

# Constructive ideas

Contractor tells how to plan

**F**ield construction is no small task. The planning, equipment and construction techniques are important factors. SPORTSTURF magazine recently spoke with Chad Price, agronomist, from Carolina Green Corp., a general contractor specializing in sports field construction, renovation, maintenance, and design. Carolina Green constructs all types of natural grass fields, including sand based, modified soil and native soil systems. The majority of the company's work is at the college/university/professional level, but the company also works with little league and athletic associations.

**ST: How far in advance of actual construction should planning for a new field begin?**

**PRICE:** Most projects need 6 months to 2 years planning, depending on scope and number of people involved in approval of the project. Approval of issues such as erosion control, zoning, wetland protection and utilities may take months to pass and should be addressed early in the design development stage.

**ST: What occurs during the planning stages, and what type of preparation is done before construction begins?**

**PRICE:** The planning process may vary depending on the type of construction process used for the project. The three most common construction projects I see are design/bid/build, design/build, or request for proposal (RFP). In design/bid/build, the owner and architect come to terms on the scope of the project, bid the project, and award the job to the lowest responsible bidder. In design/build, the owner selects a qualified contractor up front and negotiates the terms before construction, and the contractor acts as the designer. In an RFP, the owner provides an outline of the scope of the project to qualified contractors, who then respond with their individual design proposal and cost. The owner then selects the contractor with whom they are most comfortable. There are advantages and disadvantages to each approach, and the method used usually depends on legal issues with public and private funding.

With any process, a good planning team is critical to a successful project. The

team has two sides, the owner and the designer. The owner group typically consists of the person with the money, the turf manager and a coach/team rep. The design group could be the architect, the field contractor or both.

The planning process would start by the owner group communicating exactly what they expect in terms of field performance and level of use as well as budget for the project. We need to know how many events—games and practice—will be played per week, will they play rain or shine or allow for cancellations, are there periods of down time to perform maintenance, what equipment and personnel will be available for maintenance, and what is the construction and maintenance budget.

Once this is established, the field contractor, turf manager, and architect can work together to develop design specifications for a field capable of that level of perfor-



mance. Considerations include initial construction costs as well as long-term maintenance requirements. We run physical soil analysis tests on the existing topsoil to determine compaction potential and amendment needs. We then identify suppliers of materials that meet the specifications and, if possible, get the material contracted for delivery. This is especially important with rootzone mix and sod in fields with internal drainage. The soil in which the sod is grown and the rootzone mix need to be compatible for drainage purposes, and that can be a challenge.

The architect can then package the field design with the other issues in the project such as seating, lighting, and access. The team should bounce ideas off each other on issues such as field rotation opportunities, warm-up and practice areas, and spectator access and protection.

**ST: What type of information/input do you look for from the turf manager, and/or the other parties you are dealing with, during the planning stages?**

**PRICE:** Information and input from turf managers is critical in the planning process. Problems encountered in many projects can be traced back to failure to include and elicit input of the turf specialist in the design stage. The turf manager needs to inform the design team of their current capabilities, and what additional personnel and equipment may be needed to maintain the new facility (these costs should be added to the project).

We can often make slight changes in design to help an understaffed maintenance crew. These options can include grass base paths, automatic irrigation on skinned areas, or building the field longer to allow periodic shifting out of worn goal mouth areas. Even seemingly small details, such as gate placement to reduce turf wear, can make a big difference in daily maintenance.

We also want input from coaches and teams to help us better understand the level of traffic the fields will need to endure. This also gives us an opportunity to inform them on ways to limit wear during practice.

**ST: Detail for us the construction stages and the steps it takes to create a quality playing field.**

**PRICE:** The field construction stages are fairly simple. The problems usually arise in dealing with other contractors around the field such as fencing, seating, and lighting. There always seems to be someone who thinks it is necessary to drive a concrete truck across the field after the grass is down. This goes back to coordination with other contractors during the planning stages.

By the time construction begins, we know what our drainage and irrigation layout will be and what soil materials and modifications will be needed. The sequence of installation varies depending on whether we are dealing with sand-based, modified soil, or native soil fields, but they all start with a laser graded sub-grade that is a mirror image of finish grade. Once the base is perfect, we install drainage, irrigation, soil mix, infield mix, and warning tracks with the use of our laser guided equipment. Sometimes drainage precedes irrigation or vice versa, depending on the type of field design, but each step is followed with the laser grader to true up the elevations as we build the soil profile. When building a modified soil field, we install the rootzone components with our laser grader in precise increments, and then use specialized blending machines in the field to create uniform rootzone over all portions of the field.

