INCLUDE TURF MANAGERS IN DECISIONS

To not have an advance understanding of issues and concerns of any one group, as well as not have prepared and developed plans to address these issues and concerns, can lead to the quick erosion of project support. It does not take much to undermine months of work and hundreds of hours spent on the evolution of the project if key research and consensus building among all parties is not proactively developed.

One example of where effective facilitation was used was with a city developing new fields in conjunction with a local school district. The public process brought in all the key stakeholders and there was consensus that the fields as planned would serve the needs of the local youth groups scheduled to use these fields.

However, the USGA sand-based fields that were planned (and subsequently constructed), while high-end fields, were not necessarily understood by the maintenance staff, nor was the required water use. While these items should be identified before facilitation processes, the inclusion of the maintenance staff (who were not present at initial project scoping sessions) would have likely shaped what was presented and discussed with the community and user groups.

An example how facilitation can be detrimental when the discussed pre-planning processes and alignment among the stakeholders are not completed occurred with a public agency that wanted to replace several natural grass fields with synthetic turf. The owner’s project manager did not fully understand that the agency’s governing board was not fully behind the project’s objective to use synthetic turf to reduce maintenance costs and increase field use. In addition, the local community surrounding the fields was largely opposed to the proposed project, due to the environmental and health concerns, as well as the identified increased use.

While there was likely nothing that may have fully alleviated these concerns from a small group of neighbors, knowing in advance what the concerns were would have allowed the design professionals time before the facilitation meetings to educate the client on the benefits and issues with synthetic turf, whether real or perceived. In addition, the project manager would have been well-suited to ask superiors whether there was strong support for the project as proposed from all levels, including the decision-makers and governing board. This understanding of the concerns, and where the support was—and most importantly, was not—would have made the facilitation process more effective.

While facilitation can bring up issues, it also can be instrumental in developing clear support and consensus for a project. Work with a public agency recently was completed replacing two existing natural grass fields with synthetic turf. Before the project was begun, the city’s project manager in charge of delivering the project completed extensive research on issues other nearby public agencies encountered when reconstructing natural grass fields with synthetic turf and how they were/were not addressed. He also made sure that his superiors and the city council fully supported the project before commencing the work. By the time that the pre-design effort had begun, much of the research had been completed about what the key issues would be with the improvements. As it turned out, the community was fine with the synthetic turf fields, provided field lighting was not installed. But this would not have been known without preliminary research and discussions.

Effective facilitation for any project revolves around providing information for discussion and receiving clear comments and full discussion. Hopefully, there is common ground in support for the project from the community and user groups. In order to maximize the opportunity to achieve this goal, the pre-planning research and reinforcement that there is solidarity in the project’s support is a key factor in its successful use of facilitation as a means to obtain project support.

Devin Conway, PE, is principal at Verde Design, Inc., Santa Clara, CA.
Reckoning synthetic turf fields and infill material: case study

Father Terrence A. Baum, a Jesuit priest and president of Rockhurst High School in Kansas City, MO clearly is a believer in the “seek and you shall find” and “ask and you shall receive” approach to life—and high school athletics!

Father Baum asked for a new athletic field before the 2010-2011 academic season began. And he got it. Father Baum also asked that the old turf and infill be recycled. And he got that, too!

The Rockhurst High School athletic program has been ranked by Sports Illustrated in recent years as one of the Top 10 high school athletic programs in the nation. Rockhurst has won 34 state championships in the past 10 years. The mission of the athletic program is to develop strong leaders through discipline, perseverance, and the pursuit of excellence through team sports and physical education activities.

Here’s how prayers were answered and dreams were realized for Rockhurst High School administrators, staff and students when their multi-purpose athletic field was installed in only 17 days last summer.

The Challenge

Earlier last year, Father Baum, Rockhurst High School athletic director Peter Campbell, and director of facilities Delbert Conrad were faced with choosing between repairing their existing athletic field and replacing.

