In-House Versus Contract Renovations

Can our crew do that?

BY BUD WHITE

The decision to attempt an in-house renovation as opposed to an outside contractor has always been a controversial issue for golf courses. A superintendent is often seen as a Jack-of-All-Trades, and if a golf course crew has a backhoe and a dump trailer, then many golfers automatically assume they are equipped to rebuild the greens, install a new irrigation system, renovate the bunkers . . . or maybe even build a new parking lot.

There are particular parameters a club must weigh to decide whether a renovation project can be done in-house by the superintendent and crew, or if it should be outsourced to a contractor to get the job done properly and efficiently. Far too many boards or green committees simply assume that any construction project can be accomplished by the maintenance staff. True, many projects can effectively be done in-house, usually with a small amount of rental equipment and some extra labor. But these projects depend largely on the experience of the superintendent and crew and the size of the project. Common in-house projects include drainage work, bunker renovation, and sometimes tee leveling. There are circumstances, however, when even these cannot be done in-house due to the project's magnitude, the expertise of the maintenance staff with equipment operation, crew size and staffing, and the availability of the proper equipment. Management must be realistic with what a maintenance crew can accomplish. Saving money is not the only goal.

The scope of the work is the first consideration. This goes hand in hand with a master plan. Any type of renovation should be part of an overall master plan so the golf course staff, management, and golfers are on the same page as to what is to be accomplished. Additionally, if multiple projects are being considered, they can be properly prioritized according to budgets and timelines. This is where a master plan is so critical. Noted below is a link to an excellent article about master planning.

Adding a short game area is a common upgrade for golf courses today. This example was completed as an in-house project, but a shaper and sprigging company were sub-contracted to accomplish that portion of the work.

http://turf.lib.msu.edu/2000s/2006/060726.pdf

The project's timeline is another critical aspect of the planning process, and although it may seem backwards, the proper planting window for the turfgrass being used is a top priority. For a bunker or drainage project, this may not be an issue. But if turfgrass is being planted, then it must be seeded or sprigged in the proper planting window to have the most rapid establishment and insure the best success of the project. Too often, projects are begun without turfgrass grow-in as a consideration. Then, upon project completion, the golf course finds itself in a season where rapid grass establishment may be nearly impossible. This can delay the project opening for months, impacting bottom line profitability.

As a rule of thumb, I recommend the following planting windows for various turfgrasses, using the northern tier of the transition zone as a baseline:

- **Bentgrass greens:** August 15 - October 1.
- **Bermudagrass greens:** May 20 - July 15.
- **Sodding tees or fairways with cool-season grass:** March 1 - May 15, August 20 - November 1.
- **Sodding tees or fairways with bermudagrass:** April 15 - August 30.
- **Sodding tees or fairways with zoysiagrass:** April 15 - August 30.
- **Planting native grasses:** Check with an expert for the best planting window, i.e. spring or fall.

Remember: *These planting windows vary according to the specific site.*

Collar replacement or expanding putting surfaces back to their original shape and size has become a very popular course renovation project over the past few years. Collars often become contaminated with *Poa annua* or fairway grass invasion, which is normal on bermudagrass golf courses. At the

Winter drainage projects are one of the most common in-house projects completed by maintenance staff.

same time, greens become contaminated with bermudagrass or zoysiagrass from the collars if a stringent edging program is not maintained regularly.

Stripping the collars and fumigating them to eliminate bermudagrass or weed seed contamination helps ensure purity on the putting surface and allows an edging program to be initiated that can be extremely successful for many years. As a part of the collar replacement, sod should be removed one to three feet into the putting surface so the contamination can be removed on both sides of the collar/green transition.

Recapturing the original putting surfaces is usually the goal in the collar renovation project. Greens can lose shape and shrink over the years from mowing. This occurs because the operator allows the collar to creep in as he tries to prevent scalping into the collar with the putting green mower. Probing the soil to find the boundaries of the original green core is a simple, proven method of accurately finding the original shapes. Many courses have recaptured 15,000-25,000 square feet with this approach, not to mention many new and often great hole locations.

