Sport and Event Centre to Sierra Planning and Management, 206 Laird Avenue, Suite 200, Toronto, Ontario within the preapproved budget of \$353,000; and,

At the meeting of June 26, 2023, Council added item e) as follows:

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- e) That land assembly options be considered.

Update to Feasibility Study 2023

Appendix A is an update to the Feasibility Study and Market Analysis conducted by Sierra Planning and Management.

The consultant's report demonstrates that although the PMC could be renovated, the costs are extremely high to meet modern OHL and event centre standards. Costs to add seating, meet accessibility and building code standards triggered by any large renovation project, and costs to overcome architectural restrictions of the original building are estimated to be \$130-140M. This estimate does not include increased parking needed which would necessitate the construction of a parking garage. Even with these improvements, the building will never be able to overcome the limitations of the building to provide a fully modern event centre to meet modern needs of amenity space, circulation, vendor areas, and accessibility.

The report confirms that the original seat projections remain relevant, that the market conditions remain positive and are improved with increased population projections for the region and provides updates to the financial projections. Council confirmed a downtown location as its preference at the June Council meeting, the consultant's report confirms the economic advantages of a downtown location.

Strategic Plan

Community Wellbeing Strategic Priority Pillar - Community & Wellbeing

- Foster community resiliency, neighbourhood identity, civic pride, sense of belonging, and intercultural harmony. Enhance and protect the health, safety, and wellbeing of all in our city. Provide robust, affordable, and accessible sport, recreation, wellness, the arts, and social programs for people of all ages and abilities.

Growth and Economic Development

- Leadership in effective and sustainable growth that supports Peterborough's current as well as future economic, physical, and social needs. Proactively supporting and encouraging business development to boost the local economy, provide new work opportunities, and improve the quality of life for the entire community. Facilitate diversified economic growth through innovative and sustainable policies, practices, and partnerships.

Engagement and Consultation

A project Steering Committee had been in place since the inception of this project providing valuable input and was comprised of staff and representatives from the Peterborough Petes, Peterborough Lakers, Peterborough Kawartha Economic Development and Downtown Business Improvement Area. The Steering Committee last met in October 2020 to review the consultant’s presentation on Phase 3A and provided their unanimous support in favour of the consultant’s recommendations.

Staff are recommending that a new Steering Committee be established with the consultant, city staff, and community members to be appointed by the Mayor.

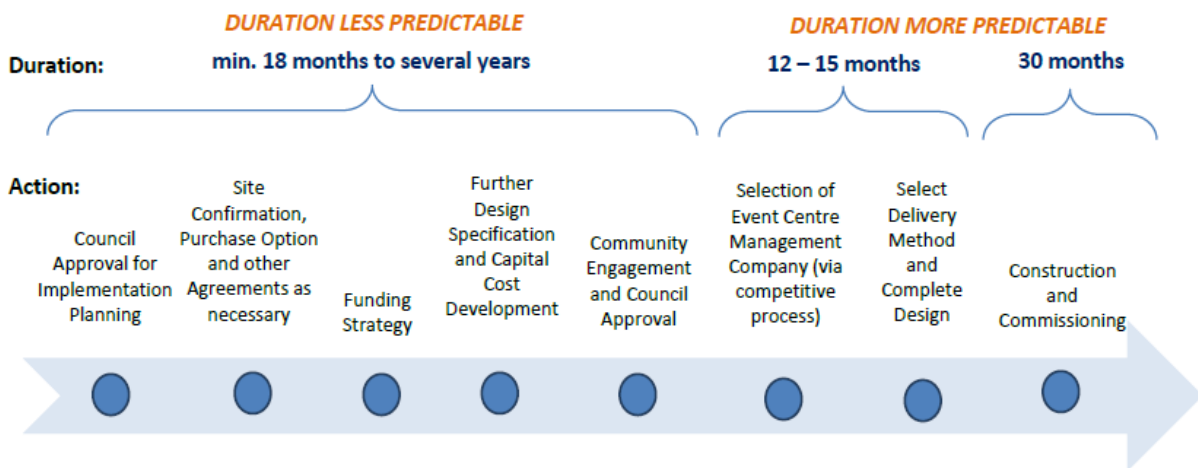
Budget and Financial Implications

The next phase of the project as recommended is anticipated to cost \$65,000 and can be accommodated within the existing established project budget.

Upon completion of the site analysis and confirmation of a site, the remaining aspects of the Phase Three of the project include detailed work to establish a project budget and a business plan to determine best practices to fund the project.

Next Steps

The original project work plan includes multiple phases each constituted to move the project toward completion. The approval of this report does not approve the project in its entirety, rather it moves it to the next planning phase which is the analysis and selection of a preferred site. Below is the graphic from the original Feasibility Study outlining the full scope of the project’s expected planning phases.



Conclusion

The 2023 updated feasibility study indicated that the Peterborough Memorial Centre as it exists today would require substantial updates to meet current standards of the OHL and a modern event centre and the cost would be prohibitive.

The consultants are recommending proceeding to the next step of the project which is a locational analysis to determine the preferred site. Future steps towards full project approval would include land assembly, funding models, operational costs, and detailed design work.

Attachments

Appendix A: Sierra Planning and Management Feasibility Study Update

Submitted by,

Sheldon Laidman, Commissioner of Community Service

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Sent via email

***RE: City of Peterborough Downtown Multi-Use Sport and Event Centre
Review and Confirmation of Market Potential and Re-Assessment of the Renovation Potential of the Peterborough
Memorial Centre***

PURPOSE

The following analysis is undertaken as part of the on-going work to address the replacement of the Peterborough Memorial Centre (PMC) with a modern, state-of-the-art Multi-Use Sport and Event Centre (MUSEC). Specifically, the central purpose of this report is to assess whether the recommendations published in 2018 remain valid in 2023 given the passage of time, the ongoing planning for Downtown and its infrastructure which has occurred, and the regional economic conditions post-Pandemic. The central recommendation of the 2018 report was for the City to pursue a new MUSEC of between 5,500 to 6,000 fixed seats, preferably located in Downtown Peterborough, and consider the merit of a second ice pad as part of the complex, to meet a range of community needs.

The 2018 reporting also included a comprehensive but high-level assessment of alternative sites, including a range of sites in the urban area of the City as well as the Central Area as defined in the City's Official Plan at the time. This included several downtown sites, some highly constrained and others worthy of continued assessment. The locations also included Morrow Park itself as an option to build a new venue while leaving the PMC in place for adaptive re-use for other purposes.

Since 2018, the following key changes have occurred which impact the findings and necessitate the review contained herein:

- The City is constructing the new community recreation centre, comprising as its first phase a twin pad arena, at Morrow Park. The impact of this is to remove Morrow Park from any future consideration of its potential to accommodate a new MUSEC. In previous reporting we recommended against any plan to demolish the PMC and rebuild on the same site (for a variety of reasons including the impact on the primary tenants and their market).
- The impact of the new community project is also to remove the option for a second ice pad as part of the new MUSEC. The 2018 report contained options with and without a second pad. By removing the

second option, greater flexibility exists for achieving a downtown site. Subsequent work may still consider the benefits of a second pad (it serves several purposes related to event hosting as well as community ice supply), but it is no longer considered a primary driver of design, location or cost.

- We have also assessed whether a new MUSEC could be added to the new community centre (Miskin Law Community Complex) and our opinion is both that it is not an option and had it been, it should have been designed into the plans for both buildings and site at the outset. Therefore, the impact of these changes is to focus a location search away from Morrow Park. Locational analysis is part of the ongoing work but is not part of this update report contained herein.
- The City has completed a comprehensive update to the Official Plan which was only commencing in 2018. The result of this update is to provide a firm footing with respect to considerations of Downtown as a prospective and preferred location for a new event centre. While the earlier rounds of analysis had always leveraged the benefit of combining the need for a replacement facility and the opportunity it represents for downtown regeneration, the finalization of the Official Plan re-emphasises the importance of achieving broader City-building goals which can, and should, include a new MUSEC.
- The macro-economic impacts of the Pandemic are waning but there are reasonable questions to ask in terms of the degree to which those changes (lifestyle and others) are likely to impact the success of existing and future sport and event centres. While this remains necessarily a study in progress and will be better assessed over time, there is also the impacts in terms of the desire by many to relocate to smaller urban areas outside of the large cities.
- Also on a macro-economic scale, construction cost escalation has, in the immediate aftermath of the Pandemic, presented serious challenges to the capacity of municipalities to fund major infrastructure projects. While cost escalation is typical, the rate of increase between 2018 and the present has been significant. Accordingly, this is reason to assess the alternative measure which is to renovate the PMC. This was addressed in 2018 with a conclusive opinion that it was not viable.
- Given the scale of cost increase in building new, there is merit in re-assessing this option at a high level. It should be remembered however, that regardless of whether renovation or new construction, costs have increased markedly while renovation also brings with it a higher risk of the unknown in design and construction terms which can result in unexpected cost increases.

PROJECT AND PROCESS BACKGROUND

This work program is part of a broader approved budget to commence more detailed project implementation planning for a facility to replace the PMC, located in the Central Area of Peterborough.

Given the time that has elapsed since the original study was completed in mid-2018, the process required a review of the original conclusions regarding the strength of the market to support the operation of a new multi-use sport and event centre, as well as the nature and scale of the building itself, its operational mandate and expected financial performance.

Since late 2017, the work to date has comprised three (3) distinct phases as follows:

- ***Phase 1 (reported to Council March 2018): A detailed investigation of the challenges of the PMC***

The purpose of this analysis was to answer the question: **Is the Peterborough Memorial Centre (PMC) worth re-investing in as the City's sports and entertainment (event) centre?** The result of that assessment was that it was not.

- ***Phase 2 (reported in September 2018): A comprehensive assessment of the market support for and feasibility of, developing a new multi-use sport and entertainment centre in Peterborough.***

The original analysis (comprised as Phase 2) included several tasks outlined as follows:

- Full market analysis of the opportunity for developing a new sports and entertainment centre;
- A review of locational options associated with a new venue; and
- An assessment of the financial risks and operating costs and revenues associated with developing a new arena.

Two reports were produced: one addressing locational criteria and the identification, evaluation, and shortlisting of a number of sites in Downtown; a second report addressing all other items listed above.

- ***Phase 3: Detailed planning for the implementation of a new MUSEC on a site in central Peterborough (reported in November 2020)***

This represented a deep dive assessment of the locational advantages, impacts for urban regeneration, land development constraints including geotechnical, flood hazard and environmental contamination, and site planning potential associated with several alternative sites. This focused on the implications of developing on two alternative sites in Downtown Peterborough, one of which was the Morrow Park location, the other being a prospective assembly of land in the vicinity of Townsend Street and George Street.

The Phase 2 report executive summary is attached to this report as Attachment 1.

OUTLINE OF THE REPORT

Part A includes the review of those parts of the original Phase 2 Market Research Report that require update to reasonably confirm that the objectives of the City to replace the PMC remain valid.

This involves the following:

- A review of market demand profile (the current and future trade area population, its socio-economic profile and propensity for spending on sports and non-sports events, cultural activities and other related services);
- Review of the financial performance of the PMC in recent years as indicative of the continued relevance of the regional events market and the role of the PMC in capturing demand year over year;
- Market supply profile (competition in terms of existing venues which draw upon the range of markets for sports and non-sports related events);
- Confirmation of proposed facility concept, including the overall scale, seating capacity, multi-use capability and range of amenities; and
- Review of the historic and projected number and duration of events on an annual basis, categorized by type of event.

A review of the order of magnitude capital costs should be undertaken at the appropriate time based on further analysis of available sites in Downtown Peterborough and additional design options. At this time, we have escalated capital costs provided in 2018 based on the recommended concept.

The Phase 2 report included order of magnitude capital costs for two scenarios:

- Option 1: the single event centre bowl at 5,800 fixed seats and an estimated gross floor area of 155,000 sq. ft.; and
- Option 2: the same facility complemented by a community ice surface and scaled to enable both surfaces and the entire building to operate effectively including the potential for the use of the second pad as part of a larger trade show/conference activity space. The estimated gross floor area based on rudimentary concept plans was 190,000 sq. ft.

The application of non-residential cost escalation factors for the Greater Toronto – Southern Ontario region for the period since 2018 to Q2 2023, suggest that the very high annual escalation in construction costs impacting all sectors is in the region of 48%. It should be pointed out that this represents the application of generic cost escalation and is not based on an actual re-assessment of the capital costs of the proposed concept as presented.

Per the requirements of the current phase of work (part of Phase 3B), pending the determination to continue planning for a new MUSEC, a new Class D costing exercise should be undertaken based on the proposed concept. Ultimately, when a preferred location is known, the particulars of the site can be expected to inform design options and overall project capital costs.

Based on the escalation noted above, the Option 1 order of magnitude capital cost for illustrative purposes is estimated to be in the range of \$107 million (from \$72 million estimated on the same basis in 2018); Option 2 is no longer considered an option for planning purposes.

It is important to note that both the concept and the estimates of probable cost are provided (in the 2018 feasibility report and reconfirmed here) as a starting point for a more detailed appraisal of design specifics and funding envelopes, the development of a detailed business plan for both delivering the facility and operating it and progressing a capital funding strategy. All these items remain as elements of Phase 3B of the overall work plan.

Additional Question of Relevance

Part B includes the analysis of whether the PMC could reasonably be renovated and expanded as a preferred solution over a new standalone MUSEC located elsewhere in the City. This is undertaken considering the significant rise in estimated construction cost for a new building. The purpose of that review should be clearly understood:

- Based on a walk-through review of the PMC, assessment of as-built architectural drawings, a separate assessment of the structural engineering of the building, and with reference to modern OHL arenas, assess whether it is a reasonable architectural and structural proposition to renovate and expand the building in such a way that it can operate as a modern OHL-style arena and multi-use sport and event centre.
- Constraints aside, develop a high-level estimate of probable capital costs required to improve the building to the equivalent of a modern OHL venue, including an increase in the fixed seat count.

It is important to understand that the question is NOT whether the PMC can be improved marginally, moderately, or significantly, it is whether to do so represents good value for money when compared to the value associated with modern OHL venues. Coupled with this, the lens of analysis is that of the longer-term: the events market opportunity for the City of Peterborough as the city and region continue to grow, and as the PMC continues to age. In this way, the questions of relevance for the PMC are not whether incremental capital investment can maintain the current level of functionality of the building as an event centre, but whether a combination of major upgrades can propel the PMC to successfully operate and compete for events in the same way as would a newly built OHL venue.

PART A: MARKET UPDATE

In updating the Phase 2 report, we focus on the following principal considerations:

1. Market Area scale and profile
2. Projected changes in the population of the market area
3. Assessment of relevant discretionary spending in the market area
4. Examination of the event attendance at the PMC as evidence of market draw
5. An update regarding existing or planned event centres in the market area
6. Confirmatory review of financial reporting for the PMC

MARKET AREA SCALE

As in the 2018 study, a 50-minute drive time is appropriate as a maximum boundary to be considered as a primary trade area for events occurring at the PMC (particularly non-sports events which in numeric terms draw from a wider geographic area than the patronage for Petes and Lakers games).

The 50-minute drive time boundary is shown below and **remains as it was in 2018** to enable a clearer comparison between the market conditions in 2023 compared to 2018 with regard to population change.

