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ARCHTIFACTS

Refresher courses are now being offered for those who will be taking the State Board examination in October. Brenner-McIntire-Arnold have courteously offered the use of their office at 97 W. Lynwood for these classes.

Courses being offered are History of Architecture, Structures and Mechanical Equipment. The classes will be held every Wednesday through September from 8 to 9 p.m.

Those interested in enrolling may call the A.I.A. office for further information.

- AIA -

How many books on drafting and any phase of architecture are gathering dust unused on your shelves? Good use can be made of them.

Thurman Johns, police reporter for The Phoenix Gazette, received a request for such books from an inmate at the state prison. Checking with the prison chaplain, Johns found that the inmate has a sincere desire to study drafting and architecture but that the prison library has no books on the subject. Johns called Arizona Architect for help in rounding up such books.

If you can help, bring or send the books to the office. They will be given to Johns, who will send them to the prison.

The Editor's PERSPECTIVE

"...tomorrow and tomorrow creeps in this petty pace ..."

If the wise Bard of Avon lived today I doubt that he would find anything petty in the pace of time. Instead of creeping, time and progress are zooming.

The architect finds himself directly and responsibly involved in this mad race, which not only involves technological change, but is rapidly making "necessities" out of what were formerly luxuries of living.

The way we're going, lots of people will soon be rationalizing swimming pools into "necessities." Already contractors are advertising: "You can own a pool for the price of a car."

There is a tremendous increase in the number of pools. It has been reported that last year more pools were built than even existed before then; that many more pools will be built this year than last. Arizona is a center in this expansion, and in this issue of Arizona Architect we attempt to underscore a few major points that the architect should be thinking about.

In planning homes, even though no pool is immediately contemplated, the architect would do well to point out to the owner that one may someday be wanted. Location of utilities, cesspools, and the very design of the house could be affected by the fact or prospect of a pool.

Although the shape of a pool will be influenced by general design factors and the relationship of indooroutdoor living, there are more obscure factors that deserve thought.

Children will use pools. Some will first learn to swim in their own back yards, and because of early interest, might even develop into future Olympic champions. That's why more modern pools have side bays for steps — so there is a clear channel for swimming. That's why pools are now three and a half feet in minimum depth, rather than three — so the new approved turnabout techniques in competitive swimming can be learned properly, and practiced

Cost factors in swimming pool design are significant. But as in anything else, the architect considers not only initial costs, but ultimate costs and the design latitude that the various methods of construction allow.

Most pools today are pressure-applied and, in part, hand-formed. This permits maximum design leeway. But these pools generally must be kept filled, rather than allowed to stand empty. New problems therefore arise. Keeping water clean, for example. Another area of concern is safety. Filled pools could constitute an "attractive nuisance." Fencing thus needs consideration, not only from a standpoint of safety and privacy, but as a matter of total design. And what about legal hiability for damages in the event the pool is used in the absence of the owner, and an accident occurred?

All these things the architect will consider in order to advise his clients well. This issue of Artzona Architect deals with some of these matters. Yet the swimming pool industry is growing so rapidly that what is said today may be out of date tomorrow. There are new catalogs constantly being issued by suppliers to this burgeoning industry. And there are qualified contractors and swimming pool engineers who would welcome an opportunity to consult with architects and give them the benefit of their specialized knowledge about these problems. That knowledge, coupled with the architect's ethical obligation to represent the interests of the client, can provide the kind of swimming pools that will fulfill every expectation of utility, safety, and esthetic pleasure.

Since last month's issue on church architecture, I've had a chance to visit the new Presbyterian Church in Stamford, Connecticut, recently featured in Life, and listed here last month in an advertisement for "Air-Roor"

The building is shaped like a fish, with stained glass walls arching and joining each other at the top. I was curious to sense the "feel" of this widely publicized church that looks like no other church in with the control of the church in with the church in with the church in with the church in which the church in which the church in which the church in which the church is the church in which the church in which the church is the church in which i

