

(12) Reconstructed or altered pool means a pool that requires replacement of or modification to a pool shell, recirculation system or its appurtenances so that the pool may continue to be operated in a manner considered by the department to be free from health or safety hazards. It does not include the replacement of equipment previously approved by the department, providing the type and size of equipment is not revised nor does it include normal maintenance or repair.

(13) Revised submittal means the submission of revised plans and/or specifications which either shows changes in the pool shell or recirculation system design necessitating additional mathematical or hydraulic computations or such a number of other items that in the opinion of the department, could not be rectified by specification addenda.

(14) Sanitary beach survey means an on-site survey for evaluation of the physical features of a watershed area to determine the existence or absence of conditions that may render the facility unsuitable for full body contact water activities because of bacteriological, chemical, physical or biological water quality factors.

(15) Shallow portion means the shallow side of the breakpoint or that portion of a pool having a design water depth of 5.5 feet or less.

**History:** Cr. Register, November, 1975, No. 239, eff. 12-1-75; renum. from H 71.03, Register, May, 1982, No. 317, eff. 6-1-82.

**HSS 171.04 Plans and specifications.** (1) **APPROVAL.** Every owner, personally or through his engineer or architect, shall obtain approval of plans and specifications covering construction, alteration or reconstruction of public swimming places or installation or alteration of their equipment prior to the start of construction or installation. Any deviation from the plans and specifications or conditions of approval thereof shall not be made without prior approval of the department excepting as provided in s. HSS 171.03 (12). Preliminary plans and specifications may be submitted for review and comment.

**Note:** See s. HSS 171.24 for fee schedule.

(2) **PREPARATION.** (a) *Prepared within Wisconsin.* Plans and specifications for all public swimming places and their equipment, including adequate supporting design data, shall be prepared by a Wisconsin registered architect or professional engineer and bear his seal and signature.

(b) *Prepared outside Wisconsin.* 1. Plans, specifications and calculations prepared in a state other than Wisconsin by an architect or engineer not registered in Wisconsin will be reviewed providing they are submitted in the following form:

a. The plans, specifications and calculations bear the signature and seal or stamp of an architect or engineer registered in a state other than Wisconsin; and

b. The plans, specifications and calculations have attached thereto a certificate dated, signed and sealed or stamped by an architect or engineer registered in Wisconsin which states that the attached plans, specifications and calculations were prepared in a state other than Wisconsin by an architect or professional engineer registered in that state, specifically describes the work performed by the Wisconsin registered archi-

tect or engineer in reviewing the plans, states that the design is structurally safe, and states that the plans and specifications comply with all applicable state codes.

(3) **SUBMISSION.** Three identical sets of plans and specifications shall be submitted to the department, 2 of which are retained by the department and one transmitted to the owner. If the designing engineer or architect desires an additional approved set or sets of plans and specifications, the necessary number shall be initially submitted.

(4) **DETAILS.** The plans and specifications shall include:

(a) *General.* The following information shall be shown on the plans or be submitted in a separate report:

1. The name and address of the owner.

2. The location of the public swimming place by street address or if none is available, by quarter-quarter section, section, town, range, township and county.

3. A description of any existing swimming facilities and the population of the municipality or establishment to be served, including non-residents or guest patrons.

(b) *Location.* Each public swimming place shall be located at a site conducive to good operation, maintenance, safety and freedom from contamination. It shall have suitable site drainage and separation from sources of harmful environmental factors. Artificial or partially artificial swimming places shall not be located in the regional floodplain of rivers, streams or flow-through lakes. For areas bounding a landlocked lake, the highest historic water level shall be used.

(c) *Plot plan.* A general map and detailed drawing showing the floor plan of pertinent portions of the structure, pool orientation, pool surface area and volume shall be included. Water supply facilities, public or private sewers and relative elevations of paved or other walkways, equipment room floor, and design pool water level shall be shown. When public water and sewer systems are proposed to serve the public swimming place, elevations of storm and sanitary sewer inverts and street grade shall be shown.

(d) *Construction plans.* Detailed scaled and dimensional drawings shall include but not necessarily be limited to:

1. A pool layout plan; longitudinal and transverse cross-sections of the pool through the main drain outlet; location and type of inlets, overflows, pool drains, vacuum fittings, deck drains, drinking fountains, piping, hosebibbs, fences and telephones; design of deck, curb or walls enclosing pool, paved walkways, overflow gutters or devices; and the location and design of ladders, stairs, diving boards and artificial lights.

2. A flow diagram, showing the location, plan and elevation of filters, pumps, chemical feeders, ventilation devices, heaters, surge tanks including operating levels, backflow preventers, valves, piping, flow meters, pressure gauges, thermometers, test cocks, sight glasses and the drainage system for disposal of pool and filter washwater.