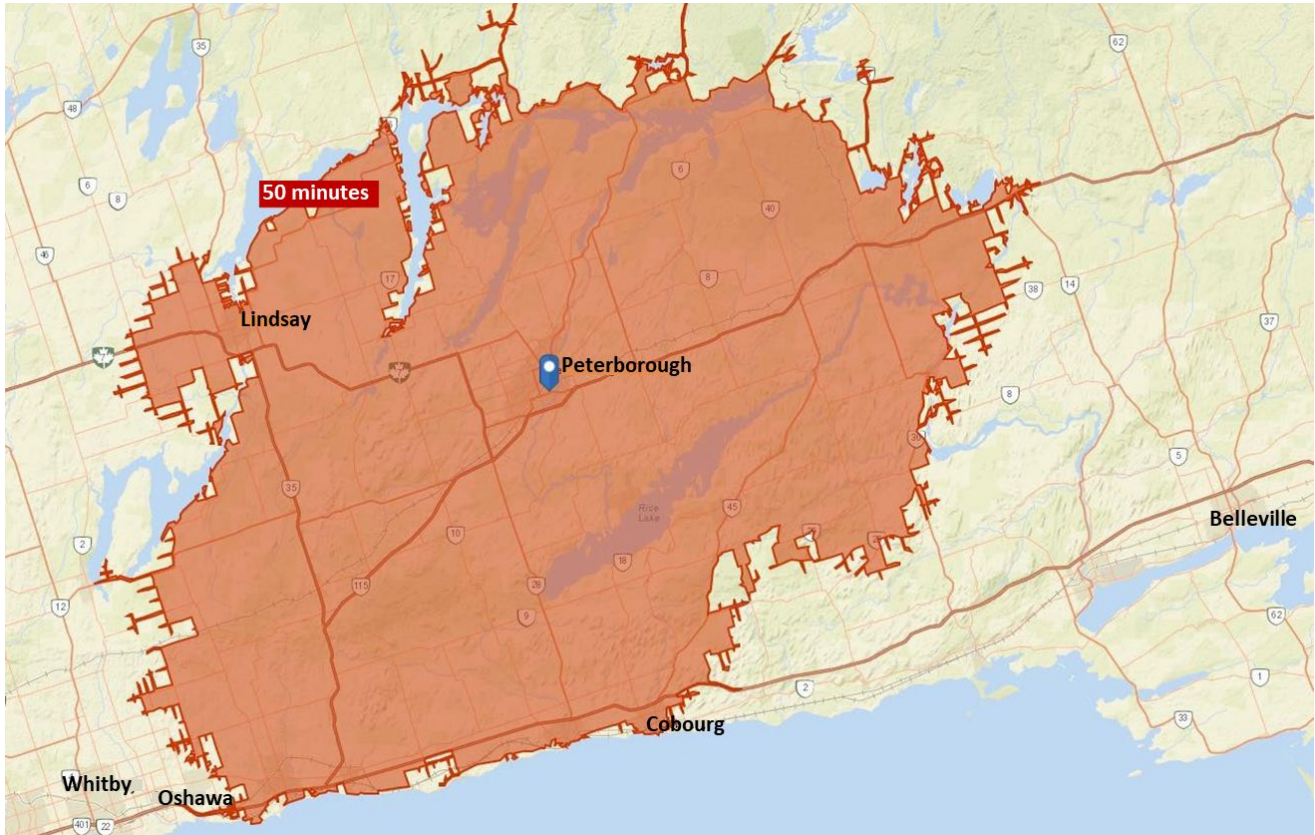
The resulting change in population in this market area is significant as shown below.

	2016	2022	% change
PMC Trade Area	317,406	350,515	9.1%

Source: SPM based on ESRI Business Analyst, 2017 and 2023.

Note: Since reporting in 2018, the 2017 population estimates obtained from ESRI Business Analyst have been updated and population figures have been recalculated based on published data from the 2016 Census. While the 2018 report identifies a 2017 population of 298,893, figures obtained from ESRI in 2023 indicate a 2016 population of 317,406 for the 50-minute market area (2018).

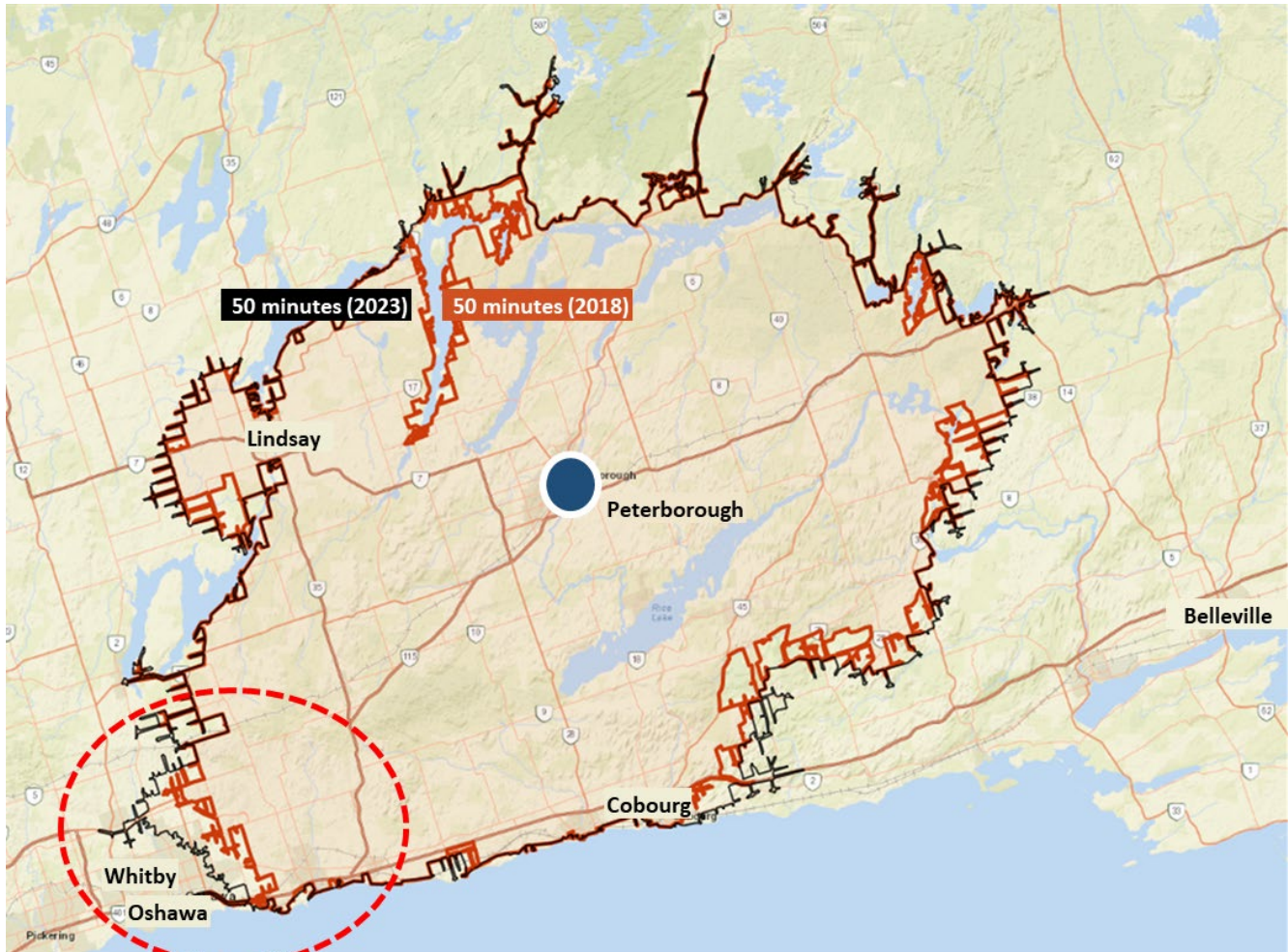
Exhibit 1: Market Area within 50-minute drive time to the PMC (2018)



Source: SPM based on ESRI Business Analyst, 2017.

As indicated in the 2018 report, road infrastructure improvements were likely to increase the size of the market area. Specifically, the completion of the full extension of Highway 407 to its interchange with Highway 115 as well as the opening of Highway 418 (both opened in December 2019) has enabled a significant increase in market population, which is further assisted by the strong growth in the Town of Whitby and North Oshawa, as well as Newcastle and Bowmanville within the municipality of Clarington. Bowmanville-Newcastle Population Centre recorded a 16% growth in population in the five years from 2016 to 2021, while the Clarington population as a whole grew by 10%, Oshawa by 10% and Whitby by 8% over the period. The total population of the three municipalities (Whitby, Clarington and Oshawa) together as of the 2021 Census was 414,000.

Exhibit 2: 50 Minute Trade Area (as of 2018) versus 2023



Source: Sierra Planning and Management based on Business Analyst by ESRI

The improved drive-time area has an estimated population of 428,443 as of 2022.

PROJECTED POPULATION

Population projections are best assessed based on approved projections using an accepted methodology. While the market trade area based on drive time has population projections associated with it, these tend to be “straight line” projections and limited to a 10-year horizon. For these reasons we prefer to utilize official sources of population projections available either as part of municipal comprehensive reviews (MCRs) and land use planning updates, or provincial government projections which are utilized for a range of policy purposes. For this exercise, we rely on the official published projections of the Ontario Ministry of Finance (July 2023) for the period 2022-2046. These are granular projections by sex and age and are based on a detailed methodology.

These projections were also used in our 2018 work and enable a comparison between current projections and those contained in the 2018 report. The geographies used is broad and far exceeds the drive time, but the primary purpose is not to total up the numbers but rather assess the patterns of change. To do this, we look at the County-level projections for Peterborough County (including the City of Peterborough), Northumberland County, Durham Region, Kawartha Lakes, and Hastings County. These are compared to the earlier projections from the same source as of mid-2018. Both sets of data comprise the “reference” scenario for projections (this is the middle projection rather than the high-end projection or low-end projection).

Exhibit 3: Market Area Population Projections, Updated 2023

	Peterborough County	Northumberland County	Kawartha Lakes	Hastings County	Durham Region	Total
2022	151,043	92,315	83,355	150,538	745,580	1,222,831
2023	154,424	93,065	84,726	154,100	764,147	1,250,462
2027	162,909	96,788	89,869	162,568	822,207	1,334,341
2032	171,029	101,972	95,985	170,314	885,901	1,425,201
2037	179,356	107,155	101,887	178,139	951,546	1,518,083
2042	188,060	112,391	107,751	186,274	1,018,438	1,612,914
2046	195,392	116,677	112,502	193,039	1,072,471	1,690,081

Source: SPM based on Ministry of Finance Population Projections, 2023.

Rather than replicate earlier projections here, these are available in the 2018 report. However, the following outlines in detail the changes that have occurred in the projections for each area:

- Peterborough County: a comparison of projections for the year 2041 in the 2018 report is compared to projections above for 2042. On this basis, the latest projected population for 2042 is some 12.5% higher than the 2018 projections for 2041; The difference is 188,060 people as compared to 167, 102 people in earlier projections.
- For Kawartha Lakes, the latest projections for year 2042 are 17.9% higher than earlier projections for 2041;
- Northumberland County projections are similarly ticking up in the 2023 report versus the 2018 report (6.6%) while Durham Region is up by 9% in the latest projections for 2042 compared to earlier projections for 2041 (a total of some 84,251 additional people).
- The one-year difference does not impact the directional conclusions: the population is growing in those counties which comprise, in part or in whole, the market area for the PMC and hence any future sport and event centre in the City.

In terms of age profile, it is apparent that Peterborough County is forecast to witness stronger relative growth in younger households compared to the projections that were in place in 2018.

Exhibit 4: 2046 Projected Age Distribution Comparison

	Peterborough County		Ontario	
	2046 Population	%share of total	2046 Population	%share of total
Children and Youth (0-19 years)	36,705	19%	4,540,972	21%
Young Adults (20-39 years)	50,076	26%	6,205,167	29%
Adults (40-64 years)	57,351	29%	6,552,199	30%
Older Adults (65+ years)	51,260	26%	4,393,898	20%
Total	195,392	100%	21,692,236	100%

Source: SPM based on Ministry of Finance Population Projections, 2023.

By comparison the 2018 reporting predicted a higher share of the population in the older age groups (65+).

Exhibit 5: Excerpt From 2018 Report: 2041 Age Distribution Comparison

	Peterborough County		Ontario	
	2041 Population	% share of total	2041 Population	% share of total
Children and Youth (0-19 years)	30,509	18%	3,757,789	20%
Young Adults (20-39 years)	34,527	21%	4,470,205	24%
Adults (40-64 years)	49,152	29%	5,676,475	31%
Older Adults (65+ years)	52,914	32%	4,573,364	25%
Total	167,102	100%	18,477,833	100%

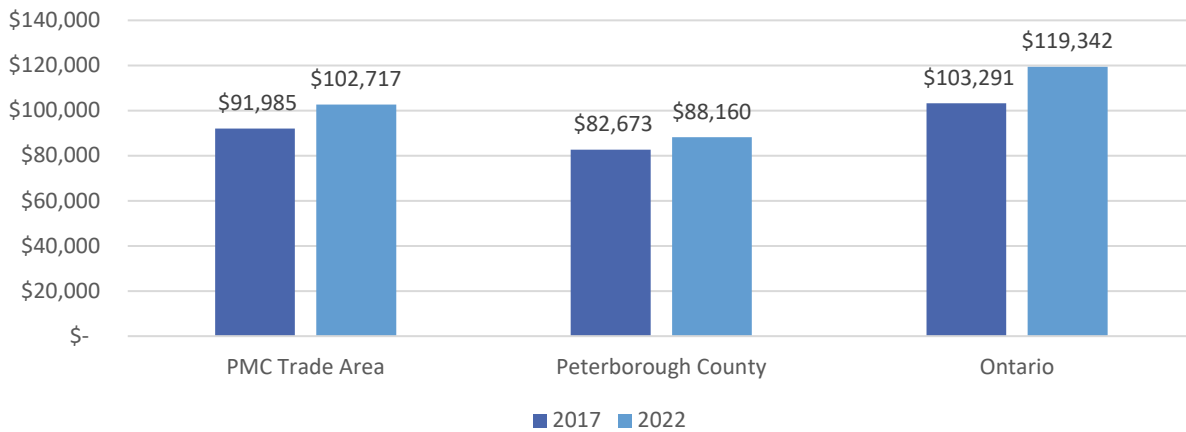
Source: Sierra Planning and Management based on Ministry of Finance Population Projections, Spring 2018

DISCRETIONARY SPENDING COMPARISON

Income and spending data available for the market area in 2018 compared to 2023 demonstrates that the spending characteristics of the trade area relative to comparison areas comprising the County as a whole and the Province remain similar as previously reported.

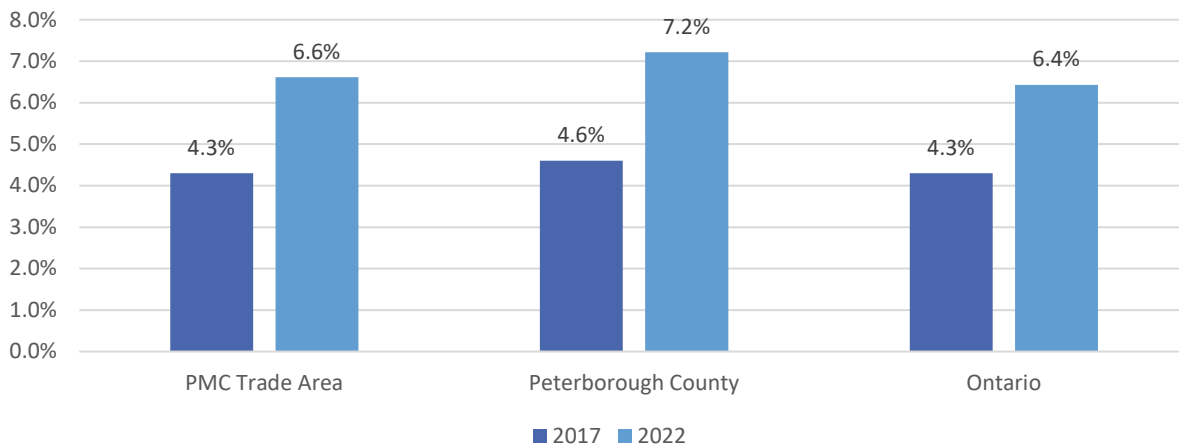
Income and Spending

Exhibit 6: Average Household Income Comparison



Source: SPM based on Business Analyst by ESRI, 2017, 2023

Exhibit 7: Annual Spending on Recreation as a % of Household Income



Source: SPM based on Business Analyst by ESRI, 2017, 2023

The trade area demonstrates higher household income than the County but lower than the provincial average. However, as demonstrated in 2018 the average household spending on live events is significantly higher for

households in the trade area than for the province. In 2018 it was also the case that such spending was higher than for households in the Greater Toronto Area.¹

Exhibit 8: Comparison of Spending on Recreation and Live Events

	Average HH Spending on Recreation		Average HH Spending on Live Events		% of Total HH Recreation Spending	
	2017	2022	2017	2022	2017	2022
PMC Trade Area	\$4,530	\$4,914	\$248	\$318	5.5%	6.5%
Peterborough County	\$4,140	\$4,784	\$252	\$240	6.1%	5.0%
Ontario	\$4,662	\$4,877	\$140	\$174	3.0%	3.6%

Source: SPM based on Business Analyst by ESRI, 2017, 2023

EVENTS BY TYPE AND BY YEAR

Given the Pandemic and the lockdowns, capacity limits and other public health-related measures which restricted both the access to public events and the number of events themselves, information for years 2020 and 2021 are of course deemed as “outliers” and excluded from the metrics.

