

# Pool & Recreational Shotcrete Corner

Change is the only consistent circumstance in life. With change, brings many wonderful opportunities. The former ASA Pool & Spa Committee is excited to announce that we have changed our Committee name to better encompass and include a more distinct range of applications in our shotcrete industry. The new Pool & Recreational Shotcrete Committee will continue to promote and educate within the pool industry but will also include other areas used for recreational shotcrete such as skateboard parks, miniature golf courses, rockscapes, water parks, zoos, aquariums, etc. The new Pool & Recreational Shotcrete Corner will represent this change and the future of this industry.

*Tom Norman, ASA Pool & Recreational Shotcrete Committee Chair*

## Spring Lake High School and Aquatic Facility

*By Timothy J. Sedmak*

**T**he Spring Lake High School Aquatic facility addition in Spring Lake, MI, was funded through a bond proposal. The Spring Lake community wanted an aquatic facility that not only would be useful to the school swimming program, but also to the community for general recreation. The Spring Lake School District hired Fanning & Howey, a national architectural/engineering firm specializing in educational facilities planning and design. The pool designer working under Fanning & Howey for this project, Bill Robertson of Bill Robertson Pool Design, Northville, MI, incorporated three bodies of water into the area, including a 5656 ft<sup>2</sup> (525 m<sup>2</sup>) competition pool with water depths from 4 to 13 ft (1.2 to 4 m), a 4135 ft<sup>2</sup> (384 m<sup>2</sup>) leisure pool with zero entry to 4 ft (1.2 m) deep with a lazy river, a 150 ft (46 m) tube slide, interactive play structures, and a 189 ft<sup>2</sup> (18 m<sup>2</sup>) spa that is 3 to 6 ft (.9 to 1.8 m) deep.

To construct the competition and leisure pools, the floors were constructed of poured concrete

and the walls were constructed of wet-process shotcrete. Time was of the essence due to a tight schedule for the project. The plumbing crew and excavation contractor began preparation of the site for pool shell installation in December 2007. The six-man shotcrete crew began work in early January with a September 2008 project completion and scheduled facility opening. Over the next 2 months, the crew formed and installed 95,700 lb (43,409 kg) of reinforcing-steel and shot 574 yd<sup>3</sup> (439 m<sup>3</sup>) of 4000 psi (26 MPa) shotcrete.

The competition pool has approximately 300 lineal ft (91 m) of a perimeter overflow gutter system that had to be carefully formed and braced to withstand the pressure applied by the application of the shotcrete. The competition pool walls were shot in 5 continuous days. The pool also had two sets of swim-out steps in the deep end that were formed entirely from shotcrete.

The main attraction for the Spring Lake community is the leisure pool. This pool features



*The all ceramic tile competition pool: eight lanes by six lanes, 4 to 13 ft (1.2 to 4 m) deep. The pool walls, steps, and gutter are all shotcrete*



*The leisure pool with its many curved walls and freeform shaped islands*

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a 22 ft (7 m) tall dumping bucket play feature in the zero entry, a floating water walk, bubble couch, twirl pool, ground geysers, waterfalls, fish fountain, a 150 ft (46 m) tube slide, and a manta kiddie slide. Children of all ages are entertained and engaged for hours. Citizen memberships will help to pay for the construction and operation of the pool complex at Spring Lake High School. The leisure pool will also function as a workout area for the high school football and track team members. The coaches are able to make the lazy river section of the leisure pool available to their players to provide excellent low-impact resistance training by running against the current.

Construction of the leisure pool presented B&B Pool Co. with a few more challenges for forming and layout. This pool was designed with many radii and sweeping walls to make it possible for the lazy river, twirl pool, and bubble couch to function correctly. The shotcrete method made all this possible.

The spa was a late addition due to the project being below budget. The school was able to add a 189 ft<sup>2</sup> (18 m<sup>2</sup>) spa with 12 jets, and a waterfall located 6 ft (1.8 m) above the spa projecting water from an adjacent wall. The decision to add the spa was facilitated by the flexibility that shotcrete construction provided in the later stages of the project with the effect of keeping costs reasonable. With a five-man crew, the spa shell took less than 2 weeks from excavation to backfill, allowing the facility to make its September 1 opening ceremonies.



*The shotcrete spa with the tiling just finished and almost ready to fill*



*The lazy river and twirl pool with Roman columns*



*The lazy river island, twirl pool, bubble couch, underwater bench seating, and divider wall between the beach entry and the lazy river illustrate the complexity of the shotcrete work for this pool*



**Timothy J. Sedmak** received his BA from the University of Michigan in 1970 and worked for Town & Country Pools until 1977 when he became the Vice President and Co-Owner of B & B Pools in Livonia, MI. As Co-Owner of B & B Pools, Sedmak participated in building the company into one of Michigan's largest commercial pool builders and currently directs all phases of the company's operations.

**Tom Norman**, ASA member and Chair of ASA's Pool & Recreational Shotcrete Committee, wants your input. Your comments, suggestions, and the topics you'd like to see covered are welcome. Perhaps you'd like to become a contributing author to Pool & Recreational Shotcrete Corner. Norman and the ASA staff encourage you to contact ASA with your questions and comments at: [info@shotcrete.org](mailto:info@shotcrete.org).