# IRRIGATING Sports Fields

*by Robert A. Bodi, CID, CLIA, CIC*

Considering having an irrigation system installed in the near future? An automated irrigation system can be your worst enemy or your best friend, depending on how well you plan it, and how you have it installed.

## Do your homework

There are many different types of irrigation equipment out there. Each brand of irrigation has its pros and cons. Talk to people in your area about their irrigation, and let them tell you what they like and dislike about their systems.

Be sure to ask pointed questions. Ask how long their systems have been in use. Ask if all the heads are functioning properly. Ask what they'd do differently if they could start again.

You'll be surprised how much people like to talk about their irrigation systems. The more you learn about other people's experiences, the better off you will be.

One of the hardest decisions you'll face is the choice of equipment for your fields. There are many different manufacturers out there. Most of them have their strong points, and some of them have no strong points at all. Be careful.

When word gets out that you're considering an irrigation project, every distributor will be at your door trying to sell you their goods. If you've done your homework, you should have already made a decision about the type of equipment you want to use.

Don't settle for gimmicks or bells and whistles. Remember, all irrigation equipment is only as good as the distributor that stands behind it.

## Choose a qualified designer

Hopefully, after you've done your homework, you'll have built a list of irrigation designers. When you approach these designers, ask them the same types of pointed questions you used before.

Remember that these fields are your babies; no one knows them better than you do. A lot of designers like to blow smoke about their qualifications. Have candidates give you references and call them. I would also ask to see some of their designs.

Make sure that the designer you choose is going to be available through the entire project. Make sure your choice will give you a set of as builts when the job is complete. These are a must for both you and future field managers.

On the technical side, ask designers if they will be able to give you a pressure chart for the valves and ends of lateral runs. This shows the dynamic pressure rate at each valve and at the last head on each zone.

Before designers can provide this information, they will need to know the pressure per square inch (PSI) and flow rate at your point of connection (POC). For an average ballfield, it should take no longer than 15 minutes to complete a PSI chart.

Last but not least, make sure your designer is certified. The Irrigation Association has a Certified Irrigation Designer classification and so does ASLA.

*Courtesy: Hunter Irrigation*

## Choosing a contractor

Look for a contractor who is experienced with the type of equipment you're using on your fields. Many times, the largest contractor is not always the best. More times than not, they are too strung out, and they don't provide the personal touch you want.

On the other hand, a small contractor may not have the capabilities to see the job through. The size of the contractor is not the most important issue, as long as the one you choose can install your system correctly.

It's always best to narrow the list of contractors before you choose. With a manageable short list, you can visit your candidates' installation sites. This will tell you more about them than anything else.

Try to answer the following ques-

**Figure 1A**

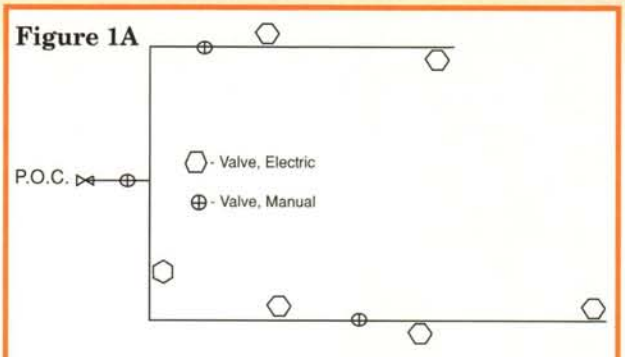
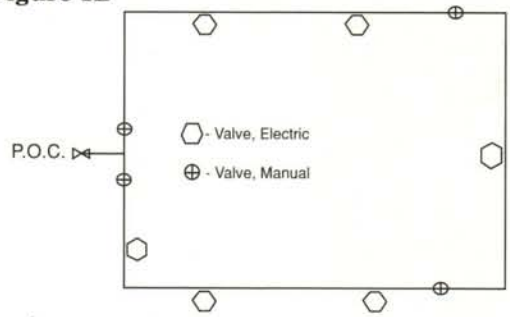



**Figure 1B**




tions: Do they have adequate equipment? In what condition do they keep their work sites? Do their employees have a good work ethic? Is everything in order?

## Design considerations

•**Water speed:** A poorly designed system is your worst nightmare. One thing you want to insist on is that all water flowing through your piping does not exceed five feet per second. This is an industry standard. Your designer should know this and stick to it.

If the designer you choose tries to say that this standard is unimportant, go to someone else. If your contractor does not want to put the pipes in as they are drawn, find another one.

Any irrigation system installed with poor hydraulics will become a system you wish you had never seen. Water traveling too fast through piping causes excessive water hammer, leaks, and loss of pressure.

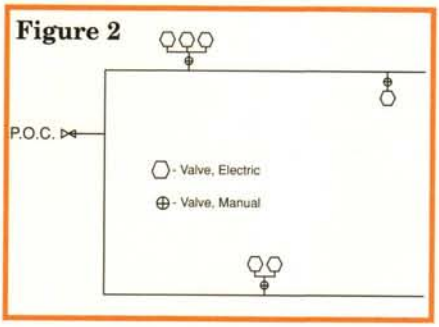
Believe me, if your water travels faster than five feet per second in your piping, you will have problems. Many designers and contractors will tell you that the speed of the water in piping does not matter. People also used to think the world was flat.

**Clocks:** There are many different clocks on the market. Be sure to choose one with cycle and soak capabilities, so it can water zones multiple times a day. This is important for those soil profiles that have a low water infiltration rate. It allows you to water for a short period, let it soak in, and water again.

**Isolation:** Another feature you'll be glad to have is isola-

tion valves on your main line. These enable you to shut down portions of the main line for repairs, while the rest of the system remains pressured up. Well planned and installed isolation valves give you much more control over your irrigation system (see **Figure 1**).

**Figure 2**




You'll want to use your isolation valves before your electric valves. This will allow you to work on any valve and/or zone without shutting down the entire main line (see **Figure 2**).

**Quick connections:** Don't overlook the importance of quick connections. These can help keep dust down in your infield, and they can also be used for cleaning concession areas, walkways, and parking lots. Placed strategically, quick connects will be a great asset to your system.

**Air vents:** Air vents release air from the main line to the atmosphere. This is an important consideration in high-pressure systems and systems that experience elevation changes.

**Blow-out:** Hopefully, you'll be able to install a blow-out valve at the lowest point of your mainline. This will allow you to drain the system for service and winterizing. Remember to have it installed at your system's lowest point, so that gravity can do its thing. Also, make sure that there is adequate drainage where the valve empties.

**Skinned areas:** It's a good idea to have a separate zone specifically for your skinned areas. This will help you mix your field-drying products, it'll help keep down dust, and it'll make you look good on game day. You can activate the infield zone 15 minutes before game time to give it just enough water to make the field look great.

**True scrubber:** If you're planning to pump water out of a lake or to use "dirty water," be sure to use a true scrubber valve. This will save multiple headaches in the future. The scrubber valve wipes itself clean and flushes contaminants out of the valve.

Don't be afraid to ask questions to learn about irrigation. The more you understand, the better your system will be.

So many systems out there are inadequate because of poor design and poor installation. When all is said and done, you're the ones who have to keep your fields playable and in the best condition possible. Don't be afraid to tell your designer and contractor what you want, and demand quality in their work.

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