

cores were dragged back in, topdressing was applied, and additional topdressing spread on any remaining low spots.

"We also vertidraind the fields every four months. In the spring of 1999, the contractor used a soil conditioner machine on all the fields. This overall program improved drainage and raised the percolation rate, as well as reducing compaction.

"To help reduce the pH levels, Calrea (23-0-0-7Ca), a high-nitrogen, high-calcium concentrate, was applied using the fertilization injection system. We also used our 14-foot boom sprayers to put down a more concentrated application of Calrea running the width of the goal keepers' boxes from end line to end line on all four fields."

Troubleshooting

Detecting a severe drainage problem on the east side of the fields, the crew removed sod and cut a swale approximately three inches deep, directing the water to a storm drain. They filled the depression with pea gravel and sand, and replaced the sod.

Mueller says, "To reduce excess wear in the goal areas during the



The multi-purpose facility hosts a concert series every year. Courtesy: Westminster City

first few years, the fields were rotated 90 degrees between the spring and fall soccer seasons, going from the north-south orientation to an east-

west orientation. We applied Crown III in all the goal boxes, and spread to a depth of 3/4 of an inch. In 1998, the field assessment at the end of spring

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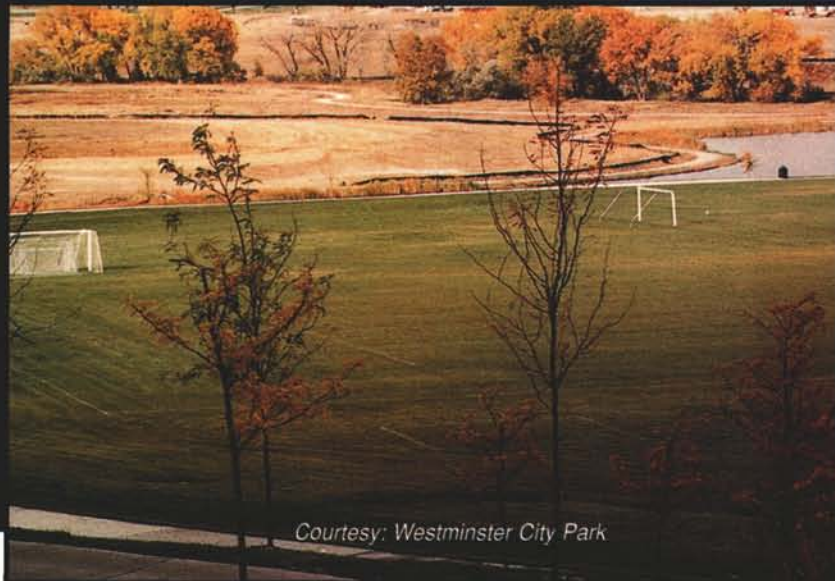
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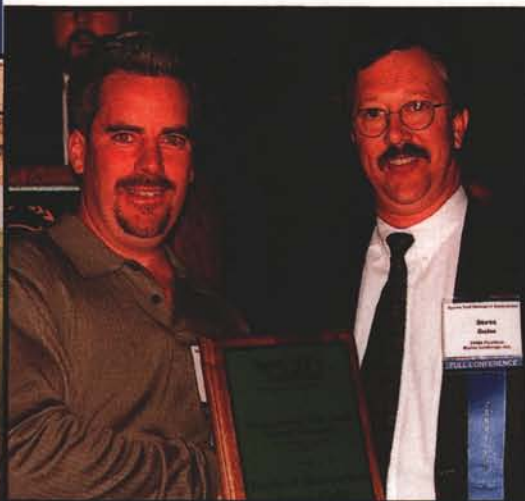
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Courtesy: Westminster City Park




STMA President Steve Guise (right) presents the Field of the Year award to Crew Leader Jim Mueller. Courtesy: STMA

play determined rotation wasn't required.

"Also in 1998, we began researching additional methods to alleviate the effects of the heavy soccer play, and to incorporate into the construction of the new baseball complex. We worked closely with suppliers to establish three plots

with different soil amendments and turf types near the soccer playing surfaces, maintaining each of the plots with our regular maintenance program.