After all components are in place, tested, and operational, we install the sod, sprigs, or seed and provide a grow-in program. It is always a good idea to re-test the irrigation system before ordering the grass. Things have a way of getting damaged on a construction site, and realizing someone has cut your irrigation main line when you have truckloads of sod in the parking lot is not a good thing.

**ST: Describe some of the laser-guided equipment that you use, the tasks that each piece of equipment fulfills and the biggest benefits of using laser-guided equipment.**

**PRICE:** Laser guided equipment is a daily part of our work. We use automatic laser grading systems on dozers, track loaders, and high flotation tractors on all aspects of field installation. The equipment is adjustable to within 1/12th of an inch and available in flat, slope, dual slope, or cone configurations. We install drainage lines with laser guided trenchers to achieve precise fall in the lines. The speed and accuracy with which we can bring a field to grade makes it a must in our work. Without question, any field construction project should have laser grading outlined in detail in the specifications. With laser grading, you get a field free of birdbaths and humps and bumps.

**ST**

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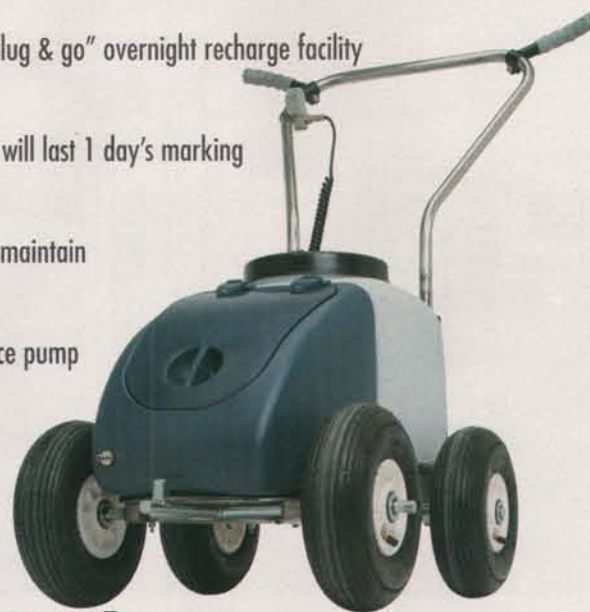
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## LEVEL MID CUT

Encore's prowler mid cut riding mower has a side-to-side articulating floating deck for a smoother, level cut, says the manufacturer. The deck suspension reduces scalping and allows a faster operating speed. A PTO shaft feeds power to the blades and the steel deck with reinforced channels control vibration.

All Prowler models, 52-, 61-, and 72-in. have blade spindles with a 2-yr. warranty on parts and labor.

Encore Manufacturing/800-267-4255  
For information, circle 144

## MOUNTABLE BROADCAST SPREADER

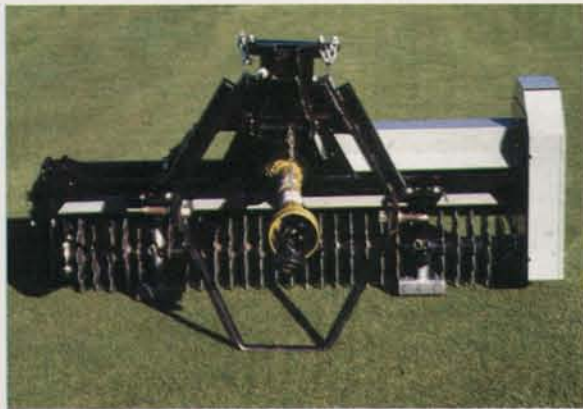
To apply chemical, fertilizer, or seed from a utility ATV, Gandy Co. is offering a 2.3 cu. ft. capacity polyethylene and stainless steel broadcast spreader, which can hold 120 lbs. The hopper has a cam gauge rate adjustment to increase or decrease its metering openings. A hand lever is within reach of operator; a 12v DC motor activates the stainless steel spinner that can spread 10 ft. each pass.