This report adds information on events by type for 2018, 2019 and 2022, which build upon the information that was provided in the 2018 report, up to and including 2017. The results indicate that the existing level of performance in terms of the number of events has been maintained. The lower events in 2019 may have been impacted by the commitments to capital upgrades which limited the number of events somewhat, but 2018 and 2022 demonstrate strong event profiles, with 2022 representing a significant rebound in the events market.

Exhibit 9: Historic Event Hosting Trends at the PMC, Updated From 2018 Report

Historic Event Hosting Trends at the PMC													
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2022	Total	11-Yr Avg.
Lakers	29	18	25	14	16	15	16	15	24	14	21	207	19
Petes	36	37	36	36	40	39	39	41	37	32	39	412	37
Events	14	9	13	10	13	9	12	18	23	14	19	154	14
Total	79	64	74	60	69	63	67	74	84	60	79	773	70
Total Attendance	199,866	169,732	183,722	178,625	171,006	178,634	219,169		223,908	143,773	181,521	1,849,956	185,822

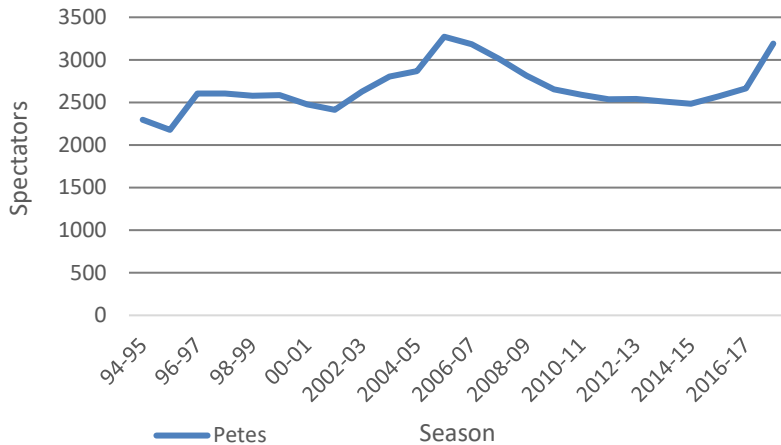
Source: SPM based on data provided by the City of Peterborough

EVENT ATTENDANCE MEASURES

The historic Petes game attendance is shown below, generally tracking upward over the period from the mid-1990s. However, there are periods of more significant gain such as in the immediate period following the major renovations in the mid 2000s.

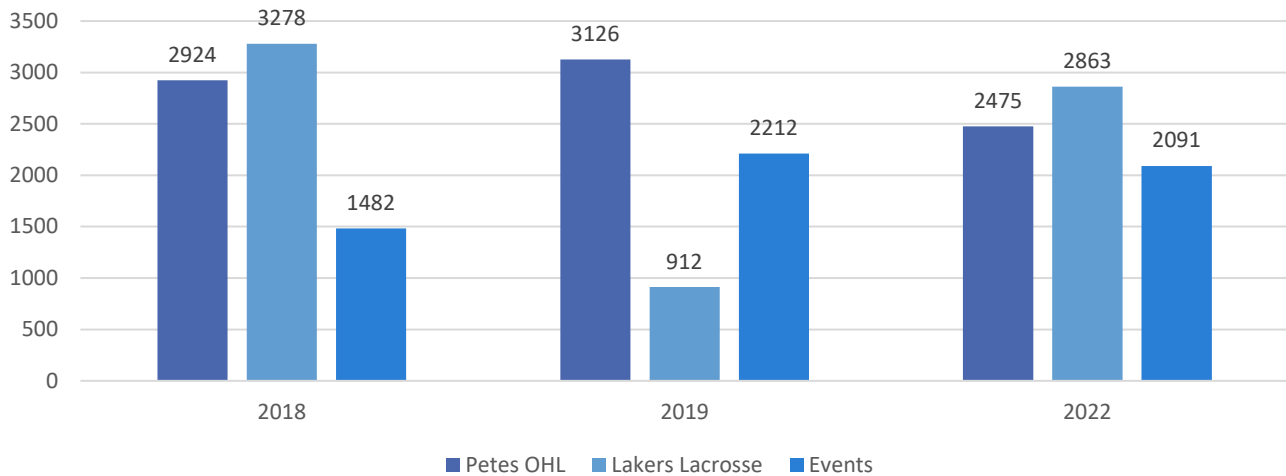
¹ Note that ESRI does not as of 2023 enable a breakout of spending on live events between sporting events and performing arts events.

Exhibit 10: Historic Average Attendance at Petes Games



In addition to the above, recent data provided by the City documents attendance for Petes games, Lakers games and the range of other events hosted at the PMC as follows:

Exhibit 11: Average Attendance at PMC by Year (2018,2019, 2022)



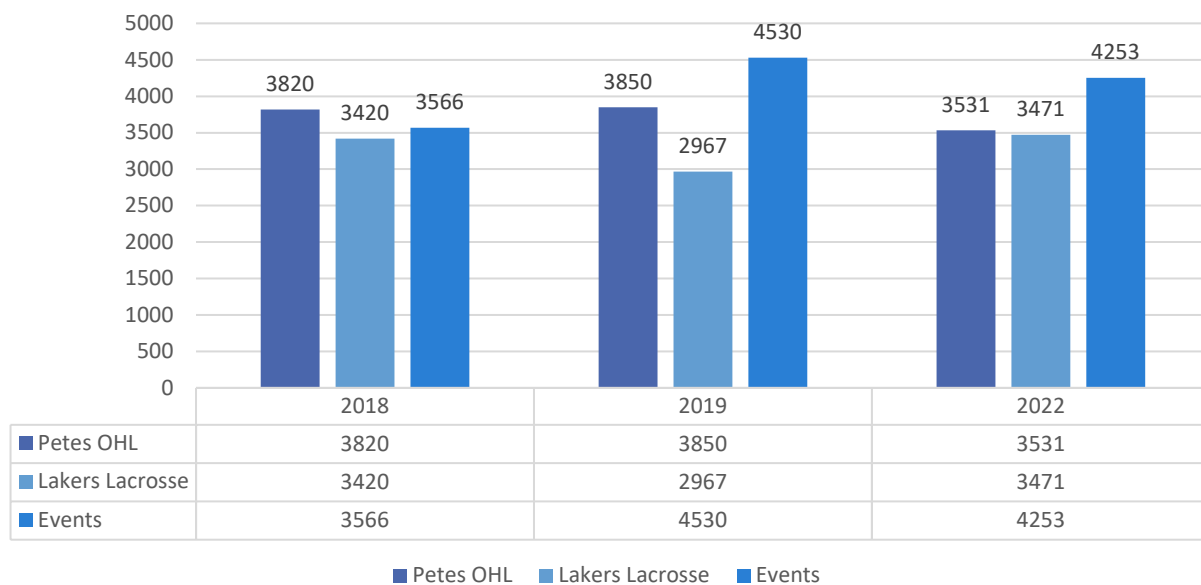
Source: SPM based on data provided by the City of Peterborough

Attendance for OHL has remained in line with recent historic results year to year and is generally in the lower bracket of attendance among the teams of the OHL. As per the 2018 analysis, which lays out these metrics in greater detail, the problems associated with the building, its surrounding parking and overall level of amenities is believed to have some impact on attendance levels. Put another way, it is the more modern facilities that are at a clear advantage in terms of offering an overall level of building venue experience that is higher than that which can be offered in most older facilities.

In terms of the growth in event attendance it is important to recognize that population growth will, overtime have a positive impact on the market opportunity to increase the level of attendance at various events. Much depends on the events themselves, and whether they meet the market needs. The quality of the building and overall experience is also important. However, other things being equal, population growth can impact the requirements for future seat count in major venues and it is therefore important to take such a long-term perspective in projecting the most appropriate level of increase in fixed seating in a new facility. The 2018 report addressed this, resulting in a recommendation to build a new facility with a fixed seat count in the region of 5,500 to 6,000 seats.

In terms of existing peak demand, the following exhibit demonstrates the highest level of attendance achieved in the three additional years under study (2018, 2019 and 2022).

Exhibit 12: Maximum Attendance at PMC by Event Type (2018,2019, 2022)



Source: SPM based on City of Peterborough data

The existing seat count is near to maxed-out in overall terms. The reality is that the building is so constrained in terms of accessibility and ease of passage within the building that a sell-out crowd creates a significant diminution of the quality of experience of the amenities and services at the PMC. A vibrant, high-energy atmosphere may be assured but the overall quality of service may not equate.

Our recommendation that the City requires a MUSEC with a demonstrably bigger fixed seat count remains the case. Creating a balance between scale, overall capital cost and the operational implications of a larger facility is important but so is building for the future, not merely the present.

As an example of the need to scale in relation to a consideration of future population-growth and the range of demand for services, including spectator sport and entertainment that follows from this, is shown below. This is based on the concept of penetration rate: the average attendance as a proportion of a given market area. For simplicity we use the Peterborough County population. The historic penetration rates are shown below.

Exhibit 13: Historic Penetration Rate of PMC Events

Census Year	Season	Average Attendance	County Population (Census Div.)	Local Market Penetration Rate
1996	Season 96/97	2,606	123,448	2.11%
2001	Season 01/02	2,415	125,856	1.92%
2006	Season 06/07	3,182	133,080	2.39%
2011	Season 11/12	2,537	134,933	1.88%
2016	Season 16/17	2,666	138,236	1.93%
2022 (Calendar Year)	2022	2,475	151,043	1.64%

Note: County = Census Division (i.e. City & County Official Plan areas combined)

Source: SPM based on City of Peterborough data, StatsCan Census Profiles 2001 to 2016, and Ministry of Finance Projections for 2022.

If by 2026, the projections for the County hold true, and holding all other assumptions equal, a population of nearly 200,000 would, at a penetration rate of 2.0% would translate into an average attendance of some 4,000 people.

With the need to accommodate peak demand higher than the average, this demonstrates reasonably how the next iteration of event centre building in the City needs to maintain the commitment to a larger seat count than is currently provided at the PMC.

To further emphasis the point, we show below historic information on those OHL facilities that have been replaced and the level of seating that is provided in the new facility versus the old. With very few exceptions, the seat count has increased significantly.

Exhibit 14: OHL Arena Capacities

	Capacity	Built	Seats Replaced
London Knights	9,100	2002	4,000
Kitchener Rangers	7,700	1950	plus expansion late 1990s / 2000s
Oshawa Generals	5,500	2008	3,625
Windsor Spitfires	6,500	2008	
Niagara IceDogs	5,300	2014	2,800
Erie Otters	5,500	1981	
Hamilton Bulldogs	17,500	1985	
Guelph Storm	4,540	1998	3,999
Ottawa 67's	10,000	1966	
Sault Ste. Marie Greyhounds	5,000	2006	3,990
Barrie Colts	4,100	1995	
Kingston Frontenacs	5,400	2008	3,300
Saginaw Spirit	5,500	1972	
Sudbury Wolves	4,600	1950	proposal for 5,800 seats
Sarnia Sting	5,200	1998	
Flint Firebirds	4,400	1969	
Owen Sound Attack	3,500	1983	
Mississauga Steelheads	6,000	1996	
Peterborough Petes	4,050	1956	
North Bay Battalion	4,200	1954	Reno in 2012
Belleville Bulls	4,400	1978	3,700, reno in 2017
Plymouth Whalers	4,000		
Brampton Battalion	6,000		
Mississauga St. Michael's Majors	6,000		

EXISTING COMPETITIVE VENUES IN THE MARKET AREA

The smaller venues located in and around the City of Peterborough, and elsewhere in the region, play an important role in the cultural life of the City and their sustainability should not be undermined by the emergence of a new multi-use entertainment complex that has, as its mandate, a significant increase in the number of commercial entertainment events held at the centre.

Exhibit 15: Smaller Event Venues in Market Area, Updated from 2018 Report

Venue		Capacity		Facility Details
Venue Name	Location	Seated	Standing	
Academy Theatre	Lindsay	900		Not for Profit; receives no Municipal, Provincial or Federal grants; 50,000 patrons a year;
Cameco Capitol Arts Centre	Port Hope	380		Regional Theatres: Live Professional Theatre, Live Concerts, Films from TIFF, HD Opera Live from the MET
		150		Flexible rental space for live concerts, theatre, cabarets, weddings
Concert Hall at Victoria Hall	Cobourg	318		Flexible rental space for theatre, corporate meetings and seminars, lectures, exhibits, balls and receptions
Durham Banquet Hall	Oshawa			
Empire Theatre & Centre for the Performing Arts	Belleville	650		Concerts, theatre, comedy, film
Market Hall Performing Arts Centre	Peterborough	348		Music, theatre, dance, presentation, film
Pinnacle St Playhouse, Belleville	Belleville	154		Regional Theatre
Showcase Performance Centre	Peterborough	647		Regional Theatre for music, stage, drama and comedy
		200		
			60	
The Venue	Peterborough	400	900	Conference, Convention, Trade Shows, Live Concerts, Bar
Trent University	Peterborough	364		
Peterborough Theatre Guild	Peterborough	232		Live performances

The consulting team have reviewed the range of existing venues which were identified in earlier reporting and confirm that all remain operational.

In addition to existing venues, plans have been publicized for the development of Kawartha Downs harness racing, casino and event grounds (Kawartha Downs Events). Recently published plans indicated an intention to develop an indoor event centre capacity of 4,000 seats. Currently, no further information is publicly available with respect to the design and timing of the development of this complex.

The Kawartha Downs regeneration plan will build on the existing array of commercial amenities which include grandstand dining, bars, outdoor event space, a casino and 5/8-mile horse racing oval. The plans call for the development not only of the 4,000-seat concert hall but also hotel and residential development to create a long-term commercial hub. These plans are ambitious and build on the 50 years of operating at the site. These plans are similar to several other mixed-use resort/commercial hubs developing in Southern Ontario. It is reasonable to assume that development will occur in terms of a deepening of the event market offer at the site but the timing of this and the nature of private sector financing with a reliance on related residential and hotel development, may result in a more incremental implementation of the master plan.

It will be important to factor this project into future business planning for a new MUSEC in Peterborough. However, it is far from clear that this location would cannibalize the market draw going to a new state-of-the-art facility in downtown Peterborough. The evidence from other venues is that there is a degree of complementarity to these operations with the result being an overall growth in the scale of events market draw to the region rather than a stymying effect on overall market demand. The spend per household on live events in the region suggests that capacity exists for additional entrants to the marketplace.

