



Pool of Indian Valley CC, near Souderton, Pa., is of gunite type construction built by Norris Blue Lake Pool Co. The pool has a beautiful scenic location pleasing swimmers and spectators.

Look Before You Leap When Planning Swimming Pool

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BUILDING a swimming pool is not as easy as diving into one — though you might think so, judging by the number of golf clubs who leap before they look.

Club members who would never authorize a major clubhouse or golf course change without professional guidance too often approve a pool project based only on the casual design of the local contractor who may, or more often may not, be familiar with the specific planning problems and engineering details involved.

The problems?

Location and size, first of all. Location determines the whole use pattern of the pool. It sets the tempo of pool life. This means more than mere aquatics. Many clubs are locating and planning their pools to be 24-hour and nearly 365-day centers for many other activities.

A dining terrace adjacent to the pool is

a lucrative investment for the dining department. Lunches that may not go in the main room are eagerly received when served on a terrace near the pool. This, and an outdoor bar, can supplement income during most of the day, stretching the swimming season. Even on spring and fall evenings too cool for comfortable swimming, a softly lighted terrace surrounding a pool glowing with underwater lights, makes a delightful place for informal parties, receptions, dances, and other social affairs. A well-located club pool permits these features.

A proper blend of sun and shade is essential. A pool can be sheltered from prevailing winds by its natural location. Or, enclosed in movable glass paneling, it can be heated even in frosty weather. The Broadmoor Pool at Colorado Springs provides outdoor swimming for more than 300

days a year — in full sight of snow-capped mountains. Climate here is on the severe side, but a thoroughly enjoyable — and lucrative—extension of the swimming season is realized.

The pool should be located where there is plenty of room for play — and where sun bathers will not pick up dirt and sand. Basketball, tennis, badminton, volley ball, shuffleboard, and ping-pong, may well be included in the general pool area. But, far enough from the water so those who come to bathe and bask may do so—out of range of stray shuttlecocks and wayward tennis balls.

The scope of pool activity and the ages and number of people who will use it raises the problems of size and dimension. A young, athletic group hepped on competitive swimming may call for one type of pool; an older and wiser group, seeking sunshine and a casual dip, quite another. A general rule is to allow 27 square feet per person. Generally, however, the larger the pool, the less area needed per bather. If this sounds strange, remember that even on a sizzling, peak-load day, at least half the people at the pool are sprawled around, not in it. For small pools, more than 27

square feet per person should be allowed, to handle peak bathing loads.

Details of pool construction follow after location, size, and use-pattern have been established. Some of the ancient, quasi-respectable Roman public baths, built of giant, cut-stone blocks, are still in use, after two-thousand years. They were made for gravity fill, and even with leaks that have developed over the centuries, they can be kept full. To do a comparable job today with the same size stones would cost Caesar's fortune. So concrete or gunite is used. It's better, and more people can afford it.

Pneumatically placed concrete or gunite is much less expensive than poured-in-place concrete. Since it is applied under pressure, it is denser, therefore stronger. Strength up to 4,500 pounds per square inch is normally achieved with gunite as compared with 2,500 or 3,000 pounds maximum with cast concrete. It is true that form-poured concrete can cost almost as little as gunite, and there are situations where it may be advisable to use this material. However, under most conditions, gunite construction has proved more convenient, quicker and stronger.

Function and location should determine shape. If there is to be much competitive swimming, two of the walls should be parallel, and about 75 feet (25 meters) apart. It is easy to shape the other two walls irregularly, and gain the interest of a non-rectangular pool, still permitting competition swimming. Another shape in country club vogue is the L-pool. One leg of the L is used for shallow water bathing and instruction; the other for normal swimming and diving. The plan can be reversed, of course, segregating diving, special instruction, or any other activity.

