## BUILDING ISSUES

GCBAA members discuss the impact of poor water quality and appropriate budgeting on construction

ditor's note: During the annual summer meeting of the Golf Course Builders Association of America, which was in Monterey, Calif., this year, Golf Course Industry hosted a roundtable with six GCBAA members to discuss the golf course development industry. Participants were Glenn Caverly, president of Golf Course Construction in Howell, Mich.; Bob Bryant, president of Bryant Taylor Gordon Golf in Costa Mesa, Calif.;

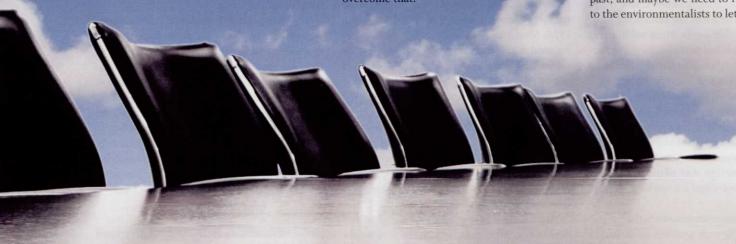
Oscar Rodriguez, vice president of Weitz Golf International in Temecula, Calif.; Klaus Ahlers, golf sales manager with Colton, Calif.-based Leemco; Wayne Massey, president of Medalist Golf in Cumming, Ga.; and Willie Slingerland, sales manager for Dallas-based Flowtronex. The following is an excerpt from the discussion.

**GCI**: Describe your main challenge in the current environment and what you're doing to overcome that.

**CAVERLY:** Our biggest hurdles today are environmental permits and getting paid for projects.

**GCI:** Is there anything you can control about either of those?

**CAVERLY:** No. I wish we could. Bureaucrats are becoming tougher about regulations. We've been on jobs that take as long as five years to receive permits. We've conducted studies in the past, and maybe we need to redistribute those to the environmentalists to let them know how



BY JOHN WALSH

good golf courses are for communities.

BRYANT: The challenge we face is the one we've faced for many years, but it's getting to be a serious problem. It's the availability of water and water quality, particularly in the western part of the U.S., but that's been expanded to all parts of the country. Water quality has continued to decrease, and that affects us two ways. One, if water quality decreases, it affects agronomics and the equipment because it doesn't last as long. Second, it increases the cost of the systems

we design because, when trying to minimize waste, it requires more sophisticated irrigation systems. We're constantly balancing having too many bells and whistles yet having adequate technology in place to control water.

**CAVERLY:** Another key is the development of useful technologies and tools to take ocean water, brackish water and poor-quality well water, and treat it to make it useful from an agronomic standpoint so it's good for the turf.

BRYANT: It's a challenge that faces all parts of the industry. It affects the contractor and its bidding. It affects the agronomics, not only initially but long-term. It affects the research and development that's being done on turfgrasses and how these turfgrasses are maintained.

**GCI:** At this point, is it a crisis, or do you see it becoming one during the next few years? Do you



## **COURSE DEVELOPMENT**



Clockwise, from top left: Glenn Caverly, Klaus Ahlers, Willie Slingerland, Wayne Massey, Oscar Rodriguez and Bob Bryant discuss how water quality impacts the cost of building golf courses. Photos: John Walsh sense the industry is adapting to this problem?

BRYANT: It's a crisis in some parts of the country simply because some golf courses can't move forward because they can't get a permit to have a reliable water source. In some parts of the world, they start building a golf course without having permits in place to have a water source. China is a prime example of that, Mexico to a certain degree and even in the U.S. We've been involved in projects in which developers weren't quite in place with their water source and struggled with the project because of that.

RODRIGUEZ: It's also affecting the standards in golf course construction. As we migrate to the Dominican Republic, for example, they're using paspalum grasses that are more tolerant to salt water. But you don't get the quality of USGA construction on greens. It has a counter effect. The USGA standards for greens construction no longer apply. The water availability isn't there. Without paspalum grasses, we couldn't build some golf courses that are being built today.

**GCI:** Is the USGA is willing to change its specs because of water quality?

RODRIGUEZ: I don't think they're going to change them, but when you're looking at it worldwide, you have to make some concessions.

CAVERLY: You have to make adjustments from region to region based on water, and in many cases, the availability of materials you have to use in construction to begin with.

