

*State of Connecticut
Department of Public Safety
OFFICE OF STATE BUILDING INSPECTOR
Division of Fire, Emergency and Building Services*

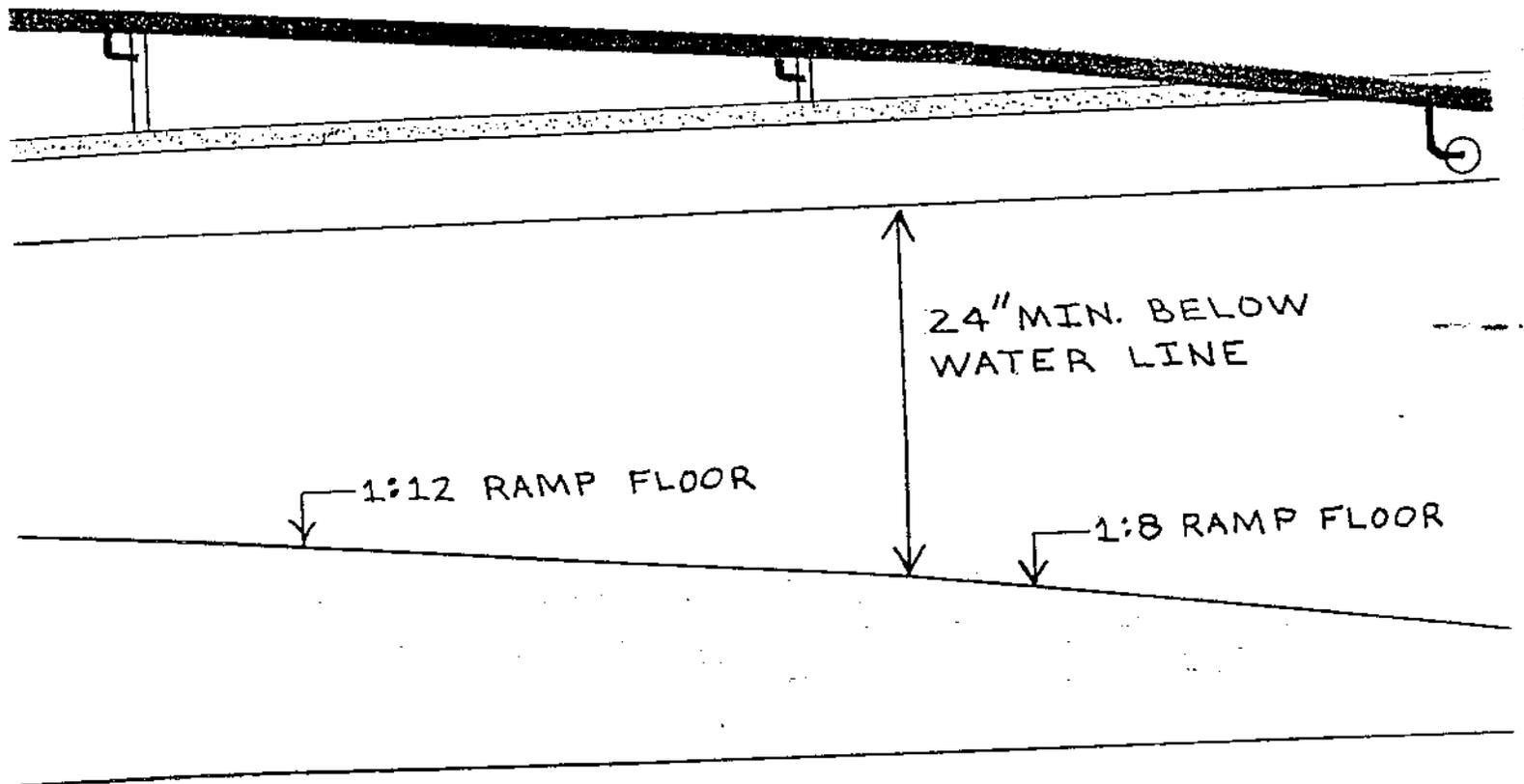
ILLUSTRATIONS TO SECTION 421.0

SWIMMING POOLS



The drawings contained in this brochure pertain to the 1996 BOCA National Building Code and the Draft-Connecticut Supplement/1998 and are for illustration purposes only. The written code text shall apply.

PUBLIC SWIMMING POOL



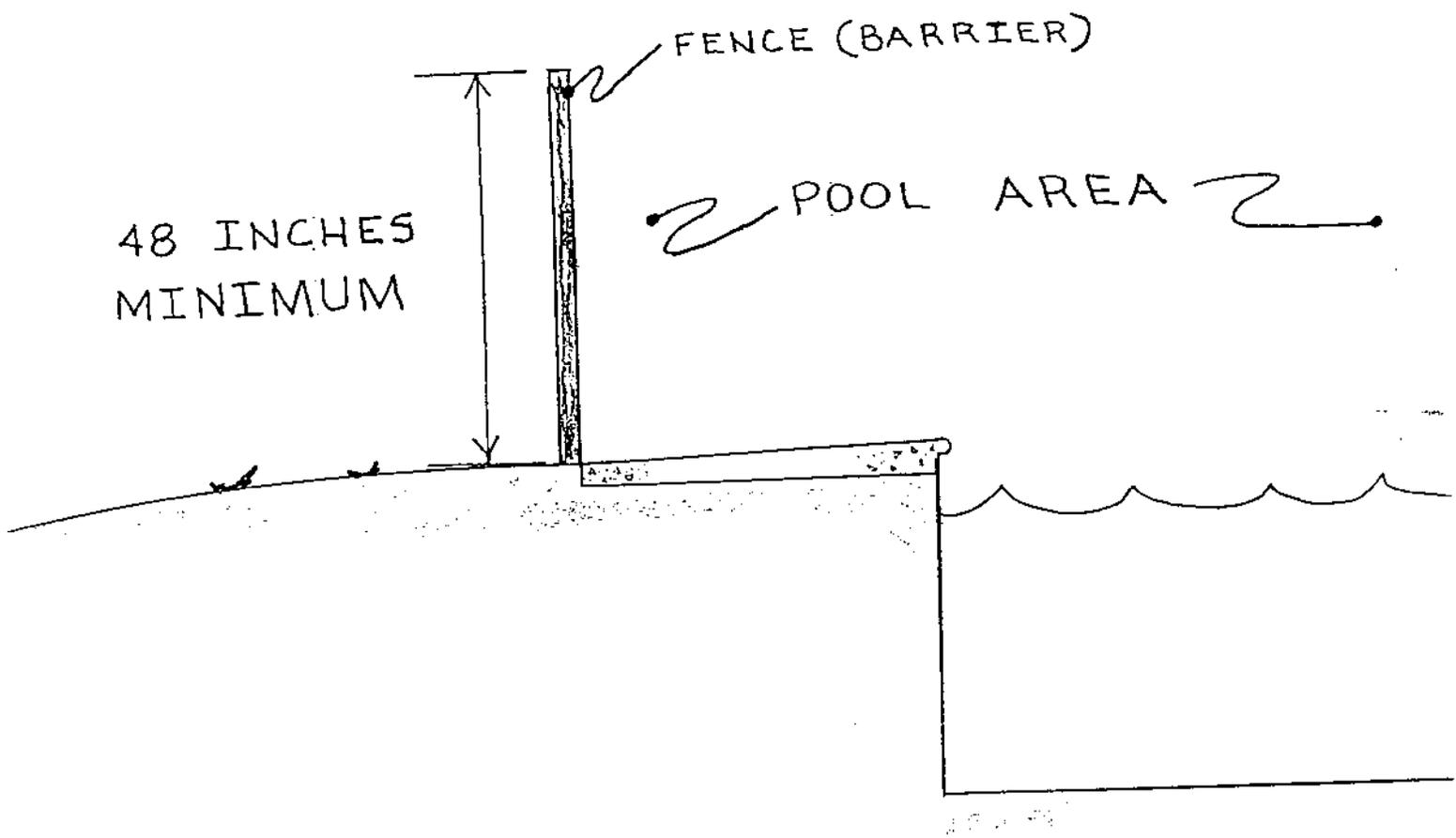
421.12 ACCESSIBILITY:

LESS THAN 50 METERS = RAMPS OR FIXED OR PORTABLE LIFTING EQUIPMENT

50 METERS OR MORE = RAMPS ONLY.

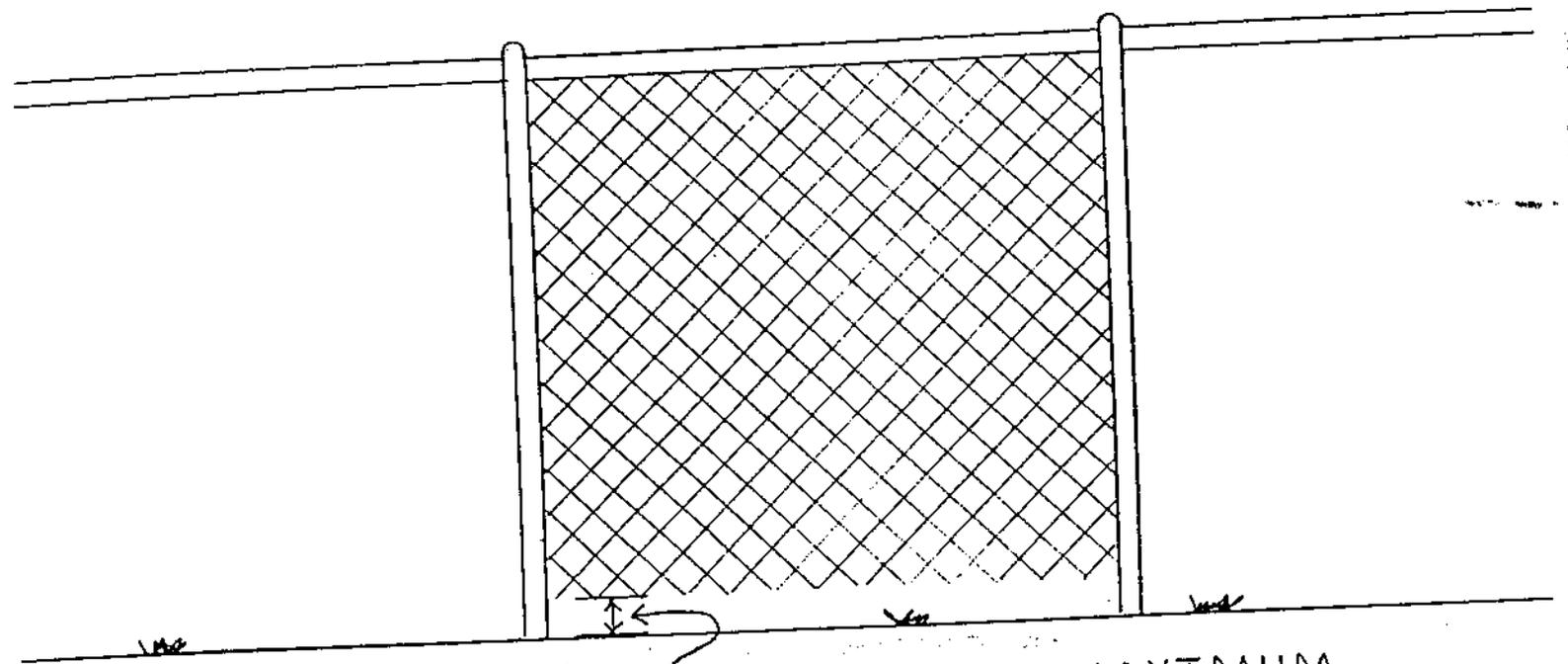
HANDRAILS ON BOTH SIDES OF RAMP

CROSS SECTION



SECTION 421.10.1, ITEM 1

CROSS SECTION



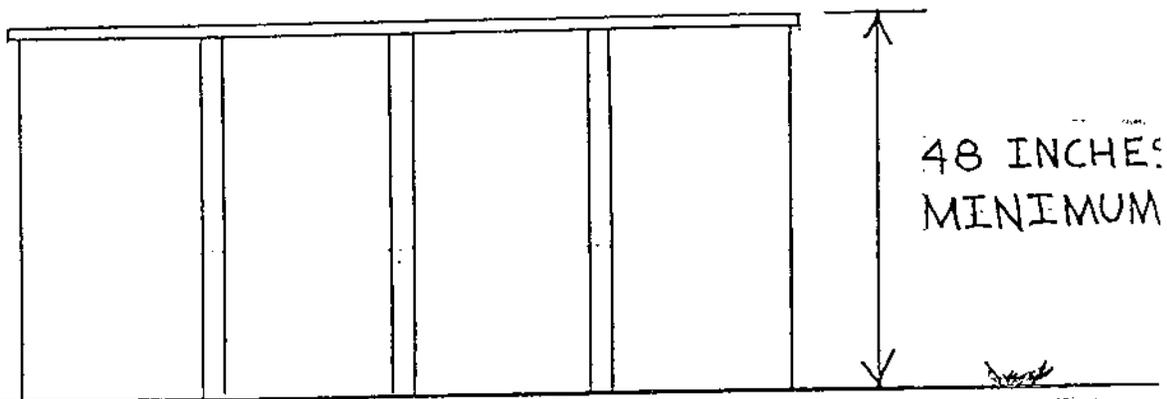
2 INCHES MAXIMUM

OUTSIDE OF THE POOL ENCLOSURE

SECTION 421.10.1, ITEM 1

ELEVATION

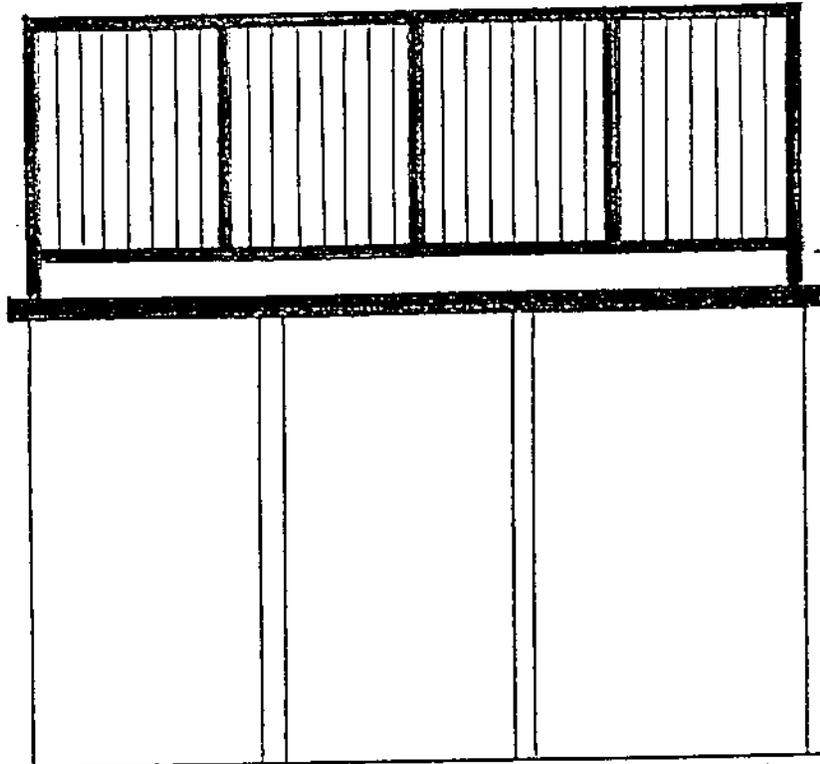
THE ABOVE GROUND SWIMMING POOL STRUCTURE
COULD BE THE BARRIER IF:



ABOVE GROUND POOL

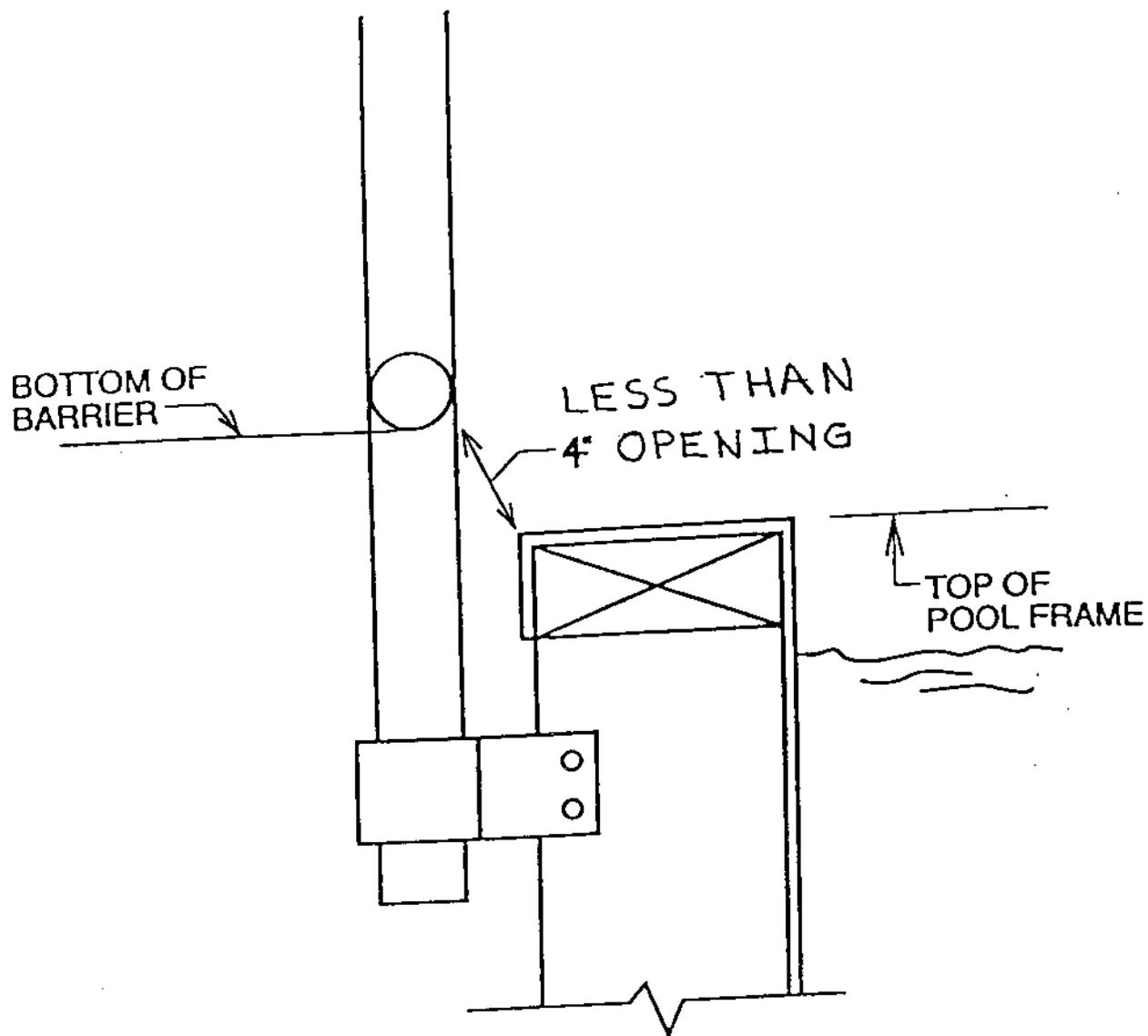
SECTION 421.10.1, ITEM 1

ELEVATION



ABOVE GROUND POOL
SECTION 421.10.1, ITEM 1

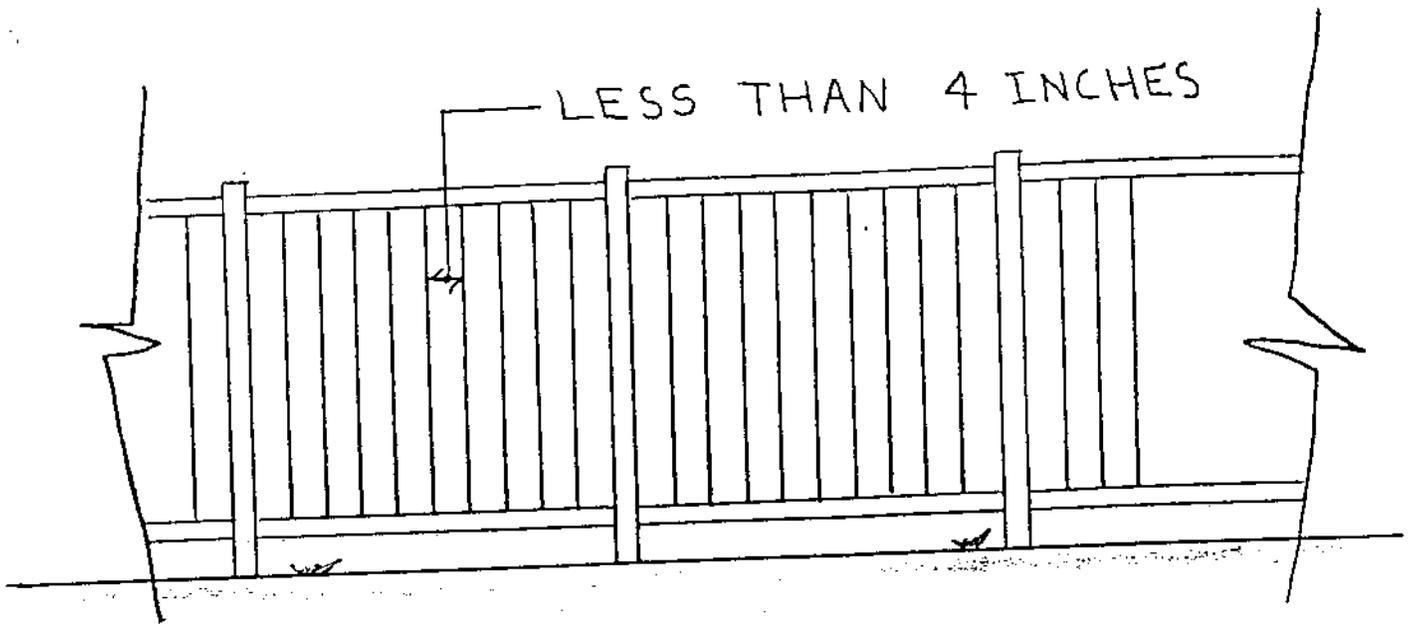
ELEVATION



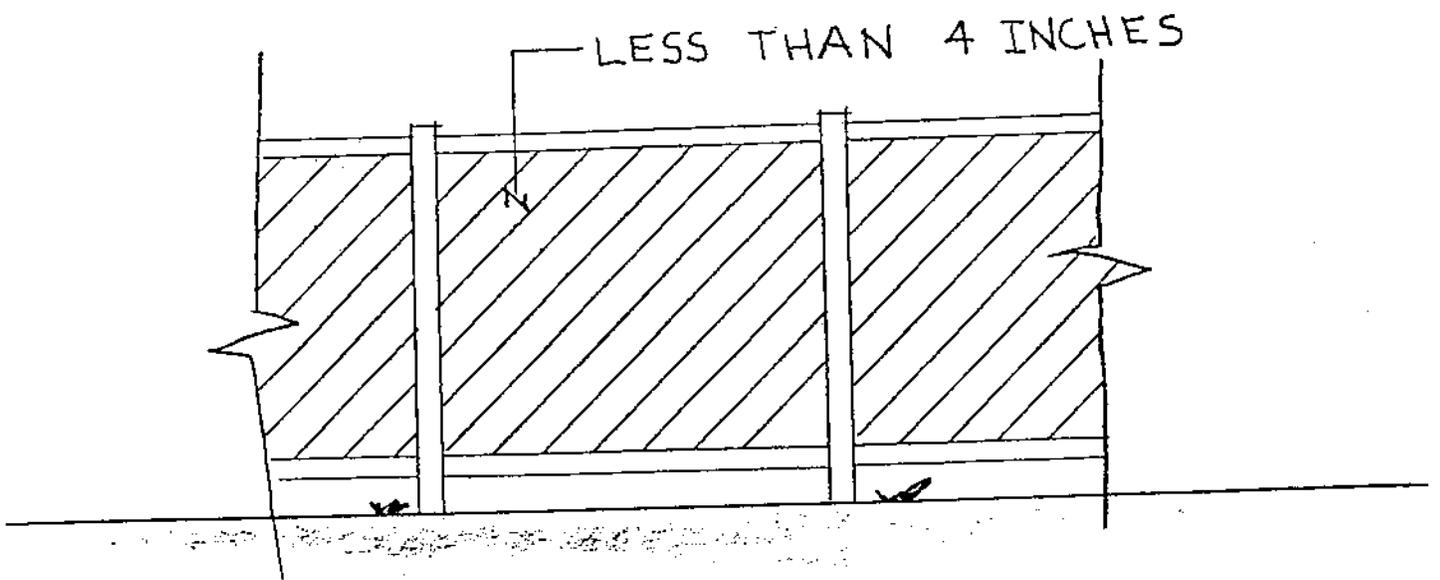
BARRIER MOUNTED ON THE POOL STRUCTURE

SECTION 421.10.1, ITEM 1