Water Depth Varies

Water depth maximum varies inversely with the height of the diving board. If there is to be no diving board, four and a half to five feet is deep enough. And, overall pool cost is substantially cut — but, so is attendance, unfortunately. The standard one-meter board requires a water depth of eight feet, six inches, the maximum depth about 15 feet out from the deep end wall. The bottom should then slope up toward the five or 4.6 foot breakpoint to form a deep area, not less than 35 feet long. The standard three-meter or "high" board requires 10 feet of water at least 20 feet from the deep end wall. Slope of any part of the pool bottom where the water is less than 5.5 feet deep should not be more than one foot in each 15 feet. Where water depth



Berkshire CC (Reading, Pa.) pool gets gunite application of concrete under pressure, over heavy steel reinforcing. This provides density and strength. Finished white coat is troweled on by hand after gunite has hardened.

is less than 5.5 feet, there should be no sudden changes of slope. Any flat area on the pool bottom offers excellent lodging places for sediment and should be avoided.

Some authorities claim that the shallow water area, five feet or less in depth, should be 80 percent or more of the total area of large outdoor pools. However, this must be considered in relation to pool volume, bathing load, type of activity, recirculation or flowing through purification system, and so on.

Permanent Interior Finish

One or two further points on construction: the interior finish of the pool should be a permanent material — not paint. Tile is best. Of course it is expensive. Where the expense would be too great to justify complete coverage, a tile band about a foot high at water level is strongly recommended. The band permits easy cleaning of the pool wall at water level, where scum accumulation is greatest. A specially developed silicon and white coating troweled on like plaster is a long-lasting, economical pool finish. A brilliant white when applied, it appears a deep, turquoise blue under water.

Most public pools are equipped with continuous "scum gutter" overflow troughs. Besides providing a convenient hand-hold for short-winded bathers, the scum trough regulates the water level and helps prevent the build-up of waves on the surface. Mechanical "scuppers" perform the same skimming action just as effectively and with less water wastage in smaller pools. But public health regulations usually call for the scum gutter in large public pools. Anyway, with a precast stone coping, the scum gutter, despite its repulsive name, makes a very attractive edge finish.

From the point of view of safety (obviously a most important viewpoint), public pools should be fenced in, especially at a country club where small children like to play explorer and follow-the-leader, while their parents are burning up the fairways. Besides a fence, there should be a good windbreak — tall, thick hedges and evergreens are excellent — so the swimming day and season can be lengthened.

As for mechanical equipment, the filtration system is most vital. A rapid sand pressure type filter system will mean clear, clean water all the time. While many "package" filter units are on the market, it is very risky to install one without the advice of a skilled engineer. The filter is a mechanism that must be geared to the particular pool. Filtration equipment

should be located where there will be no damage from freezing and, in frigid climates, where it can be removed during coldest winter months. Under normal usage, the total volume of water should be filtered about once every six hours.

Heavy particles which settle to the bottom and are not easily picked up in the recirculating system and drawn across the filters for removal may be removed by a vacuum cleaning system. A vacuum head, much like the domestic tank-type cleaner, is connected by a long hose to the suction return on the filter system. This head is pushed back and forth across the pool and the heavy dirt particles are quickly and completely removed. A couple of hours a week of this usually will keep even the largest club pool in perfect condition.

Besides this pool cleaning equipment, there must be water for washing the deck area, with hose and brush or other equipment. The deck should be slightly sloped away from the pool so the run-off from this cleaning will not contaminate the pool water. Provision must, of course, be made for waste water disposal, both for cleaning and for filtration plant backwashing.

It takes little fuel (about as much as needed to heat a moderate size home) to extend the swimming season two or three months in the spring and fall. If heating equipment is to be installed, it should generally be done in conjunction with the filter plant. Most heating systems are thermostatically controlled and can be set to keep the water at desired temperature.

Chlorinization is the surest way of keeping a pool bacteria-free. Again, this is installed in conjunction with the filtration and recirculation system.

Maintaining and operating the pool will depend on location and swimming load as well as size. The cost is moderate even for large pools, and many clubs have found their pools far more than paid for themselves.

With all these pointers, the best advice still is: consult an expert. No pool project should be undertaken without skilled planning from inception through completion. Just as you would consult an architect from the earliest stages of laying out your club's course, so you should call in a swimming pool specialist for consultation and guidance. In the final analysis, it pays — and you save — when you hire a professional pool building firm to handle all architectural and engineering details. The 5% assessment insures a lifetime investment. It is better to look before you leap.