

**THOROLD ARENA FEASIBILITY STUDY**  
**FUTURE ARENA PROVISION OPTIONS**  
**March 14, 2013**

**A. Engineering Assessment Conclusions**

- Replace James Whyte Arena within 5 years
- Continue to operate Frank Doherty Arena for next 10 years

The following costs are associated with maintaining and not replacing the arenas for the next ten years.

<b><u>ARENA</u></b>	<b><u>2013/14</u></b>	<b><u>2014/15-2017/18</u></b>	<b><u>TOTAL 5 YEAR</u></b>	<b><u>2018/19-2022/26</u></b>	<b><u>TOTAL 10 YEAR</u></b>
JAMES WHYTE	\$125,000.00	\$1,655,800.00	<b>\$1,780,800.00</b>	\$2,141,050.00	<b>\$3,921,850.00</b>
FRANK DOHERTY	\$319,150.00	\$810,900.00	<b>\$1,130,050.00</b>	\$784,350.00	<b>\$1,914,400.00</b>
Sub-total	<b>\$444,150.00</b>	<b>\$2,466,700.00</b>	<b>\$2,910,850.00</b>	<b>\$2,925,400.00</b>	<b>\$5,836,250.00</b>

**B. Municipal Indoor Ice Facility Service Provision Assumptions**

- Provide two municipal indoor ice pads

**C. Base Capital Costs New Arena Facility Development**

The 2013 "Condition Assessment" prepared by AECOM identified the cost of replacing the existing arenas as approximately \$4.725 million to \$6.3 million for the Whyte Arena and \$5.6 million to \$7.4 million for the Doherty Arena. These estimates relate to replacing the existing facilities exactly as they are at present in terms of the size of the ice surfaces, minimal amenities, etc.

The following identifies the order of magnitude capital costs for new facility construction, at a level comparable to contemporary facilities including the provision of NHL size ice surfaces and up-to-date public and user amenities.

Four options are summarized: a twin pad area; a single pad arena with capacity to twin; a basic single pad arena; and a single pad arena with enhanced public and support areas.

The order of magnitude total capital costs for each option are based on current per square foot costs (2013\$) for municipal arena facilities identified in the AECOM report, and also include consideration of additional project costs associated with:

- Site development
- Fittings, furnishings and equipment
- Fees associated with design, management, legal, etc.
- Contingencies

➤ **Twin Pad Arena**

A twin pad indoor arena facility is proposed to be comprised of the following components:

- 2 ice surfaces, both measuring 85' by 200'
- Spectator seating for 1,400 provided for 1 ice pad and 200 for the other ice pad
- A Junior B Hockey Club change room
- 12 general dressing rooms and 1 female dressing room
- User group offices and storage
- A board room with a capacity for 50 persons
- Food court style food and beverage services
- Support areas (lobby, media/music room, staff offices, etc.)

The size of the twin pad indoor arena facility would be in the order of 89,700 square feet (gross).

The cost to develop the twin pad indoor arena facility, based on the concept described and a total gross floor area of 89,700 square feet, is projected to be in the order of \$25,735,100 to \$34,313,480 (2013\$).

The cost estimate is comprised of the following cost allocations:

Cost Items		Costing Benchmark	Capital Cost Estimate (2013\$)
A	Building	89,700 s.f. @ \$210 - \$280/ s.f.	\$18,837,000 – \$25,116,000
B	Site development allowance (Landscape, Parking, Services)	10% of A	\$1,883,700 – \$2,511,600
C	Fittings, furnishings, equipment allowance	5% of A+B	\$1,036,035 – \$1,381,380
D	Soft cost allowance (Design Fees, Management, Legal etc.)	10% of A+B	\$2,072,070 – \$2,762,760
E	Contingencies (Design 5%, Construction 3%)	8% allowance (of A+B+C+D)	\$1,906,300 – \$2,541,740
<b>Total Cost Estimate*</b>			<b>\$25,735,100 – \$34,313,480</b>

\* Figures are rounded

➤ **Single Pad Arena (Capacity to Twin)**

A single pad indoor arena facility, with the capacity to twin, is proposed to be comprised of the following components:

- 1 ice surface, measuring 85' by 200'
- Spectator seating for 200
- 6 general dressing rooms and 1 female dressing room
- User group offices and storage
- A meeting room with a capacity for 50 persons
- Food court style food and beverage services
- Support areas (lobby, warm viewing area, pro-shop, media/music room, staff offices, etc.)