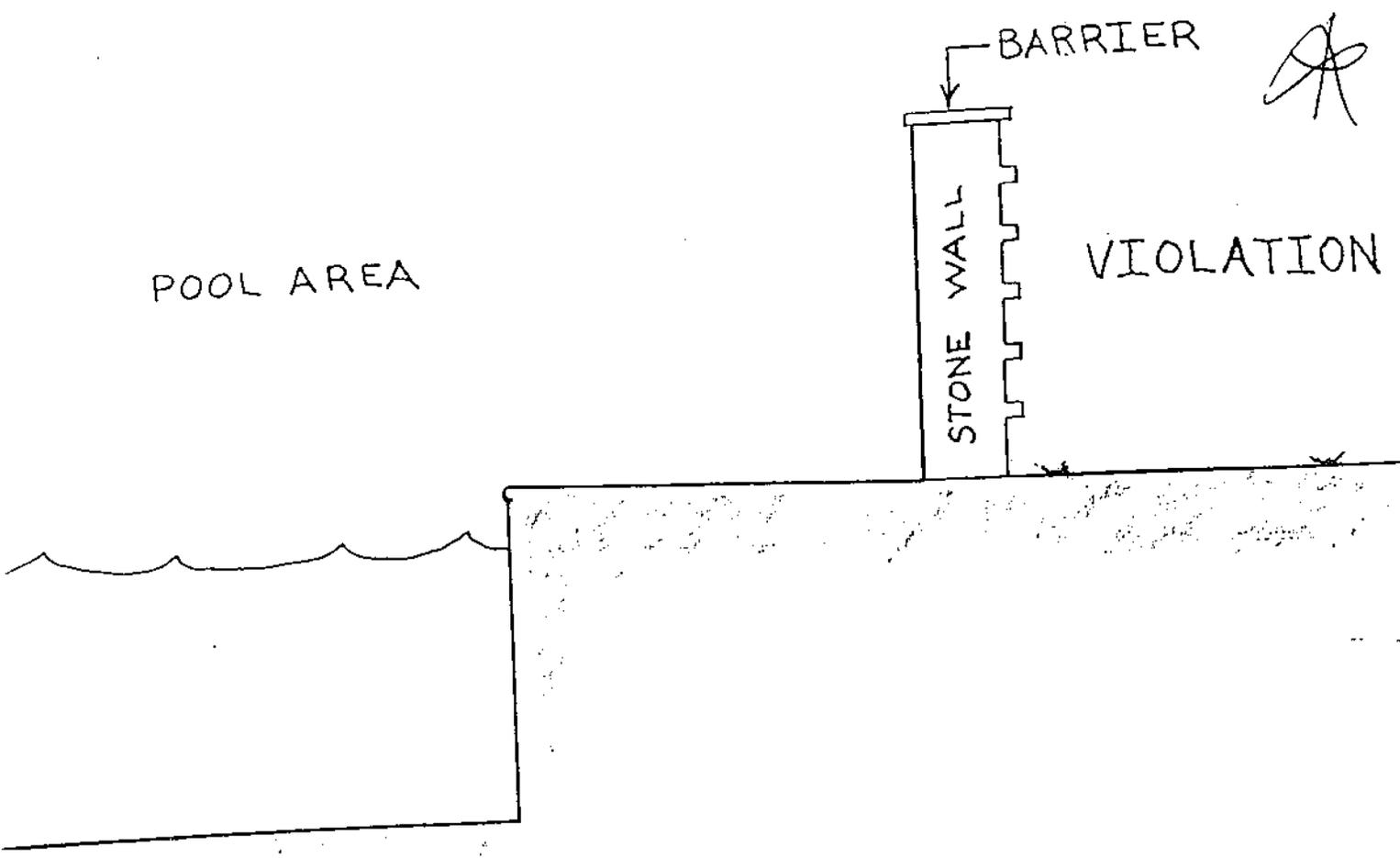
CROSS SECTION



SECTION 421.10.1 , ITEM 2

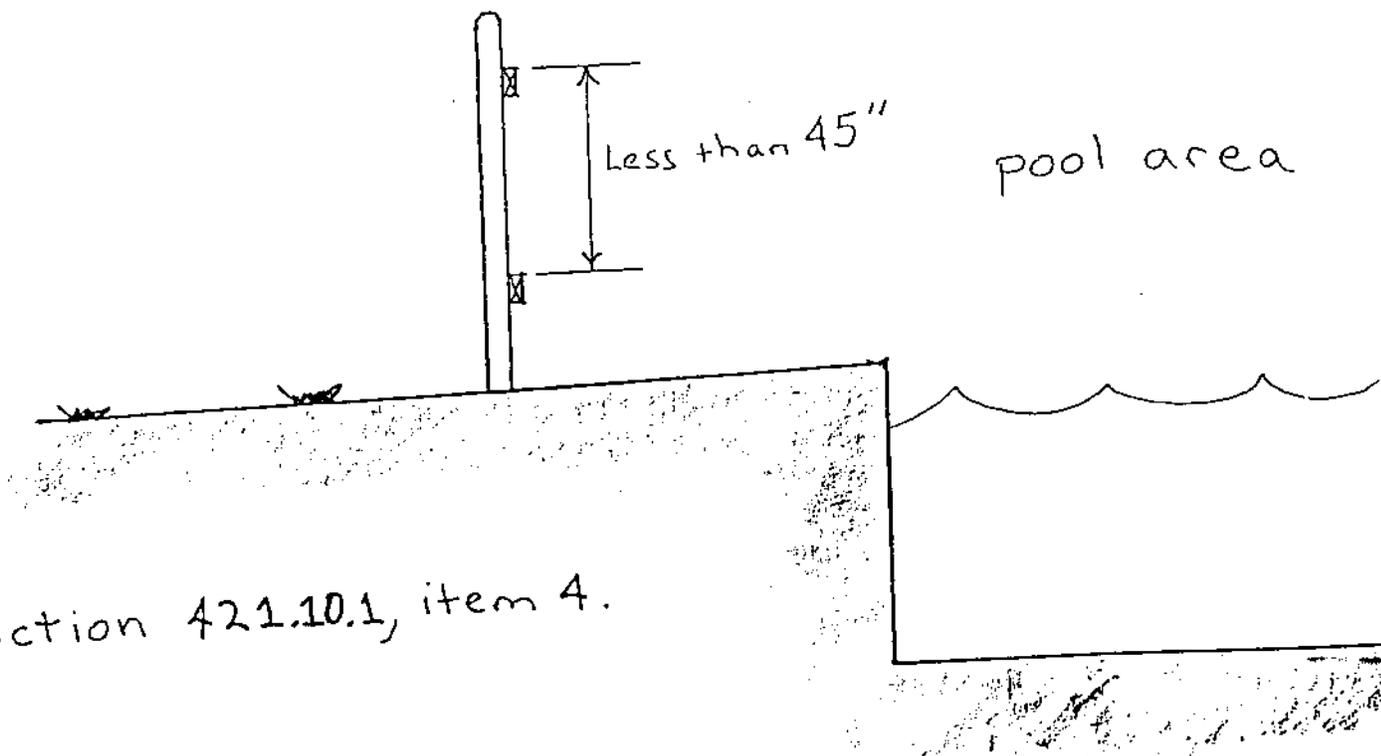


ELEVATION



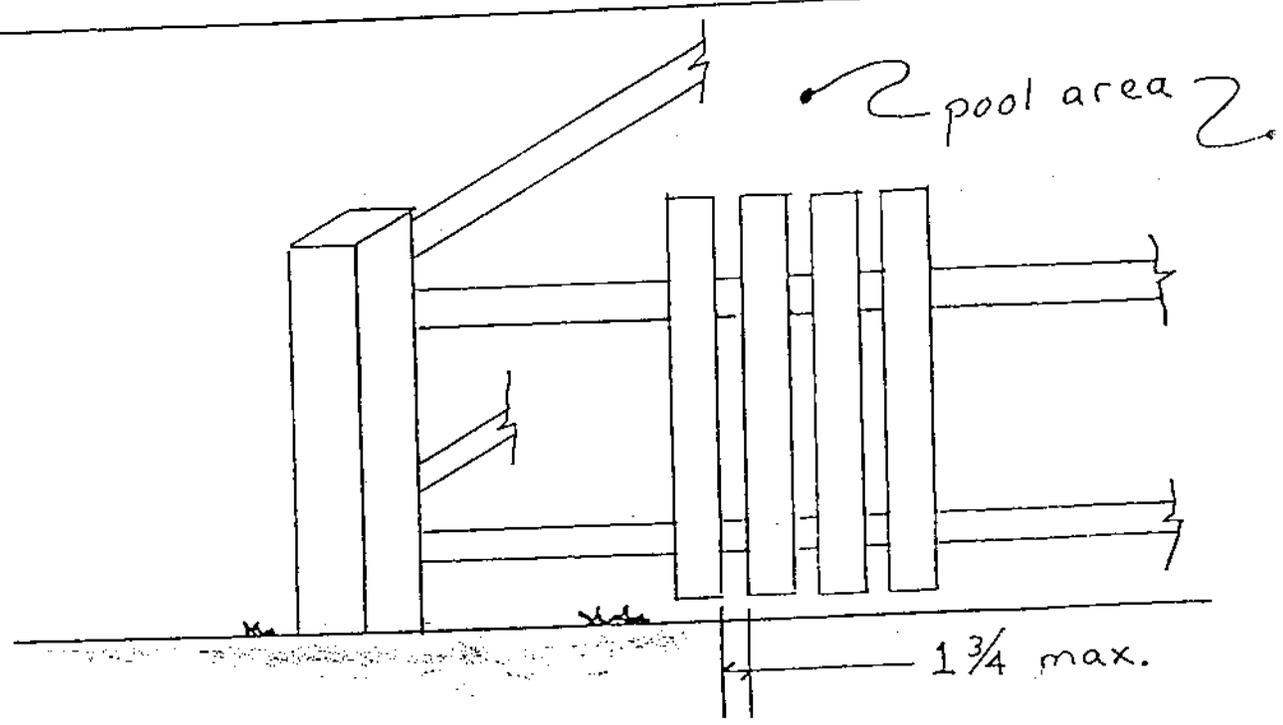
SECTION 421.10.1, ITEM 3

CROSS SECTION



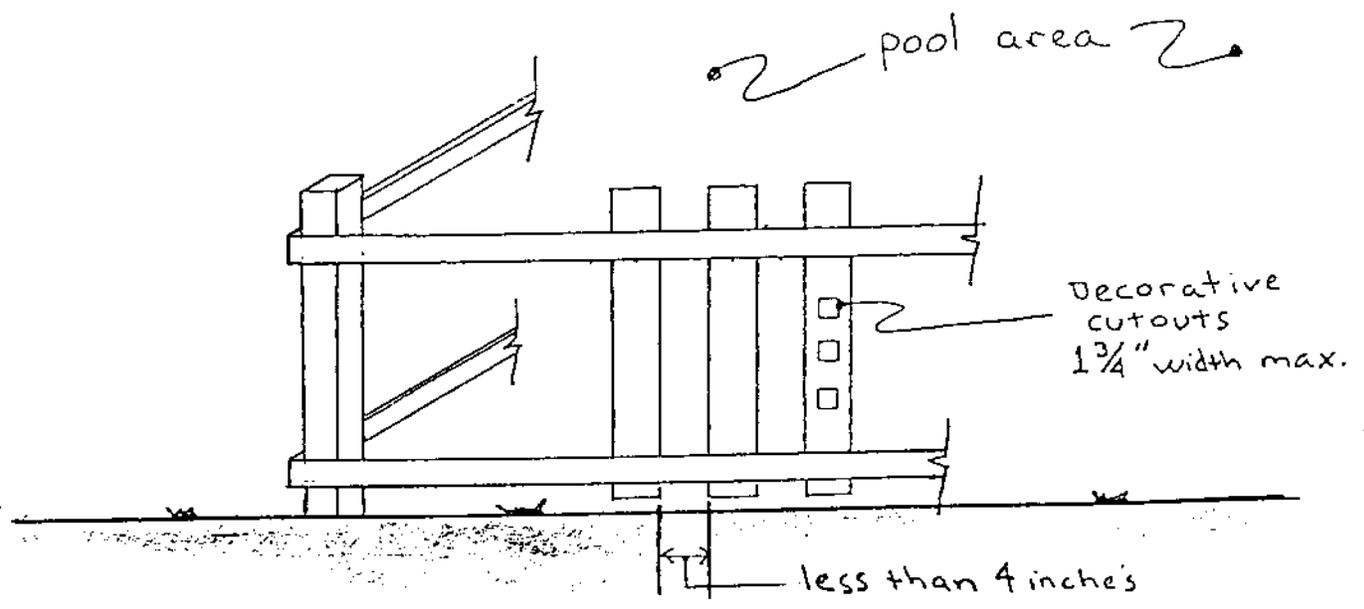
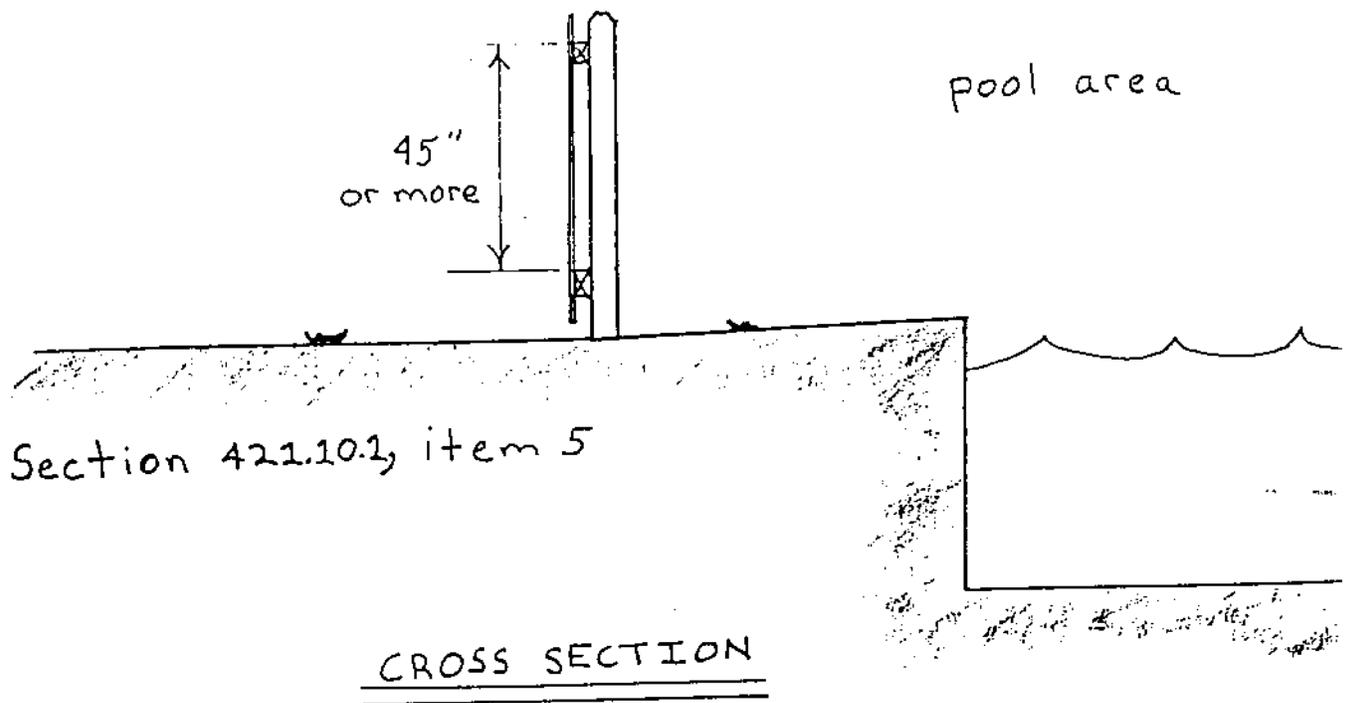
Section 421.10.1, item 4.