BRYANT: What we're having to do because of water quality is continue the soil profile that we've created. We can fan the profile we've used in greens into the fairway and, in some cases, into the rough just to have a surface in which we can control percolation rates because even with paspalum, the less uniform the water distribution, the higher the salts come up. There's been a lot of talk about salt intrusion and salt-affected turfgrass. It's back to irrigation systems again. We've been forced to move sprinklers closer and closer to maintain higher distribution uniformity to push salts down.

**RODRIGUEZ:** It goes back to getting paid projects off the ground. We started budgeting golf courses and throwing out current irrigation budget numbers. We need to sit back and rethink if it makes sense or not to have that project.

CAVERLY: What we're finding frequently on the construction side is that owners are projecting budget numbers based on other courses that have been built. And when all this stuff comes up, that's where we all get in a pickle because when the true numbers come out, we're four or five million dollars short. It's almost like the consultants don't do enough homework up front to let the owners know what a true dollar budget is that they need to deal with.

Every job's different, every piece of property is different. It's county to county, city to city anymore. There are different soil and water properties that need to be dealt with. So there's a lot more research that needs to go into preplanning and prebudgeting a golf course today.

SLINGERLAND: When you're dealing with these higher salt contents, you're not using standard equipment anymore. You're using pumping systems that are completely made out of 3/16 stainless steel, which is three times the cost of a regular station. You have to use special fittings just to handle the high salt content or the acidic water, whatever it might be. Even the sprinkler heads have steel springs and 3/16 instead of 304 plungers. All of these things continue to add to the cost. You don't see them in most cases, but they keep adding up. If you do a job in the

Dominican versus a job in central Texas, it's not even remotely in the same price range.

AHLERS: We're changing over from standard iron to almost everything being epoxy coated. We



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## "We're changing over from standard iron to almost everything being epoxy coated. We started it because of water conditions ..." - KLAUS AHLERS

started it because of water conditions and fertigation injection, acid injection, things of that nature. We changed all the internals to stainless steel. You can't look at this and say they've got good water and everything's all right and not think that in the future if the quality of reclaimed water deteriorates everything will fall apart.

BRYANT: Remember it's not just water. It's a combination of water and soil. Both of those have to be analyzed for what the total effect of that profile will be when you apply certain water to a certain soil.

AHLERS: In some cases, the soil conditions are as bad as the water conditions for salinity. It's easier to epoxy in and out, otherwise you're going to tape it off and separate it. In some places it has been done that way. The stuff we shipped years ago to Saudi Arabia was like that, and Hawaii has always been that way because of the soil conditions.

GCI: What are some challenges with regard to budgeting?

CAVERLY: The GCBAA has a cost guide for estimating construction, and it's broken up in different regions of the country. It's based more on true numbers not guess numbers, so we have that available today, which is a lot closer than somebody shooting from the hip.

BRYANT: Those are guidelines. But the owner needs to understand the unique conditions of the property. They also need to understand the architect's vision for the project because a golf course that's routed one way in terms of irrigation and drainage can cost a certain amount of money. For irrigation, one linear project can add 20 percent more mainline pipe to get from one place to another if it's a long, linear housing site. Those are the things owners don't always realize. The individual aspects of the project need to be understood in terms of water, soil design and everything else. And quite often, the owner already has a budget before he has hired an irrigation designer. There are still owners who believe in a certain number because they've heard that number kicked around forever.

GCI: Are architects setting the owners straight in terms of cost?

AHLERS: There was case in North Carolina recently in which there were several architects who didn't see any value in the irrigation. A good, well-known irrigation consultant, who was actually brought in by the architect to begin with, made a presentation to the board. Everything looked fine with the budgets. Then the architect comes back in and says, "That's ridiculous. You don't need all this stuff. There's way too much stuff on this system that you don't need. We can put in more bunkers and tees or do something worthwhile." The attitude is that the efficiency of the system and water savings and stuff like that is just too much.

> SLINGERLAND: You can have the greatest architect in the world, the greatest piece of property, but if you don't have water and a good distribution system to put that water on that turf, I might as well design the golf course. It comes down to the irrigation and the quality of the facility you're going to end up having.