Gandy Company/800-443-2476  
For information, circle 148, or  
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### NEW FACILITY, NEW TURF

The Supreme Green turf cover has been used throughout North America for new greens as well as new field construction since 1990. The product is a multi-purpose turf growth cover made of specially designed material that accelerates seed germination and encourages root development and rapid growth. Package comes with anchor pegs and storage bag.

Coverttech/800-837-8961

For information, circle 140, or see [www.OneRS.net/210sp-140](http://www.OneRS.net/210sp-140)

### COMPACT SKID-STEER LOADER

The compact skid-steer loader business is a competitive one. Just ask Walter Butman, executive vice president of Finn Corp. "To be competitive with a compact skid steer in this market, we knew we needed to exceed the features and benefits of the products already on the market," Butman shares. The Finn strategy: the Eagle 244-D, a compact skid-steer loader featuring a standard Cat 3003NA diesel engine. The diesel-powered mini machine is an addition to the Eagle line of compact skid steers, which Finn introduced 1 year ago.

Finn Corp/800-543-7166  
For information, circle 143, or see [www.OneRS.net/210sp-143](http://www.OneRS.net/210sp-143)



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## VACUUM EXCAVATION SYSTEM

A new, large capacity version of the Ditch Witch FX30 Vacuum Excavation System is now available with a 1,200-gal. vacuum tank and a fresh water capacity of 500 gal. Its innovative rear tank door latch, space-efficient trailer configuration and hose reel provide big-machine productivity in applications with small, confined workspaces.

Ditch Witch/800-654-6481

For information, circle 141, or see [www.OneRS.net/210sp-141](http://www.OneRS.net/210sp-141)



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## 15-MPH MOWER

At 15 mph, the Super Z from Hustler mows fast. Its new features include: lifetime warranty on the tractor frame and deck's leading edge; stainless steel, high-pressure hydraulic lines with Parker Seal-Lok o-ring face seal fittings; and heavy-duty air cleaner as standard equipment. The simple, foot-operated deck-lift system can be accompanied by optional 9-bushel BAC-VAC catcher.

Hustler Turf Equipment/800-395-4757

For information, circle 142, or see [www.OneRS.net/210sp-142](http://www.OneRS.net/210sp-142)



## LIFT FOR SERVICE

The Heftee 2000 safely lifts up to 2,000 lbs. to 6 ft. in seconds, says the company and easily adjusts to handle many pieces of equipment. Techs can stand comfortably to work with unrestricted access to service areas. The unit is free standing so it can be moved around the shop, and it features a ramping system to ease loading and unloading of equipment.

Heftee Industries/800-755-7540

For information, circle 139





## CLEAN AIR TRIMMER

RedMax says in a recent test its BCZ2500 string trimmer was more cost effective to run than two comparable machines by reputable manufacturers. The 25.4-cc, two-cycle Strato Charged engine is the only one that meets CARB Tier II and EPA Phase 2 standards without a catalytic converter. The engine introduces fresh air into itself between the exhaust gases and the fresh charge of air/fuel mix.

RedMax/800-291-8251, x213

For information, circle 146, or see [www.OneRS.net/210sp-146](http://www.OneRS.net/210sp-146)



## AERATOR

For soil conditions that need maximum plug removal per square foot, Rock Solid introduces the Plugr PL800 Pro, which has two more cams (8 total) to move tines closer together to increase number of cores by 20%. Aeration pattern is tight 2 1/4 x 8 in. The camshaft and engine supply punching power so tines are driven deep without add-on weights or water drums.

Rock Solid/888-418-9065

For information, circle 152, or see [www.OneRS.net/210sp-152](http://www.OneRS.net/210sp-152)

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The Grasshopper Co./620-345-8621  
For information, circle 150