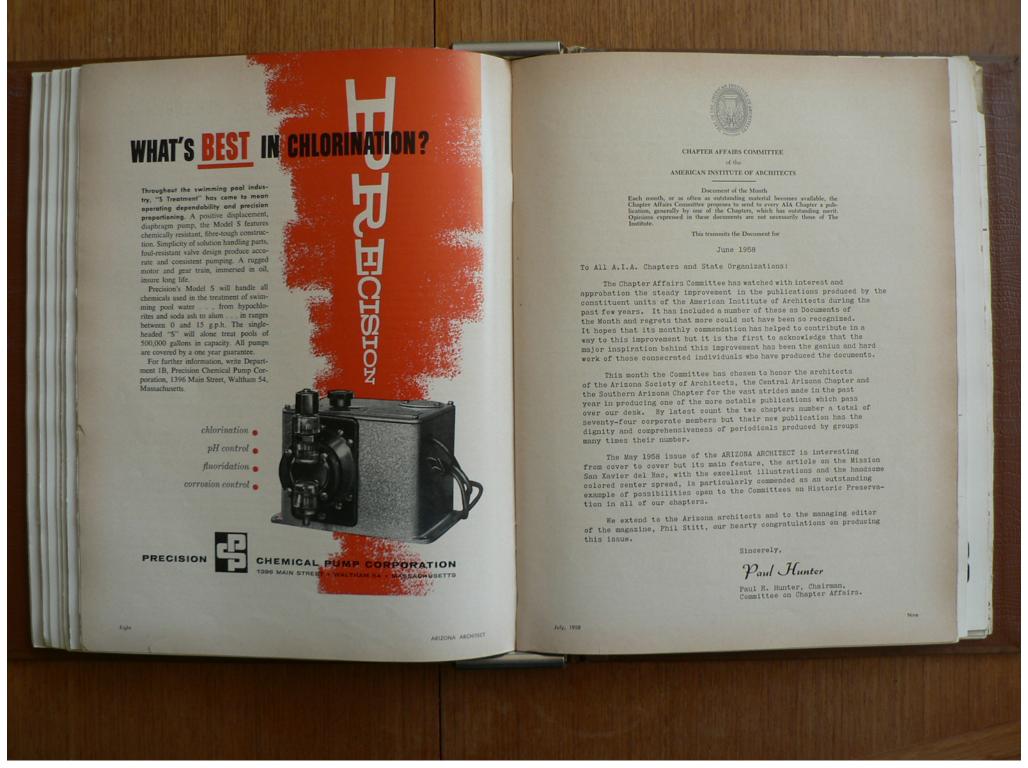
It is beautiful. It is warm. It immediately invites quietude and reverence. If the quality of spiritual leadership is as high as I suspect it must have been to inspire this kind of building program, Stamford Presbyterian Church will become one of America's best-known religious structures.

On the way to New York and Stamford, I flew a day and an evening across this great and beautiful country of ours. From the "organic" beauty of natural contours of mountains, forests and moonlit rivers and lakes, to the man-made designs of subdivided land, ploughed fields and intricate traffic interchanges, the comprehensive view one gets from a transcontinental plane on one clear day is one to remember always.

Phil Stitt

July, 1958





ARCHITECTS

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POOL INSTALLATIONS BOOM

Like Topsy, the swimming pool industry has "jest growed," with a national increase in two years of nearly 150 per cent.

On Jan. 1, 1956, there were 56,000 swimming pools in the United States, according to the National Swimming Pool Institute. Just two years later, the total had climbed to 133,000.

Last year, for the fifth straight year, swimming pool builders increased by more than one-third the number of pools constructed. About 44,000 permanent type pools were built, of which about two out of three were residential.

Although the growth has been felt nationwide, new pools on the west coast to the midwest were installed at an increase of 100 to 600 per cent during 1957. In Arizona, there were believed to be about 5,000 pools in 1957, with an estimated additional 2,000 built or slated to be constructed this year.

Trade estimate for the current year is that 53,000 pools will be built in the nation at a total installed price of almost \$600 million.

At one time, swimming pools were generally regarded solely as the province of very wealthy persons. Today, however, they are within the means of middle income families.

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ARIZONA ARCHITECT

Nearly 42 per cent of all nonresidential pools constructed in 1957 were for motels, an increase of nearly one-third over the preceding year. Of the other remaining non-residential pools, 16.5 per cent were for clubs, 9.5 per cent hotels and 7.8 per cent for neigh-

One factor which has brought the swimming pool to the backyard of the white and blue collar workers is the availability and increase of financing.