The event day calendar for the PMC is strong, as is the overall market. If the replacement of the PMC is a multi-use sport and event centre, similar in design and operation to other recently built venues which are characterized by a highly effective events management focus supported by a building design that caters to a full range of non-sport events, it is likely that promoters and tour operators will seek to prioritize this venue as the primary opportunity in the region.

By contrast, the PMC, despite its good location and ample staging grounds, may not be viewed as the primary venue for the region when other, more comprehensive concert hall options are apparent. However, the timing of this depends on whether the economics exist to support the financing and operations of a concert hall developed as a first phase project for the Kawartha Downs revitalization and the extent to which the accommodations piece of the development plan is viable at the same time.

CONFIRMATORY REVIEW OF PMC FINANCIAL REPORTING FOR THE PMC

The consulting team has reviewed the financial performance of the PMC excluding the Pandemic-impacted calendar years 2020 and 2021. Although the impacts of public health restrictions on public gathering were still in place early in 2022, it remains appropriate to present these financials as the balance of 2022 experienced a strong recovery in events scheduled at the PMC compared to 2017, 2018 and 2019.

The net operating position excludes debt load associated with the PMC to provide a more accurate picture of the actual operations of the complex and the relationship between operating expenses and revenues from all sources. In fiscal (calendar) years 2016 and 2017, as reported in the 2018 Phase 2 report, the resulting net operating income were as follows:

- 2016: deficit of \$448,635; and
- 2017: deficit of \$817,648.

The annual deficits attributable to operations of the PMC in 2019 and 2022 are shown below:

Exhibit 16: Review of Operating Financials, 2019, 2022

	2019		2022	
Revenues	Actual	% of Total	Actual	% of Total
Administration	\$ 922,312.31	53%	\$ 1,131,733	52%
Events	\$ 648,607.39	37%	\$ 859,866	39%
Vending	\$ 12,876.93	0.7%	\$ 4,873	0.2%
Food & Beverage	\$ 151,319.98	8.7%	\$ 199,837	9.1%
Total Revenues	\$ 1,735,116.61	100%	\$ 2,196,308.77	100%
Expenses				
Administration	\$ (656,794)	26%	\$ (653,083)	21%
Operations	\$ (1,066,230)	42%	\$ (1,236,651)	40%
Events	\$ (774,159)	31%	\$ (1,134,719)	37%
Vending	\$ (2,964)	0.1%	\$ -	0.0%
Food & Beverage	\$ (13,278)	0.5%	\$ (54,769)	1.8%
Total Expenses	\$ (2,513,427)	100%	\$ (3,079,221)	100%
Net Operating Income	\$ (778,310.03)		\$ (882,912.25)	

Source: SPM based on City of Peterborough data

CONCLUSIONS ON MARKET CONDITIONS, CONCEPT AND PROJECT RISKS

Based on the foregoing analysis of selected market-related, events related and financial and other metrics, the findings of the 2018 Phase 2 Feasibility Assessment for a New Multi-Use Sport and Event Centre in Peterborough remain accurate. The conclusions and next steps presented in the Phase 2 report, as well as the findings on matters of economic impact of a new facility in Downtown Peterborough contained in the Phase 3A report therefore also remain relevant.

The financial performance of the PMC appears to be consistent. While changes have occurred with respect to renewed licensing agreements with the principal tenants, the projections of operating performance for a new facility remain reasonable. As noted at the time of the original report, any decision to implement a new multi-use facility as a replacement for the PMC would necessitate a full review of all business arrangements between the City and the prospective tenants (or licensees) of the new building.

Should the project proceed further in terms of implementation planning, a more detailed assessment of both operational costs and revenues, as well as more detailed projections of annual commercial event days should also be undertaken, concurrent with the priority assessment of potential downtown locations, confirmation of the final functional space program in consultation with all stakeholders, and an assessment of total project costs including both building and land development.

PART B: REVISTING THE QUESTION OF WHETHER THE PMC IS A WORTHY CANDIDATE FOR RENOVATION TO MAINTAIN IT AS THE CITY’S PREMIER SPORT AND EVENT CENTRE

FUTURE CAPITAL COSTS TO MAINTAIN THE BUILDING FUNCTIONALITY AS-IS

Based on information provided by the City, it is understood that over the course of the facility’s lifespan the following major capital investments have been made:

Exhibit 17: Historic Major Capital Investments

Year	Description	Initial Investment (+/-)
2003	Major Renovation	\$14,000,000
2007		\$242,900
	Parking Lot Repair	\$2,100
	Doors	\$3,900
	4 th Floor Railing	\$12,300
	Refrigeration Plant	\$188,200
	Refrigeration Room Doors	\$2,100
	Electrical	\$10,400
	Change Room Floors	\$23,900
2008		\$37,700
	Dasher Board Glass Supports	\$18,400
	Piping	\$7,700
	Refrigeration Compressor Overhaul	\$11,600
2017		\$1,165,000
	Refrigeration Plant Upgrades	\$940,000
	LED Lighting Replace & Low E Ceiling	\$225,000
2018 - 2020	Roof and HVAC replacement; Ice Slab, Dasher Board and Refrigeration Plant	\$5,475,784
TOTAL		\$20,921,384

Source: SPM based on City of Peterborough data

Relevant findings of the City of Peterborough Multi-Use Sport and Event Centre Feasibility Study, September 2018, are excerpted below (Executive Summary Page iv):

“The increasing lack of functionality of the PMC, relative to its competition, is the most significant future risk. The required investment to maintain the building in essentially its current functional state is not supportable and is made more apparent when considering the likely future subsidies required to support annual operations over and above the required capital expenditures to maintain it.”

Future Capital Investment Required for PMC (as of 2011)

Estimated Replacement Year	Budget (Nominal \$)
2012 - 2020	\$3,369,467
2021 - 2030	\$4,850,643
2031 - 2040	\$4,750,647
2041 - 2050	\$7,364,754
2051 +	\$ 819,315
Total	\$21,154,825

All of this additional capital spending, which in 2018 dollars is approximately \$26 million, is simply to maintain the **current** level of functionality. None of this spending improves the capacity or functionality of the building in a materially significant way or enables it to compete better against buildings in other centres in the region. Less charitably, it can be viewed as the spending required to maintain the same level of disfunction of the building. An analogy with treading water doesn't do justice to the fact that this can only occur for so long.

The operating gap – the gap between market potential and the performance of the building - is more than just a comparison of the current to future deficit of the PMC, it is between the future deficit in this building and the operating performance of a new building. That is likely to represent a wider gap still.

The resulting economic impacts of the building also can be expected to decline as the competitive position of the building in the market place further declines.

All together, these growing margins between what is possible and what is apparent, represent opportunity costs that are potentially every bit as important over time as capital costs are in terms of initial funding needs for a new building.”

It should be noted that the City undertook a relatively major investment in capital repairs in the 2019 to 2020 period that addressed issues with the structural integrity of the ice slab as well as several other changes.

It is also understood that the ice surface slab was replaced in 1979, however the capital expenditures for this improvement are not known.

The consulting team is in receipt of the latest Building Condition Assessment (BCA) completed for the PMC in 2023. The results of this analysis in terms of required future capital lifecycle expenditures is summarised below:

Exhibit 18: Forecast Major Capital Investments

Estimated Replacement Year	Budget
Immediate Expenditure	\$454,750
2023-2030	\$5,820,998
2031-2042	\$13,008,331
Total	\$19,284,079

Source: SPM based on City of Peterborough data

Ongoing significant capital costs remains a feature of future planning for the operation of the PMC in its current configuration.

FUNCTIONAL CHALLENGES

When viewed against the amenities typically provided within a modern sport and event facility, the PMC is exhibiting a significant number of present-day challenges. These can generally be divided into two categories: functional challenges and building code challenges. The following excerpt from the 2018 Phase 2 Report (italicized for ease of reference) highlights some of the more significant of these.

Circulation Challenges

Identified circulation challenges at the event level include:

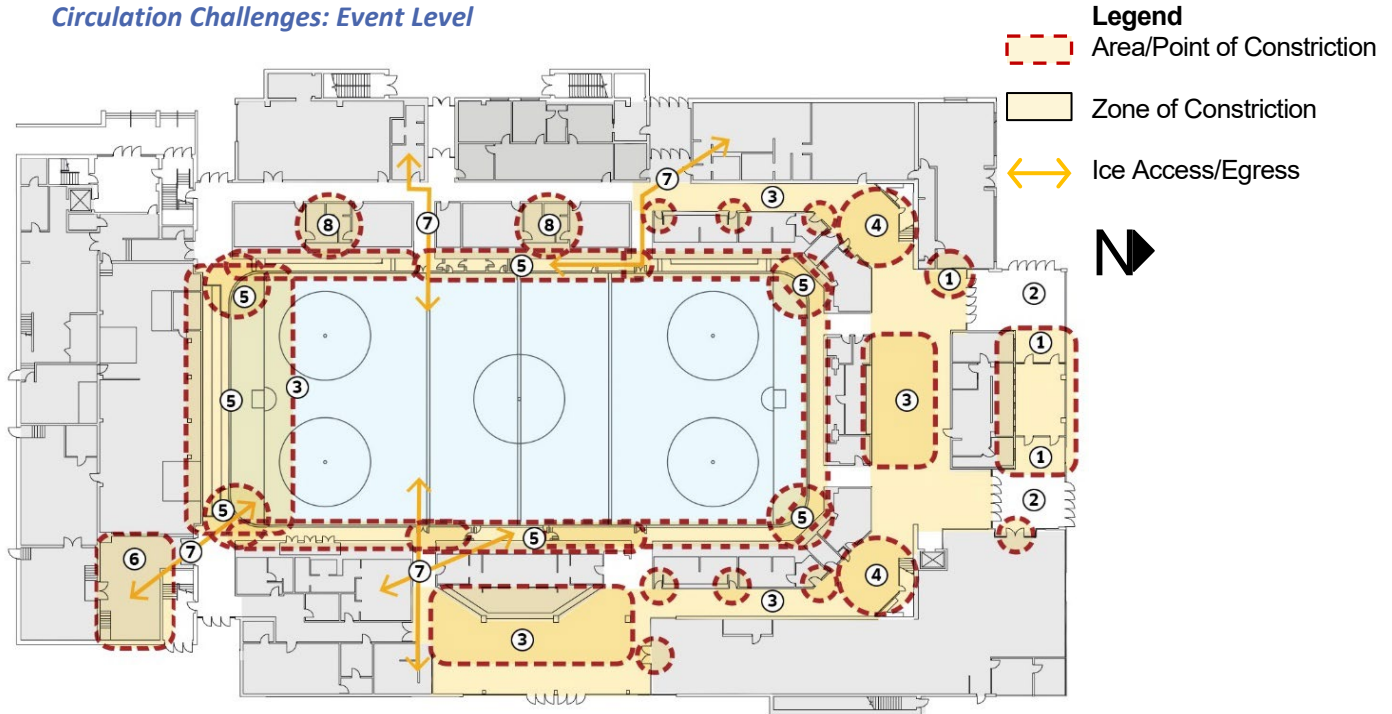
Main Entry Lobbies

The amount of space provided in each lobby appears to be adequate. However, the box office and Petes’ Team Store, and Hall of Fame locations (1) are awkwardly positioned, and queuing compromises circulation. The low clear interior height of the Lansdowne entry (2) does not showcase the building as a special event centre.

Concourse and Circulation

The main level concourse (3) exhibits a general lack of breathing room and is undersized for maximum capacity events. Already tight circulation is frequently compromised by kiosks and vendor table placement, queuing, and a number of undersized washroom and food service access points. These issues are particularly pronounced in the north corners (4) of the building. As a result, the concourse is not a welcoming place for spectators to stretch their legs.

Circulation Challenges: Event Level



Ice Surface

The ice surface and geometry (5) has many significant challenges. The player’s and penalty box locations, length of ice, corner radii, and dasher board condition/design specifications do not meet current hockey and lacrosse standards. The ice resurfacer room (6) does not accommodate two machines. In addition, participants cross spectator circulation (7) areas when moving to and from the ice surface.

Community Changerooms

The community changerooms are undersized, with insufficient washroom, shower, and drying areas. The shared washroom and shower facilities (8) significantly limit usability and security for concurrent mixed gender users.

Additionally, circulation challenges at the spectator level include:

- Seat spacing is generally constricted throughout the facility, with steep and restricted access aisles;
- Access to seating is convoluted and challenged to accommodate maximum capacity events;
- Significant conflicts between spectator and participant circulation also exist; and
- Barrier free viewing locations are often compromised. This is particularly pronounced in the north corners of building.

Food Services

The restaurant anchors the south end of the seating bowl, and positively adds to the variety of seating product available at the Centre. The location of the back-of-house kitchen space (1) on a separate level from the front-of-house seating area, while not uncommon in special events facilities, is a functional challenge for the restaurant tenant.

The remainder of the primary food services (2) appear undersized, particularly in the amount of food preparation space provided. Significant conflicts exist between queuing areas and adjacent concourse circulation, ultimately creating an unwelcome environment that encourages spectators to avoid food services and remain in their seats.

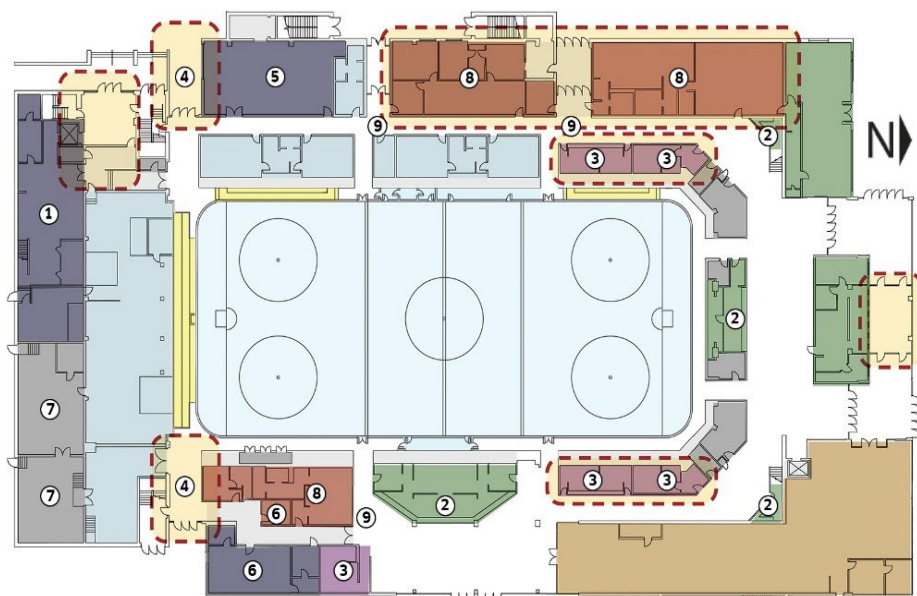
Washrooms

The number of public washroom facilities (3) appear to be insufficient in number and are undersized for maximum occupancy events. The north corners of the spectator area are underserved and should have their own washroom facilities. Doors, in lieu of open weave accesses, produces substantial bottlenecks during periods of intermission.

Special Event Hosting

The Centre falls significantly short in meeting basic demands of contemporary shows and special events. Some of the major areas of concern include undersized: back of house loading (4), staging (5), media broadcasting, dedicated dressing rooms, green room (6), event power and communications (7), sound system, dedicated rigging points, and roof height.

Utilization / Amenity Location Challenges: Event Level



Legend

- Spectator
- Ice Support
- Concession
- Washroom
- Team Space
- Support
- Hall of Fame
- Utilization/Location

Constricted Circulation and Concession Space



Primary Tenant Leased Space

Primary tenant leased space (8) is generally undersized, and poorly configured to meet OHL and Major Series Lacrosse standards. In addition, these spaces are located in the publicly accessible portion of the facility and generate significant spectator/participant conflicts. This is particularly pronounced in the concourse area, outside of team rooms (9).

