



Brown Stadium's field is marked and ready to go for an Ivy League football game. Photos courtesy: Pat Vetere.

# The Greening of Brown

By Robert E. Reaves

**F**ounded in 1764, historic Brown University is the seventh oldest institution of higher learning in the United States. This Ivy League school holds athletics in high esteem; however, the school has never sought to commercialize athletics, rather to give intercollegiate contests at Brown a "high purpose." While some outside New England may think that an Ivy League school might resist change, this does not hold true when it comes to sports facilities and athletic field management at Brown. The university's new irrigation system is an excellent example of the school's look to the future.

"We have approximately 25 acres of sports fields at Brown. This includes Brown Stadium (football), three football practice fields, Stevenson Field (men's and women's soccer and lacrosse), women's soccer and lacrosse practice field, baseball and women's softball, plus an intramural field," says Pat Vetere, grounds superintendent at Brown University. Except for a few months in the winter, the athletic fields see exten-

sive use. If weather turns completely foul, lacrosse practice and games can still be played on the Warner Roof, an artificial playing surface at the Olney-Marcolies Athletic Center.

For years the campus used water cannons and portable irrigation sprinkler systems to take care of its irrigation needs, but Vetere became increasingly aware of their inefficiency. "We ran the water cannons from 7 a.m. to 7:30 p.m. every other day and were still only able to water a field a day. And because of the extensive use of the sports fields, it was difficult to juggle the watering schedule. In some instances, we would water half a practice field to allow play on the rest of the field. For the baseball infields we would hook up irrigation pipe and use portable sprinkler systems," explains Vetere.

Besides obvious scheduling concerns, water pressure was also a problem. Stately Brown University sits atop College Hill overlooking downtown Providence, RI. "Because of the hill, during hot weather, the pressure could get very low — sometimes so low that we couldn't

run the water cannons," says Vetere.

"We let our athletic department know about our concerns with the irrigation here. They were very supportive when we asked for funds to install an in-ground sprinkler system," says Vetere.

## Athletic Field Design

The university selected Brian Vinchesi, owner of Irrigation Consulting & Engineering, Pepperell, MA, to do the irrigation design. Vinchesi, a member of the American Society of Irrigation Consultants, designed a wall-to-wall sprinkler system that would irrigate the athletic fields quickly. Vinchesi was impressed with the great job Vetere and his crew were doing, even without a sprinkler system.

"There were four primary goals in the design of Brown's irrigation system. The first goal was to greatly improve the water window. The second goal was to have a design that would enable each zone to be treated as an individual. Third, since the athletic fields are spread over a large area, we would have a radio-controlled system. Finally, we wanted to build versatility into the system — because the fields get so much use," explains Vinchesi.





Shown here is Stevenson Field, the stadium for soccer and lacrosse. A sod cutter was used in the irrigation pipe installation to avoid as much disruption as possible to the playing surface.

The design called for:

- New six-inch tap of the street water line;
- Four-inch PVC main line, buried 2 1/2 feet deep;
- Three-inch PVC submains;
- Two-inch PVC laterals in a loop design, laterals buried 12 to 18 inches deep;

- PVC swing joints;
- 52 irrigation zones, eight sprinklers per zone, designed for 108 GPM;
- Hunter Industries I-40 Rotor Sprinklers;
- Two Legacy Genesis System Controllers, radio controlled;
- Rain sensor at each satellite;

- Buckner valves;
- Booster pump;
- Two two-inch water meters; and
- Three-inch backflow preventers.

The irrigation installation went out to bid and was won by Middletown Sprinkler Company, Port Monmouth, NJ.

"We decided to go with the I-40 full- and part-circle rotors from Hunter Industries throughout our sports fields," says Vetere. The I-40 delivers water at distances up to 74 feet, ideal for a wall-to-wall design at athletic fields. The sprinkler also has a safety feature that Hunter calls the ProTech™ safety system — a small, exposed, heavy-duty rubber cover and boot.

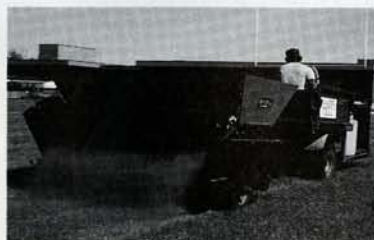
**Time for Construction**

Construction began on the irrigation project in June 1995 and was finished by the middle of September. "The installation crew worked on a field at a time to avoid as much disruption as possible. And, the new sprinkler system was put in live so as they finished we were able to irrigate," says Vetere.

"At the time we started the installation, we really expected to find some decent soil to work with. However, it

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**Greening of Brown**

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**A football practice field at Brown University benefits from the new irrigation system.**

turned out there was a substantial amount of rock and gravel — typical of Rhode Island. Our crew removed more than 100 cubic yards of rock,” says Bob Dobson, owner of Middletown Sprinkler Company. “When the trenches were dug for the main lines, we replaced all the loam with gravel and a four-inch main line drain,” explains Vetere.

Many years before the construction

of the athletic fields, much of the land surrounding Brown was devoted to farming. “During the installation we uncovered a plow layer a foot below the surface — obviously from an old farm. The plow layer required us to make a change in our trenching equipment,” explains Dobson. “We came in with a trenching machine with alligator teeth. And to help soften the soil,

we laid out drip along the place where we would be trenching.

“At Stevenson Field, the stadium for soccer and lacrosse, we used a sod cutter where we were going to pull the irrigation pipe. This helped us avoid any tell-tale lines from the vibratory plow,” adds Dobson. Stevenson Field is one of the finest lacrosse facilities in the East.

“The results at the sports fields were dramatic. We normally topdress the turf in May, then overseed between May 1 and June 15. The addition of a new sprinkler really increased our seed germination — and gave us a jump start, especially after our winter with 100 inches of snow. Except for some goosegrass, we really haven’t had many problems this year,” says Vetere. □

*Robert Reaves is the editor of Golf Course Irrigation and Irrigation Journal. He holds a master’s degree in horticulture from Oklahoma State University.*

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