Among other factors that have abetted the growth of pools are: increased leisure time; greater income; the surge to the suburbs; decreasing cost of pools; the accent on backyard living; the existence of a pool as a symbol of presdesire to teach youngsters to swim and learn water safety; an inability periods; and increased equity in the



Floating candles for a party at Town and Country Lodge, Phoenix.

COMPETENT COMPACTION TESTING, CONTROL INSURES PROPER SUB-GRADE PREPARATION

The time has passed in which the bearing capacity and stability of Arizona's widely-varied soils can be left to guess-work or "expert" opinions.

Scientific compaction testing and control by an independent laboratory was specified by Ralph Haver & Associates, AIA, for the Scottsdale Elementary School under construction at 56th St. and Exeter Blvd.

"By grading the building site and utilizing controlled compaction before commencing construction, we were able to place the entire group of buildings on one level. This simplified layout of con-struction and roof connections, saved concrete for footings and stem walls, eliminated steps and ramps, and enabled utility lines to be run with fewer offsets," Haver reports.

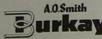
Assumptions can lead to serious and expensive difficulties. Whether the building site is on a fill, partial fill or natural grade, the best insurance against construction problems is competed supervision, testing and control by a qualified independent test-



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ARIZONA ARCHITECT

DESIGNING THE POOL

Obtaining a swimming pool is like buying a suit of clothes. It's possible to purchase a \$40 suit which will well serve its purpose. It is wearable and looks all right. Then again, one can pay \$150 for a suit which serves the same function, but in a different, more highly satisfying manner. So it is with pools.

The National Swimming Pool Institute reported this year that the national average selling price of a pool today is \$3,700. Average of top price pools is \$7,346; in the low price range, \$3,225. In Arizona a functional pool can be obtained for considerably less. Thus it can be readily seen that the cost of a pool is highly variable.

There are three basic types of pools from which the architect or designer can fashion an installation to suit the needs and wishes of the client.

For people who want a pool in which to dunk themselves to cool off and primarily are interested in the social attributes of owning a pool, the free form is most acceptable. The pool generally is small, has lights, is three to five or six feet deep and has no board.

The athletic type of family generally will find that the rectangular pool is best suited to its needs. The rectangular shape, with its modifications still the most popular type of pool, gives the greatest swimming area for the money. For people who will

use the pool a lot and want to swim properly, perhaps the best bet is one about 15 by 38 to 40 feet, three and one-half to six feet deep, with no board or ladder. The board and corresponding depth are optional.

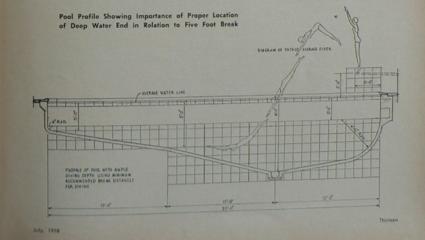
For the wealthy family which entertains large groups of people, a glamorized rectangle about 20 by 40 feet is most popular. These frequently include steps at the shallow end and benches in the deep corners, black tile trim to define the edges and beautify the pool, lights and coping made from flagstone or various blocks and bricks.

The trend in apartment houses and motels, incidentally, is away from boards since one teenager in a 17 by 34 foot pool can completely monopolize use of the pool.

In designing a pool for a client, it is wise to discourage pools two and one-half feet deep or less because it will be wasted area when the children are older and it invites use by young non-swimmers.

A popular misconception is that the depth under a diving board is the most important safety element. On the contrary, as the drawing below shows, the critical point is the five foot depth, at which swimmers come out of the dive. That point should be at least 22 feet from the end of the pool.

Other factors which influence the design for a pool



include such topics as coping and tile, lights, the filtration system, heaters, maintenance and location.

Four colors of coping, in order of their popularity, are white, pink, buff and yellow. Blue or turquoise tile is almost universally chosen, although such combinations of and coping as black and yellow are finding favor.

Frequently, especially if the client has a health problem, anchor bolts are installed for a life line. The location of cutrances and exists is influenced by the family

When designing a house, the architect would do well to plan for a pool even if the client does not want one. He, or a subsequent owner, may want one later. If planning for a pool, the architect should place his sewer lines or septic tanks and cesspools out of the way. If the ground is rocky, it is far more economical to blast it out before construction of the house and refill it until needed for the pool.