Utilization and amenity locational challenges at the spectator level include:

Seating Bowl and Spectator Experience

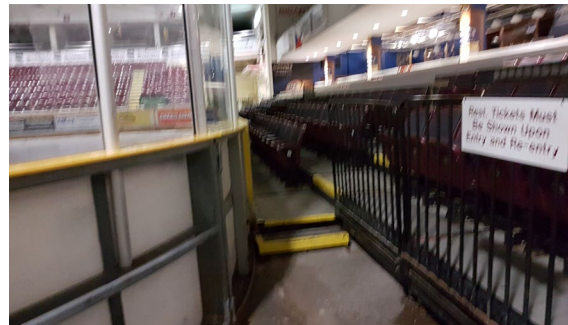
The intimate seating bowl generates a high energy atmosphere for seating positions in the lower bowl, and suites. However, the circulation zone adjacent to the dasher boards (see adjacent image), low roof, structural elements, pageantry, and scoreboard, compromise sightlines and reduce spectator immersion. This is particularly pronounced in the skybox and second level south seating tier where these seats are disconnected from the remainder of the spectator experience.

Given the robust nature of the Centre's concrete structure, and the placement of the executive suites, the total seat count is fixed for the foreseeable future.

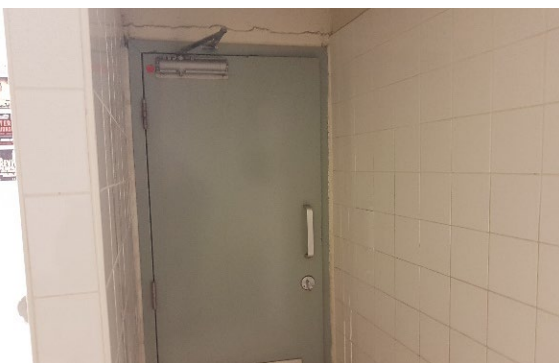
Problematic Seat Spacing



Constricted Circulation Space



Washrooms Doors Produce Bottlenecks



Washrooms

As with event level, the number of public washroom facilities appear to be insufficient in number and are undersized for maximum occupancy events. The north corners of the spectator area are underserved and should have their own washroom facilities. Doors, in lieu of open weave accesses, produce substantial bottlenecks during periods of intermission.

Petes' Alumni Space

The north corner location for the Petes' Alumni space and Hall of Fame storage is not the highest and best use of these areas. Ideally additional spectator washroom facilities would be placed here.

Building Code Challenges

Over time the facility has fallen behind modern building codes. While this work is outside the scope of this study, we anticipate that the following items may require building code upgrades if the facility were to undergo renovations of any nature:

- *Exiting and egress: occupant load, exit width, number of exits, travel distance, seating bowl, stair, hand & guardrail geometry;*
- *Fire Protection: Sprinklers, fire resistance and flame spread ratings, location of fire rated assemblies, and extent of combustible finishes;*
- *Washrooms: fixture and stall counts, sizing, distribution, and finishes;*
- *Barrier free design: vertical conveying, access & egress;*
- *Mechanical: Heating & cooling capacity, ventilation rates, smoke exhaust, plumbing system; and*
- *Electrical: Primary distribution service, power condition assessment.*

A detailed building code and life safety analysis is required to adequately determine where the existing Centre does not comply with existing regulations. However, currently it is understood that the trigger that renovations create with regard to broader upgrades throughout the building to meet code are one reason why full length, centre-mounted hand rails have not been installed on the stairs serving the fixed seating. Furthermore, it is the steep rake at the seating areas that was identified by the public and other stakeholders as a major challenge to the positive experience of patrons in the building.

Conclusion

Given the order of magnitude of the building condition and functional and building code challenges currently facing the existing Peterborough Memorial Centre, and the anticipated capital costs associated with addressing them in a substantial manner, it is becoming increasingly timely for the City of Peterborough to consider a new multi-use special events centre to host entertainment, Major/Junior sports, and special events.

In September 2023, representatives from WGD Architects and DK Watson Consulting Engineers inspected the PMC through a walk-through of the building and a subsequent review of as-built architectural drawings which include the renovations undertaken in 2003.

Based on their review, WGD Architects concurs with the findings of the 2018 report with regard to the nature, extent and severity of the existing functional limitations of the building.

The work of WGD Architects and DK Watson Consulting is presented as Attachment 2 to this report. Their analysis differs from that of 2018 in the following ways:

1. Whereas the 2018 report included a detailed articulation of the challenges of the building and a supporting opinion as to the difficulty of renovating the premises, the analysis led by WGD Architects seeks to investigate the ways in which renovation and expansion of seating capacity, food and beverage offer and other requirements of a modern facility, can be achieved;
2. Secondly, the current analysis seeks to establish a range of high level estimates of capital cost to achieve renovation that would transform the building from its current limits of functionality and seat count to an expanded and operationally more functional building.

With respect to the site characteristics of the Morrow Park location, the 2018 report is likely out of date with respect to the overall range of changes that have occurred including changes to the City roads leading to the site. Review of site conditions is not part of the current scope. We note that one of the historic advantages of the PMC and Morrow Park is the size of the staging area for major events that enables transport vehicles to remain on site while materials and equipment for major events are being loaded in, the events held and the subsequent removal of materials and equipment. Whether this remains the case, along with the adequacy of parking for major events, and whether overflow parking is enhanced by the development of the new community arenas, are questions that are relevant only if the decision is made to retain the PMC as the City's long-term sport and event centre.

SUMMARY OF FINDINGS OF 2023 REVIEW OF RENOVATION POTENTIAL

The results of the architectural review of the building are presented in Attachment 2.

City of Peterborough

October 27, 2023

Should you have any questions please contact me at 416-464-4443 x20 or via email jonhack@sierraplan.com .

Yours sincerely,

SIERRA PLANNING AND MANAGEMENT



Jonathan Hack, MA, CMC, MCIP, RPP, PLE
Director

Attachment 1:
Phase 2 Report
Executive Summary

CITY OF PETERBOROUGH MULTI-USE SPORT AND EVENT CENTRE

FEASIBILITY STUDY

SEPTEMBER 2018



Sierra Planning and Management
advice • strategy • implementation

DIALOG



Executive Summary

There is no single measure of viability of a facility of this nature. Rather, it is determined through a combination of work streams that together address the relative merits of the project, the proposed capital spend and operational impacts (both financial and “below-the-line” economic benefits) and the tolerance toward the range of risks (capital cost, market, timing, and operational) that must be understood prior to embarking on a funding strategy to develop the facility.

Key Questions Answered

- **Is the Peterborough Memorial Centre (PMC) worth re-investing in as the City’s sports and entertainment (event) centre?**

There is no capacity to add additional fixed seating to meet a modern standard of expectation for hosting major sporting events (5,000+ seats).

The increasing lack of functionality of the PMC, relative to its competition, is the most significant future risk. The required investment to maintain the building in essentially its current functional state is not supportable and is made more apparent when considering the likely future subsidies required to support annual

¹ Short-term costs do not include expenditures planned and pre-approved for ice pad and dasher boards replacement of \$3.5 million. However, refrigeration plant upgrades planned for 2025 per this 2011 report have

operations over and above the required capital expenditures to maintain it.

Future life cycle costs are based on a 2011 Building Condition Assessment which identified the remaining life of all building systems and FF&E (furniture, fixtures and equipment) and their replacement cost in current dollars (2011).

Future Capital Investment Required for PMC

Estimated Replacement Year	Budget
2012 - 2020 ¹	\$3,369,467
2021 - 2030	\$4,850,643
2031 - 2040	\$4,750,647
2041 - 2050	\$7,364,754
2051 +	\$ 819,315
Total	\$21,154,825

Source: Sierra Planning and Management based on Accent Building Science Inc. Memorial Centre Building Condition Report, 2011

All of this additional capital spending, which in 2018 dollars is approximately \$26 million, is simply to maintain the **current** level of functionality. None of this spending improves the capacity or functionality of the building in a materially significant way or enables it to compete better against buildings in other centres in the region. Less charitably, it can be viewed as the spending required to maintain the same level of disfunction of the building. An analogy

been undertaken; and dasher boards, now part of the 2019 expenditures, were planned for 2023.

with treading water doesn't do justice to the fact that this can only occur for so long.

The operating gap – the gap between market potential and the performance of the building - is more than just a comparison of the current to future deficit of the PMC, it is between the future deficit in this building and the operating performance of a new building. That is likely to represent a wider gap still.

The resulting economic impacts of the building also can be expected to decline as the competitive position of the building in the market place further declines.

All together, these growing margins between what is possible and what is apparent, represent opportunity costs that are potentially every bit as important over time as capital costs are in terms of initial funding needs for a new building.

➤ **Should the City of Peterborough be involved in the entertainment and events business?**

The City of Peterborough, through its investment and operation of the PMC, has been a longstanding player in the events market in Central and Eastern Ontario. In general, the PMC has hosted a consistent number of sporting events and has seen steady growth in the concert market in the last few years.

A review of historic events indicates there is opportunity for growth in live shows, family events and the tradeshow/conventions market.

Trends in facility performance indicate the importance of the concert market at the PMC. Despite hosting fewer of these events compared to tenant events, concerts generate a significant share of gross

revenues for the facility. Additionally, on a per event basis, concerts generate the largest gross revenues compared to other activities.

A review of PMC **tenant** event ticket sales indicates the market for these activities is more local than regional. However, non-tenant events (for example concerts) tend to pull a larger share of attendees from beyond the local and county area. This can be expected to have both direct economic impacts, through spending at the PMC, as well as indirect economic impacts, as out-of-area visitors can be expected to spend dollars outside of the PMC on food and beverage, accommodations and other items locally.

The City of Peterborough is fully invested in the spectator events market in addition to the spectator market for hockey and lacrosse. The market draw for events to the PMC is expectedly broad for even the most typical of events – extending well beyond the City and into southern Durham Region and parts of the GTA to the west of Durham. The City of Peterborough is both the beneficiary of its proximity to the GTA market as well as a partial casualty in terms of enhanced competitive offer at other GTA venues. There is an emerging strong rationale for investing in renewed facilities to better access this market potential, with greater frequency and the potential for improved economic and reputational benefits for the City.

The existing spending impact arising from the operations of the PMC and the spending of patrons in the City associated with visiting the PMC is not inconsiderable. The direct spending impact coupled with the wider impacts to the region is in the order of \$8 million to \$9 million annually.

Profiling the Market Area for Concerts

2017 Concerts Attendance (excl. OHL and Lakers)		
General Area	Patrons %	
1 City of Peterborough	10,642	46.2%
2 Peterborough County and North Hastings County Lindsay, Kawartha Lakes, Haliburton, West	4,252	18.5%
3 Northumberland County Belleville, Trenton, Cobourg, Port Hope, Quinte	2,119	9.2%
4 Shores East	1,819	7.9%
5 Oshawa, Whitby, Pickering, Ajax	553	2.4%
6 Bowmanville, Newcastle, Courtice, East Durham	417	1.4%
7 Toronto	360	1.6%
8 International	257	1.6%
9 Other: Renfrew /Lanark, London	215	0.9%
10 Port Perry/Uxbridge, Keswick, Barrie	146	0.6%
Sub-Total	20,780	90.2%
Other	2,259	9.8%
Total	23,039	100.0%

- **What is the future market for events in the City and at a major sports and entertainment facility?**

Tenants

- Clearly two tenants remains the aim with a goal to ensure stable enhancement in non-tenant events as well;
- The goal for tenant events is to increase attendance commensurate with the higher seat count in the new facility and ensure sustainability of this annual attendance. This

speaks to the responsibility of the teams to create an evergreen business planning framework which is capable of sustaining growth in the target audience market; and

- Commensurate with this, new license agreements will reflect the importance of achieving higher attendance and patron spending at all events.

Non-Tenant Events

- The aim should be attendance growth leveraging the higher seat count, the greater functionality of the building, its renewed competitive position and the market that is growing;
- The aim should be continued diversification of event types and growth in all categories of event;
- If a second pad is an option the aim should be to maximize the trade show and convention market working with the hotel sector and, depending on the site capacity, utilizing the campus as a whole;
- Armed with a new building, actively seek a place in the market for major provincial and national sporting competitions / championships. This includes not only ice but dry floor sports as well (i.e. gymnastics, dance, court sports, even pool events - see Windsor's successful use of a 50-metre competition Myrtha pool in its sport and event centre); and
- A second pad adds significant potential for tapping new ice rental opportunities (for example, adult summer leagues, as is the case in Oshawa's Tribute Communities Centre), as well

as major tournaments. A second pad would be scheduled primarily as a community recreational facility to meet those future needs but with its complimentary use for major events. This is particularly the case if the community facility includes a number of meeting / break-out rooms for use during conventions.

The goal for a new MUSEC should be to attract, on a sustainable basis, between 25 to 30 commercial ticketed events in addition to the roughly 55 game days of the two tenants that typically occur each year. While yearly numbers vary, the 2017 calendar included 18 such events over and above the 56 tenant events.

It is estimated that the annual operating and visitor spending impact arising from a new MUSEC is an order of magnitude greater than at present – likely to be in the range of \$12 million to \$13 million.

Proposed Concept and Capital Cost

Following the review of market opportunities, the balance of the report addresses the proposed concept which is recommended to be a new facility with approximately 5,500 to 6,000 fixed seats (our proposed concept is 5,500 to 5,800 fixed seats). The capital cost, potential approach to a funding strategy, as well as an estimate of the operating costs and revenues are also included.

Order of Magnitude Capital Costs

Cost (Note: Costs exclude land, off-site servicing and extraordinary development costs.)	Event Centre (\$2018)		Plus Community Ice Pad (\$2018)	
	5800 Seats Approx. 155,000 sq. ft.	% of Total	Approx. 190,000 sq. ft.	% of Total
A. Hard Construction Costs	\$43,975,000	61.0%	\$55,756,000	64.9%
B. General Consultations & Selected Soft Costs	\$9,710,000	13.5%	\$9,710,000	11.3%
C. Other Soft Costs	\$4,570,000	6.3%	\$5,470,000	6.4%
D. FF&E	\$13,877,000	19.2%	\$14,971,000	17.4%
Total	\$72,132,000		\$85,907,000	

Relationship with Community Ice Needs

The business case for a second ice surface lies in its relationship to the overall scale of capital cost and the constraints of site location. Other things being equal, we would recommend the active consideration of an integrated community ice surface as a second pad. There are significant benefits to the community and marketability of the centre for space extensive events. There are also obvious economics of scale in both capital and operating costs.

Locational Opportunities

The choice of location is complex and represents an ongoing discussion, as it should. The benefits of a second ice pad and the successful search for a site to accommodate a larger footprint such as would result from a two-pad facility clearly intersect with the viability of a downtown versus a near-downtown location. Choices will have to be made. This report, as well as the location assessment report under separate cover, provides the range of choices and the implications of each.

The locational assessment is predicated on Council's endorsement of the search for a site within the existing Central Area planning boundaries (Official Plan Schedule J) which precludes the easy accommodation of a second ice surface. This is not to suggest that the ultimate project exclude a second surface; examples exist of two sheet buildings in the context of tight urban sites, including Oshawa's Tribute Communities Centre.

As required by the Council Motion in this regard, the locational assessment of sites outside of the Central Area is necessary given the constraints or otherwise of existing Central Area sites; regardless, the decision to accommodate a second sheet may represent an opportunity dependent on site and funding availability rather than a predetermined component of a new event centre.

Understanding the Benefits and Costs of Status Quo Versus Change

A new Multi-Use Sport and Event Centre will in all likelihood return an annual deficit. Very few venues of this nature are operationally in surplus and even fewer account for additional costs such as necessary capital reserve funding as an annual charge.

The status quo is represented by the current deficit which has increased as a result of changes to the licensing agreements for the two teams and the sharing of revenues. A new building offers the potential to achieve the same goals of revenue generation for both the City and the tenants but with less risk assumed by the City.