CROSS SECTION



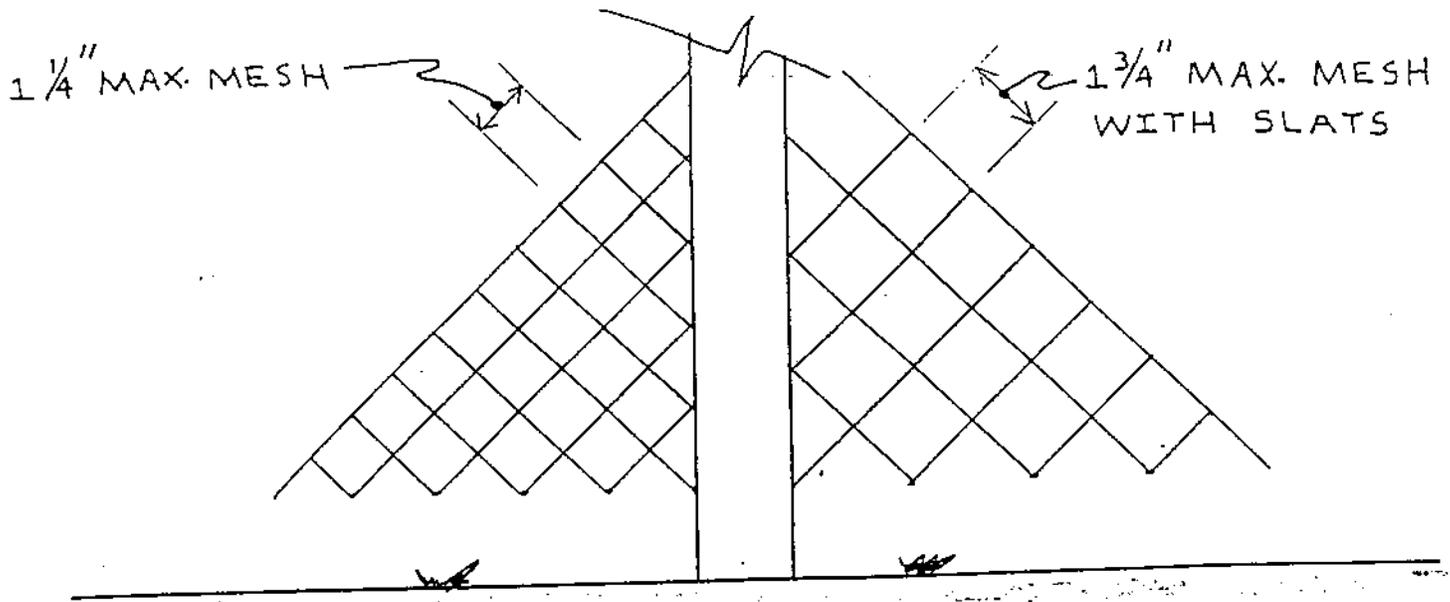
ISOMETRIC

AK



ISOMETRIC

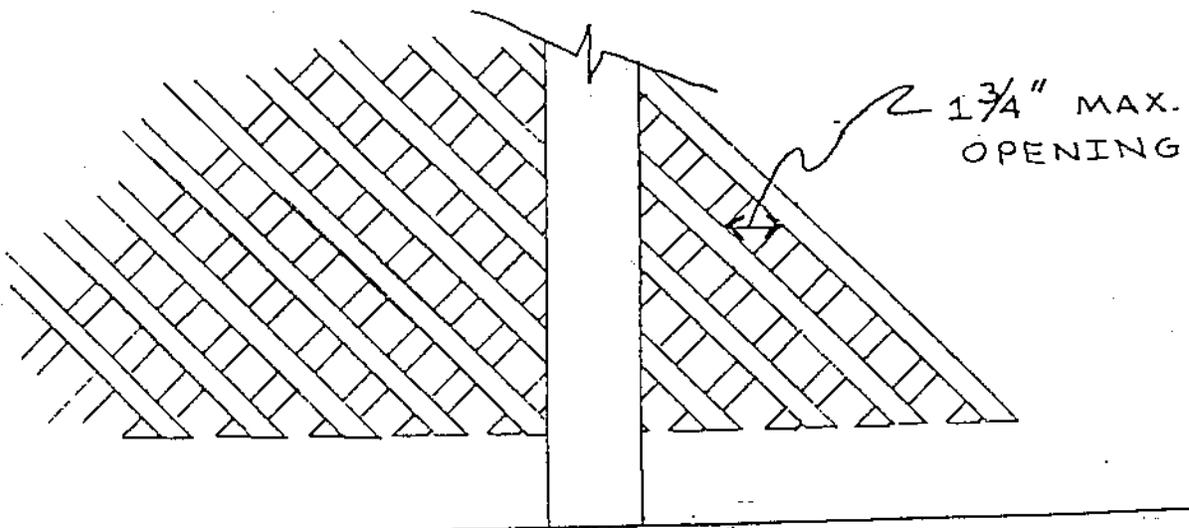
CHAIN LINK FENCE



SECTION 421.10.1, item 6

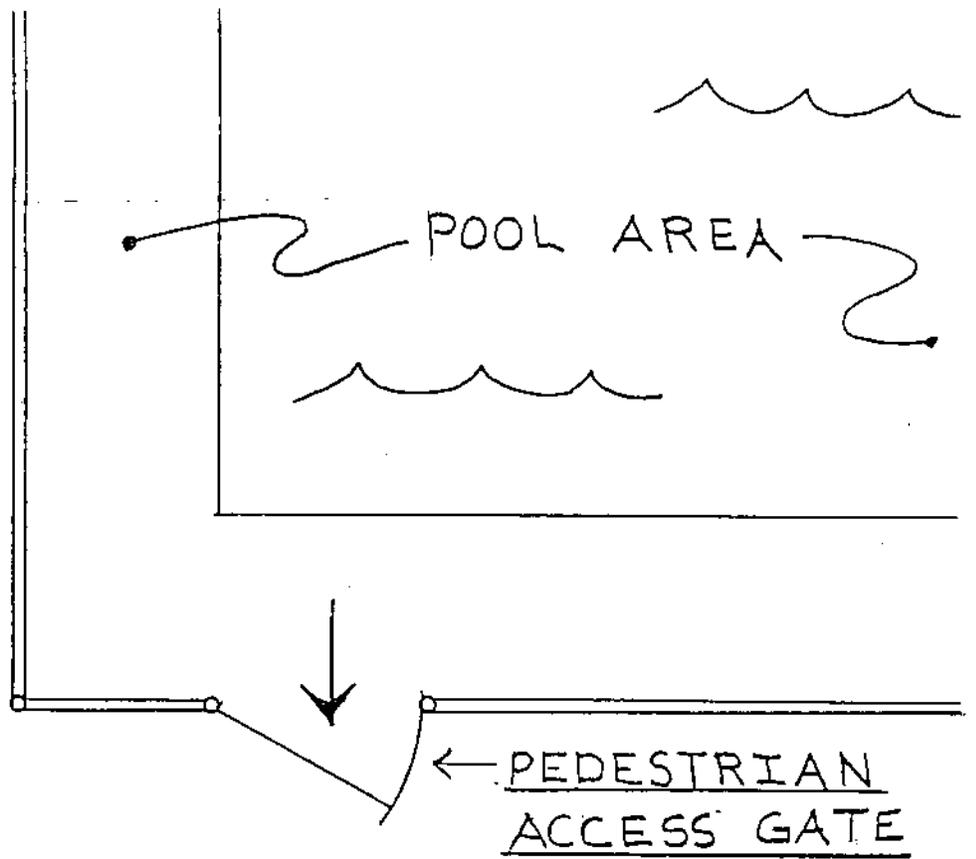
ELEVATION

LATTICE FENCE



SECTION 421.10.1, item 7

ELEVATION

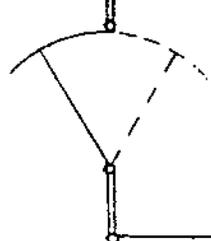


SHALL: COMPLY W/ ITEMS 1-7,
EQUIPPED TO ACCOMODATE A
LOCKING DEVICE,
OPEN OUTWARDS AWAY FROM POOL,
SELF-CLOSING,
SELF-LATCHING.

SECTION 421.10.1, ITEM 8

SITE PLAN

ACCESS GATE OTHER
THAN PEDESTRIAN
ACCESS GATE



HOUSE

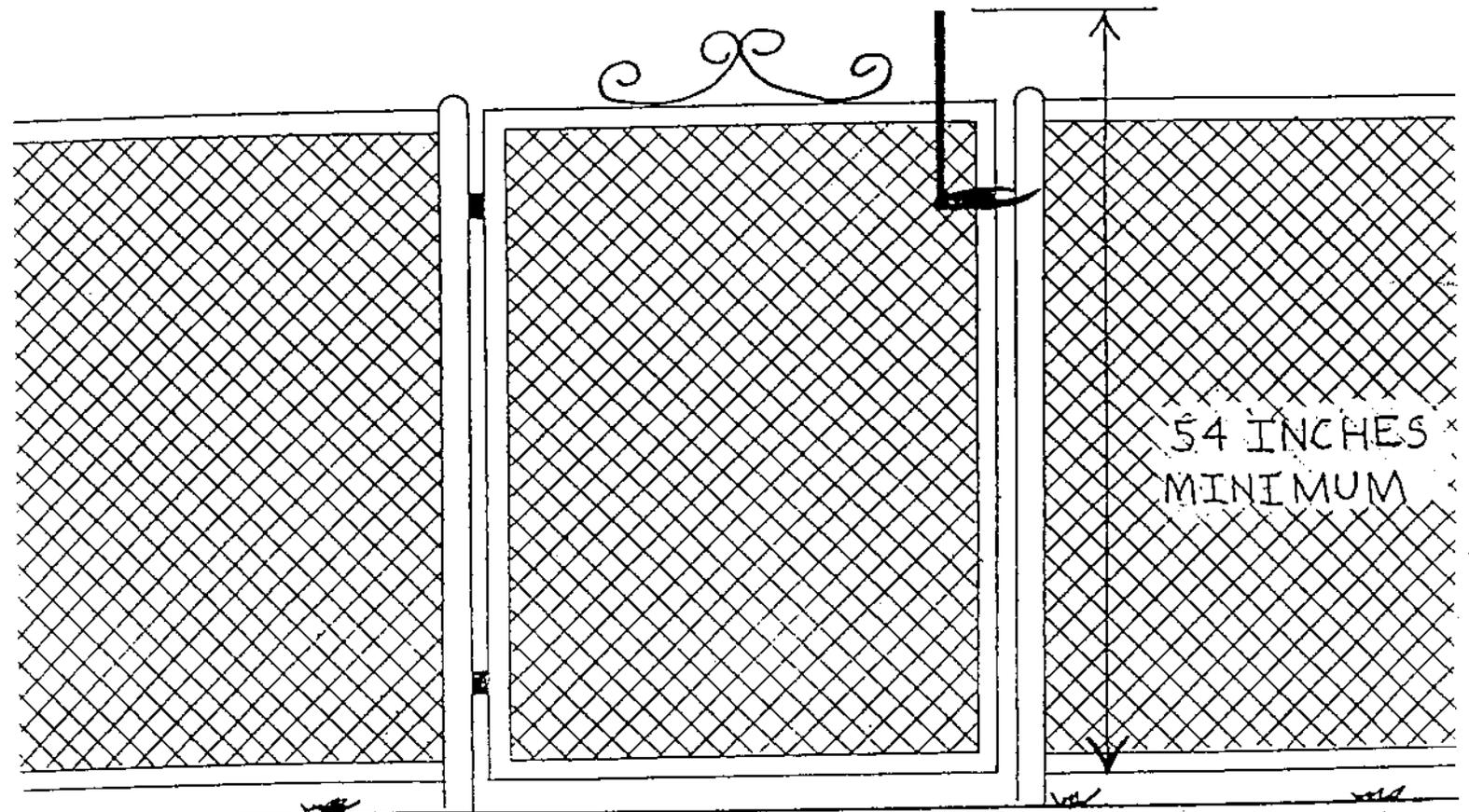
POOL AREA

SHALL: COMPLY W/ ITEMS 1-7,
EQUIPPED TO ACCOMODATE A
LOCKING DEVICE,
SELF-LATCHING.

