The City of Surrey’s vision was to build a world-class aquatic centre to attract recreational users and professional athletes to the developing Grandview Heights community – the pivotal first piece of a larger master plan. The pool was to meet stringent FINA standards to host local and international competitions in its 10-lane Olympic-sized pool with seating for 900 spectators, yet remain universally accessible and welcome a diverse set of abilities and cultures.

A key consideration here was the facility’s roof, which would accommodate a 10m dive platform at one end and a spiralling waterslide at the other, with competition and leisure aquatics programming in between. Forgoing the typical ribbed ceilings of steel, the design team pursued a novel approach – the world’s most slender longspan timber catenary roof, with clear spans of up to 55m.

Fast + Epp developed the catenary roof using glulam members only 250mm deep supported by post-tensioned concrete buttresses on each end of the building. These spaghetti-like glulam “cables” were erected in just 12 days, supported by V-shaped concrete columns between the pools.