over management's back.

After getting the proper input from everyone required, you need to determine the company's strengths and weaknesses from financial, marketing, operational and management viewpoints.

The next step is to look at both longterm and short-term objectives. Shortterm objectives should change depending on how the long-term objectives are framed, and *not* vice versa.

The planning at this point takes into account information on the consumers, the company and overall objectives. These are examined at the same time, not sequentially.

The next part of planning is to determine accountability. If no one is responsible for either the plan or its final outcome, there isn't much chance it'll work.

The final cog is to work out some sort of contingency plans. Obviously, it's impossible to foresee all the variables that can occur during the year. If the plan is not working, there must be an alternative. Failure to understand when the plan is going poorly is often a major problem in the planning process.

'Critical heights' of playground tested materials

■ Natural and artificial turf are not recommended by the Consumer Product Safety Commission (CPSC) for surfacing public playgrounds "because their effectiveness in absorbing shock during a fall can be reduced considerably due to wear and environmental conditions."

According to a CPSC pamphlet entitled "Handbook for Public Playground Safety," unitary and loose-fill materials are better suited than grass.

Unitary materials are generally rubber mats or a combination of rubber-like materials held in place by a binder that may be poured in place and cures to form a unitary shock-absorbing surface.

Loose-fill materials include sand, gravel and shredded wood products. The table lists the critical height—maximum height from which a child can safely fall—for each of seven materials tested by the CPSC. (For example, if uncompressed wood mulch is used at a minimum depth of six inches, the critical height is 7 feet.)

The depth of any loose fill material could be reduced

during use, which would result in different shock-absorbing properties. For this reason, a margin of safety should be considered in selecting type and depth of materials, the CPSC warns.

CRITICAL HEIGHT OF TESTED MATERIALS

Material	Uncompressed to:			Compressed to:
	6"	9"	12"	9"
Wood mulch	7'	10'	11'	10'
Double shredded bark mulch	6'	10'	11'	7'
Uniform wood chips	6'	7'	>12'	6'
Fine sand	5'	5'	9'	5'
Coarse sand	5'	5'	6'	4'
Fine gravel	6'	7'	10'	6'
Medium gravel	5'	5'	6'	5'

Source: CPSC

—Landscape Structures Inc. is offering free reprints of "Handbook for Public Playground Safety." To get yours, write 601 Seventh St. South, Delano, MN 55328; or phone (800) 328-0035.

Selecting plants: a backwards method

■ If plants have not been specified in a landscape design, here is a "backwards" process for selecting them, as suggested by Bonnie Lee Appleton of the Virginia Hampton Roads Ag Experiment Station:

 Decide generically what type of plant is needed: a tree, a shrub, vines, a groundcover; deciduous or evergreen.

2) Decide what plant characteristics (time of flowering, fruit, fall color, bark or branch patterns) you want. She suggests to aim for multi-seasonal interest.

 Decide—realistically—how large a plant can grow in its intended landscape site. Consider height and spread, and growth rate.

4) Decide the degree of maintenance (pest control, pruning, fertilizing, etc.) desired.

5) List the existing landscape site conditions, to include:

• soil: type; pH; moisture content

• exposure: full or partial sun or shade; direction and amount of wind

• available moisture: precipitation and irrigation

• temperature tolerance: both winter and summer.

6) Use plant reference guides to select a

specific plant of the desired type with the desired characteristics and level of maintenance.

7) Shop for plants that are labeled as to type; healthy looking; free of insects, diseases, mechanical damage and well-cared for.

8) Look for a few specific things based on the way the nursery produces the plants:

• bare-root: adequate number of roots, roots not dried out

• balled and burlapped: tight rootball, no weeds, rootball not dried out, rootball well wrapped and/or laced

• container-grown: adequate number of roots on outside of rootball; no major circling roots; no weeds; not dried out

• containerized/process balled: adequately rooted into the medium packed around the roots; not dried out.