Sometimes golf courses undertake a project that can, for the most part, be done in-house but requires some detailed shaping that is beyond the expertise of the superintendent and maintenance staff. To address this issue, professional golf course shapers can be contracted directly to provide this portion of the project that cannot be done in-house. This is a very workable arrangement for a golf course when the shaper is simply paid a contracted price and then a dozer or other equipment is rented according to his specifications. This has been accomplished quite effectively. The American Society of Golf Course Architects (www.asgca.org) and the Golf Course Builders Association of America (www.gcbaa.org) are good references for obtaining information about contacting a shaper directly.

Oftentimes, the golf course serves as a general contractor and simply subs out specific work, such as utilizing a shaper. When the golf course serves as the general contractor, there is money to be saved, but coordination and planning are even more critical, so work is accomplished by subcontractors efficiently. Moreover, when materials such as bunker sand or greens mix and gravel are bought directly by the club, the club must have detailed soil tests taken initially and then adequate soil tests performed throughout the delivery process to insure quality control.

When a project is undertaken in-house, the management of the golf course must have a clear understanding of the scope of the work and how

the project work will be accomplished in addition to the day-to-day maintenance of the golf course. This will require additional hourly labor to be hired and additional equipment to be rented. The superintendent and assistant superintendent will manage the project as well as the day-to-day golf course operations. If only a small amount of extra labor is hired, then golf course management must decide what operations will not be accomplished on a day-to-day basis to provide extra labor for the project. This project detail oftentimes slips through the planning phase and becomes a difficult issue when day-to-day maintenance on the golf course is not kept up. It is imperative that course officials are in complete agreement as to how golf course maintenance and the project will be managed and how much labor will be supplied to each. If maintenance details on the course suffer and golfers do not know why, it is the golf course superintendent who receives the criticism.

Cart path additions must be installed to the proper grade. Addressing tree roots should be a major concern for long-term success.

Similarly, in the past, management or committees have added tees, bunkers, moved greens, etc., because they decided it would be a good "upgrade" for the course. In today's society this is a huge golf course liability. If someone is hurt on the course due to play from one of these additions, the course is at risk because the structure was not professionally located or designed.

Courses should obtain a plan from a golf course architect to prevent design liability issues by an unqualified individual. Such changes/upgrades should be a part of the master plan as mentioned earlier. As a side note, an architect is not always needed for native area conversions, except to consult on design considerations or aesthetics. Course officials can decide conversion areas based on reducing maintenance or out-of-play zones. Oftentimes native area boundaries are a work-in-progress to find a boundary that does not overly affect or slow play.

Not all aspects of renovation projects are physical construction. Evaluation, planning, and management are major components of renovation by the superintendent and course officials. Discuss with the architect design concerns such as slope steepness, bunker depths, and height of sand flashing. A course must make sure it can afford master plan changes/upgrades *before* the renovation. Actual renovation costs can be the least of expenses over the long term, whether done in-house or by contract, as compared to greatly increased hand labor or other excessive design changes.

If a project is professionally contracted out, there are still many jobs that the superintendent and his staff can do to supplement and support the contractor without being in the way. Oftentimes, superintendents and other management people want to be overly involved in the day-to-day operations of a contractor, instead of remembering that he is an expert who does golf course renovation work as a profession, and therefore he needs support, not micromanagement. Rootzone testing, both physical and chemical, applying preplant fertilizers and soil amendments, bunker sand quality control testing, gravel testing, sod selection, and inspection at the sod farm are all support tasks superintendents can do to help contractors.

An expansive golf course project may be completed at one time as a whole project, or it may be phased in over two years for budgetary or weather reasons, such as the inability to complete a project in the short season of an extreme northern site. The most common reason projects are phased in over two years are budgetary, and this has been accomplished quite successfully. However, the golf course must be committed to finishing the project the following year, as many projects have taken years to be completed even with the best of

Retainer walls are projects often accomplished in-house, but the question should be asked, "Do they require engineering specifications to ensure adequate structural integrity?"

intentions. A complete irrigation system replacement, tee releveling, or green construction on a golf course are probably the most common projects considered for phasing in over two or even three years. The installation of new cart paths or the replacement of a cart path system is yet another such project.