For convenience and more economical installation later, put an extra switch right outside so the lights can be turned on before going into the pool area. Wiring for 220 should be available and properly located for later hookup. When building the pool, provide for the heater by putting Ts in the plumbing and, because the heater can be up to six feet tall, choose well its location so that it will be as inconspicuous as possible.

Most pools are placed in direct sunlight, but if there is to be a board, it is wise to avoid facing the board into the west and thereby creating a dangerous situation for late-afternoon divers. Consider where the shade will be in the morning and afternoon. The trend is to place the pool as close to the patio as possible, so that the area becomes an outdoor living room and is easier to supervise. A word of caution, however: leave the pool lights out of the side facing the patio and eliminate a source of irritation to patio-seated spectators.

Once the pool is filled, water requirements are practically nil. With excessive use and evaporation, the pool may require 50 to 100 gallons a day, but by carefully combining the function of the filter, automatic skimmer and circulation system it is possible to get crystal clear, sparkling water and to cut down cleaning maintenance by about 50 per cent.

The swimming pool industry is keeping development in pace with its fast-increasing sales. The next big advance will be fully automatic pool covers. There will be improvements in methods of killing bacteria and algae and in pool finishes. Just as it is with women's clothes, something new and different is developed each year in the pool industry. Any pool builder stands ready to inform the architect of new methods and equipment.

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Fifteen



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ARIZONA ARCHITECT

RESIDENTIAL POOL LANDSCAPING

By George Christensen



Part of the American dream was to have a home that had a back yard planted with flowers and shaded with trees that surrounded a green lawn. Today this dream is shared with a blue swimming pool. In many yards pools are just placed in the center of the area with no thought of their relationship to the landscaping. For safety reasons a wovenwire fence is placed around this construction to add to the eyesore.

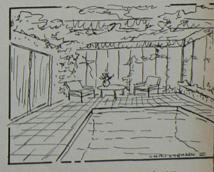
In our desert climate we have a wide choice of landscaping techniques. The surrounding yard is usually partly lawn and partly concrete. A strip of flowers and a strip of trees. The general effect is pleasing, although rather barren in concept.

A pool should be integrated as much as possible with the building and landscaping around it. Even in a very small lot the space can be divided, so that there is some group of foliage that forms a landscaped island to add a feeling of diversity and space to the swimming area. Sensible solutions allow swimmers to walk to and from dressing rooms and cabanas to the pool without walking through areas such as grass or gravel that would track extraneous matter into the water. Of course, this can be eliminated by such things as foot baths. However, in most residential pools the cost is prohibitive. A grassy area adjacent to the water's edge is a most pleasant sun bathing area. Next to such an area should be a shaded plot or patio, where one can get out of the sun and glare during hot periods of the day. The trees that shed their leaves should not be near a pool, and plants that require cultivation are a pool side hazard. Many natural things such as rocks and eacti add a theme to a pool's design and are reflected in the mirrored sur-

For people with small children, safety is of primary importance in pool design. Often landscaping and

convenience take a far second place. One of the most interesting solutions to this problem, sketched below, was a pool on the back of a residence. Near the building the owners had a complete structure of post and beams covered with a wire lattice built over the entire pool area. Interwoven in this lattice was an intricate fabric of plants that formed the walls and ceiling, however, not densely enough to restrict greatly the sunlight. There was no entrance to the pool except for one door from the house, which offered maximum security, control and safety. The total effect was most pleasant, giving definition to the swimming area and still allowing a view of the surroundings.

In designing pools, then, a few simple considerations of relation of the use of the pool and the landscaping will offer far more utility and enjoyment to the nool owner and swimmers.



rventeen





Seven Arizona architects participated in the committee and general business sessions at the A.I.A. annual convention in Cleveland, Ohio this month. From left E. D. Herreras, Tucson; James Elmore, Phoenix; Arthur T. Brown, Tucson; Martin R. Young, Mesa; John Brenner, Phoenix; David Sholder, Phoenix, John Brenner was elected a director of the National Council of Architectural Registration Boards, which held its annual meeting in Cleveland. Not in picture: M. H. Starkweather.

CRITÍQUE

EDITOR, ARIZONA ARCHITECT:

Please accept my personal congratulations on the splendid progress you have made in the design and presentation of Arizona Architect. It is one of our best publications, and I am happy to see the chapter affairs committee recognize it as such.

Please extend this congratulatory expression to David Sholder and Santry Fuller.

