



A well-designed maintenance facility increases efficiency and cost effectiveness.

Planning the Golf Course Maintenance Facility

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FACILITIES PLANNING is not a new concept in architectural design. It was recognized as a contributing aspect in early architecture, but it developed as a major role during the Industrial Revolution. As industry became more competitive, new methods of increasing efficiency naturally developed. Using every square foot of space effectively became mandatory. The effectiveness of space planning became more and more apparent, and the process spilled over from industrial use to other facets of architectural planning. Efficient use of space has become the primary objective in the design of buildings today.

I became interested in planning golf course facilities after a phone call from a golf course manager I had met not long before. He had a problem, and he invited me to visit his operation to see it for myself. It was taking 30 minutes or more to get equipment out of the building and into the field.

Having grown up on a golf course, I can recall some of the problems my

father had had operating within his facility. It had been 20 years since I had been in a golf course maintenance building, but to my surprise, the building looked and smelled just like the one my father had.

At first it appeared that nothing had changed — until some of the modern equipment came into view. It was difficult to determine in which direction some of this new machinery was intended to go, and I could tell only after I located a steering wheel and a seat. It was evident that new ideas had been moved into the design of golf course maintenance equipment. In contrast to this, I saw no evidence that any new technology had been applied to the design of the building.

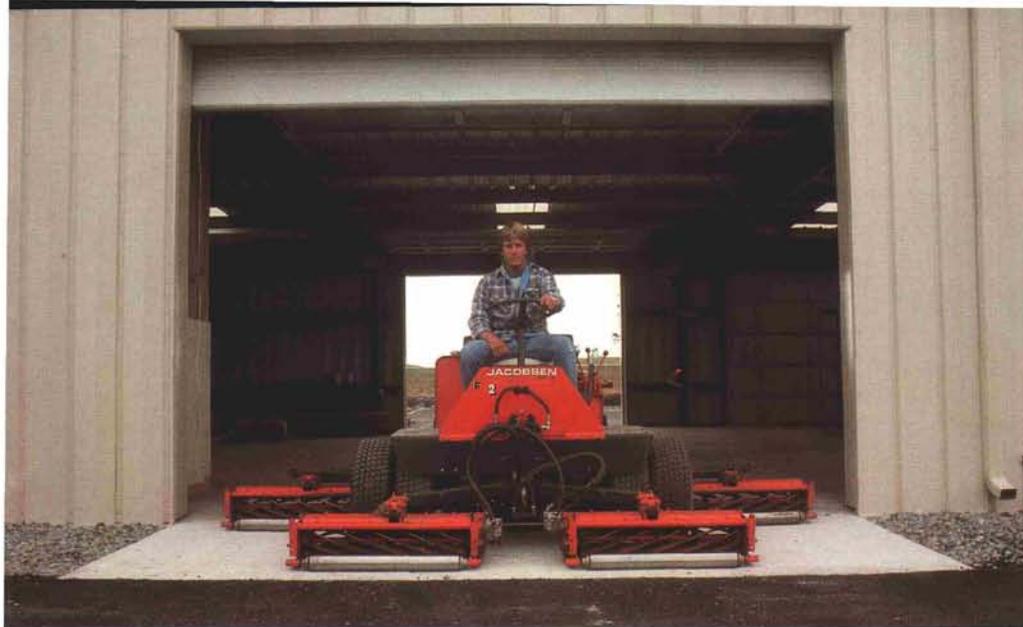
After visiting many maintenance facilities and talking with golf course managers, it became clear that although the activities necessary to maintain a golf course were very much the same, no two facilities were even remotely alike.

This proved that new design and planning technology that had been developed

through the last decades were not being used for golf course maintenance buildings. It is hard to believe that as long as golf courses have been around, the design of their facilities could be so neglected.

