

**J. Pumps and Wells.**

1. Irrigation pump electrical control systems must conform to NEC and local building codes.
2. The pumping system shall be protected from the hazards of the environment in which it is installed.
3. Use electric motors with a nominal horsepower rating greater than the maximum horsepower requirement of the pump during normal operation. Motor shall have a service factor of at least 1.15.
4. Casings for drilled wells may be steel, reinforced plastic mortar, plastic, or fiberglass pipe. Only steel pipe casings shall be used in driven wells. Steel pipe must have a wall thickness equal to or greater than Schedule 40. See SCS code FL-642. Steel casings shall be equal to or exceed requirements of ASTM A 589.

**K. Chemical Injection Equipment.**

1. Chemical injection equipment must be constructed of materials capable of withstanding the potential corrosive effects of the chemicals being used. Equipment shall be used only for those chemicals for which it was intended as stated by the injection equipment manufacturer.

**L. Filters and Strainers.**

1. Filtration equipment and strainers constructed of materials resistant to the potential corrosive and erosive effects of the water shall be used. They shall be sized to prevent the passage of foreign material that would obstruct the sprinkler/emitter outlets in accordance with the manufacturer's recommendations.

**PART V: INSTALLATION**

**A. Pipe Installation.**

1. Pipe shall be installed at sufficient depth below ground to protect it from hazards such as vehicular traffic or routine occurrences which occur in the normal use and maintenance of a property. Depths of cover shall meet or exceed SCS Code 430-DD, Water Conveyance, as follows:

a. Vehicle Traffic Areas.

Pipe Size (inches)	Depth of Cover (inches)
1/2 - 2 1/2	18-24
3-5	24 - 30
6 and larger	30- 36

b. Nontraffic and Noncultivated Areas.

Pipe Size (inches)	Depth of Cover (inches)
1/2 - 1 1/4	6-12
1 1/2 - 2	12 - 18
1/2 - 3	18 - 24
4 and larger	24 - 36

c. Residential single lot installations only.

Pipe Size (inches)	Depth of Cover* (inches)
1/2 - 1	4 - 6
1 1/4 - 1 1/2	8 - 12
2 - 2 1/2	12 - 18
3 and larger	24

\* Except in areas where more than one lot is connected together, controlled, or connected through a master system than the depths in Chart B shall apply.

2. Make all pipe joints and connections according to manufacturer's recommendations. Perform all solvent-weld connections in accordance with ASTM D 2855.
3. Minimum clearances shall be maintained between irrigation lines and other utilities. In no case shall one irrigation pipe rest upon another. Comingling or mixing of different types of pipe assemblies shall be prohibited.
4. Thrust blocks must be used on all gasketed PVC systems. They must be formed against a solid, hand-excavated trench wall undamaged by mechanical equipment. They shall be constructed of concrete, and the space between the pipe and trench shall be filled to the height of the outside diameter of the pipe. Size thrustblocks in accordance with ASAE S-376.1.
5. The trench bottom must be uniform, free of debris, and of sufficient width to properly place pipe and support it over its entire length. Native excavated material may be used to backfill the pipe trench. However, the initial backfill material shall be free from rocks or stones larger than 1-inch in diameter. At the time of placement, the moisture content of the material shall be such that the required degree of compaction can be obtained with the backfill method to be used. Blocking or mounding shall not be used to bring the pipe to final grade.
6. Pipe sleeves must be used to protect pipes or wires installed under pavement or roadways. Use pipe sleeves two pipe sizes larger than the carrier pipe or twice the diameter of the wire bundle to be placed under the paving