ULYSSES FLOYD RIBLE, FAIA AIA, Washington, D.C.

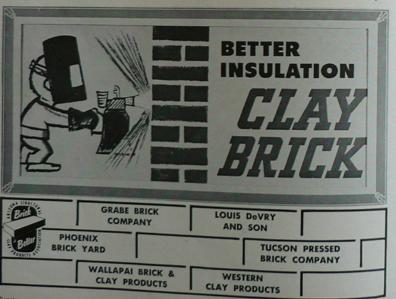
EDITOR, ARIZONA ARCHITECT:

We, the Southern Arizona Chapter, would like to take this belated opportunity of expressing our appreciation, and enjoyment, for the fine job you are doing for the Arizona architects in the publication of Arizona Architect.

In particular we wish to congratulate you on the fine May issue devoted to the restoration of San Xavier del Bac and the work of Mr. Ed Herreras.

D. S. Swanson, Secretary, Southern Arizona Chapter.

ARIZONA ARCHITECT



Public Pools Can Be Too Large; Design Factors Based On Needs

By R. J. KOUPAL, INFILCO, INC.

Many municipal pools being built today are too large for the communities they will be serving. Possibly local civic pride, Chamber of Commerce overoptimism as to population increase, rivalry between neighboring towns, over-designing for extreme, instead of average, hot weather conditions are some of the things bringing about this situation.

Be that as it may, there is this tendency to build pools too large. Thus, it frequently happens the local taxpayers find, at bidding time, they cannot afford to build and equip their proposed new pool substantially—to say nothing of providing sufficient funds for operation and maintenance.

Thirty years of observations and experiences in swimming pool work have suggested the use of certain factors for developing conservative design data indicating just what a community actually needs in the way of swimming pool facilities. These factors are set forth below in the hope that they will prove interactions, and perhaps helpful.

P Population of community to be served by pool 15,00 Px 0.033 Number of persons for which bath house facilities should be provided 40 Px 18.0 Volume of pool in U. S. Gallons 270,00 Px 0.48 Number of square feet of pool surface area 7.20 (60'x1 Px 0.02 Maximum number of persons actually in pool at any one time Px 0.01 Number of persons for which to provide lounging areas around pool 15 Px 0.03 Maximum attendance load at any one time (persons in pool	esting — and perhaps helpful.			
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(a) Factors apply only to public municipal pools.

Px0.12 Maximum daily attendance

assuming 8 hr. day

(b) Towns of less than 5,000 should assume "P" equal to 5,000.

1,800

(e) If population is greater than 25,000, consideration should be given to building two or more smaller pools.

July, 1958

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Next month: Concrete Strength (continued)

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Twenty-one

Liability Hazards Can Be Minimized

By WILLIAM G. BARNES, Attorney

(Editor's Note: As private swimming pools have become common, a tragic corollary has been an increase in child drownings. So that architects may understand the question of legal liability and both advise their clients and prevent unnecessary fears, we asked Mr. Barnes to prepare a special report, part of which follows. For detailed information, consult an

If an uninvited child drowns in a neighbor's unguarded pool, is the pool's owner liable? Given these facts alone, no clear answer can be given on the basis of existing Arizona decisions. We must look to cases in other states and to Arizona decisions on analogous

A property owner has no duty to anticipate the coming of trespassers on his property. He is not liable for injuries that may befall them while there unless he has permitted hidden conditions amounting to a trap to exist on his property.

However, a significant exception to the landowner's immunity exists: the presence on his land of something so attractive to children as to constitute an implied invitation to trespass can render the owner liable for harm resulting from the attracting substance. The doctrine of "attractive nuisance," of relatively recent origin, has not found universal acceptance. Thirteen states have rejected it and others have limited its application to inherently dangerous machinery or to artificial, as opposed to natural, hazards. The semiauthoritative Restatement of Torts, Sec. 339, has recognized a relatively broad interpretation of the

"A possessor of land is subject to liability for bodily harm to young children trespassing thereon caused by a structure or other artificial condition . . . if, (a) the place where the condition is maintained is one which the possessor knows or should know that such children are likely to trespass, and (b) the condition is one of which the possessor . . . realizes or should realize involves an unreasonable risk of death or . . bodily harm . . . and (c) the children, because of their youth, do not discover the condition or realize the risk involved . . . and (d) the utility to the possessor of maintaining the condition is slight as compared to the risk to young children involved . . .