The size of the single pad indoor arena facility, with the capacity to be twinned, would be in the order of 47,600 square feet (gross).

The cost to develop the single pad indoor arena facility, based on the concept described and a total gross floor area of 47,600 square feet, is projected to be in the order of \$13,656,535 to \$18,208,700 (2013\$).

The cost estimate is comprised of the following cost allocations:

Cost Items		Costing Benchmark	Capital Cost Estimate (2013\$)
A	Building	47,600 s.f. @ \$210 - \$280/ s.f.	\$9,996,000 – \$13,328,000
B	Site development allowance (Landscape, Parking, Services)	10% of A	\$999,600 – \$1,332,800
C	Fittings, furnishings, equipment allowance	5% of A+B	\$549,780 – \$733,040
D	Soft cost allowance (Design Fees, Management, Legal etc.)	10% of A+B	\$1,099,560 – \$1,466,080
E	Contingencies (Design 5%, Construction 3%)	8% allowance (of A+B+C+D)	\$1,011,595 – \$1,348,790
<b>Total Cost Estimate*</b>			<b>\$13,656,535 – \$18,208,700</b>

\* Figures are rounded

➤ **Single Pad Arena – Basic (Replacement for Existing JW Arena)**

A “basic” single pad indoor arena facility, as a replacement for the existing JW Arena, is proposed to be comprised of the following components:

- 1 ice surface, measuring 85' by 200'
- Spectator seating for 200
- 6 general dressing rooms and 1 female dressing room
- Minimal support areas (vending, staff offices, etc.)

The size of the basic single pad indoor arena facility (replacement for the JW Arena) would be in the order of 39,300 square feet (gross).

The cost to develop the basic single pad indoor arena facility, based on the concept described and a total gross floor area of 39,300 square feet, is projected to be in the order of \$11,275,250 to \$15,033,660 (2013\$).

The cost estimate is comprised of the following cost allocations:

Cost Items		Costing Benchmark	Capital Cost Estimate (2013\$)
A	Building	39,300 s.f. @ \$210 - \$280/ s.f.	\$8,253,000 – \$11,004,000
B	Site development allowance (Landscape, Parking, Services)	10% of A	\$825,300 – \$1,100,400
C	Fittings, furnishings, equipment allowance	5% of A+B	\$453,915 – \$605,220
D	Soft cost allowance (Design Fees, Management, Legal etc.)	10% of A+B	\$907,830 – \$1,210,440
E	Contingencies (Design 5%, Construction 3%)	8% allowance (of A+B+C+D)	\$835,200 – \$1,113,600
<b>Total Cost Estimate*</b>			<b>\$11,275,250 – \$15,033,660</b>

\* Figures are rounded

➤ **Single Pad Arena – Enhanced Public and User Areas (Replacement for Existing JW Arena)**

A single pad indoor arena facility, as a replacement for the existing JW Arena, is proposed to be comprised of the following components:

- 1 ice surface, measuring 85' by 200'
- Spectator seating for 200
- 6 general dressing rooms and 1 female dressing room
- User group offices and storage
- A meeting room with a capacity for 50 persons
- Food court style food and beverage services
- Support areas (lobby, warm viewing area, pro-shop, media/music room, staff offices, etc.)

The size of the single pad indoor arena facility with enhanced public and user areas would be in the order of 48,270 square feet (gross).

The cost to develop the single pad indoor arena facility, based on the concept described and a total gross floor area of 48,270 square feet, is projected to be in the order of \$13,848,760 – \$18,465,000 (2013\$).

