



Ledge depth should be adequate to submerge pots, usually 12 - 16". Pond should be deep enough to provide protection for fish during winter and to provide cool depth in summer.

Figure 4.67 Typical ornamental pond detail.

installation. Whichever type is chosen, the installed liner should be smooth and curvilinear, and sharp corners or abrupt changes in surface aspect should always be avoided. Most pond liners are dark colored, that tends to produce a reflective surface effect. A light-colored pond surface will produce a somewhat transparent effect. In a light-colored pond, everything is visible, and so maintenance becomes a critical issue.

Pool depth is an important consideration. The minimum recommended pool depth is 16 in, a minimum requirement for operating most submersible pumps. Ponds with fish must provide an adequate depth to allow the fish to overwinter; otherwise, the fish must be removed each fall. For ponds it is important to vary the depth to allow areas for rooted plant stock as well.

Waterfalls require the addition of a pump. To select the correctly sized pump, Bazin's formula is used to estimate the flow over the falls:

$$Q = \left[ 0.405 + \left( \frac{0.00984}{H} \right) \right] [1 + (0.55H^2)(P + H)^2] LH (2gH)^{0.5}$$