



Good visibility and quietness make this maintenance shop office a pleasure to work in.

# A Guided Tour The Evolving Maintenance Facility

BY GARY BOGDANSKI

The maintenance barn of yesteryear can be an obstacle to operating a modern-day golf course.

**T**he expectations of today's golfers require more labor and equipment, and with the added workforce and equipment it's easy to outgrow the golf course maintenance facility. At Sharon Golf Club (Sharon Center, Ohio) it became clear we needed to update our facility, not only from the maintenance standpoint, but also to provide better working conditions for our employees.

When faced with the need for a new facility, a golf course superintendent has several options: continue struggling with the existing facility, which is not a good option if there are health and safety issues; build a new facility from the ground up if the existing complex is in extreme disrepair, a very expensive proposition; or update the existing facility. We opted to update and add on to the existing complex, as the buildings were in good physical shape but needed maintenance.

## THE PLANNING STAGE

Prioritizing the facility's needs allowed the process to proceed one step at a time. As a result, very thorough planning was accomplished for each addition. Over the span of 11 years, the facility's space was doubled to more than 16,000 sq. ft., not including the outside washpad and topdressing

storage area. Each project was designed to meet the functionality of our operation and anticipate future needs. The primary goal was very simple: provide a professional work environment and eliminate health and safety concerns.

The safety factor was proactively investigated in every aspect of the project. Several agencies advised us: the local fire department, the building department, and the state bureau of workers' compensation. Our insurance carrier also was a good source of information.

One of the best ways to gather input is to tour other complexes to see how they function. Compiling ideas and advice from others helps develop a clear plan. As with all major construction, general contractors were utilized, but we stayed involved. Communication between all parties must be very clear. Mistakes during construction can be very costly. Our intent was to do it right the first time.

## A GUIDED TOUR

The fuel dispensing area ranked the highest priority for improvement. Regulations required that the underground fuel tanks be removed. The local fire department allowed us to replace them with two 1,000-gallon

above-ground tanks having their own secondary containment. In addition to minimizing the potential for pollution from spills or leaks, a considerable cost savings was realized using above-ground versus underground tanks. A roof was added to protect the tanks from the elements.

## WORKSHOP

The second priority was an update to the existing workshop and larger working area. A 10 ft. x 10 ft. area in the shop was reconfigured to serve as an equipment manager's office. To reduce noise transmission, the walls were heavily insulated and the windows constructed with double-paned tempered glass with a 4-in. air gap. The result is a very quiet office in which to conduct business. Hot water heat and an air conditioner provide year-round comfort.

Other improvements to the shop area included an above-ground lift, natural gas infrared overhead heaters, and expanded parts storage. The actual building size increased to allow specialized maintenance procedures, such as washing equipment during cold weather and spray painting equipment. After much consideration an architect was hired to distill our ideas onto a blueprint. The final version consisted of a

washroom, paint booth, flammable storage area, and a mechanical room.

The washroom is equipped with a steam cleaner and a floor drain that flows into an oil separator to catch any oily residue from equipment washing. During warmer weather an outside washpad is used; the washroom and paint booth serve a dual purpose and are used for mower parking during the golf season.

The Binks paint booth has a fire suppression system and a complete filter to catch paint overspray. Since a paint booth requires large volumes of air movement, an outside heater operating at 1 million BTUs supplies air for wintertime painting.

The flammables storage room where all paints and oils are stored is located at the far end of the building next to the paint booth. The room has explosion-proof lighting, heating, and fire suppression. The room also has a sunken floor to provide secondary containment. Because oil drums with hand

pumps are extremely messy, the room has a loft with bulk oil storage cubes mounted overhead. Oil from drums is pumped to one of six steel tanks, each capable of holding 65 gallons. The product is then dispensed via gravity to a spigot below, with a drip trough that catches any spillage. This makes for a clean, space-saving method for dispensing oil.

The last room (which we call the boiler room) contains the fire suppression tanks for the paint booth and oil storage rooms. To eliminate noise, the air compressor was relocated from the main shop to this room. Hot water heats the flammable storage room as well as the paint booth when it is not being used.

#### PESTICIDE AND FERTILIZER STORAGE

A safe, secure facility to mix, load, and store pesticides and fertilizers is a must (See "Pesticide Storage: One Step Ahead," *USGA Green Section Record*,

March/April 1997, Vol. 35(2):5-7). The design evolved as we discussed our plans with the governing bodies for this type of storage. In our case the local fire department and the Ohio Department of Agriculture had the highest jurisdiction. The project was designed in-house. Some of the main features in this all-block building are: secondary containment in the storage areas and in the mix/load room, epoxy-coated floors, ventilation for each room, and block walls that divide each room and extend to the roof deck to minimize the spread of fire. The mix/load room has a floor that slopes to a stainless-steel trough and flows to a custom-designed double-walled stainless-steel sump. The rinsate captured in this sump can be pumped up to one of three 55-gallon plastic overhead storage tanks and dispensed via gravity to a spray tank, an idea similar to the oil storage room. Having

The fuel-dispensing area was the number-one priority. The result was a clean, well-labeled refueling station.



three tanks allows the rinsate to be segregated by material type. Fertilizers are stored in an adjoining room on pallet racks. A used forklift was purchased to facilitate storage, and we can now store 18 tons on just one wall.

## COLD STORAGE

During the last ten years our equipment inventory has doubled, and we faced the issue of how to house this extra equipment. We decided that a pole-type building would be the most cost-effective solution. The additional 2,600 sq. ft. helped eliminate the congestion in other buildings. Although the main purpose of this building was to store equipment, we included the capability to store PVC pipe and fittings. A "home improvement" type store approach was taken, using racking and labeling to ease locating parts and help us control inventory. As a result of the success of this storage method, it has been expanded throughout our older buildings with great success.

## MAINTENANCE STAFF OFFICES

The last phase of the project involved the center of the entire maintenance operation: the construction of new maintenance offices. The goal was to provide an office environment not typically seen at a golf course. The previous office was inadequately sized, with three staff working out of a 12 ft. x 15 ft. room. The previous restroom accommodated only one person at a time. With 30 people on the crew, this configuration was inconvenient. The addition provided an additional 2,000 sq. ft. of space consisting of one private office, an open office area to accommodate three people, space for an administrative assistant, and restrooms. The open office provides for direct communication between staff members, as opposed to an individual office concept. The administrative assistant takes care of the cumbersome day-to-day paperwork and required record keeping, and having



Bulk oil dispensing can be clean and efficient. Oil is dispensed from six steel drums. A drip trough catches any spillage.



Fertilizers are stored on pallet racks. A lift truck increases fertilizer storage capacity.

someone to answer the phone saves the mechanics from being distracted. The new office design is professional, with oak trim throughout, high ceilings, and specialty lighting.

With all of the improvements, we took the necessary time to assess our needs. Even before an architect was hired, we worked up a complete plan via CAD. As with past projects, there were many revisions. I even went so far as to lay out the proposed plan with paint lines on the ground to get an idea of actual spacing. When the redrawing was done, the plan was then given to an architect to draw it up.

## CONCLUSION

If a working environment is created to be as professional as possible, there is an expectation that will carry through to the whole staff and be reflected on the golf course. In updating a current facility, the most important piece of advice is to **take your time and plan it out**. The better it is on paper, the easier the project will proceed.

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