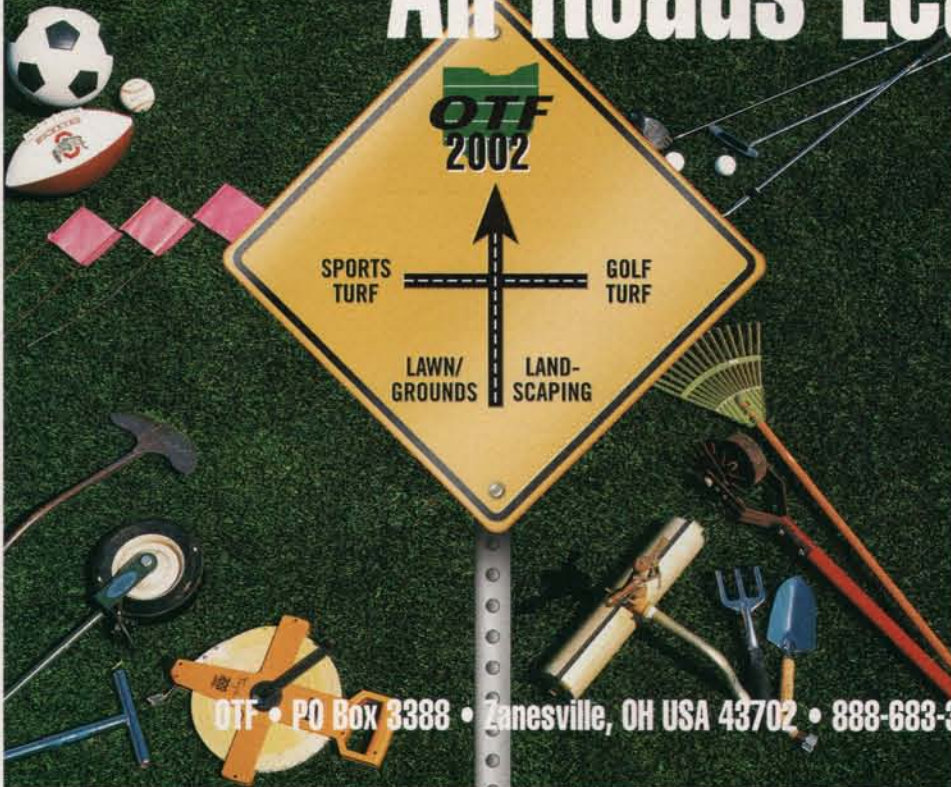
## COMPACT UTILITY TRACTOR

Allmand Bros has a new compact utility tractor, the 8330 model with four-wheel drive. Equipped with a category one, three-point hitch, the tractor has standard rear auxiliary hydraulics, and a variety of implements are compatible with this system and are driven directly by an independent, 540-rpm PTO. The tractor uses a synchro-shuttle shift transmission for easy forward and reverse loader operations.

Allmand Brothers/800-562-1373  
For information, circle 153, or  
see [www.OneRS.net/210sp-153](http://www.OneRS.net/210sp-153)



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### PROFESSIONAL MOWER

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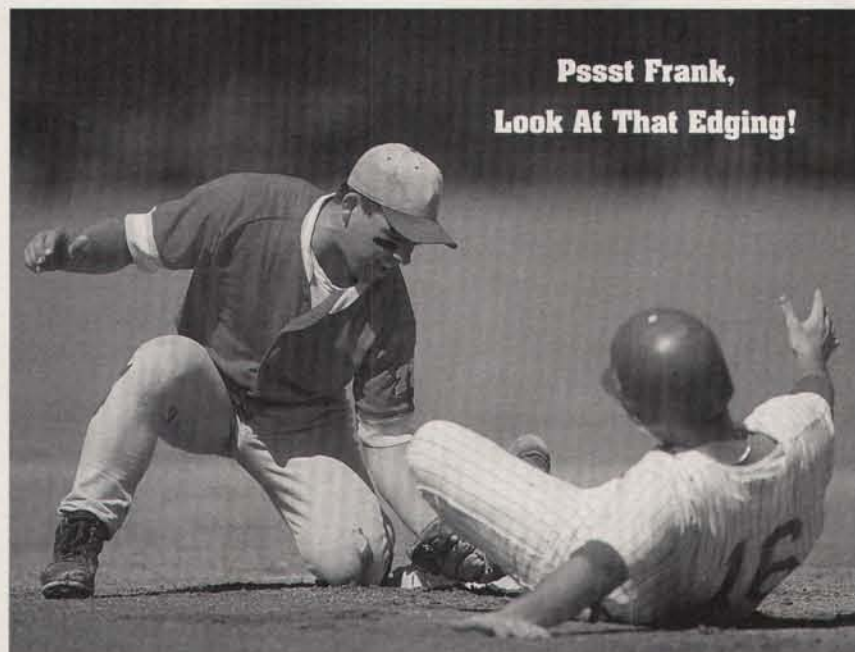
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Exmark/402-223-6300  
For information, circle 147,  
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