Six steps to recycling and replacing synthetic turf and Infill

Many of the 5,000-plus synthetic turf fields in North America are approaching the end of their useful life. Maintenance and repair costs are typically so high that upgrading with new turf and infill is usually the best option for facility owners and managers.

MDH Turf, a subsidiary of McAnany Construction, offers six key steps for upgrading turf fields with an effective and progressive recycling solution that the company calls “The Extreme Turf Makeover.” MDH has found that recycling turf and infill can save a client approximately 20% of the total budget on a new turf and infill installation project, reduce fuel consumption for transportation of the old turf and infill to landfill, and eliminate waste in landfills.

The steps and timeframes outlined below are provided for a typical 100-yard football field based on MDH’s actual experience.

### 1. Assess the Field Condition
Evaluate the condition of existing infill, the grade of the field, condition of existing nail board, and any potential drainage issues. If needed, the general contractor or project owner will engage an architect with athletic field design experience to assist with making adjustments to the grade of the field. **Estimated timeframe: 2 days**

### 2. Extract Existing Infill
Using an extraction device, remove all existing field infill. MDH has found that about 95% of the existing infill can be removed and reused; however, usually only about 2/3 of the original infill is available for salvage due to infill loss over the 8-10 year life of a typical synthetic field. **Estimated timeframe: 36 hours**

### 3. Recycle Existing Infill
Test the infill to ensure that it meets or exceeds GMAX standards for adequate shock absorbency. Sieve the infill to sort out sand and other debris. Clean all extracted infill (MDH is able to remove 99% of all bacteria removed from contaminated infill through a patented cleaning method.) **Estimated timeframe: 7 days**

### 4. Remove Existing Turf
Remove existing turf. Transport all sections of turf that is in good condition and make it available for other landscaping, sports or recreation applications. Ensure that the base grade of the field is in good condition and is free of infill spillage. **Estimated timeframe: 2 days**

### 5. Prepare the Field
Grade the field using laser equipment. Re-grade the subsurface to meet field specifications. Repair the drainage system and nailers as needed. Secure certification from the architect and turf installation crew that the requirements for the field are met and adjust the grading of the field as needed. To expedite the preparation process, the contractor or project owner may choose to assign multiple work crews to various parts of the field. **Estimated timeframe: 16 hours**

### 6. Install New Turf and Recycled Infill
Install new turf. Approximately 93,000 square feet of new turf is typically needed for a 100-yard football field. Stripe the field for use by multiple sports. Apply numbers. Insert home team logo. Add freshly recycled rubber infill and appropriate amount of new rubber infill to meet the needs of the field. Approximately 300,000 pounds of infill is typically needed for a 100-yard football field. **Estimated timeframe: 10 to 12 days**

>> EXTRACTING INFILL from the existing field at Rockhurst High School. MDH Turf tested, cleaned and recycled the infill using a proprietary technique.
THE REASON WHY this turf area is green and the surrounding area is brown might surprise you. This part of Iowa was flooded last year in mid-August and this turf was under the floodwaters for about 48 hours. The Patriot Bermudagrass on this research area is located at the football practice fields at Iowa State University. The Patriot Bermudagrass appeared completely unaffected by the flood waters that devastated the stands of tall fescue and Kentucky bluegrass that surrounded it. After the flood, the air temperatures were in the 90 degree range, stressing the bluegrass/fescue mix even further. Probably due to the lack of air exchange of the turf and its roots caused by the plants being under water was the final nail in the coffin for the cool season turf. Because the floods wiped out 100% of the tall fescue and about 80% of the bluegrass the Sports Turf Manager reseeded the entire area, with the exception of the Bermudagrass. The second photo is not really part of the same story, however after the winter frosts came, the Bermudagrass went dormant and the cool season grasses looked perfect, showing that no grass is suited to all areas of the country.

Photo submitted by Andrew Hoiberg, Ph.D. Student/Research Assistant at Iowa State University. Tim Vanloo is ISU’s Athletic Field manager.