SECTION 421.10.1, ITEM 8

SITE PLAN

ACCESS GATE OR PEDESTRIAN ACCESS GATE



INSIDE OR OUTSIDE POOL AREA

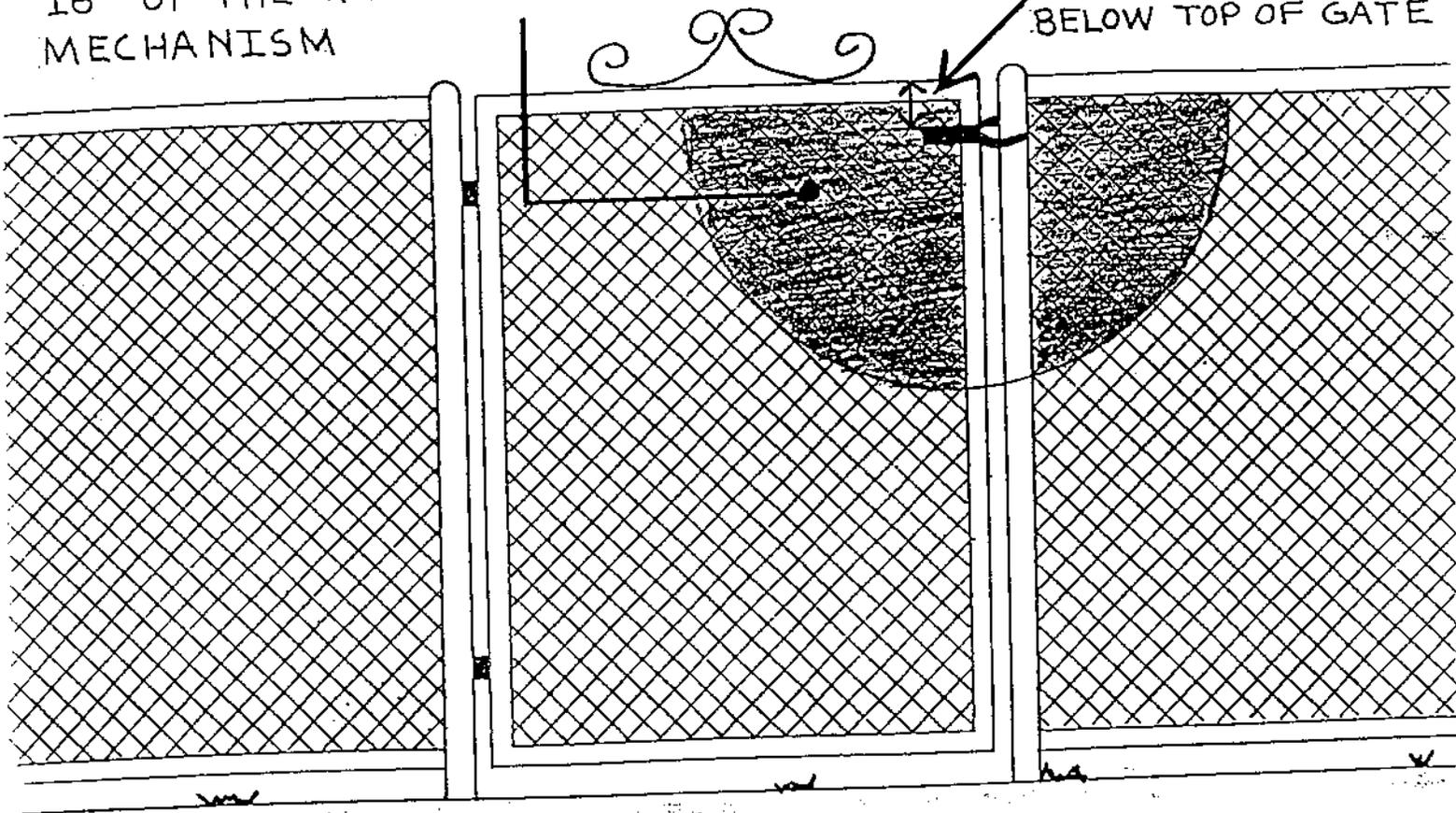
SECTION 421.10.1, ITEM 8

ELEVATION

ACCESS GATE OR PEDESTRIAN ACCESS GATE

1/2" MAXIMUM OPENING WITHIN
18" OF THE RELEASE
MECHANISM

3" MINIMUM
BELOW TOP OF GATE

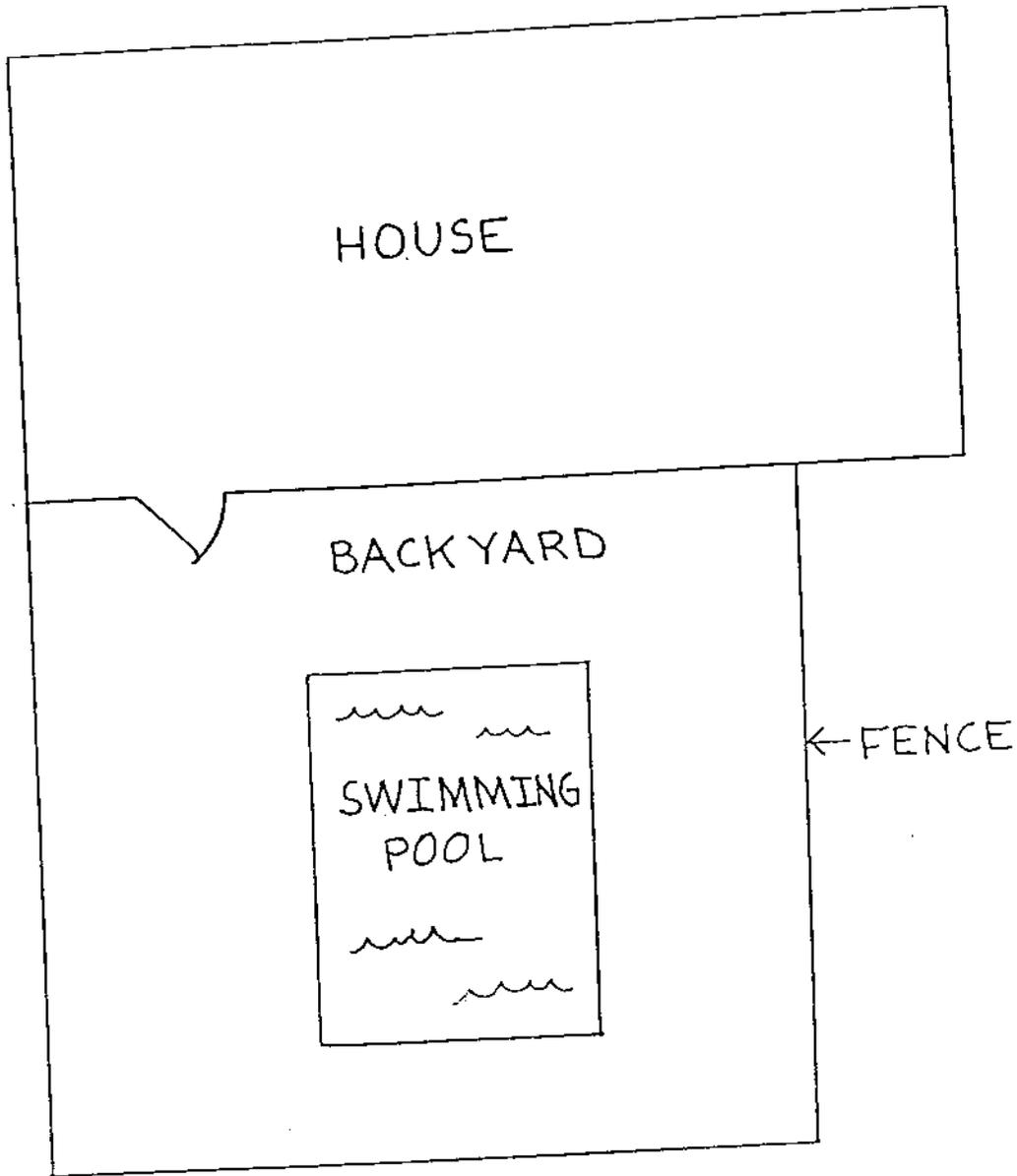


INSIDE POOL AREA ONLY

SECTION 421.10.1, ITEM 8 (a) and (b)

ELEVATION

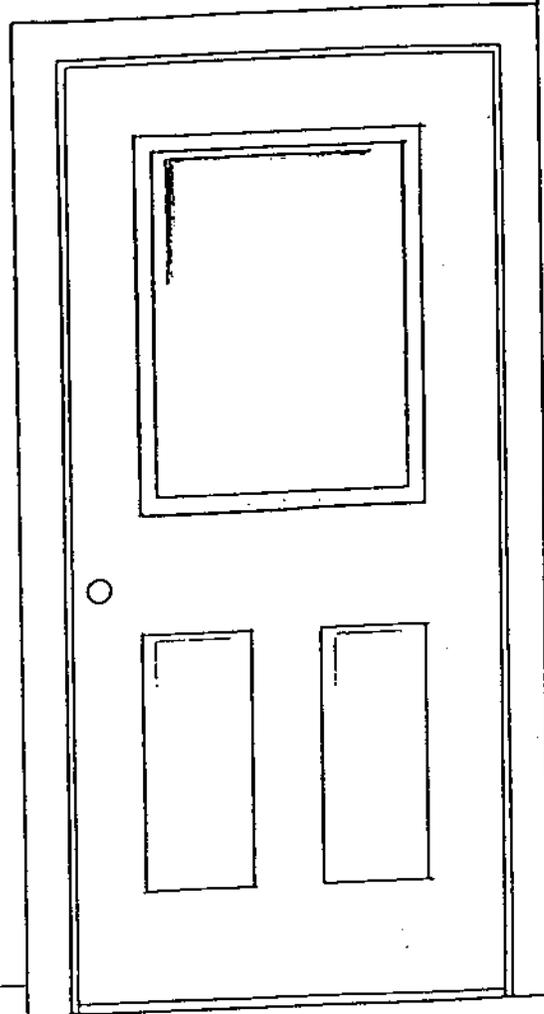
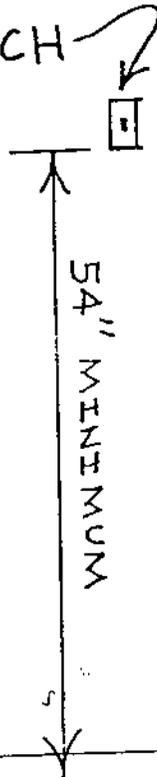
SECTION 421.10.1, ITEM 9



SITE PLAN

SECTION 421.10.1, ITEM 9.1

ALARM
DEACTIVATION SWITCH
OR TOUCHPAD



ELEVATION

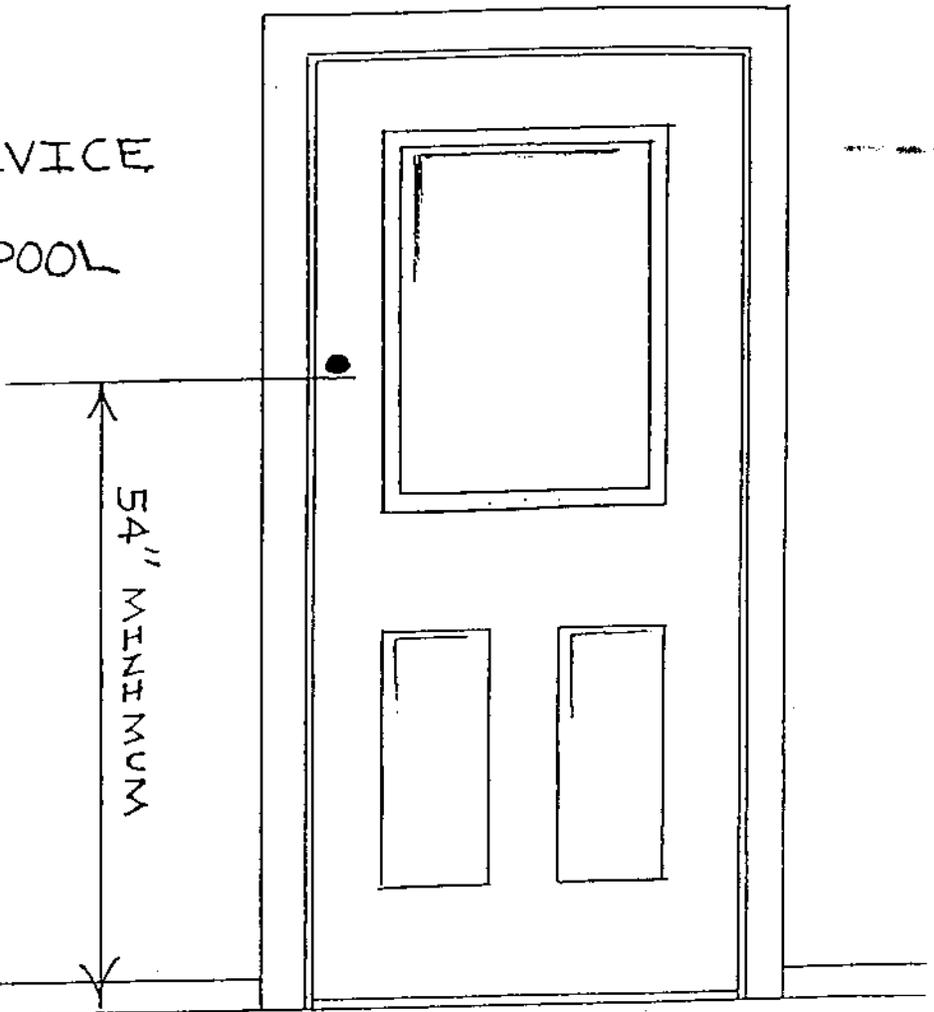
SECTION 421.10.1, item 9.1

THE DOOR ALARM SHALL:

- Produce an audible warning when the door and its screen are opened
- Audible warning sounds within 7 seconds of opening the door and
- Sound continuously for 30 seconds minimum
- Have a minimum sound pressure rating of 85dba at 10 feet
- Be distinctive from other household sounds
- Automatically reset under all conditions
- Be equipped with manual means to temporarily deactivate the alarm for a single opening from either direction
- Allow deactivation to last not more than 15 seconds
- Have deactivation touch pads/switches located a minimum of 54 inches above the door threshold