With new regulations and the right-to-know laws in effect today, plus the high cost of maintaining a golf course, owners can no longer overlook the importance of the maintenance facility. The idea that maintenance activities can be carried out in a barn hidden away out of sight, as they were in the old days, is courting serious problems and operational inefficiencies.

THIS LACK of proper design undoubtedly reflects some of the old traditional attitudes. While tradition is a foundation of golf, it is nevertheless necessary to consider the modern needs and new issues facing today's maintenance operations. The cost of maintenance is a major consideration today. Although the manufacturers of equipment are addressing the problem, we



(Above) Getting the equipment in and out — the drive-through concept with large roll-up doors to reduce damage to the building and the equipment.



(Left) Equipment service island — located so that each piece can be serviced and cleaned in the same location. Note the large catch basin for collecting debris from clean-up.

still have the matter of efficiency at the golf course itself.

The majority of the maintenance facilities I have visited lack adequate space to perform the work. This is a major factor affecting the total operation. Since there are no published guidelines dealing with the space requirements for golf course maintenance operations, one can understand why facilities are so unlike one another.

Following the normal procedures of the facilities planning process, I conducted a space study of the various golf maintenance activities. For example, to determine the size of the equipment storage area, I measured all pieces of equipment. A parking plan was developed. Equipment used each day was located for easy accessibility, and it could be driven from the building without moving other pieces of equipment. Equipment that wasn't used as often was located in secondary parking slots. Equipment that was seldom used was parked in less accessible slots. This assignment of space enables the super-

intendent to dispatch any piece of equipment to the course without having to move other equipment first.

The inside space necessary for other aspects of the golf maintenance operation have been established as follows:

Administration and supporting facilities for employees	1,600 sq. ft.
Equipment parking	3,200 sq. ft.
Chemical storage	800 sq. ft.
Repair shop and parts	1,600 sq. ft.
Cleaning bay	800 sq. ft.
Soil bins	800 sq. ft.

When the opportunity to design and build a complete new facility presents itself, the following space requirements will provide a guide for the size of the land area necessary to operate a golf course maintenance facility effectively.

Building	8,800 sq. ft.
Fuel island/wash apron	1,720 sq. ft.
Hard surface apron	42,838 sq. ft.

Dumpster pad	375 sq. ft.
Soil mix apron	1,200 sq. ft.
Drives and green space	4,992 sq. ft.
TOTAL LAND AREA:	
235 ft. × 55 ft.	55,925 sq. ft.

BECAUSE efficiency is only obtained by creating an orderly traffic flow, it was necessary to analyze the flow to and from the facility. Many factors are concerned, among them the separation of employee vehicles from other activities, visitors to the facility, outside service vehicles, and the maintenance vehicles themselves.

Two operations at every golf maintenance facility deserve special study: fueling and washing vehicles. Washing creates an offensive environment, while fueling is a major safety consideration. Each operation is usually conducted at a separate location. They do, however, have one aspect in common. Both must be done to every piece of equipment every time it is used. Therefore, upon entering the facility from the golf course, the equipment is usually driven to two separate locations. This can create a complex traffic flow. However, space will be saved and efficiency increased if the two activities are confined to one general area. The combination fuel island/wash apron should be located directly in the traffic flow between the golf course and the building.

Designated parking spaces is important, too. Employees' performance in driving maintenance vehicles is far more predictable when the operator knows exactly where they are to be parked. Past studies show time is wasted when an employee cannot find a place to park his vehicle. While this aspect of facilities planning may appear at first to be minor, it is one of the major contributing factors to the order so necessary to achieve efficient operations.

Planning of space and creating a traffic flow for equipment develops a sense of order that carries over to other activities. Order reflects an attitude of management. Attention to see that every activity has been studied conveys to the employees a sense of concern. You will find that a positive attitude will prevail, and that the quality of the job performance will increase accordingly.

The maximum efficiency level of any operation is achieved when facilities planning technology is applied. This aspect of any golf course operation deserves further exploration. It can significantly affect golf course economics and a successful future.