The cost estimate is comprised of the following cost allocations:

Cost Items		Costing Benchmark	Capital Cost Estimate (2013\$)
A	Building	48,270 s.f. @ \$210 - \$280/ s.f.	\$10,136,700 – \$13,515,600
B	Site development allowance (Landscape, Parking, Services)	10% of A	\$1,013,670 – \$1,351,560
C	Fittings, furnishings, equipment allowance	5% of A+B	\$557,500 – \$743,360
D	Soft cost allowance (Design Fees, Management, Legal etc.)	10% of A+B	\$1,115,030 – \$1,486,700
E	Contingencies (Design 5%, Construction 3%)	8% allowance (of A+B+C+D)	\$1,025,830 – \$1,367,780
<b>Total Cost Estimate*</b>			<b>\$13,848,760 – \$18,465,000</b>

\* Figures are rounded

**D. Description of Facility Options**

The following outlines 5 alternative approaches to the provision of municipal indoor ice facilities in the future. Two additional options are also identified but not assessed.

**Option: NS-1**

- Replace both existing arenas with new twin pad arena
- Develop on a new site/location
- Close/decommission/demolish JW now
- Close/decommission/demolish FD when new twin pad operational

Does option require acquisition of new site for facility development?	<ul style="list-style-type: none"> <li>• Yes</li> <li>• There will be a cost associated with acquisition of new site.</li> <li>• This may impact timing.</li> </ul>
Implications to ice users programs and activities.	<ul style="list-style-type: none"> <li>• Closing/decommissioning of JW arena will mean that existing ice users will be required to find alternative ice during the time period until new facility is operational.</li> <li>• When new facility is operational ice users programs and activities and potential new uses should be enhanced by capacity and environment of new facility.</li> </ul>
Disruptions to existing facility.	<ul style="list-style-type: none"> <li>• Decommissioning/demolition of JW immediately and FD when new facility is operational, site remediation.</li> <li>• Potential sale of property.</li> </ul>
Implications to the efficient operation of the municipal indoor ice facilities.	<ul style="list-style-type: none"> <li>• A new indoor twin pad facility could be designed to operate efficiently in terms of staffing, could include energy conservation design and equipment which would reduce annual operational expenditures, a new facility would require less investment in facility repair and replacement compared to existing facilities, could be designed to support 12 month ice provision, could include enhanced public user areas and amenities that may improve potential use and rental of the facility for special events (both ice and non-ice) which may result in increased revenue generation.</li> </ul>
Timing implications.	<ul style="list-style-type: none"> <li>• Funding strategy would drive development schedule.</li> <li>• Construction period should allow for 24 months.</li> </ul>

**Capital Cost Estimate**

<ul style="list-style-type: none"> <li>• <b>Investments required to the existing municipal indoor ice facilities:</b> FD until new facility is operational (assumed to be 5 years).</li> </ul>	<b>\$1,130,050.00</b>
<ul style="list-style-type: none"> <li>• <b>Capital costs associated with demolition of existing facilities:</b> Decommissioning/demolition of JW and FD arenas Site remediation. Potential sale of property.</li> </ul>	<b>Unknown</b>
<ul style="list-style-type: none"> <li>• <b>Capital costs associated with new facility construction:</b> New twin pad facility.</li> </ul>	<b><u>\$25,735,100 – \$34,313,480</u></b>
<b>Total Estimated Cost:</b>	<b>\$26,865,150 – \$35,443,530 ++</b>

**Option: NS-2**

- Replace JW with new single pad arena with capacity to twin in future on new site/location
- Close/decommission/demolish JW now
- Continue to operate and invest in FD until such time as new second ice pad constructed
- Close/decommission/demolish FD when new second ice pad operational

