**Section 920.80 Special Type Wells**

a) General. Wells in this classification are dug, bored, driven, and radial collector. The choice of any one of these as opposed to a drilled well is largely dictated by the characteristics of the water bearing formations or aquifers in the local areas.

b) Bored or Dug Well - Well Not Finished With Buried Slab. Bored or dug wells that are not finished as buried slab wells shall comply with the following: (See Illustration G.)

1) Annular Opening. The open space between the excavation and the installed casing shall be grouted with concrete. The concrete shall be a minimum of six inches thick and be poured without construction joints from the ground surface to a minimum of ten feet below ground level. The contractor shall be responsible for the installation of the concrete grout. The diameter of the well bore below the grouting shall be a minimum of four inches greater than the outside diameter of the well casing and shall be filled with washed pea gravel to the well bottom.

2) Upper Terminal. The casing shall extend at least 8 inches above finished ground surface. A cover slab at least four inches thick, adequately reinforced and having a diameter sufficient to extend to the outer edge of the casing shall be provided. The slab shall be constructed without joints. The top of the slab shall be sloped to drain to all sides and a watertight joint made where the slab rests on the well casing. A manhole, if installed, shall consist of a curb cast in the slab and extending four inches above the slab. The manhole shall have a watertight cover having sides which overhang the curb at least two inches.

A) A vent shall consist of pipe extending above the slab with the open end turned down and not less than six inches above the slab. The open end shall be covered with 24 mesh or finer screen of durable material.

B) Adequate sized pipe sleeve or sleeves shall be cast in place in the slab to accommodate the type of pump or pump piping proposed for the well.

c) Bored or Dug Well - Buried Slab Construction. The well casing shall be terminated at a depth of 10 feet or more below the ground surface. Well casing shall meet the requirements in Section 920.90. This casing shall be firmly imbedded in a uniformly tapered hole that is formed when the reinforced concrete buried slab is manufactured, the hole size tapering in diameter from 1/2 inch greater than the outside diameter of the riser pipe to 1/2 inch smaller than the outside diameter of the riser pipe or shall be connected to a pipe cast in a reinforced buried concrete slab. The connection shall be made in accordance with Section 920.90(c). The casing shall be a minimum of four inches in diameter and extend from the concrete slab to at least eight inches above finished ground surface. A bentonite seal that is a minimum of 12 inches in thickness shall be installed over the buried slab the entire diameter of the well. The annular opening between the casing pipe and the well bore shall be filled with clean earth thoroughly tamped to minimize settling, and mounded to drain away from the well. The contractor shall be responsible for the installation of the backfill. If a pitless adaptor is scheduled to be installed within seven calendar days, the earth backfill may terminate one foot below the frost level. The diameter of the well bore below the buried slab shall be a minimum of four inches greater than the outer diameter of the well casing and shall be filled with washed pea gravel to the well bottom. (See Illustration H.)

d) Driven Well. The well point, drive pipe and joints shall be structurally suitable to prevent rupture during the driving of the well. If aids to driving are used, such as an augered starting hole or water jetting, the annular space around the drive pipe shall be sealed with cement grout or puddled clay. The type of pump proposed for the well will determine how the the top ten feet or more of the well shall be completed. If the working barrel of a hand pump is to be located below ground surface, the upper portion of the well shall be enclosed in steel or iron casing pipe to a point below the barrel. So called "frost pits" curbed with stone, brick, tile, etc., are prohibited.

1) A minimum of 20 ft. of casing shall be provided for the drop pipe. (See Illustration I.)

2) Driven wells shall not be constructed in basements.

3) Well seals or pitless adapter units shall be employed in accordance with the Illinois Water Well Pump Installation Code.

4) The casing used in driven wells shall be in compliance with Table A or Table B.

e) Radial Collector Well. Approval of plans for the well shall be obtained from the Department before construction. Factors that will be considered for approval of a radial collector well will include depth of well, types of soil formations, location of well and sources of potential contamination in the surrounding area.

(Source: Amended at 22 Ill. Reg. 3973, effective April 1, 1998)