

# PROPOSED POOL DESIGN HIGHLIGHTS FOR CLUB TRAINING/COMPETITIONS- CAMBRIDGE AQUAJETS

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# Overview of Project

## **BACKGROUND:**

The City of Cambridge is currently pursuing the possibility of the construction of a new Multi Use Recreation Centre including Aquatic Facilities. The preliminary design concept is to include a 10lane 25m training pool, a therapeutic pool and leisure pool. The Cambridge AquaJets have been given the unique opportunity to provide input into the design of the aquatic facility in order to develop an optimal design for training, competition and community use.

## **ROLE OF RECTEC:**

The Cambridge AquaJets have retained the services of RecTec Management Group Inc to assist in developing a key set of desired design criteria for the new facility. Further to assist the AquaJets in engaging with the City of Cambridge in discussions regarding the new facility.

RecTec met with representatives of the AquaJets on November 5<sup>th</sup> to review the project in terms of:

- Brief history of City of Cambridge background on project and where it is to date
- Identify any key features currently highlighted or assigned to potential design
- Identify key design components that would be optimal for the AquaJets both in training and competition
- Identify any current communications and liaison with the City of Cambridge
- Identify next steps

Out of the initial meeting the key components identified have been summarized into the charts on the following pages. This report is focused on the 25m Lap Pool.

## PROPOSED DESIGN REQUIREMENTS: Training Pool

**25M 10-LANE POOL WITH 1 LEISURE POOL WITH 2 FULL LANES** – We need to start out by saying the optimum pool layout for any Swim Club is 50m. Realizing that this is not possible on this project the next best layout is a 10 Lane 25m x 25m pool. This layout allows for strong flexibility in both training and competition. Out of all the items listed in the chart this 25m x 25m pool layout is the most important we feel for both the City and the Club. Having 25m across the pool will allow for training both down the length of the pool and across as well.

This layout will allow both the City and the Club to utilize the pool during those prime hours of 4pm – 8pm and weekends 9am – 1pm. The concept is that during the later afternoon slot the Club would train across the deep end and the City would have the shallow end. As the evening progresses the layout would change to where the Club has a certain number of lanes and the City has the other lanes.

POOL PROFILE 25M 10-LANE POOL WITH LEISURE POOL WITH 2 LANES	
<b>LENGTH</b> – Pool Length must include the thickness of the touchpads to ensure the FOP meets FINA Competition Standards for Short Course Events.	25.030M
<b>WIDTH</b> – Width of the pool is driven by the # and the width of the lanes. Width desired is to accommodate effective training not only the length of the pool but across as well. 10 Lanes preferred.	25.000M
<b>LANE WIDTH</b> – FINA Olympic standard is 2.5m per lane. This width is great for competitions but more importantly for training. Width desired reflects need to allow for adequate space within lane for touchpads and lane ropes during competition and multiple swimmer training.	2.5000M
<b>DEPTH AT START END</b> - FINA Standard to permit safe diving entry from starting blocks. Allows for Water Polo, Synchronized swimming and other sports and activities that require deeper water.	2.750M
<b>DEPTH AT TURNING END</b> – FINA Standard plus a bit more to allow for speed and ease of turns.	1.200M
<b>WATER SURFACE AREA</b>	
<b>PERIMETER</b> – Is the perimeter of the pool.	
<b>VOLUME</b> – Is the volume of the pool.	
<b>TEMPERATURE</b> - of the water to meet the needs of all the aquatic sports that would be using the pool for competition or training.	
<b>SKIMMING SYSTEM</b> – To select the skimming system that makes the best cleaning and a with good circulation with overflow gutters for a fast swimming pool.	Overflow gutter on all 4 walls

<b>RETURNS</b> – To select the proper return and location that makes for a fast swimming pool.	Bottom deflector plates.
<b>MOVABLE FLOOR</b> – will allow for diversity of programming options, can come in multiple levels as well.	No
<b>BULKHEADS</b> – Bulkheads are moveable walkways across the pool that divides the FOP and the programming space.	No
<b>HEADWALLS</b> – A fixed riser on the end of the pool used to install the touchpads, starting blocks and timing equipment for competitions.	1 fixed in place headwall at start / finish deep end of pool.
<b>DIVING FACILITIES</b> – There are 2 types of diving facilities, springboard and platform.	N/A for this pool.
<b>DISPLAY BOARD</b> – Can range greatly from full colour video that can show live video, results advertising, etc. to a LED Numeric Scoreboard that displays numeric only.	1 - 10mm Pixel Pitch Full Colour SMD Video Display Board.
<b>TIMING / SCORING SYSTEM</b> – This will allow you to time and score 1 or all the aquatic sports, comp swimming, water polo, diving, synchronized swimming, and lifesaving.	1 – Timing / Scoring System for the 5 Aquatic Sports.
<b>STARTING BLOCKS</b> – required for one end of pool to be used for short course events as well as club training.	10 - OSB11 Omega Starting Blocks
<b>LANE ROPE STORAGE SYSTEM</b> – preferred in deck system to maintain cleanliness and safety on deck	Yes, or Lane Reels.
<b>UNDERWATER SPEAKER SYSTEM</b> – To be mainly used by Synchro Swim Groups, other aquatics groups will benefit from this underwater audio system.	Portable System
<b>DECK SPACE</b> – adequate deck space required for comp/training and for officials and competitor use during competition.	Min. 6m off the end wall of the pool. Min. 4m off the length of the pool.
<b>DECK LEVEL SEATING</b> – adequate seating required on deck for athletes/coaches during events – Retractable seating preferred.	250
<b>GALLERY SEATING</b> – adequate seating for spectators during programs and events. Must not be accessible from the deck or have lockable entrance.	300
<b>LEISURE POOL REQUIREMENTS</b> – Input into the design of the leisure pool to make it usable for aquatic groups during competition.	2 Lanes of 25m Swimming Area to be used for warmups during Swimming Competitions.
<b>STORAGE SPACE</b> - within close proximity to deck for storage of training equipment. Must be secure and lockable. This would store all the equipment related to the aquatic sports, Lane Rope Reels, Touchpads, club training equipment, etc.	10m x 10m area with divided sections.

<b>OFFICE SPACE</b> – For use of the Aquatic Sport Administration	5m x 5m
<b>SHADING FOR EXTERIOR WINDOWS</b>	Yes
<b>TIMING CONTROL</b> – allowance for designated space on deck at finish line or in spectator gallery to be used by officials during events.	Yes, in the spectator seating or on pool deck.
<b>SERVICE TUNNEL</b> – Space around the basement of the pool for shell maintenance and inspection. As well provides space for lane rope storage system for competition ropes.	Yes
<b>LANE MARKINGS</b> – FINA lane markings for training and competition.	Yes
<b>BACKSTROKE REFERENCES ON CEILING</b>	YES

#### Suggested Additional Design Requirements:

Although we are not expecting a fully compliant FINA Standard pool, there is the expectation that as many standards as possible be committed to in Design to make this pool as fast as a competition pool.

- **Headwall – removable sections for access to pool during community use?**
- **Recessed Ladders to allow for full lanes**
- **Timing/Multi-Purpose Room**
- **Filtration/HVAC to optimize Air Quality**
- **Focus on lower chemicals optimize health**
- **Reference new SNC Pool Construction Guidelines**
- **Leisure pool design elements to promote swimming and programs**