First of all, it is important to point out that phasing in any of these projects over multiple years is more expensive to the course and is more inconvenient to the golfers than completing the project all at once. Green reconstruction is the worst of these projects to complete over multiple years because of the inconsistency of construction that can occur from one year to the next. Variations in materials and management of different maturity levels in greens can be a management nightmare for a club. New cart path installation or a new irrigation system is a more common project to phase in over two years. Again, with proper planning and a total commitment of the club to complete these projects in the agreed time, this can be done successfully.

Turfgrass selection is almost always a major part of renovation and should always be given high priority. Whether in-house or contract, architect directed or not, the superintendent and course officials should have the final say on turf selection. A committee should seek out other courses that have the turf variety being considered, play them, and discuss with their officials the pros and cons of the grass. Make sure, however, to compare maintenance and environmental issues on an apples-to-apples basis. Proper turfgrass selection should never be taken lightly. It can be an asset or a nightmare for many years after project completion. Make sure the selection fits the environment, course budget, and playing clientele.

Bunker design is a factor of bunker renovation that must be carefully weighed today to reduce maintenance costs as much as possible. We have forgotten in the United States that bunkers are hazards, and many courses spend more man-hours on bunker maintenance than on putting greens. Today's economy will not allow this to continue. Converting faces from high-flashed sand to sod has reduced overall maintenance in bunkers for many golf courses and might be a consideration for your course, since sand washing on the faces is greatly reduced. Converting sand bunkers to grass depressions is another consideration. In this situation, input from an architect and having an approved master plan are so important.

Collar replacement and recapturing lost putting green surface are common renovation projects that are handled very well in house.

Considering a change in bunker sand? Installing multiple sands in a bunker test plot at a golf course for golfer review is not the best approach for evaluating new sands. Regardless of the choice, a sand will be selected that some members of your golfing clientele will not like. Anticipate complaints about sand selection, even before the project is completed.

Does a particular in-house project require engineering or permitting? A prime example is a retainer wall located on solid ground or on a lake bank. If a wall being installed is more than 18" tall, is on unstable ground, or might have excessive pressure behind it, engineering might be required as part of a building permit or to ensure adequate structural integrity. Pond construction might be another example that requires design and specification details from an engineer. Safety ledges, slopes, depth, and dam construction are all critical details that cannot be built without caution.

When contracting a project, make sure you choose a qualified golf course contractor, not just the lowest bidder. Bid proposals should be requested only from qualified golf course builders, but oftentimes projects are bid by unqualified construction companies that do not know golf course construction intricacies. If such a contractor

secures the bid as the lowest bidder, then the superintendent's job as the course representative to manage the quality of construction and prevent corners from being cut becomes one of the most important jobs of the entire project. Utilizing a non-qualified golf course contractor is a slippery slope.

A request-for-bids document that details the project to be built goes a long way toward eliminating unqualified bidders if a project must be put out to the general public for bid.

There are many other examples of projects that may be considered for in-house renovation, but which are typically too large for maintenance staffs. Some of these include:

- Practice facility expansion.
- Short game area construction.
- Large tree removal and heavy, high pruning.
- Expanding the irrigation system mainlines.
- Maintenance building renovation.

Examples of projects commonly done in-house include:

- Leveling tees.
- New topdressing bin construction.
- Building a new mix/load station.
- Building a new wash station.
- Construction of covered storage.
- Additional seedbed firming on greens to help contractors.
- Fairway topdressing with old sand from greens or bunkers.

Doing a project in-house versus outsourcing requires much thought, planning, and evaluation to make sure it can be realistically accomplished by the current maintenance staff. Saving money is not the only consideration. The quality of the finished project must be the overriding factor in the decision process. Golf course management must consider all aspects of this decision and carefully weigh all parameters. It is not always an easy choice.

ADDITIONAL INFORMATION

"Perils and Pluses of 'In-House' Renovations," USGA Green Section Record, James F. Moore, May-June 2010. (TGIF Record 162729)

White, Charles. *Turf Manager's Handbook for Golf Course Construction, Renovation and Grow-in*. Chelsea, Mich., Sleeping Bear Press, 2000. (TGIF Record 64871)

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Laser leveling of tees is easily accomplished in-house if proper equipment is obtained.

Bunker renovation often can be handled as an in-house project that is completed during the off-season or over a two- to three-year period.