PMC Financial Position Summary (2017)

	2017 (Actuals)
REVENUES	
Administration	(1,028,716)
Operations	0
Events	(699,192)
Vending	(20,853)
Food & Beverage Services	(137,327)
Transit Advertising	(83,727)
TOTAL REVENUES	(1,969,814)
EXPENSES	
Administration	710,128
Operations	1,199,844
Events	851,168
Vending	18,411
Food & Beverage Services	7,911
Transit Advertising	0
TOTAL EXPENSES	2,787,462
NET	817,648

Revenues/Expenses of Note:

Ice/floor rentals: \$242,570
Advertising: \$135,038
License Fees: \$289,600
Box Office: \$109,262

Admissions: \$293,320
Contractual Rec.: \$363,780

Salaries/benefits: \$507,100

Salaries/benefits: \$425,806
Utilities: \$538,173
Building Mtce: \$122,477

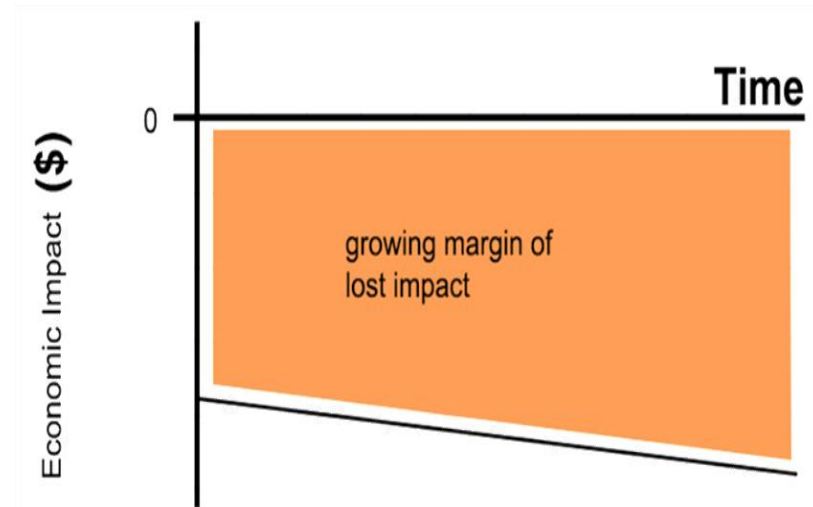
Salaries/benefits: \$509,177
Contractual Services: \$310,489

A process to renew the principles of licensing arrangements at a new venue is important as a first step, creating a partnership of collaboration to maximize the success of the new facility. The Peterborough Petes and the Lakers are core partners to ensuring the success of the new business plan and a collaborative arrangement of revenue sharing to achieve growth and sustainable operations at a new MUSEC is a fundamental principle going forward.

Our estimates in this report are that a new facility can achieve a reduction in deficit compared to the current position. The amount of that deficit (approximately \$500,000 before consideration of any management fees for a third-party operator) is a conservative assessment. It is anticipated that, as the project moves forward, opportunity will exist to further consider the range of revenues but also costs to determine and reconfirm the expected nature of the deficit for a new building over the long term.



Regardless of the final projections, it is evident that the deficit in the current building will likely grow if the role of that building remains the premier sport and event centre in the City. We have witnessed this in other venues which, as they age and their functionality declines, see the more financially beneficial events decline, replaced with more local events, and the overall operating position deteriorates. This can reasonably be expected in the case of the PMC.

Growing Gap of Lost Impact



The comparison of benefits and costs (the Benefit-Cost Ratio) firmly indicates that the status quo results in a net cost compared to embarking on an implementation plan to replace the PMC. The estimated Benefit-Cost Ratio (BCR) is 2.40, indicating substantial benefits from this project over the long-term.

Benefit-Cost Ratio (BCR)

	Net Present Value (NPV at 5% discount rate)	New MUSEC	PMC – Maintain to 2040 then Build	Benefit-Cost Ratio (BCR) >1.0 =  <1.0 = 
A	PV Total Capital	(\$78 Million)	(\$57 Million)	
B	PV Total Net Operating	(\$10 Million)	(\$21 Million)	
C	PV Economic Impact Benefits	\$213 Million	\$130 Million	
	Total Benefit (Cost) (A+B+C)	\$125 Million	\$52 Million	2.40

Source: Sierra Planning and Management

Among other positive social impacts, such as an increase in reputation for a community, multi-use facilities also play an influential role in creating vibrant areas that can attract higher income/higher educated households to the local environment. MUSECs can also act as anchors for regeneration efforts, based on the ability to draw a critical mass of visitors to the area for events, which can help support restaurants and retail shops. Additionally, these large-scale projects can stimulate infrastructure investment in the district and attract other development projects.

These broader regenerative impacts are difficult to predict but, based on case examples, there is a reasonable expectation that a

new MUSEC as part of a more comprehensive development framework for Peterborough can effect change.

As part of the decision-making process, it is important that City planning initiatives like the Official Plan Review continue to create a vision for the central areas of the City.

Priorities Going Forward

Based on the assumption of timely and concurrent work on the range of location, funding, and downtown planning work that is required, the following represents a schematic timeline to achieve development with 5 years. This is based on the assumption of a) Council approval to continue the work required toward implementation and b) funding is achieved within the timeframe prior to planned construction.

These two caveats – council approval to proceed and achievement of sufficient funding or a likelihood of achieving funding – are critical to the timeline. If a decision to proceed with further site selection work, funding assessment and project planning were immediate, it is likely that a minimum 5-year window is required before the building is completed. Evidence from elsewhere suggests the timeline may be longer by several years, with the delay not in the design and construction phase but in the project definition, location selection and funding approval stages.

Faced with this reality, implementation planning should commence in 2019, so as to ensure a replacement facility in the medium-term. Any delay and replacement becomes more akin to a long-term plan which, based on the findings of this report, represents a risk to the City operating successfully in the events market.

Potential Project Timeline

Potential Timing:

2019

2023 or Later

DURATION LESS PREDICTABLE

DURATION MORE PREDICTABLE

Duration:

min. 18 months to several years

12 – 15 months

30 months

Action:

Council
Approval for
Implementation
Planning

Site
Confirmation,
Purchase Option
and other
Agreements as
necessary

Funding
Strategy

Further
Design
Specification
and Capital
Cost
Development

Community
Engagement
and Council
Approval

Selection of
Event Centre
Management
Company (via
competitive
process)

Select
Delivery
Method
and
Complete
Design

Construction
and
Commissioning



Site Location

Alongside this report Council has received our analysis which effectively ranks several sites according to our preference based on a range of factors. However, every site has significant questions regarding its validity which can only be answered once the current study is complete and additional site investigation is conducted.

Site selection drill-down analysis for the preferred site(s) is a key next step which enables further consideration of all other aspects of the project. Site selection informs:

- Site development costs;
- Scale and capital cost of the facility;
- Funding Strategy; and
- Delivery Strategy and timing of implementation of a competitive process to select a design-build consortium.

Surrounding all of this is a need to frame the locational choice firmly in the context of the vision for downtown and the central area of Peterborough over the next 20 years. This involves an understanding of the big-moves in land use planning under consideration including the gateways and corridors which are positioned for increased density and redevelopment, planning for the open space system and its connections across downtown, along and across the river and how the future of the GE lands offers a new an innovative direction for the City.

Design Work

The level of design work in the next phase is tied to the selected method of delivering the facility). At the very least, there is a need to develop the project from a concept plan, developed to articulate expected scale and capacity to fit on candidate sites, to a design which is capable of informing the specifications for a detailed design-build package.

Funding Strategy

This is likely to involve the following:

1. Continued capital cost estimating based on design specifications work and increasing certainty as to overall scale of land-related acquisition and site development costs/extra-ordinary development costs, etc.;
2. Development of a funding strategy based on a range of potential sources, and a potential approach to itemizing and estimating the funding potential of each; and
3. Undertaking necessary risk analysis for each of the funding sources to determine the potential impact to the tax base arising from different combinations of funding.

The funding strategy should commence immediately in the next phase of work following any decision of Council to accept and approve the feasibility study.

New License Agreements

New License agreements will be required. Work should commence in the shorter term following any approval of this feasibility study. This is because the nature of the license agreement is centrally relevant to the emerging operating model, business planning documents and revenue projections, and even the agreement with the third-party operator and its capacity to manage the building effectively. These agreements also impact the design assignment and functional space program, as well as the capital costs and the extent to which the tenants are expected to contribute capital dollars.

The principles of an agreement with each licensee should be established. More detailed discussion leading to an agreed license agreement can occur with the third-party operator involved alongside the consulting team.

Council Updates

Throughout the process, Council will need to be kept apprised of the outcome of each substantive stage of the work so that decisions can be taken as to whether the project remains viable as the specifics of capital cost, timing, and funding are brought clearer into focus.

Future of the Peterborough Memorial Centre (PMC)

The future use of the PMC should be part of this process. The current study identifies the principles on which any future planning should occur, recognizing the historic value of the PMC to the community. Key among those principles is the need to minimize municipal operating and capital costs for the facility if the City develops a new MUSEC to replace the PMC.

Implementation Planning Does Not Equate to Final Approval

An Implementation plan is essential. There are, as described, a number of concurrent and sequential tasks involved in determining in the final manner whether the City can, or should, invest in the replacement of the facility now, or later. The City will need to address the long-term future of the asset but has a choice to continue the status quo or invest in the process leading to change.

An implementation plan must respect the Council's fiduciary responsibility to assess the feasibility and timing of the project relative to other needs and impacts on the City. Accordingly, there are a number of decision points which are provided in the implementation plan going forward where Council can assess the process of implementation.

The implementation plan is an immediate step to provide greater certainty to the project – its definition, location, cost and affordability to the City.

Attachment 2:
2023 Review of PMC



Peterborough Memorial Centre Upgrades

WGD Architects was retained by Sierra Planning to review the possibility of making the Peterborough Memorial Centre (PMC) into what would be considered a modern Sports and Entertainment facility.

The arena, built in 1950's is a 4,329 person capacity facility that is the home of the Peterborough Pete's. In 2003 the facility went through a renovation adding additional seats, boxes and a restaurant.

Executive Summary

The stated goal of the project is to make the PMC suitable for more non-ice entertainment events. It does include for an addition to the number of seats.

The goal of additional seats can be achieved; however, it would require the raising of the roof in order to provide proper sight lines to the ice. Our plans indicate an addition of 1,336 seats; however, this would be subject to more detailed design. The additional seating would be a costly endeavour as new foundations and supporting columns would be required.

Such a major renovation will trigger the necessity to have the building be compliant with current building codes including seismic design requirements, envelop improvements for energy efficiency, additional washrooms to accommodate the additional seating, and changes to the building to be AODA compliant.

Presently circulation within the arena is poor, and below any modern entertainment facility expectations. Concessions are extremely limited and crowded. Circulation and concessions can be improved with modest conditions, but the improvements are constrained by the current building envelope. As part of improved circulation some building elements on the ground floor would need to be sacrificed.

It is not certain, but it is likely that the current long span truss does not have the capacity to support modern show rigging, and this could be addressed at the time of raising the truss.

Loading for shows is presently awkward, and this could be addressed by adding operable dasher board doors in the corners.

Presently the Pete's training facility is small by modern OHL rink standards and could be addressed with a modest addition.

While it is not being requested by the OHL at present, the playing surface itself is non-NHL regulation and should be addressed at the time of a major renovation.

Presently on-site parking is inadequate and would need to be addressed at the time of a major renovation.

Modern Event Centre Program

The program for a modern event centre is as follows:

PUBLIC AREAS CONCOURSE (& ENTRIES)

- Building to have two major general spectator entrances, one Club Seat/Private Suite Entrance and one staff and services entry (which may be combined with Practice Rink Entry).
- Spectator entrances to provide convenient, direct access to washrooms, concessions and vomitoriums to seating.
- A continuous main concourse is preferred.
- General and Club Concourses to be based on approximately 0.28m²/person (3.0sf) and (0.33m²)/person (3.5sf) respectively.
- Suite Concourse to be approximately minimum 1.7m (5.5ft) wide.
- Public Skating Skate Change Areas: (approximately 100m² (1,075sf)).

WASHROOMS

- Based on 50% male and 50% female occupants in building.
- Male Water Closets ("WC") and Urinals: 1/80 (80% urinals).
- Female Water Closets: 1/50
- Lavatory: 35% of WC/Urinals.
- Above ratios to be increased 20% in Club Concourse.
- Provide ability to change over flexibility of male/female washrooms to female/male washrooms respectively (i.e. with signage, etc.).
- Family Washrooms: 2 per level.
- Washroom layout to incorporate wheelchair requirements per code.

CONCESSIONS

- One permanent point of sale (POS) per 150 spectators (with 1.5m (5ft) counter and 10m² (110sf)/POS).
- Three (3) portable POS/1,000 spectators (i.e. a kiosk)

RETAIL

- One main store (with storage area) at street level with exterior visibility and (if possible) accessibility: 190m² total. (2,045sf)
- Three (3) Portable Retail Outlets (i.e. kiosks) located on each main Concourse: 20m² (215sf) per outlet.

BACK OF HOUSE FOOD & BEVERAGE



- Concessions (see above)
- Suite/Hospitality Pantries (2): 60m² (645sf) total
- Concession Central Storage and Prep. Kitchen: 370m² (3,980sf)
- Restaurant and Premium Seating Kitchen: 190m² (2,045sf)
- Offices (see Operations below)

MEDIA

- T.V. Broadcast Booths: 2
- Radio Broadcast Booths: 2
- Written Press Viewing Positions: 16
- Media Meeting, Work and Lounge to be at either Press Viewing Position Level or Event Level: 30m² (320sf) (to double as building meeting room and to include adjacent storage room).
- Media Interview: 20m² (215sf)

OPERATIONS

- Administrative/Finance Offices: (12 people) 280m² (3,010sf)
- Ticket Sales Main Ticket Area – Minimum 4 windows to exterior Minimum 2 windows to concourse (including customer service) – 2 offices: 20m² (215sf) total – General office (8 workstations): 40m² (430sf) – Storage/safe: 20m² (215sf) – Washroom/coffee: 10m² (110sf)
- Food and Beverage, Retail and Catering Offices (3 people): 30m² (320sf)
- Security, Building Control Office and Employee Entrance: 30m² (320sf)
- First Aid (adjacent to Security/Building Control): 15m² (160sf)
- Event Staff Areas: 40m² (430sf)
- Maintenance Office (1 private office and 1 general office for 2): 30m² (320sf)
- General Purpose (Green Room/Catering) at Ice Level (30 people capacity plus adjacent storage): 45m² (485sf) total (OPTIONAL)
- Production Offices (2): 20m² (215sf) total. • Circulation (5% of above).

MISCELLANEOUS

- Arena Bowl Scoreboard, Sound System, and Security Control Room: 40m² (430sf) TECHNICAL • Ice Plant: 100m² (1,075sf)
- Zamboni Storage: 45m² (490sf)
- Storage (interior with 4.5m (15ft) clear ht.): 370m² (3,980sf) • One Miscellaneous Storage Room of 20m² (215sf) on each level.
- Marshalling/Receiving/Staging (with 2 truck bays): 280m² (3,010sf) (not including exterior area).