<b>Factor</b>	
Does option require acquisition of new site for facility development?	<ul style="list-style-type: none"> <li>• Yes.</li> <li>• There will be a cost associated with acquisition of new site.</li> <li>• This may impact timing and capital cost.</li> </ul>
Implications to ice users programs and activities.	<ul style="list-style-type: none"> <li>• Closing/decommissioning of JW arena will mean that existing ice users will be required to find alternative ice during the time period until new facility is operational.</li> <li>• When new twin pad facility is operational ice users programs and activities and potential new uses should be enhanced by capacity and environment of new facility.</li> </ul>
Disruptions to existing facility.	<ul style="list-style-type: none"> <li>• Disruptions to existing site associated with demolition of JW arena.</li> <li>• FD arena decommissioning/demolition when new facility is twinned.</li> </ul>
Implications to the efficient operation of the municipal indoor ice facilities.	<ul style="list-style-type: none"> <li>• There may be a time period when the municipality would be operating two single ice pad facilities on separate sites. This will increase the operational expenditures associated with this option.</li> <li>• A new indoor twin pad facility could be designed to operate efficiently in terms of staffing, could include energy conservation design and equipment which would reduce on-going operational expenditures, a new facility would require less investment in facility repair and replacement compared to existing facilities, could be designed to support 12 month ice provision, could include enhanced public user areas and amenities that may improve potential use and rental of the facility for special events (both ice and non-ice) which may result in increased revenue generation.</li> </ul>
Timing implications.	<ul style="list-style-type: none"> <li>• Funding would drive development schedule.</li> <li>• Construction period should allow for 24 months.</li> </ul>

**Capital Cost Estimate**

• <b>Investments required to the existing municipal indoor ice facilities:</b> FD until new facility is operational (assumed to be 5 years).	<b>\$1,130,050</b>
• <b>Capital costs associated with demolition of existing facilities:</b> Decommissioning/demolition of JW and FD arenas Site remediation. Potential sale of property.	<b>Unknown</b>
• <b>Capital costs associated with new facility construction:</b> Phased construction of new twin pad facility.	<b><u>\$25,735,100 – \$34,313,480+</u></b>
<b>Total Estimated Cost:</b>	<b>\$26,865,150 – \$35,443,530 ++</b>

**Option: ES-1**

- Replace both existing arenas with new twin pad arena on existing site
- Close/decommission/demolish JW now
- Close/decommission/demolish FD based on construction timetable

<b>Factor</b>	
Does option require acquisition of new site for facility development?	<ul style="list-style-type: none"> <li>• No</li> </ul>
Implications to ice users programs and activities.	<ul style="list-style-type: none"> <li>• Closing/decommissioning of JW arena immediately will mean that existing ice users will be required to find alternative ice during the time period until new facility is operational. FD would also be closed just before new construction and that would mean that there would be no municipal indoor ice provision for the duration of the construction period which may be 24 months.</li> <li>• When new facility is operational ice users programs and activities and potential new uses should be enhance by capacity and environment of new facility.</li> </ul>
Disruptions to existing facility.	<ul style="list-style-type: none"> <li>• JW arena decommissioned/demolished immediately.</li> <li>• FD arena decommissioned/demolished before new construction.</li> </ul>
Implications to the efficient operation of the municipal indoor ice facilities.	<ul style="list-style-type: none"> <li>• A new indoor twin pad facility could be designed to operate efficiently in terms of staffing, could include energy conservation design and equipment which would reduce on-going operational expenditures, a new facility would require less investment in facility repair and replacement compared to existing facilities, could be designed to support 12 month ice provision, could include enhanced public user areas and amenities that my improve potential use and rental of the facility for special events (both ice and non-ice) which may result in increased revenue generation.</li> </ul>
Timing implications.	<ul style="list-style-type: none"> <li>• Funding would drive development schedule.</li> <li>• Construction period should allow for 24 months.</li> </ul>

**Capital Cost Estimate**

• <b>Investments required to the existing municipal indoor ice facilities:</b>	<b>\$0.00</b>
• <b>Capital costs associated with demolition of existing facilities:</b> Decommissioning/demolition of JW and FD arenas	<b>Unknown</b>
• <b>Capital costs associated with new facility construction:</b> New twin pad facility.	<b><u>\$25,735,100 – \$34,313,480</u></b>
<b>Total Estimated Cost:</b>	<b>\$25,735,100 – \$34,313,480</b>

**Option: ES-2**

- Invest in FD for continued operation for 10 years, replace JW now with new single ice pad on existing site.