"The intent is to have the Colorado Rapids' goalies practice on these plots throughout 1999, then survey the conditions and make comparisons. These plots

and the amended goal areas are open for viewing by those from other complexes, and questions are welcome." 

Bob Tracinski is business communications manager for John Deere in Raleigh, NC. He is public relations co-chair for the National STMA.

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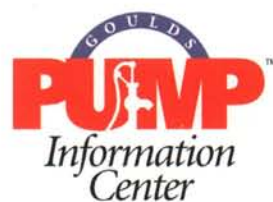
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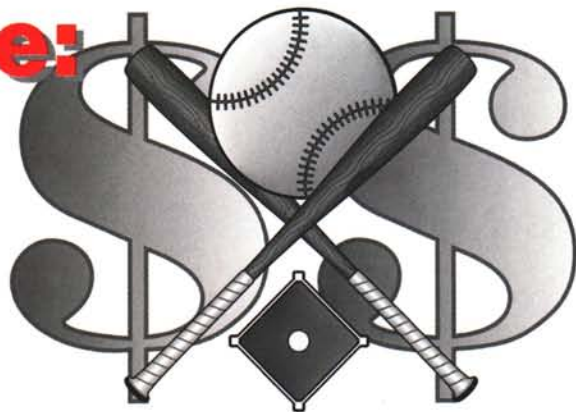
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The Bottom Line: Ballfield Budgeting



by Tim Moore

Do your homework!
I'm sure every one of you remembers at least one of your parents telling you to do your homework. Well, I hate to bring back unpleasant memories, but I'm going to tell you the same thing.

You have to do your homework to establish, revise, and maintain accurate budgets for ballfield construction, renovation, and maintenance. By homework, I mean research.

The research I'm talking about involves interviewing other sports turf managers, suppliers, and contractors; and creating a great deal of documentation. You *must* keep track of everything you do.

Construction and renovation

How much does it cost to build a ballfield?

I get asked that question all the time. I respond with a similar question: "How much does it cost to build a house?" I continue, "It depends on how big it is, and what the house has in it."

You can buy a 14-foot by 70-foot mobile home for, say, \$30,000. A vinyl-sided, three-bedroom house in the suburbs could run you \$200,000. If you're looking for a 6,000 square-foot, all-brick home on five acres, you could wind up paying \$750,000.

When developing an initial construction budget, determine



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how much the *field you need* costs, not how much you can afford. Other entities will give you that number.

Remember, as a sports turf manager, you are much more of an expert on ballfield construction and budgeting than the budget specialist or the on-staff civil engineer. They count on your input; give it to them freely. They want to see a successful project as much as you do.

Determine your needs and do your homework. Talk to area planners who determine recreation needs, ask user groups what they need, and study current trends in sports. These inquiries will allow you to determine the level of play on your new fields. You can then design appropriately for a neighborhood recreative, a league play, or a tournament play field.

Differences in these fields will be found under the turf, in the root zone, irrigation, and drainage systems. The grade will be a consistent factor in all fields. Do *not* compromise the precision grading.

Some general construction costs follow. Keep in mind that costs will vary by geographic location. I will not attempt to price professional or high-performance, sand-based systems. Dr. Dave Minner suggested some price ranges for those types of fields in an article several months ago. These general costs reflect budgeting for municipal-type fields, those that can host events from t-ball practice, to high school football and soccer, to industrial league baseball.

• Grading

Rough grading is site specific. It depends on the existing grade. Costs will be determined by how much earth has to be moved.

Ask some reputable local excavators for budget numbers. *They* want to make sure you budget enough as well.

Precision fine grading can run in the neighborhood of \$.25 per square foot. It will be the best 25 cents you ever spend. It's also cheaper than a sprained or broken ankle!

• Amendments

High-quality, organic, composted materials can cost up to \$.10 per square foot, per inch depth incorporated (mixed evenly throughout the root zone).

High-quality sand can run up to \$.15 per square foot, per inch depth incorporated.