3. Location, plan and elevation drawings of any bathhouse facilities provided including dressing rooms, lockers, basket storage, showers, toilets and other plumbing fixtures; partitions and devices for routing of swimmers; storage facilities for first-aid and maintenance equipment; floor construction; and means of lighting and ventilation.

(e) *Specifications.* Complete technical specifications for the construction of the pool and all appurtenances shall accompany the drawings and shall include but not necessarily be limited to:

1. All construction details not shown on the drawings.
2. Detailed requirements as to the type, size, operating characteristics and rating of all mechanical and electrical equipment.
3. Detailed information with respect to plumbing fixtures and piping, when applicable such as in bathhouses or floor drains utilized as deck drains.
4. The sources of all water supplies.
5. Filter media such as diatomaceous earth, sand, gravel or other approved material.
6. Miscellaneous appurtenances.

(5) CONSTRUCTION SUPERVISION AND CERTIFICATION. (a) *Supervision.* 1. Every public swimming place shall be constructed under the supervision of a Wisconsin registered architect or professional engineer. Said architect or engineer shall be responsible for the facility being in substantial conformance with the drawings, plans and specifications approved by the department. Should the supervising architect and/or engineer or the department, be confronted with a nonconformance to the code during construction said parties together with the designing architect and/or engineer shall confer on a decision to effect compliance.

2. Prior to the start of construction the owner of the improvement or his authorized agent shall designate to the department in writing the name and registration number of the supervising architect or engineer retained for the improvement.

3. Said supervision is a professional service, as distinguished from supervision of construction by a contractor, and means the performance of an architect's or engineer's service of reasonable on-the-site observation to determine that the completed construction is in substantial compliance with approved plans and specifications. No change in plans or specifications which involve any provisions of this code shall be made unless such change is signed, sealed and dated by the architect or engineer under whose supervision the change was made and approved by the department.

(b) *Certification.* On completion of the construction, the supervising architect or engineer shall file a written statement with the department, on the form it provides at the time of approval, certifying that, to the best of his or her knowledge and belief, construction has been performed in substantial compliance with the plans and specifications approved by the department.

## HSS 171

**HSS 171.05 Structural stability.** All pools shall be designed to be structurally sound using suitable and durable materials which are inert, nontoxic to humans and watertight. Provision shall be made for the relief of stresses which may occur as a result of unbalanced hydrostatic pressures and to protect the pool structures from stresses which may develop due to freezing. All metal pools shall be protected against corrosion by galvanic action or aggressive water by provision of appropriate grounding devices, bonding, insulation and/or sacrificial rods or other units.

**History:** Cr. Register, November, 1975, No. 239, eff. 12-1-75; renum. from H 71.05, Register, May, 1982, No. 317, eff. 6-1-82.

**HSS 171.06 Water supply.** (1) **GENERAL.** The source and quality of the potable and non-potable water supplied to a public swimming place shall at all times meet the approval of the department.

(2) **POTABLE SUPPLY.** The source of supply shall be in accord with the applicable standards of the department of natural resources. Equipment design shall take into consideration the quality of water to be used.

(3) **POOL SUPPLY.** The supply for a pool shall be from an adequate and approved source. The total alkalinity, pH, iron and manganese of the supply shall be indicated. No direct connection shall be made between potable water supply piping and a pool or the piping thereof.

(4) **BEACH SUPPLY.** See s. HSS 171.21 (2).

**History:** Cr. Register, November, 1975, No. 239, eff. 12-1-75; renum. from H 71.06, Register, May, 1982, No. 317, eff. 6-1-82.

**HSS 171.07 Maximum pool attendance.** (1) **COMBINATION, SWIMMING OR EXERCISE POOLS.** The shallow and deep portions of the pools shall be based upon 10 and 24 square feet per patron, respectively.

(2) **INDOOR INSTRUCTIONAL POOL.** The shallow and deep portions of the pools used for class purposes shall be based upon 25 and 36 square feet per student patron, respectively.

(3) **WADING POOL.** Wading pools shall be based upon 10 square feet per patron.

(4) **MAXIMUM POOL LOADING.** A sign indicating maximum allowable pool loading shall be permanently and conspicuously mounted with the pool enclosure.

**History:** Cr. Register, November, 1975, No. 239, eff. 12-1-75; renum. from H 71.07, Register, May, 1982, No. 317, eff. 6-1-82.

**HSS 171.08 Pool basin.** (1) **ENTRANCE AND SEPARATION.** Swimmers shall gain access to combination, swimming, limited purpose or exercise pool decks adjacent to the shallow portion unless the pool deck width at the point of access is at least 10 feet. This requirement does not prevent provision of emergency exits at other locations. Area, routing and drainage separation shall be provided between the areas used by patrons and those used by spectators.

(2) **DEPTHS.** Water depth at the end wall in the shallow portion of a combination, limited purpose, exercise or swimming pool shall be between 30 and 36 inches unless a variance in depth is approved by the