- Workshop: 45m² (485sf)
- Ice: NHL size: 1,580m² (17,000sf)
- Direct Access to Rink Slab by Tractor Trailer: Minimum 4.5m (15ft) headroom
- Garbage, Recycle Room – 45m² (485sf) • Janitors Room – 6 @ 2.5m² (27sf); 15m² (160sf) total
 - Score Clock.
- Event Lighting.
- 4 follow spot platforms.
- Catwalk over primary stage areas.
- Roof structural capacity to carry user loads (concerts, grids,)

HOME HOCKEY TEAM

- Administrative Offices (12-15 people): 200m² (2,150sf)
- Team – Dressing Room (24 stalls): 35m² (375sf) – Steel Lockers: 20m² (215sf) – Players' Lounge: 40m² (430sf) – Showers (8): 15m² (160sf) – Washroom (2 water closets, 2 urinals and 4 sinks): 30m² (300sf) – Hot Tub: 15m² (160sf) – Coaches Offices and locker room: 65m² (700sf) – Trainer (3 benches, storage, office): 40m² (430sf) – Equipment and Uniform Storage and Laundry: 45m² (485sf) – Equipment Repair (Sharpening): 15m² (160sf) – Exercise/Weight Room: 100m² (1,075sf) – Workshops and Landry: 65m² (700sf) – Doctor: 15m² (160sf) – Circulation: 75m² (800sf)

VISITING TEAMS

- Dressing Rooms (4) 200m² (2,150sf) total. (3 @ 45m² (485sf) and 1@ 65m² (700sf))

OFFICIALS & STARS

- Change / Dressing Rooms (4): 85m² (915sf) total.

TECHNICAL EXTERIOR

- Approximately 2,000m² (21,530sf) of exterior loading/service space adjacent to interior marshalling/loading area.
- Minimum 28m (90ft) width for truck turning

ACCESS ROUTES

The way in which equipment gets into and out of venues is really important. We have worked in venues where it simply is not possible to get a 3m piece of truss or a large oven in through the goods entrance. This can result in equipment being carried through a reception area or even up escalators – far from ideal. Generally, an access route should allow for a piece of equipment 2.5m long by 1.5m wide by 1.8m high to be wheeled through. This may seem enormous but items such as lighting racks and larger control racks are often based around an 8' x 4' footprint – not to mention large set pieces or even cars that may want to be brought into your venue. This size of access route will certainly require double fire doors.

Ideally corridors will be straight from loading area to event space – if this is not possible, any bends or dog legs need to be very wide.

The length of the access route would ideally be as short as possible, but this is less of a consideration if the size is sufficient. If the equipment can be wheeled off the truck and to the event space with as few level changes or turns as possible, production staff will be happy – just factor in that a long corridor will take more time to push everything down.

Steps should be avoided when designing a new event venue at all costs! If there are elevation issues with your design, always consider ramps or lifts over stairs – even a single step can cause issues.

VEHICLE ACCESS

There are many wonderful event spaces that do not win business due to their poor vehicle access – this is a particular issue in central London. Aim to ensure that there is provision for flat-ground goods vehicle parking near the venue doors. Better still, have a proper loading bay that allows for several trucks to park at once.

If you are in a tight space, such as a city centre, aim to make the street directly outside your goods-in bay a designated loading area. Many events rely on trucks of 44 feet (13.5m) in length to transport their equipment to site, and not having the ability to temporarily park one at or near the entrance can double or triple logistics costs – a deal breaker for some.

RIGGING

Overhead rigging is absolutely vital when designing a new event venue – and for almost all events. ‘Rigging’ is the equipment and processes by which equipment can be hung overhead. This can include speakers, lights, video screens, print graphics, decor and even lightweight items like flowers.

Where appropriate, an exposed roof structure is best as ‘spreaders’ and ‘bridles’ can be used to position a rigging point anywhere that you wish.

Where the ceiling is covered (plaster, ceiling tiles, etc.) there should be trap doors where pre-installed rigging points can be accessed. As most rigging equipment is designed for straight trusses and square ‘grids’, these points should be designed in a manner which facilitates this. It has been known for venues to have rigging points installed in concentric sweeping curves across the ceiling – this may seem like a good idea to a designer but is a nightmare for a rigger. I would recommend liaising with a competent rigging company, such as PYTCH, when installing these rigging points. You will also need to engage the services of a structural engineer. PYTCH can also advise with this.

Each rigging point should have a Safe Working Load (SWL) of at least 6,000 lbs point load and 120,000 lbs total load.

It is common practice and sensible for a venue to have a preferred in-house rigging contractor. An experienced production company such as PYTCH can be appointed to take care of all rigging, which negates the requirement to vet the competence of every production company coming into the venue. Modern facilities of this size include a rigging grid at the bottom of the main roof trusses comprised of W section steel beams at approximately 10’ on centre with safety lines for rigging contractors.

CEILING HEIGHT

It is likely that wider architectural considerations will determine the ceiling height when designing a new event venue. However, it is important to note that a low ceiling in a medium/large venue may completely hinder an event's operation. Height is very important for a stage or video screens to be high enough for all guests to see over other people's heads. A ceiling height of under 2.5m makes a space almost useless for even the smallest events. Generally speaking, the following approximate rule of thumb applies:

- Less than 100 guests – 2.5m minimum
- 100-300 guests – at least 3.5m
- 300 – 1000 guests – at least 4.5m
- 1000 – 4000 guests – at least 7m (or more if you are looking at having proper concerts)
- 4000+ – this is arena scale and clearance of at least 15m is needed (ideally 21m+)

When planning a new facility like a stadium, one must consider factors such as the event calendar, climate, culture, and much more. The team creating the arena design must know how the building will operate based on the terrain and the site.

Delivering a project depends on the event types, the number of people the stadium will attract, and other custom plans and budget expectations. A shared idea leads to the development of a better project that can be delivered efficiently.

Challenges of Arena Design and How They Are Different from Stadium Design

Stadiums are usually massive, and the arena design process is complicated, as the structure must serve multiple types of groups and functions on the field. During events, fields need features for flexibility, such as access to the event floor, roof loading capacity, and better environmental control in the event space.

A newly built or renovated arena design should meet your requirements, such as the challenges involved while hosting differing sporting events, time frames for the sporting events, and so on. It is crucial to know how the arena will be set up during games.

Changes in Arena Designs over the Last Decade

There is an emerging evolution, moving away from the single-purpose sporting venue to modern stadiums with spaces that support many different entertainment events, in addition to sports.

The current trend in arena design enhances flexibility and versatility.

Arena design is dependent on profitable brand mixing and naming rights corporations. Due to the demand for a quality and reliable event experience, the multimedia uprising has led to higher realistic market competition. Going to an event must be an experience that exceeds the convenience of watching games at home.

A Growing Trend Toward Designing Sustainable Arenas

Due to the shift toward state-of-the-art stadiums, with added financial dependency on identifying rights partnership, there will be an increase in arenas design with sustainability in mind. The buildings can act as facilitator regeneration, becoming public anchors for urban setup.

Technical issues relating to the environmental performance of the arena design, and the arena size, are many hence connecting venues with hotels, shopping malls, training facilities and much more makes it flexible.

PETERBOROUGH MEMORIAL CENTRE

The existing PMC is a 4,034 seat arena including 320 suite capacity, restaurant: 249, club lounge: 964, and group sales: 192. The building footprint is confined by a municipal street, Lock Street on the east and by a parking lot on the west.

CHALLENGES

Increasing the seating capacity can be achieved by eliminating the suites and continuing the rake of seats on the rink sides. This would result in total capacity of 5,000 seats. An option to place additional seating on top of the boxes was explored but sight lines were impeded by the large box truss running the length of the rink. To make sight lines work, the box truss would need to be raised (see exhibit D&E). In addition, it is unlikely that the current truss can handle the loads required for concert rigging, and the trusses may need to be reinforced.

Circulation is constricted in the current arena with no continuous concourse and very restrictive concession areas. Congestion at the concessions is very likely diminishing the visitor experience. Additional and improved circulation is recommended.

Access to the spectator seating is via two relatively small sets of stairs which also likely lead to congestion.

The corridor serving the suites is also restricted, creating congestion between the guests and service carts.

Parking for the facility is currently 436. Adding additional seats would require new parking to be added. Approximately 300 new parking spaces would need to be added (exhibit F).

As this would be a major renovation, the entire envelope would need to be improved to meet current building code standards, as well as washrooms and circulation to meet AODA standards.

It also needs to be noted, that loading of the rink floor for displays and staging is difficult due to the restricted space between the dasher boards and the mechanical rooms.

OPPORTUNITIES

The existing hockey arena was built approximately 75 years ago and is used primarily for the Peterborough Pete's, community hockey and other sporting event and for concert events. The structure includes a structural steel superstructure with concrete seating tiers. The roof is a long span steel structure with two main roof trusses spanning the length of the arena on each side of the rink. These support steel trusses and timber deck over the rink surface and the seating at the perimeter.

We have worked with WGD to explore options for the expansion and modernization of the arena. WGD has identified 3 options and the following is our input related to the structural issues for each of these.

Option 1 – Seating Expansion with Suites Moved

This option is relatively simple from a structural perspective with the need for new framing and foundations for the new seating and moving of the suites. The existing low roof will need to be raised so the most economical approach would be to remove and replace this roof at a higher level. The main longitudinal roof trusses are expected to have the capacity to support the raise lower roof and we do not expect the need to upgrade the lateral system of the building. This option does not address the ability of the roof to support the types of rigging loads for modern concert events.

Option 2 – Seating Expansion Above Suites

This option has similar issues as noted for Option 1 however the raised seating level may trigger the need for an upgrade of the entire lateral system of the building.

Option 3 – Seating Expansion Above Suites and Raising Roof

This option includes a major structural intervention on the building. This type of approach will expose the building to the elements during construction which will require the complete replacement of all systems and finishes. This approach is also very challenging from a construction process perspective and does not address all the usage requirements of a modern multi-purpose arena including concert rigging capacity.

It needs to be noted that any major renovation would require the building to be upgraded to current building code standards including upgrades for seismic design, upgrades to the building envelope, upgrades for accessibility, and a general increase in the number of washrooms to accommodate additional seating.

In any proposed solution improvements in circulation and additional concessions are warranted.

With an increased capacity, a parking deck would need to be added to accommodate additional parking, unless a parking study indicates otherwise.

Costing for improvements are roughly as follows:

• Raising the box truss and new roofing	\$12m to \$14m
• Renovation & Addition (AODA, washrooms, concessions, circulation)	\$56m to \$58m
• Lateral Reinforcement / Seismic	\$ 6m to \$ 7m
• Envelope	\$ 6m to \$ 7m
Total Hard Construction	\$ 80m to \$ 86m
Soft Costs (25%)	\$ 20m to \$ 22m
Sub Total Hard and Soft	\$100m to \$108m
Contingency (30%)	\$ 31m to \$ 34m
Total	\$130m to \$140m

Including decked parking would cost approximately \$24m. Other site works have not been allowed for.

Costs are subject to an escalation of 15% per year estimated and should be allowed for.



Even with these improvements there are still compromised areas such as the rink slab and dressing rooms, general circulation. The rink surface is still not NHL regulation sized.

Costing would be adjusted based upon a detailed design.

As a comparison, a newly designed arena for Prince Albert British Columbia, larger than possible at the Peterborough site, was at \$90m hard construction cost in 2022.

EXHIBITS

Exhibit A shows changes to the ground floor to improve circulation. New escalators have been added at the expense of some of the existing ground floor uses.

Exhibit B shows the Suite Level with some modest additions over existing roof areas. While circulation is improved it is still not equivalent to a modern entertainment facility.

Exhibit C shows additional seating being added above the suites. The building footprint is being maximized to achieve this.

Exhibit D shows additional seats in place of the suites. This was determined to be undesirable so not pursued further.

Exhibit E shows new seating above the suites, but with compromised sight lines.

Exhibit F shows additional seating above the suites, but with a raised truss and roofs to provide proper sight lines.

Exhibit G shows the expansion more or less within the existing footprint and a decked parking structure to accommodate parking requirements.

PROJECT SAMPLE

The Meridian Centre serves as a 5,200 seat recreational facility and a 6,000-plus-seat venue for other events like concerts.

In December 2011, after years of debate, St. Catharines City Council voted 9–3 to approve the construction of a multi-use spectator facility with 4,500 to 5,300 seats, at a maximum cost of \$50 million. The project was to be funded with \$17 million from the civic project fund, \$5 million in fundraising, \$1 million from the federal gas tax fund.^[2]

In October 2012, city councillors voted 11–2 to pay \$45 million to Ball-Rankin Construction to build a new 4,500-seat facility, to be completed by September 2014.^[3] Ball-Rankin donated a pair of 25-metre elevated walkways to connect the centre to the city's downtown area on St. Paul Street, at a cost of \$2 million.