As a general rule, bodies of water are not classified as attractive nuisance. This exclusion applies to natural bodies of water and to artificial bodies which do not differ in characteristics from natural bodies. Why do so many states exempt water bodies from attractive nuisance coverage? Among several strong reasons are: water is a common substance, its danger in pools is obvious and well known, and, in the absence of concealed elements of danger, the presenceof water does not constitute an unreasonable riskparents have a duty to care for their children, warn them of obvious dangers and keep them away from water hazards; this duty should not be shifted to neighbors;

Also, children normally become aware of the nature of water at an early age and its dangers are known to them; some states refuse to apply the doctrine because the dangers of drowning or serious injury due to the water hazard are only possibilities, and not probabilities; some states hold that the keeping of water bodies is not the "implied invitation" to child trespassers required for an attractive nuisance; and perhaps, most important, once liability in such cases is recognized, there might be a deluge of litigation.

In the states permitting recovery under the doctrine for injuries resulting from water hazards, there must usually be some element of hidden danger. Liability is more likely if the hazard is easily accessible to children, if the owner can reasonably anticipate the presence of children and if he should recognize the dangerous propensities of the hazard. Whether the owner takes reasonable precautions under the circumstances are questions of great importance in such

The age of the children can be crucial. Many of the cases rejecting the attractive nuisance doctrine and denying recovery involved as the trespassers young boys. Such boys could recognize the danger of water and for landowners to keep them away was a near impossibility. As one Wisconsin judge said, . . to construct a boy-proof fence at a reasonable cost would tax the inventive genius of an Edison." But is the same principle applied if a three-year-old tot falls in a private swimming pool?

Another element of importance is that of "attraction." Many courts feel that the substance must be so unusual and uncommon as to draw the child upon the owner's property. Thus, a normal, well-known object cannot be the subject of attractive nuisance.

Courts have been emphatic in declaring that the doctrine should not be a substitute for the basic responsibility of parents for the welfare of their children. As one judge stated, "There is a growing tendency to make everybody responsible for the safety of children except their parents. . . . The duty to safeguard them, however, rests primarily upon their parents. . . . Parental responsibility is in danger of becoming a vanishing quantity in this age of progress. The law should not, without effort, let it entirely dis-

The modern private swimming pool is an artificial body of water, often placed in the middle of a residential section for the specific purpose of recreation. It is sufficiently small in size to make fencing or guarding practical. The residential nature of the neighborhood puts the owner on notice of the probability of trespasses by children. Most decisions involving residential swimming pools have, in the absence of special elements of danger or invitation, rejected the attractive nuisance doctrine.

In a 1956 case, Justice Dudley W. Windes gave one of the finest expressions of the doctrine available

"If one maintains on his premises an artificial, dangerous instrumentality under such conditions that he as a reasonable person should anticipate the access of children who would not realize the dangers involved and should anticipate that there is an unreasonable risk that the instrumentality would tempt or entice the children to trespass by tampering, playing, or intermeddling therewith and that there is an unreasonable risk of harm resulting from such trespass, he is negligent, unless to provide protection against the harm would involve serious interference with the owner's use of his premises or would entail unduly burdensome costs."

Arizona cases on analogous subjects show a decided trend toward a more liberal application of the doctrine of attractive nuisance. Further, the expression of the doctrine by Justice Windes and the approval of the Restatement rule in another case provide a definite standard which can be applied to swimming

According to Windes or the Restatement, or both, it is possible that Arizona courts, on the basis of existing Arizona law, could find that residential pools are attractive nuisances, at least to very young children, though such a finding would be different with respect to children old enough to appreciate fully the danger

If there is a possibility the pool owner may be liable for the drowning of trespassing children, what can he do to protect himself? To offer a very sketchy list of suggestions, he might:

Build a fence around his pool or around his property. Even then he should be sure that it is high enough to discourage climbing by small children. It would be wise to lock the gate.

Then even if a child should get in, the court would probably find sufficient precaution had been taken;

Even if it would be meaningless to younger children, a warning sign would put older children and possibly parents on notice as to the danger and the landowner's desire that trespassers stay away from

It might mean becoming the ogre of the neighborhood, but a warning to trespassing children and their parents might save the landowner much trouble later;

The landowner might agitate for some type of legislation to clarify his position with reference to trespassing children who get in his pool;

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Pool in the Pines

The ole swimmin' holes are drying up, even in the mountainous areas of the state. Because of dry spells and overpopulation of the few natural swimming spots in northern Arizona, owners of summer camps are putting in pools.