If you would like to submit a photograph for John Mascaro’s Photo Quiz please send it to John Mascaro, 1471 Capital Circle NW, Ste # 13, Tallahassee, FL 32303 call (850) 580-4026 or email to john@turf-tec.com. If your photograph is selected, you will receive full credit. All photos submitted will become property of SportsTurf magazine and the Sports Turf Managers Association.
Turning to several general contractors for recommendations and estimates, Rockhurst administrators were being told that their athletic field renovation would take between 4 and 6 weeks.

The turf field was in almost continuous use for football, soccer teams, lacrosse, and physical education classes. When their grass facilities were unplayable due to weather conditions, the school’s baseball and track and field teams also used the turf field for practice. Their old synthetic turf field was 9 years old and the warranty had expired. Estimates of up to $80,000 to recondition the old turf field for the next school year deemed the repair option to be impractical and unacceptable.

Turning to several general contractors for recommendations and estimates, Rockhurst administrators were being told that their athletic field renovation would take between 4 and 6 weeks, and that the work would have to be done after football season ended in late 2010. Only one of the general contractors in the mix offered a much shorter time frame, MDH Turf, a new subsidiary of McAnany Construction, Shawnee, KS. McAnany and MDH committed to completing the field in only 2 weeks.

“EXTREME TURF MAKEOVER”

Assigning Ed Huggins as project manager, MDH Turf implemented a design/build solution that included TigerSports Americas, Inc., as the synthetic turf supplier and VSR Design as the architect for the field design enhancements. The TigerTurf US operation is based in Austin, TX while VSR Design is out of Overland Park, KS. Huggins has had a working relationship with VSR Design for more than 20 years.

“The level of care and concern from the collective team impressed me quite a bit. McAnany had reps from TigerTurf meet with officials from our school to explain about the durability and other characteristics of the TIGER XQ 48 turf product that they had specified. I had every confidence that McAnany and MDH Turf would take special care with the sub-surface and grading of our field,” Father Baum said.

“McAnany also offered up and promised a short, 2-week turnaround time so that our summer camps and practices for football and soccer would not be hindered. It became apparent within only a few days of beginning the project that they were keeping their word. They had crews working through the blisteringly summer heat to stay on schedule,” Father Baum said.

The project got under way on July 23 and wrapped on August 9. Undertaking what it now calls The Extreme Turf Makeover, MDH employed three continuous shifts of crew members for several consecutive days to meet the tight project schedule and install 103,000 square feet of new turf.

Recycling the old turf and rubber infill was an additional requirement for the Rockhurst project. Using an extraction device from the field was made available for other sports, landscaping or recreation applications. Recycling the old turf and rubber infill as the final step for the new Rockhurst High School synthetic turf field. The project was completed in only 17 days.
over a 3-day period, MDH was able to remove approximately two-thirds of the original rubber infill. The infill was then tested, cleaned and reserved for reuse on the new field. Work crews removed more than 100,000 square feet of old turf, which was salvaged and made available for other turf projects in the Kansas City area.

“Recycling the turf and infill saved about 20% of the total estimated cost of the new field. And we were able to eliminate the need for transporting the old turf to a landfill, which would have consumed approximately 1,000 gallons of diesel and added about 350,000 pounds to a landfill site in another state,” Huggins said.

Vance Rzepka, founder of VSR Design, determined through an onsite assessment that the existing grade of the field and the perimeter constraints of the track and field events would present a significant challenge that had to be addressed. He also had to factor in the school’s need to accommodate many different sports with the fewest compromises in adjusting the field design.

“The existing track and field events in both ‘D’ areas and the shape of the sub-grade limited how much grading could be done to the finished surface. The existing field had a crown on one end and was sloped from the 30-yard line to the back of the end zone. The ability to make the crown uniform along the entire length of the field was limited by the sub-grade and drainage rock thickness. Also, the addition of perimeter netting to allow lacrosse practice during track practice added a level of complexity to the coordination of the entire project,” Rzepka said.

Rzepka worked closely with MDH Turf throughout the laser-grading process and also supervised and approved the placement of the additional rock that was needed to prepare the sub-surface of the field.