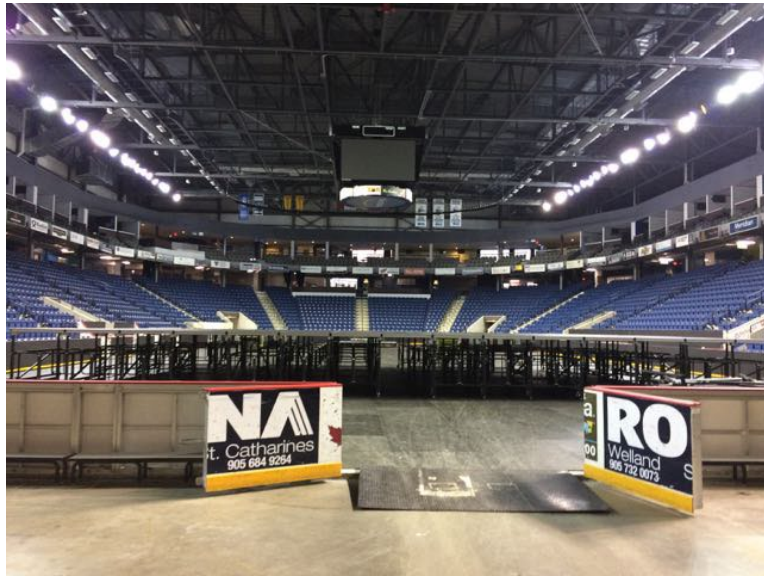
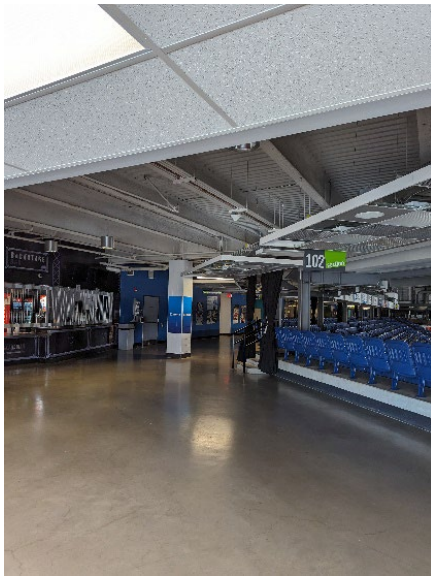
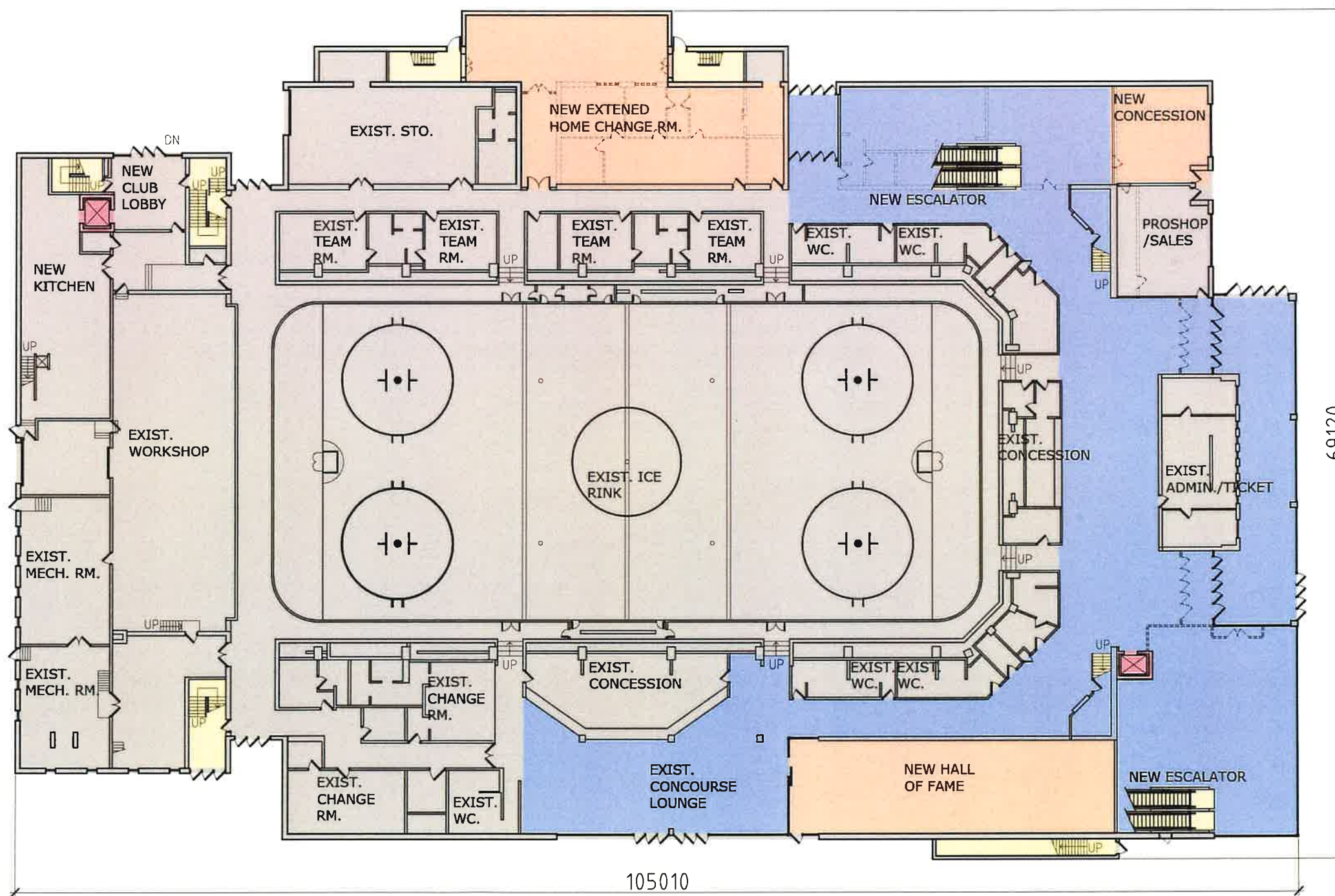
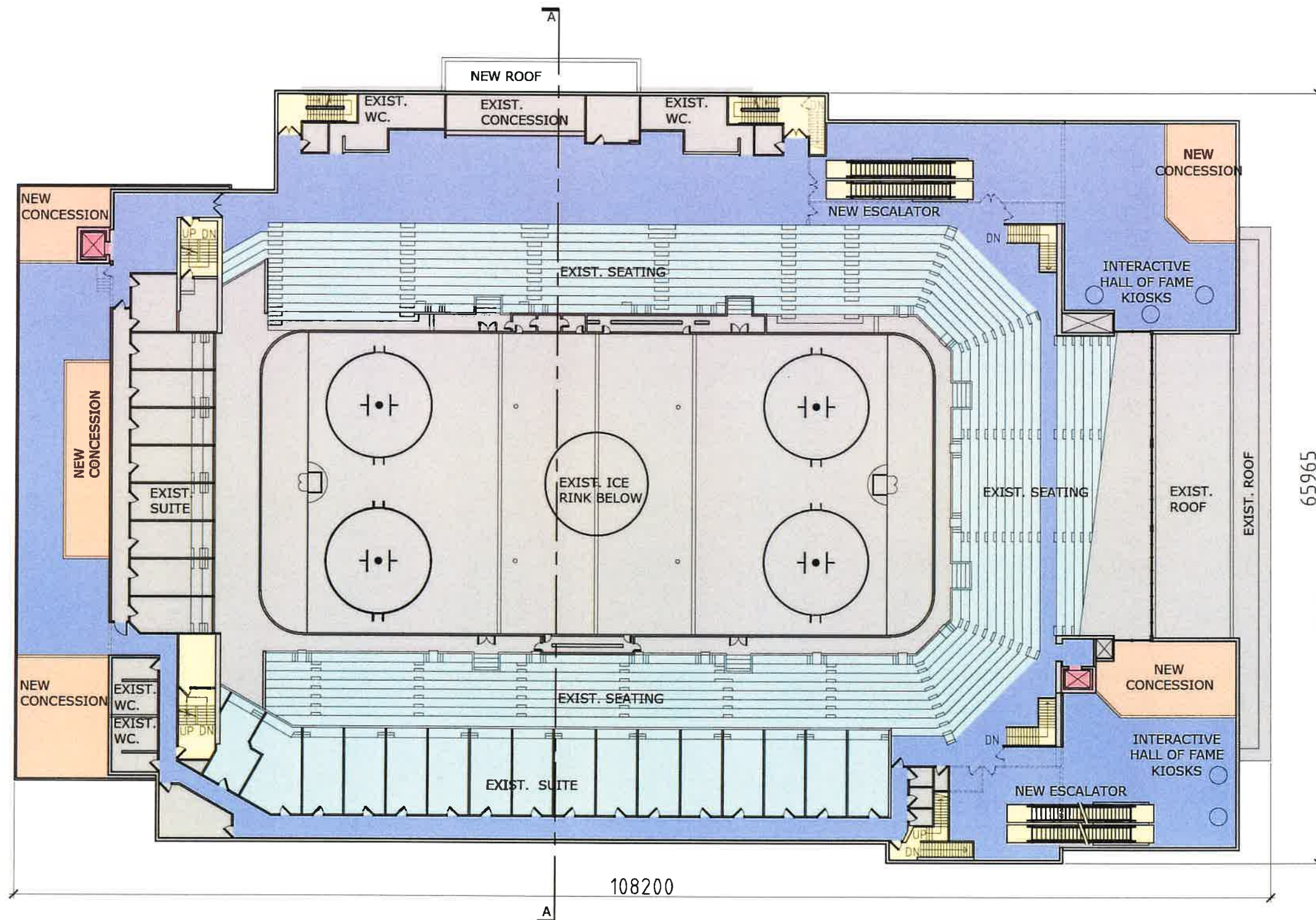


Exhibit A



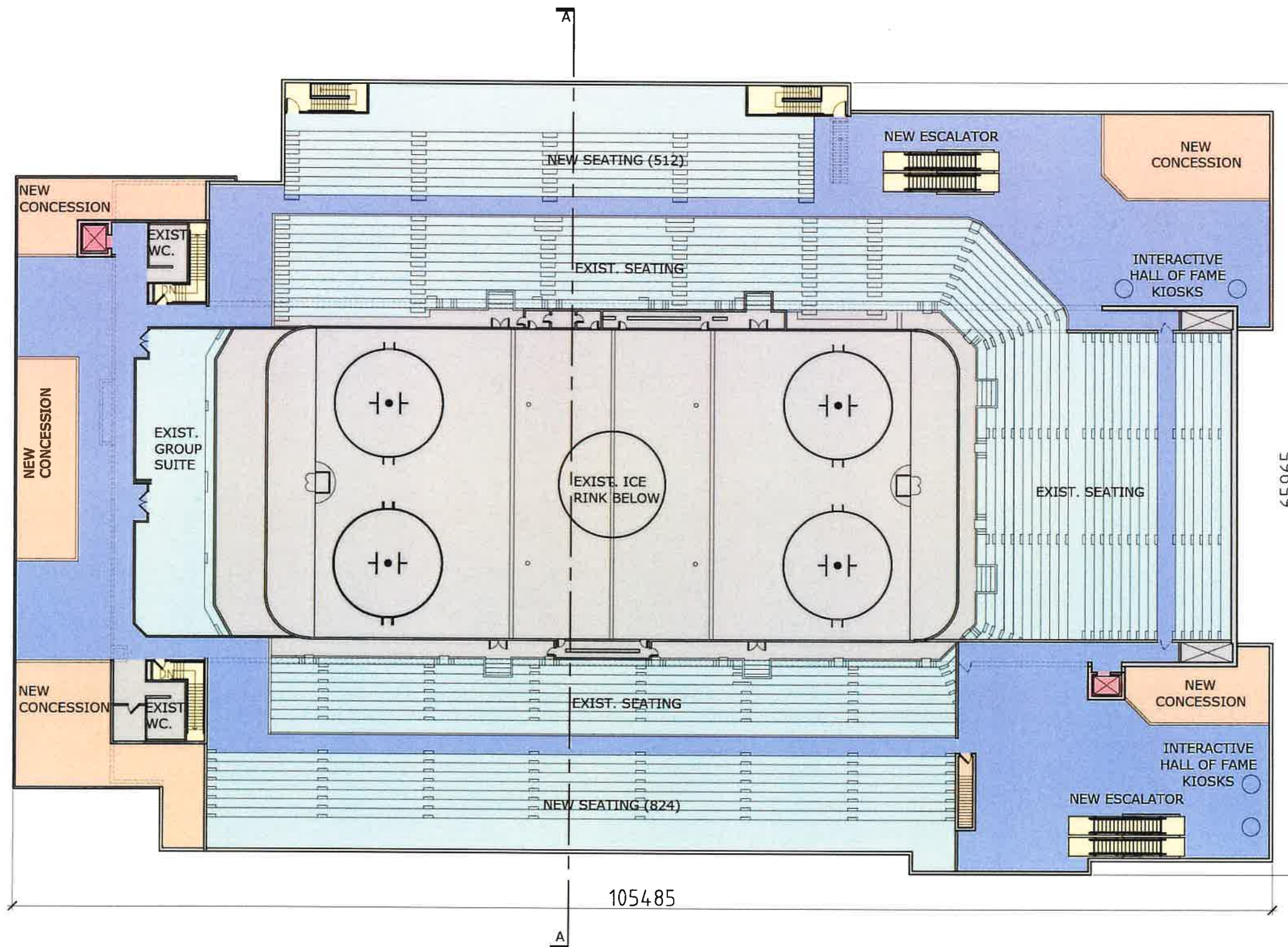
RENOVATION AREA:
979.2 sm, 10,540 sf
ADDITION AREA:
100.2 sm, 1,079 sf

Exhibit B



RENOVATION AREA:
278.5 sm, 2,998 sf
ADDITION AREA:
932.9 sm, 10,042 sf

Exhibit C



RENOVATION AREA:
260.9 sm, 2,808 sf
ADDITION AREA:
2,646.4 sm, 28,486 sf
NEW SEATS: 1336

Exhibit D

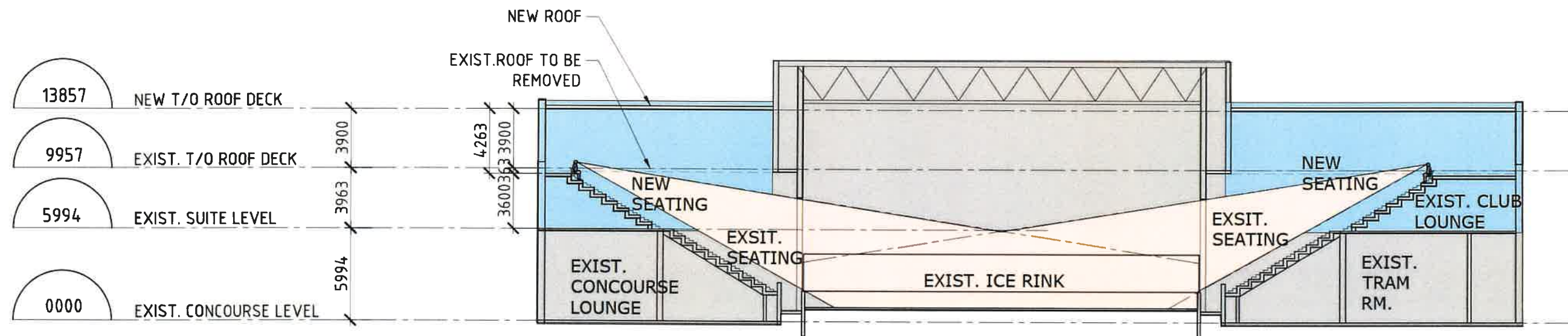


Exhibit E

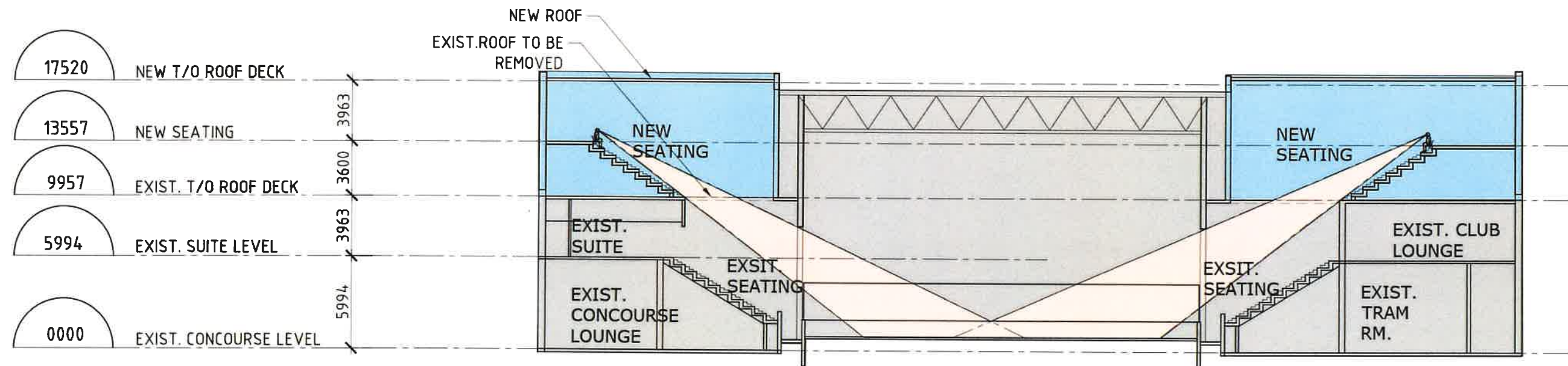


Exhibit F

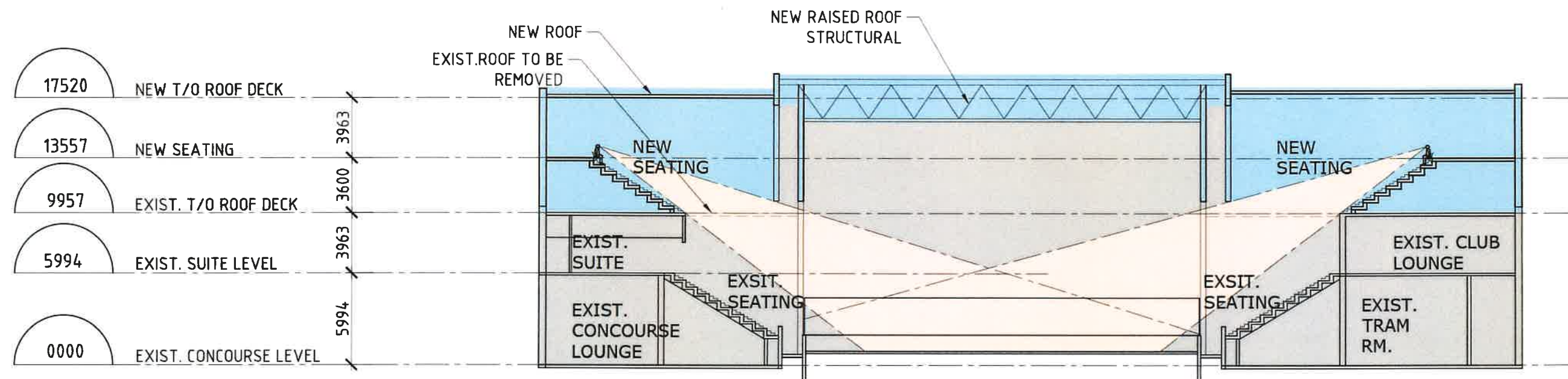


Exhibit G