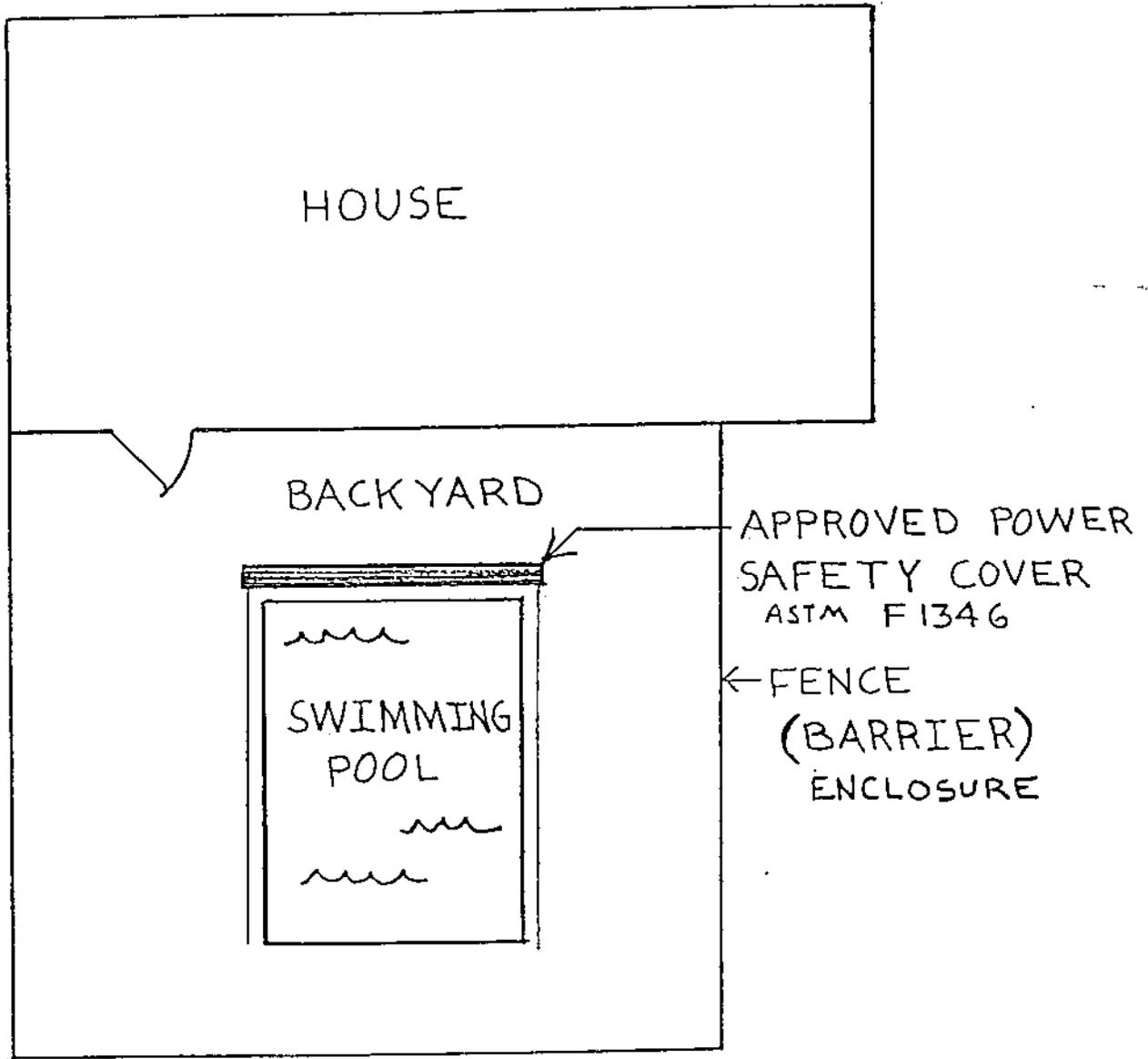
SECTION 421.10.1, ITEM 9.2

- SELF-CLOSING AND SELF-LATCHING DEVICE
- SWING AWAY FROM POOL



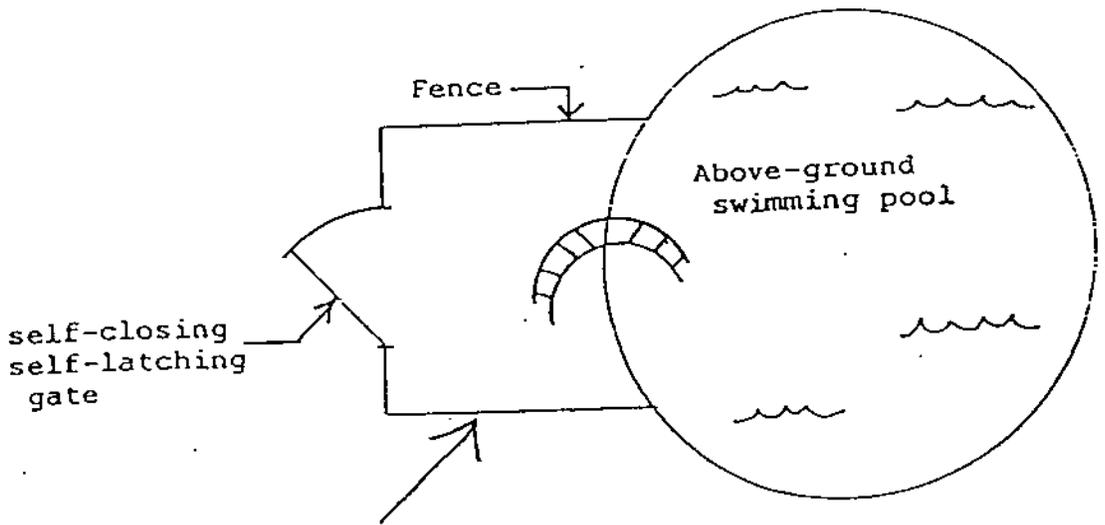
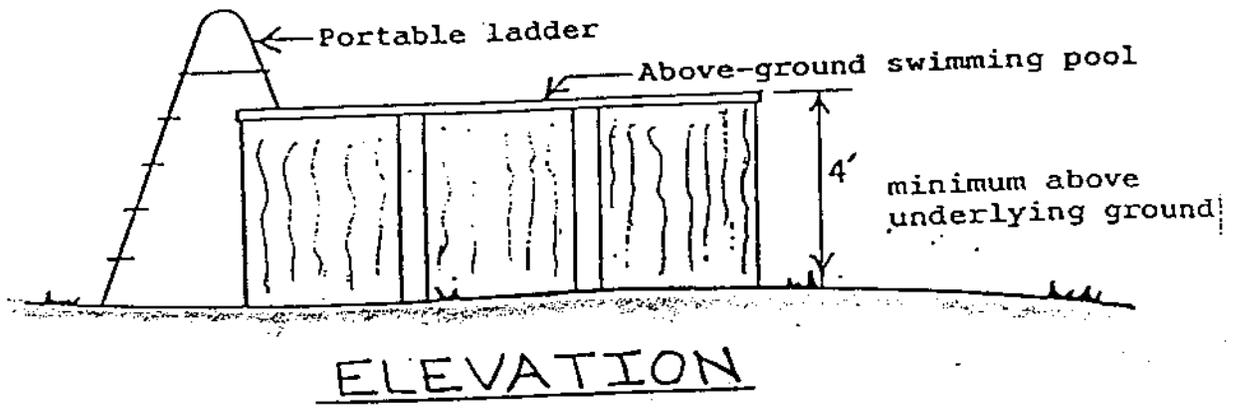
ELEVATION

SECTION 421.10.1, ITEM 9.3



SITE PLAN

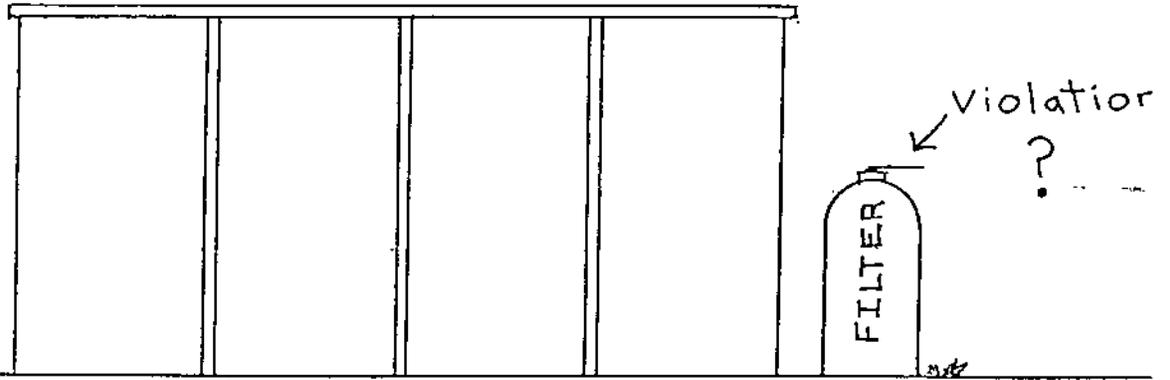
SECTION 421.10.1, ITEM 10



Barrier shall comply w/items 1 through 9

SITE PLAN

ABOVE GROUND SWIMMING POOL



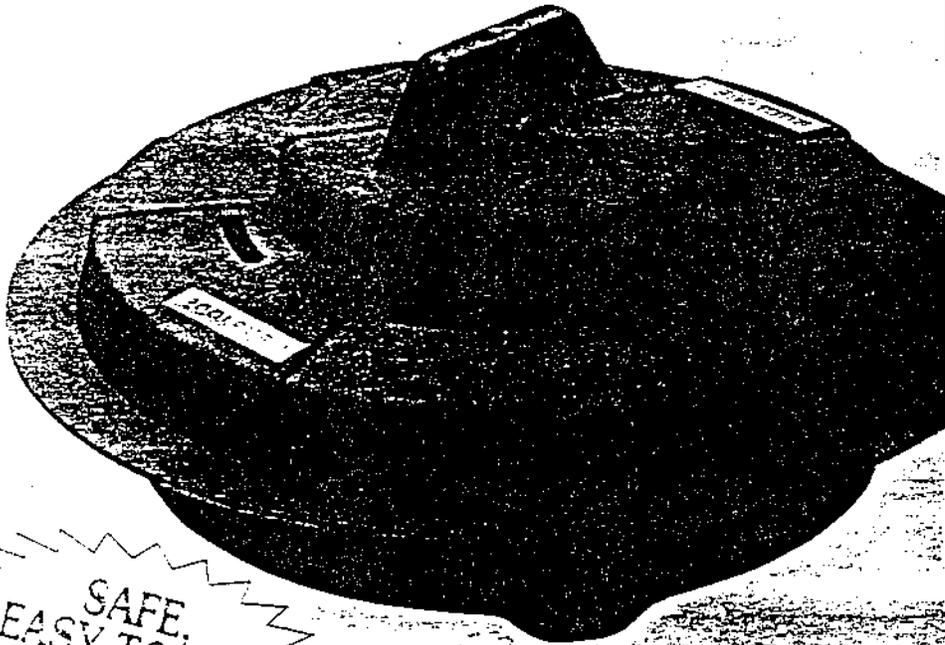
SECTION 421.10.3 "PROHIBITED LOCATION"

ELEVATION

POOL PATROL™

Sounds alarm if children or pets fall into your pool

a **MUST** for every
Pool and Spa



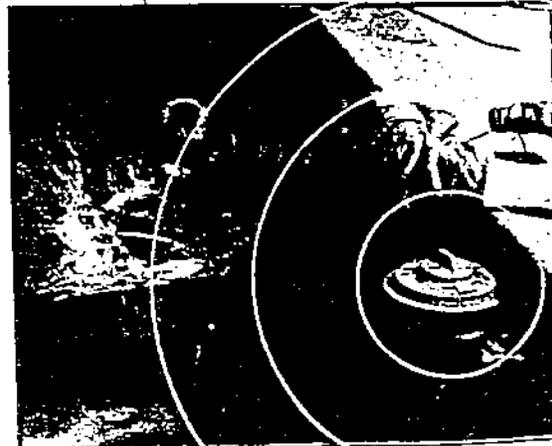
SAFE,
EASY TO USE

- Exciting new concept in pool safety
- 9 volt battery operated with low battery indicator
- Can be used with a solar cover
- Installs in seconds, no tools required
- Adjustable sensitivity
- Floats on pool or spa surface
- FCC approved
- Quality constructed using latest RF technology
- Corrosion resistant for long life
- 2 year warranty

Call 603-595-2500
for distributor nearest you.