“Quality control was happening real time throughout every stage of this project,” Huggins said. “The TIGER XQ 48 product was the best solution for Rockhurst High School since we were well aware of the extremely high usage that this field would have to withstand,” said Bob Aurich, regional sales manager for Tiger-Sports Americas.

With the completion of the field renovation accomplished in early August, Rockhurst High School coaches and student athletes were able to get ample time on the practice field to gear up for the competitive fall season. The varsity football and soccer teams went on to win state championships after their first season of play on their new field.

“We have had zero problems with drainage, and the players love the resiliency of the turf,” Campbell said. “Our coaches were especially happy to have been consulted and approved throughout the entire renovation process. Having Delbert Conrad closely involved every step of the way facilitated the entire process. Delbert was empowered to make decisions that kept the project moving forward effectively. If changes needed to be made, they were made quickly and to the complete satisfaction of everyone involved.”

Laura Pennino is a writer and consultant based in Houston. She can be reached at 281 286 9398 or lp@penninoandpartners.com.
**How to ask for a raise**

**SO YOU THINK YOU DESERVE A RAISE.**

Chances are, your boss hasn't voluntarily showered you with bonuses or even offered you more than the annual cost-of-living raise, if even that. So it’s up to you to make the first move. Here is some advice from eHow.com:

First, make sure you deserve a salary increase. Make a list of what you’ve done; what are your recent achievements? Write them down. Read them and think about what you did to create positive change or avert disaster. If you can’t think of any good examples, you probably shouldn’t be requesting a raise.

Once you have a list to work with, your next step is to figure out a successful strategy for delivery. Having the goods only gets you part of the way; timing and delivery will either seal the deal or not. Devising a strategy is all about research and preparation. You should know what the salary standard is for your industry, what objections the boss might raise, and how to deliver your pitch without backing down too soon.

Figure out exactly what you want. You also must consider what other options exist besides a one-time raise. This will help you when bargaining time comes. Compensation is not just limited to money: Perks can be great, too. You might want to think about more vacation time, tuition, getting a company-paid cell phone or more flexible work hours.

You also should know what your company’s raise policy is. Are raises merit-based? Are they fixed cost-of-living raises that everyone gets? Is there a percentage range depending on performance? That way, you can have a more productive discussion once the issue is on the table.

Predict your boss’ objections. If the boss says the company does not have money in the budget at the present time, ask when you might see the raise you hoped for. Or you can ask for feedback on what you need to do to get the raise you want and get a schedule of goals in writing so you both can remember what you agreed on. If the boss offers a completely different compensation package than you had thought of (and it might be a better one) ask to be allowed to sleep on it before agreeing. If it’s unfamiliar to you, the plan may have a drawback you haven’t noticed.

If the boss delivers an outright “No!” for an answer, you don’t have to take it lying down. Naturally, this is not the answer you want to hear, but there are ways of dealing with it. Try your spectrum of compensation options, ask for feedback and finally convey your sense of dismay about the answer. You can always tell your boss you would like to take this discussion to the next level and target someone higher on the chain of command that might agree with you and overrule your immediate supervisor. But be prepared to raise some hackles if you take this approach; it is essential you do it openly and not behind your boss’ back.

Your boss will eventually find out anyway. There are several conditions to consider when weighing your options. One is how far off the annual review is. If it is several months away, you might want to strike when you have recently had a stunning success. That way, your achievement won’t lose its luster, and the boss can’t claim amnesia when you bring it up a year from now. If you decide to have the raise discussion when your boss is not expecting it, or if your company does not have regularly scheduled formal reviews, let her know you want to set aside time to sit down and talk about your performance and compensation.

Another opportune time to ask is when you have been handed more responsibility in your job or a new position entirely. While it would seem that more money is a natural consequence, you sometimes have to bring it up yourself. Yet another time to request a raise is when you notice that your job responsibilities have gradually morphed into a beast of burden but your paycheck has somehow been left behind.