At Friendly Pines, operated for 17 seasons by Phoenician Bud Brown, a pool was installed last year in order to provide for the day-long water traffic at the camp.

Two pools, in fact, were installed, a major factor in water safety at the camp. The large pool, for accomplished swimmers, is 16 feet wide by 32 feet long, with a graduated depth of three to seven feet. The smaller pool is 14 by 24 feet, with a depth graduation of three to five feet. Brown reports that the youngsters can be watched and supervised more effectively than would be possible in one larger

Again improving on nature, Friendly Pines has in its pool a completely automatic filter system and skim-



mer so that changes in water, on short supply, are infrequent. A heating system improves the temperature of the water, which is 52 degrees coming out of the ground and the heating extends the swimming season from two to three and one-half months.

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Functional **Public Pools**

By KEMPER GOODWIN, AIA

The main design problems of a public pool can often be centered as much in the bath house and office area as in the pool itself.

Our firm, in designing the pool for Arizona State at Tempe, found that there were specialized requirements for both pool and shower-locker

For the pool, which is 60 by 110 feet and divided by a bulkhead into 75 and 31 foot areas, we had to provide sufficient length so that swimmers could qualify for records which might be set in intercollegiate meets and also enough width so classes or water sports could be divided into groups and go on simultaneously.

Because the pool is used for both instruction and recreational swimming, the decks had to be wide enough to accommodate those involved and to permit spectators at

Other features included raising the bulkhead to eliminate the need for starting platforms in competitive swimming; raising the office to a height permitting full visibility and using the space under it for storage; and the erection of a 10 foot wall to cut out winds and still tie in architecturally with other heights.

We still had the problem, however, of getting students changed in the brief time allowed between classes. Our studies showed that over 50 per cent of the time was taken in the check-out process, so instead of baskets, we devised a system of racks on which the students can deposit all their clothes. The racks, when full, are rolled into the checkroom and

After the class, students save the waiting time of a number-basket operation. When the pool is used for recreation only, the racks remain in the checkroom and numbers are given. There is also a single check-in for valuables so that one attendant can

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F. H. "BUNK" PORTER ELECTED NEW REGIONAL DIRECTOR OF ALA

Frederic H. Porter, Sr., founder and first president of the Wyoming chapter, AIA, this month was elected regional director of the AIA to represent the Western Mountain District.

Frederic "Bunk" Porter, of Cheyenne, has been in the profession since 1906 and is a registered architect in Wyoming, Colorado, Nebraska and Utah. He is present secretary of the Wyoming AIA chapter and has been a member of AIA since 1925.

Regional chairman of the National Committee on Architectural Practice, AIA. Porter also serves as secretary-treasurer of the Wyoming state board of architects.



"Bunk," who went into practice for himself in 1923. was elected to the Wyoming legislature of 1931. where he introduced an architectural registration law. It was after 20 years of promoting the law, however, that it was finally passed in 1951.

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Pool Plans, Specs Need Sanitation Bureau Okay

In accordance with the provisions of part IX, regulation 81 (h) of the Sanitary Code, an application for the approval of plans and specifications for the construction of swimming pools or alterations to existing swimming pools must be submitted to the bureau of sanitation, state department of health, on a form furnished by the bureau.

The application must be accompanied by plans and specifications and a report describing the proposed construction in detail, giving the basis of design and furnishing information not clearly shown on the plans.

In general, the plans of swimming pools and appurtenances, or modifications thereto, should be in sufficient detail to show whether the pool can be constructed and operated in accordance with the requirements of the appropriate section of the Sanitary Code.

Plans should show the source of water supply, the method of disposal of discharged water and of sanitary sewage. They shall also show the proposed method of operating the pool, i.e., recirculation, flow-through or fill-and-draw.

A copy of policies governing the preparation and submission of plans of swimming pools and bathing places may be obtained from the bureau of sanitation.