• Drainage

This can be one of the most expensive ingredients in the construction mix. It can run from \$.20 per square foot for low-end sideline channel drains, to more than \$2.00 per square foot for an entire herringbone system.

• Irrigation

For a no-frills system, irrigation can cost approximately \$.20 per square foot, plus your initial hookup. Do your homework on the hookup charge. In the metropolitan Washington, D.C., area, hookup can cost more the system itself. Don't be caught off guard.

• Seeding or sprigging

This will run about \$.05 to \$.10 per square foot.

• Sodding

Sodding can range from \$.23 to \$.30 for locally grown, cool-season turf, installed; and from \$.25 to \$.35 for locally grown, warm-season turf, installed.

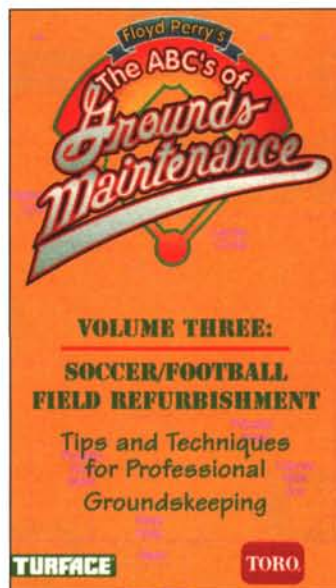
I suggest square-foot prices because they seem easier for non-ballfield people to understand. Many construction projects are budgeted using accepted square-foot costs.

When budgeting for parking lots, my organization's development office uses \$1,000 per space, which translates to \$3.33 per square foot. It sure would be nice to get that for a parks

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and recreation ballfield! And why not? People park in the lot to use the ballfield, don't they?

You could also compare field costs to lighting costs. Your field budget should request at least the same amount as the lighting budget. I know I can build a nice baseball field for \$125,000.

For \$124,000, I could build an 80,000 square-foot football field with one-inch compost, two-inch sand sideline drains, irrigation, and bluegrass sod. That translates to just \$1.55 per square foot.

A 93,000 square-foot soccer field with irrigation (\$.05 per square foot for water hookup) and sprigged with bermuda (no amendments or drains) would run \$.60 per square foot, or \$ 55,800.

Once you have some budget numbers, you can screen out some contractors. For example, I recently reviewed a sister agency's bid package for field renovation work. The low bidder bid \$6,000 to fine grade 30,000 yards. That's 270,000 square feet, or just over six acres.

If you go by the budget numbers for precision grading at \$.25 per foot, a reasonable range of 20% would give you bids between \$54,000 and \$81,000. This company can not fine grade for \$.02 per square foot, and it will probably leave you high and dry, not to mention uneven!

Maintenance

In all fairness to those of you who are math challenged, anyone can develop a budget. If you become very methodical and detailed with your maintenance procedures, the four-letter "M" word becomes simple arithmetic.

Before we get started with some guidelines, I want to clarify the distinction between developing a budget and determining costs. Developing the budget comes first and deals with work hours, material needs, and equipment needs. Costing is much more involved, and deals with actual hours worked, materials used, equipment costs (including capital, operating, and repair), and overhead.

Once you develop a budget, you must track your labor, materials, and equipment to refine future budgets. Here I will address budgeting; costing warrants its own article.

First determine what your maintenance standards will be, and make sure they account for user expectations. Then, take all operations (mowing, fertilizing, aerating, seeding, etc.) and attach work hours to them.

• Equipment

Most experienced field managers know how long it will take to perform any particular operation with their equipment. If you're new in the field, there are places to go for this information.

You can ask equipment manufacturers. They always have performance numbers for their equipment; that's how they sell it. They'll tell you, "This machine will cut 3.7 acres per hour," or, "You can seed 1.3 acres per hour with this seeder."

These numbers can be helpful, but they can also be dangerous. They're based on ideal conditions with experienced operators. Use them as a guide, not as your budget basis.

The best place to go for accurate, honest production times is your local STMA chapter or STMA Headquarters. The Association can put you in touch with experienced managers.

Continued on pg. 22

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