On the other hand, if your review is coming up, it could be the perfect moment, since you and your boss will be on the topic anyway. Furthermore, you will have some time to get some good deeds under your belt and build your case.

It is also essential to be sensitive to external pressures, such as the overall economy and how your employer is doing financially. If the economy is in a major recession or your employer is struggling to stay in the black, it is clearly not an appropriate time to demand a raise, no matter how darn good you are. Bide your time, and hopefully the company will recognize your efforts later.
The Extreme Turf Makeover (ETM) solution brings over 75 years of construction experience to meet the growing demand for new and existing artificial turf renovation projects across the United States. Traditional field replacement methods are inefficient, time consuming, and costly for both you and the environment.

ETM has created a patented new recycling process to handle these important challenges facing every turf renovation project.

**Why ETM you ask?**

- **It’s Smarter** – All existing turf is extracted and recycled; gone are the costly hauling fees and landfill dumps
- **It’s Effective** – Over 95% of all existing field infill is removed, cleaned on-site and recycled for use on your new field
- **It’s Safe** – 99% of all bacteria removed from extracted infill and the recycled infill meets or exceeds the highest industry GMAX standards
- **It’s Faster** – Complete infill extraction 50% faster than any of its competitors
- **And It Saves You $$** – ETM provides you significant costs savings, saves you time and ultimately makes a positive environmental impact

**Call us today to learn more about Extreme Turf Makeover!**

MDH Turf, LLC | 913-928-6781
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**Tree selection and planting**

**Recommendations for optimum planting success**

When selecting a tree for planting, there are several considerations to take into account. John Knitta, editor of Arbor Age, SportsTurf’s sister magazine, recently asked Daniel Butler, author of “How to Plant a Tree,” for suggestions to maximize planting success.

**Q:** What type of planning should be done before planting a tree?

**A:** The most critical aspect has to be thinking ahead. It’s very easy for enthusiasts to prepare the ground meticulously — clearing the site and getting the soil and protection for the tree just perfect — only to overlook how things will look in 30 or 40 years time. To be fair, the problems usually lie with the client: many want ‘big’ results quickly. When they put in an oak or a redwood, they just can’t picture how quickly this little sapling will completely dominate its surroundings. So I would say one of the most important skills any tree care expert needs is a doctorate in client psychology — the ability to persuade the homeowner, planner or architect of the need to scale things down and, more importantly still, to convince them the new realistic idea was actually their own brainchild.

**Q:** What recommendations would you make in terms of trees that tolerate urban conditions?

**A:** Obviously the tree has to be relatively tough, drought and pollution tolerant, but scale is probably the most critical issue. Big trees take up a huge amount of light and space — and, in time, spreading branches and foliage can easily create problems. At best this requires costly maintenance, but at worst it can end up in costly litigation and even the loss of the tree. That’s the bad news, but the more constructive path is to think in terms of maximizing impact. I come from the university town of Oxford. Fifty years ago someone had the brainwave of planting ornamental cherries along all the main roads in and out of town. These never produce any fruit, but they flower for almost a month and have wonderful purple leaves. In other words, they are a wonderful addition to an already beautiful city for at least half the year.

**Q:** What suggestions do you have for matching the tree to the planting site?

**A:** That’s an incredibly difficult question. Obviously there’s no point planting a tropical tree in an area where there’s winter snow for months on end, but given that, I don’t think there are hard and fast rules. I love all trees in their natural setting, so I would tend toward planting native species. That said, I live in Wales on the western fringe of Britain, and some of the most spectacular trees locally are Californian sequoias planted by Victorian entrepreneurs 150 years ago. They are just stunning in our Celtic valleys. And I also love utilitarianism — I just adore the idea that as well as looking beautiful in its own right, a nut or fruit tree will produce a natural bonanza of nutrients for both man and wildlife in due course. So, what’s the answer? Well, in the end, the most important thing is to remember that the trees we are talking about are for people. Therefore, it’s critical to work with the client and, better still, the local community — what do they like? Do they want just the aesthetic beauty of wonderful bark, blossom or leaves?
— or are they more interested by symbolism in which case a majestic, long-lived, veteran species might be more important.