Engineering Bulletin No. 4, the report deals in detail with requirements for such topics as general principles of bathing place sanitation, location and layout of pools, design and construction features, proportioning pool areas to expected load, inlets and outlets, scum gutters, steps, ladders and step ing, ventilation and heating, the recirculation system, filters, disinfection, diving towers, spring boards and floats, and safety pre

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More specifically, they said: "These graceful lines reflect both beauty of structure and simplicity of design. Good taste in swimming pool accessories is achieved by means of close relation between the architect and the "Nice clients!" they added.

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The Pipe Trades Industry Program of Arizona is devoted to higher quality throughout the trade. By co-operating in apprentice and journeymen training programs, by seeking high standards in building codes for protection of health and safety, and by requiring contractors and employees to meet ever-increasing standards, the Program constantly seeks a better Arizona.

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BOOKS FOR PROFESSIONALS

REINFORCED CONCRETE IN ARCHITECTURE by Aly Ahmed Raafat. (Reinhold Publishing Corporation, \$15.00). Reviewed by George W. Christensen.

Concrete is where buildings begin. In Arizona the concrete is poured early in the day because of the heat. From then on concrete is almost forgotten, save for boxy beams and columns in a few buildings, Reinforced concrete is on a new threshold; in Arizona where this material is so ideal, we as architects must consider the many ways it is used so effectively.

"Reinforced Concrete In Architecture" brings back to view how very plastic a material concrete is. One of the best collections of building photos throughout the world show the varied nature of the material.

No architect can remain in practice and not keep up to date. Perhaps just a reminder will recall terms such as "pre-stressed," "curvature forms" and "linear structural forms." Not the way an engineer must look at them but the way an architect is free to look at them. Review and clear investigation will point out that concrete does not have to be boxy. Cement is fluid. It is poured into forms. Architecture and economy are easily combined in reinforced concrete, especially where the surface is exposed. Arizona is one of the many climates in the world that can and should use reinforced concrete effectively.

This book is divided very neatly into ten chapters and gives a complete description of the many ways concrete is used today and the photo collection of the buildings used as examples is well worth any architect's spare time. It begins with a technical approach to concrete and is followed by consideration of the architectural approach, material, design and regional development. All of this goes under the main title of "Cycle of Growth," which is followed by "The Architecture It Creates," which analyzes structures and

Reinforced concrete is at its real dawn in architecture and this book gives a good glimpse of the direction it will take in tomorrow's buildings

THE NORTHWEST ARCHITECTURE OF PI-ETRO BELLUSCHI. Edited by Jo Stubblebine. Fully two-thirds of this book is devoted to superb photographs which bear witness to Belluschi's integrity, his rare ability to express in wood and stone the rugged character of the Pacific Northwest. An excellent reference bibliography is included. 112 pages -8 x 10½ \$6.50

JAPANESE TEMPLES AND TEA-HOUSES by Werner Blaser. (Translated by D. Q. Stephenson). The

prize-winning Wiss book, available for the first time in the English language, and profusely illustrated with over 90 photographs, plus line drawings and plans of classic examples of Japanese architecture, 156 pages. \$12.75.

THE NOTEBOOKS OF LEONARDO DA VINCL The Edward McCurdy translation, edited and abridged by Robert N. Linscott. A sampling of Leonardo's ingenious ideas on anatomy, fossils, perpetual motion, astronomy, guns, etc. \$1.65.

BAUHAUS: 1919-1928. Edited by Walter Gropius. Covers the many activities of this famous school and its pioneer efforts in modern design. 224 pages, 550 plates - cloth. \$5.50.

DESIGN OF CONCRETE STRUCTURES by Leonard Church and Urquhart and George Winter. Covers plain concrete in detail, deals with pratical design problems, contains useful data and design tables, covers all changes in the 1956 ACI BUILDING CODE 546 pages. \$8.00.

THE SWIMMING POOL by Robert Scharff, A book written for those people planning a pool or for those who have owned one for years. Covering a variety of subjects including: maintenance, landscaping around a pool, pool safety, various types of pool construction, filters, etc. Publication date - July. \$3.50.

GREAT FRENCH PAINTING IN THE HERMIT-AGE. Text by Charles Sterling, Curator of Painting in the Louvre, Paris. 216 pages, 162 reproductions with 80 in full color, hand tipped. \$25.00.

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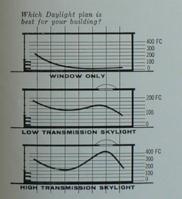
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