<b>Factor</b>	
Does option require acquisition of new site for facility development?	<ul style="list-style-type: none"> <li>No</li> </ul>
Implications to ice users programs and activities.	<ul style="list-style-type: none"> <li>Yes.</li> <li>Closing/decommissioning of JW arena immediately will mean that existing ice users will be required to find alternative ice during the time period until new facility is operational.</li> <li>When new facility is operational, ice users programs and activities and potential new uses should be enhanced by capacity and environment of new facility.</li> </ul>
Disruptions to existing facility.	<ul style="list-style-type: none"> <li>Yes.</li> <li>JW arena decommissioned/demolished immediately.</li> </ul>
Capital costs associated with new facility construction	<ul style="list-style-type: none"> <li>Yes.</li> <li>New Single ice pad facility.</li> <li><b>\$11,275,250 – \$15,033,660</b></li> </ul>
Implications to the efficient operation of the municipal indoor ice facilities.	<ul style="list-style-type: none"> <li>Yes.</li> <li>A new indoor ice pad facility could be designed to operate efficiently in terms of staffing, could include energy conservation design and equipment which would reduce on-going operational expenditures, a new facility would require less investment in facility repair and replacement compared to existing facilities, could be designed to support 12 month ice provision.</li> </ul>
Timing implications.	<ul style="list-style-type: none"> <li>Funding would drive development schedule.</li> <li>Construction period should allow for 24 months.</li> </ul>

**Capital Cost Estimate**

<ul style="list-style-type: none"> <li><b>Investments required to the existing municipal indoor ice facilities:</b> Investments to FD during the 10 year time period</li> </ul>	<b>\$1,130,050.00</b>
<ul style="list-style-type: none"> <li><b>Capital costs associated with demolition of existing facilities:</b> Decommissioning/demolition of JW arena</li> </ul>	<b>Unknown</b>
<ul style="list-style-type: none"> <li><b>Capital costs associated with new facility construction:</b> New basic single ice pad facility.</li> </ul>	<b><u>\$11,275,250-\$15,033,660</u></b>
<b>Total Estimated Cost:</b>	<b>\$12,405,300 – \$16,163,710</b>

**Option: ES-3**

- Invest in FD for continued operation for 10 years, replace JW now with new single ice pad + new service/lobby/change rooms for both on existing site.

<b>Factor</b>	
Does option require acquisition of new site for facility development?	<ul style="list-style-type: none"> <li>• No</li> </ul>
Implications to ice users programs and activities.	<ul style="list-style-type: none"> <li>• Closing of JW arena immediately will mean that existing ice users will be required to find alternative ice during the time period until new facility is operational.</li> <li>• When new facility is operational, ice users programs and activities and potential new uses should be enhanced by capacity and environment of new facility.</li> </ul>
Disruptions to existing facility.	<ul style="list-style-type: none"> <li>• JW arena decommissioned/demolished immediately.</li> </ul>
Implications to the efficient operation of the municipal indoor ice facilities.	<ul style="list-style-type: none"> <li>• A new indoor ice pad facility could be designed to operate efficiently in terms of staffing, could include energy conservation design and equipment which would reduce on-going operational expenditures, a new facility would require less investment in facility repair and replacement compared to existing facilities, could be designed to support 12 month ice provision, could include enhanced public user areas and amenities that may improve potential use and rental of the facility for special events (both ice and non-ice) which may result in increased revenue generation.</li> </ul>
Timing implications.	<ul style="list-style-type: none"> <li>• Funding would drive development schedule.</li> <li>• Construction period should allow for 24 months.</li> </ul>

**Capital Cost Estimate**

<ul style="list-style-type: none"> <li>• <b>Investments required to the existing municipal indoor ice facilities:</b> Investments to FD during the 10 year time period</li> </ul>	<b>\$1,130,050</b>
<ul style="list-style-type: none"> <li>• <b>Capital costs associated with demolition of existing facilities:</b> Decommissioning/demolition of JW arena</li> </ul>	<b>Unknown</b>
<ul style="list-style-type: none"> <li>• <b>Capital costs associated with new facility construction:</b> New enhanced single ice pad facility.</li> </ul>	<b><u>\$13,848,760 – \$18,465,000</u></b>
<b>Total Estimated Cost:</b>	<b>\$14,978,810 – \$19,595,050</b>

**Option: BU-1**

- Explore opportunities for joint development and operation of a new twin pad facility in association with Brock.

**Option: BU-2**

- Explore opportunities for joint development and operation of a new single pad facility (with capacity to twin) in association with Brock.