**Q:** When is the best time to plant?
**A:** Again, it varies with location, but in most places the colder months are best. Trees are generally dormant, or nearly so, and are far more tolerant of the stresses involved in transplanting.

**Q:** What should be taken into consideration regarding climate and soil conditions?
**A:** Common sense is by far the most important thing. It is pointless planting a mango in Ohio, and a birch is never going to thrive in Nevada. Most trees have evolved to thrive in a particular habitat, and you ignore millions of years of plant genetics at your peril. So, before planting, read up on your chosen species. Yes, you can alter the soil’s pH to get something to grow in an otherwise alien environment, but you are setting a millstone around not only your own neck, but those of future generations. If you are in an acid area and you plant an alkali-loving tree, then every couple of years you will have to treat the soil to keep the tree happy. And if you plant a delicate tree in a harsh climate you will need to rush out each fall to shroud the thing with frost-protection.

**Q:** What suggestions do you have regarding planting of B&B trees versus bare root planting versus containerized trees?
**A:** Impatience is a very human failing. We all suffer from it and it’s one of the biggest headaches when it comes to planting trees. Clients naturally long to see results quickly, so they want a big tree now! This often means putting in a big B&B specimen and involving huge trucks, diggers and cranes. To me this just misses the big picture. Trees grow fast in their early years, but can live for centuries. Smaller, bare-rooted, specimens will usually catch up with their bigger B&B or containerized equivalents within a few years. Indeed, some years back I planted two hedges — one using foot-high bare-rooted ‘whips’ and the other using 10-foot B&B stock. A decade later the ‘whips’ are half as high again as their expensive neighbors.

**Q:** What are your recommendations regarding follow-up care?
**A:** I wish I could put on a saintly expression and put forward a litany of after-care instructions with a straight face. The truth is I tend to ‘plant and walk’. One of the wonderful things about trees is that a healthy specimen planted in the right spot should need very little aftercare. Yes, protection from deer and rabbits can be vital, and it certainly doesn’t hurt to clear grass away from the base of the trunk — preferably by mulching — but, in general, the tree should be able to look after itself. If it can’t, you’ve probably planted the wrong tree in the wrong place, in which case you are starting a potentially never-ending battle with nature.

John Knitza is editor of Arbor Age magazine, sister publication to SportsTurf. This interview originally appeared in Arbor Age.
Improving baseball field drainage

MATT JOHNSON, ASSISTANT HEAD GROUNDSKEEPER, Toronto Blue Jays/Florida Operations

I work on five fields at our complex here in Dunedin and to the best of my knowledge originally there was no drainage at all on any of them. Field 1 is used mostly by high schoolers and younger teams and it drains well. Our main field for the Blue Jays, #2, had poor drainage, especially in the outfield; any rain at all and it would be so soaked we couldn't mow it.

Fields 3 and 4 have some spots that stay wet for awhile but mostly have average drainage, depending on the weather of course. Field 5 remains a problem but I hope in the future we will get the same system for drainage on it as we now have on #2.

My boss, Pat Skunda, and I knew that we had to get drainage into Field 2. We tried aerifying and slicing more; we tried drilling holes into the outfield and putting pea stone at the bottom filled with sand to try and get water to percolate better. Nothing worked.

When we attended the STMA Conference in Orlando in January 2010 my goal was to first learn as much as I could and second, to find a good drainage system. I knew all about drainage tile and had heard that after a period of time those drains stop working. In Orlando I met Jim Surrall of Hydraway who said he would give me a lifetime guarantee on his product. I did my research and came to the conclusion that it was the best product for me to use.

Munie Greencare came to install half of the outfield and the day they finished that it rained pretty hard, a few inches. Normally, I wouldn't be able to mow that part of the field for days. I mowed the next morning. At the end of the season Munie came to finish the field. We had a little bit left over and we had Dave Laub from landscaping put our staff had to physically move water around in the grass areas to try and play games after our traditional afternoon thunderstorms.