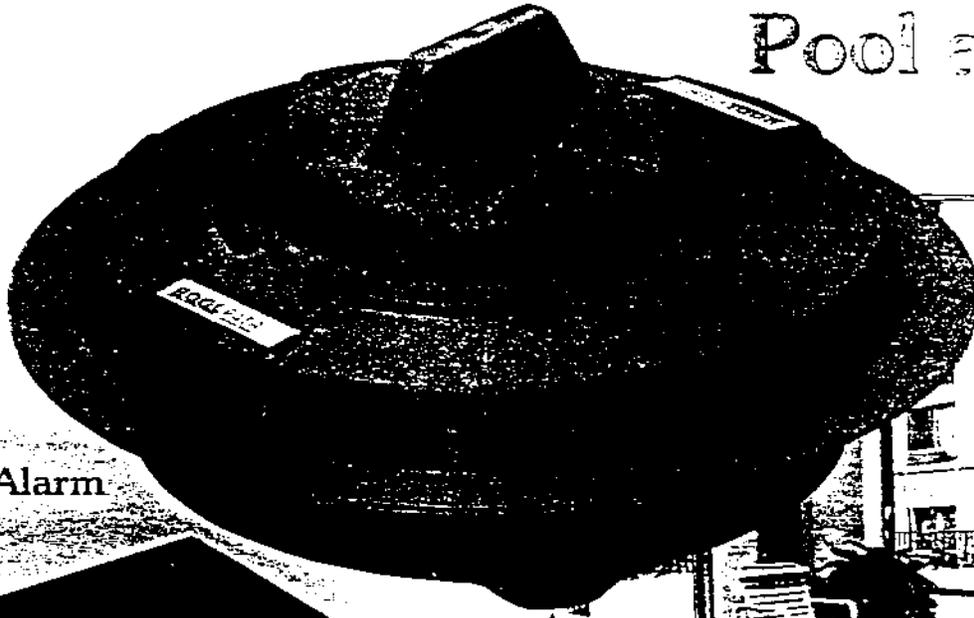
dm DANBURY
MARKETING
CORPORATION

105 Rte. 101A • Unit S • Amherst, NH 03031
Tel. 603-595-2500 • Fax 603-886-4939

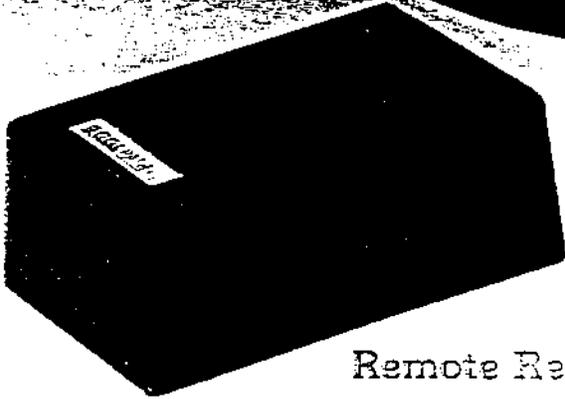


POOL PATROL

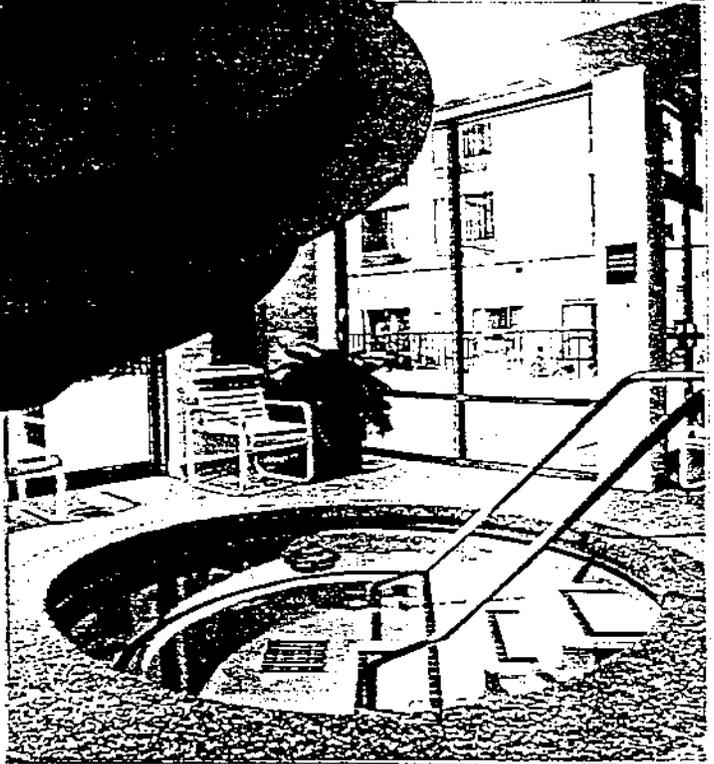
The Best Choice For
Pool and Spa
Safety



Pool Alarm



Remote Receiver



No worry installation

- Attractive four color package
- Affordably priced
- Huge consumer demand

Pool Patrol Pool Alarm with Remote Receiver

MODEL PA-30

Deluxe model with electronic solid state remote receiver. Alarm will sound both in your pool and in your house up to a distance of approximately 200 feet when properly installed. Remote receiver has on/off switch with "on" indicator light. 120 volts, A.C.

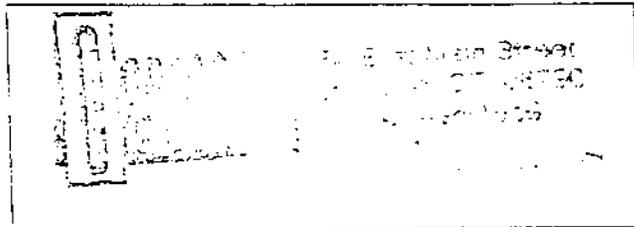
Alarm in the pool is battery powered. Uses one 9 volt alkaline battery (battery not included). Packed one per carton, weight approx. 3.5-lbs., 6 cartons per mater. weight approx. 21-lbs., 3.3 cubic feet.

Pool Patrol Pool Alarm

without Remote Receiver

MODEL PA-20

Battery powered. Uses one 9 volt alkaline battery (battery not included). Packed one per carton, weight approx. 2.7-lbs., 6 cartons per master, weight approx. 16-lbs., 3.3 cubic feet.



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APPENDIX G

SWIMMING POOLS, SPAS AND HOT TUBS

SECTION AG101 GENERAL

AG101.1 General. The provisions of this appendix shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- and two-family dwelling.

SECTION AG102 DEFINITIONS

AG102.1 General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See "Swimming pool."

BARRIER. A fence, wall, building wall or combination thereof which completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See "Swimming pool."

IN-GROUND POOL. See "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one- or two-family dwelling or a one-family townhouse not more than three stories in height.

SPA, NONPORTABLE. See "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water over 24 inches (610 mm) deep. This includes in-ground, above-ground and on-ground swimming pools, hot tubs and spas.

SWIMMING POOL, INDOOR. A swimming pool which is totally contained within a structure and surrounded on all four sides by walls of said structure.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

SECTION AG103 SWIMMING POOLS

AG103.1 In-ground pools. In-ground pools shall be designed and constructed in conformance with ANSI/NSPI-5 as listed in Section AG108.

AG103.2 Above-ground and on-ground pools. Above-ground and on-ground pools shall be designed and constructed in conformance with ANSI/NSPI-4 as listed in Section AG108.

SECTION AG104 SPAS AND HOT TUBS

AG104.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section AG108.

AG104.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section AG108.

SECTION AG105 BARRIER REQUIREMENTS

AG105.1 Application. The provisions of this chapter shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including in-ground, above-ground or on-ground pools, hot tubs and spas shall be provided with a barrier that shall comply with the following:

1. The top of the barrier shall be at least 48 inches above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches.
2. Openings in the barrier shall not allow passage of a 4-inch diameter sphere.
3. Solid barriers that do not have openings, such as masonry or stone walls, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the barrier. Spacing between vertical members shall not exceed $1\frac{3}{4}$ inches in width. Where there are decorative cutouts within vertical or horizontal members, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches in width.

* SEE Appendix G - page 3

5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not allow passage of a 4-inch diameter sphere. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed $1\frac{3}{4}$ inches in width.
6. Maximum mesh size for chain link fences shall be $2\frac{1}{4}$ inches square unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to not more than $1\frac{3}{4}$ inches.
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than $1\frac{3}{4}$ inches.
8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, the release mechanism and surrounding openings shall comply with the following: The release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate and the gate and barrier shall have no opening greater than $\frac{1}{2}$ inch within 18 inches of the release mechanism.
9. Where a wall of a dwelling serves as part of the pool barrier, one of the following conditions shall be met:
 - 9.1. The pool shall be equipped with a power safety cover in compliance with ASTM F 1346-91; or
 - 9.2. All doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door and its screen, if present, are opened. The alarm shall sound continuously for a minimum of 30 seconds within 7 seconds after the door and its screen, if present, are opened and be capable of being heard throughout the house during normal activities. The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as a touch pad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds. The deactivation device(s) shall be located at least 54 inches above the threshold of the door; or
 - 9.3. All doors with direct access to the pool through that wall shall be equipped with a self-closing and self-latching device with the release mechanism located a minimum of 54 inches above the door threshold. Swinging doors shall open away from the pool area.
10. Where an above-ground or on-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps shall be surrounded by

a barrier which meets the requirements of section AG105.2, Items 1 through 9.

AG105.3 Indoor swimming pool. All walls surrounding an indoor swimming pool shall comply with Section AG105.2, Item 9.

AG105.4 Prohibited locations. Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

AG105.5 Barrier exceptions. Spas or hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section AG107, shall be exempt from the provisions of this appendix.

AG105.6 Temporary enclosure. A temporary enclosure shall be installed prior to the commencement of the installation of any in-ground swimming pool unless the permanent barrier specified in Section AG105.2 is in place prior to the commencement of the installation. The temporary enclosure shall be a minimum of 4 feet in height, shall have no openings that will allow passage of a 4-inch sphere and shall be equipped with a positive latching device on any openings.

AG105.7 Pool alarm. No building permit shall be issued for the construction or substantial alteration of a swimming pool at a residence occupied by, or being built for, one or more families unless a pool alarm is installed with the swimming pool. As used in this section, "pool alarm" means a device that emits a sound of at least 50 decibels when a person or an object weighing 15 pounds or more enters the water in a swimming pool.

Exception: Hot tubs and portable spas shall be exempt from this requirement.

SECTION AG106 ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

AG106.1 General. Suction outlets shall be designed to produce circulation throughout the pool or spa. Single outlet systems, such as automatic vacuum cleaner systems, or other such multiple suction outlets whether isolated by valves or otherwise shall be protected against user entrapment.

AG106.2 Suction fittings. All pool and spa suction outlets shall be provided with a cover that conforms with ANSI/ASME A112.19.8M, or a 12" x 12" drain grate or larger, or an approved channel drain system.

Exception: Surface skimmers

AG106.3 Atmospheric vacuum relief system required. All pool and spa single or multiple outlet circulation systems shall be equipped with atmospheric vacuum relief should grate covers located therein become missing or broken. Such vacuum relief systems shall include at least one approved or engineered method of the type specified herein, as follows:

1. Safety vacuum release system conforming to ASME A112.19.17, or
2. An approved gravity drainage system

AG106.4 Dual drain separation. Single or multiple pump circulation systems shall be provided with a minimum of two (2) suction outlets of the approved type. A minimum horizontal or vertical distance of three (3) feet shall separate such outlets.

* See Appendix G - changes on page 3 of this document

STATE OF CONNECTICUT
REGULATION

of

NAME OF AGENCY

DEPARTMENT OF PUBLIC SAFETY

Concerning

SUBJECT MATTER OF REGULATIONS

STATE BUILDING CODE-2005 CONNECTICUT
SUPPLEMENT – 2009 AMENDMENT

Sec. 87. Section 29-252-1d, State Building Code – 2005 Connecticut Supplement, Appendix E, of the 2003 International Residential Code, is amended as follows:

~~[(Del)]~~ **(Add) SECTION AE600 – SPECIAL REQUIREMENTS FOR FOUNDATION SYSTEMS** [Delete Section AE600 without substitution.]

Sec. 88. Section 29-252-1d, State Building Code – 2005 Connecticut Supplement, Appendix E, of the 2003 International Residential Code, is amended to add:

(NEW) (Add) **AE600.1 General.** The provisions of Sections AE601 through AE606, inclusive, are applicable only upon request of the building permit applicant with the approval of the local building official.

*** APPENDIX G – SWIMMING POOLS, SPAS AND HOT TUBS**

Sec. 89. Section 29-252-1d, State Building Code – 2005 Connecticut Supplement, Appendix G, of the 2003 International Residential Code, is amended to add:

(NEW) (Add) **AG102.1.1 Definitions.** Amend the following definition to read as follows:

(NEW) **Residential.** That which is situated on the premises of a detached one- or two-family dwelling or which is accessory to an individual one-family townhouse for the exclusive use of its residents and invited guests.

(NEW) (Amd) **AG106.2 Suction fittings.** All pool and spa suction outlets shall be provided with a cover that conforms with ASME/ANSI A112.19.8M-2007 or an approved channel drain system.

Exception: Surface skimmers.

(NEW) (Add) **AG106.2.1 Fitting maintenance.** Any pool, spa or hot tub with a broken, loose or missing suction outlet cover shall be immediately placed out of service until repairs are completed and approved.

(NEW) (Amd) **AG106.3 Atmospheric vacuum relief system required.** All pool and spa single or multiple outlet circulation systems other than pools equipped only with surface skimmers shall be equipped with atmospheric vacuum relief. Such vacuum relief systems shall include at least one approved or engineered method of the type specified herein, as follows:

1. Safety vacuum release system conforming to ASME A112.19.17, or
2. An approved gravity drainage system operating through a surge tank.

(NEW) (Amd) **AG106.4 Dual drain separation.** Single or multiple pump circulation systems shall be provided with a minimum of two (2) suction outlets of the approved type. A minimum horizontal or vertical distance of three (3) feet shall separate such outlets. The separation distance shall be measured from near point of opening to near point of opening. These suction outlets shall be piped so that water is drawn through them simultaneously, distributed as evenly as possible, through a vacuum relief protected line to the pump or pumps.

(NEW) (Amd) **AG108.1 General.** Amend the following standard:

(NEW) (Amd) ANSI/ASME A112.19.8 2007 Suction Fittings for Use in Swimming Pools, Wading Pools, Spas and Hot TubsAG 106.2