BRYANT: The good news is that during the past 20 or 30 years architects have come to understand what the irrigation costs are and are more realistic about them, especially from those who understand agronomy. There are architects who understand design and have a vision, and there are those who not only have that but also have an agronomic understanding or a staff that has an agronomic understanding of running the course. Those that have that also realize the costs that are involved, and it's the age-old story that you have to spend the money on the irrigation and drainage upfront because that gives you the long-term value on the project. Otherwise, you end up with golf courses that have had to add an additional million dollars worth of drainage, and that's a shame when that happens. That's not always the architect's fault. Sometimes the architect tells the owner, and the owner isn't always willing to spend the money.

GCI: Are the builders and contractors brought in early enough in the development process?

**RODRIGUEZ**: It's a disservice if the architects don't educate their clients on the budget side. Many of these architects have their preferred contractor. But I don't remember ever having an architect call saying, "Hey Oscar, there's no commitments here, but I have a project. What do you think?" Most contractors would be happy to say, "Yeah we'll do that." If they want us to sign on the dotted line about it, that's a different story.

GCI: You can catch red flags early on, right?

RODRIGUEZ: Sure. Recently, we were bidding on a project in Northern California. I went to the site, and they were turning over the topsoil right into everything. I called this person and said 'Hey, I just want you to know I'm not going through a proper RFI because this is what I see. This soil is what you want on top. You've got to strip this.' He says, 'That's a budget cut. All these prices - PVC, copper - have gone up so we've got to find a way to cut cost.' I said 'You're making a lifetime decision about this golf course.' I'm not blaming the consultant because maybe the architect told him that. He was making a budget decision. Maybe he was stuck with that budget.

The architect should make a better attempt to contact builders and say, 'Hey guys, just give me your budget for this so we know if we're in the ballpark.' I do that on irrigation systems. I'll call Bryant Taylor Gordon or Marvin Mills and say 'Hey guys, give me a ballpark figure?' so I don't go in with a budget and do what I'm complaining about with other architects.

MASSEY: I don't know of any builder who won't offer those services a year and a half to two years in advance and give these guys ballpark numbers, some real numbers.

BRYANT: The most successful projects we've been involved in have been when we're part of a team, whether that was just the architect and us and the number of builders that were being considered. Usually, when you have that team together and the agronomist, you have the opportunity to establish a budget, evaluate it and then choose what things are worth considering, cutting or saving here and there and what things are detrimental to the project long term.

GCI: What areas can you cut that won't negatively affect the project long-term?

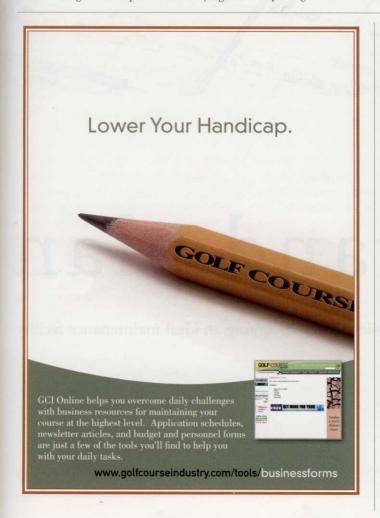
AHLERS: It depends on the soil conditions. Oscar had a good example. You're burying the topsoil underneath. Just moving dirt without considering what it costs you to stockpile it and put it back to what your long-term costs are is ridiculous. But somebody's got to hear that and understand the situation. When I was still doing construction, it was ridiculous to see these guys with the attitude of 'I'm not even going to be around here for this long-term thing. I want my \$100,000 premium lots around this golf course. I'm not going to maintain it. I'm not going to take care of this thing later.' And then they wonder why nobody's playing the golf course and why members are leaving.

RODRIGUEZ: Two or three years ago, I started on a trend of sand-capping everything. It was eight to 12 inches of sand. It's expensive to plate the entire golf course with that. Well, that seems to have gone away because of budget reasons. I haven't done that lately. Something as simple as repricing tee sand with masonry sand or straight sand. Those kind of things make sense.

BRYANT: I've been involved in a couple of projects where they should have sandcapped and didn't, and they've paid for it 10 years later. An option is to sandcap, and if that option is too expensive, then another option is to consider stripping the topsoil and screening on site. Again, it's so specific.

CAVERLY: It's almost to the point where they need to take consultants out to the property that you're going to purchase before you purchase the property. Sometimes it's worth it to walk away from a chunk of land that you want to build a golf course on. GCI

Coming next month: Part two of the roundtable in which participants discuss the golf course renovation market.





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