

STMA Conference Called a Success

By all accounts, the STMA's Sixth Annual Conference and Exhibition in Bradenton, FL, was a tremendous success. Cochairs **Mike Schiller** (Schaumburg Park District), **Dr. Henry Indyk** (Turfcon) and **Eugene Mayer** (O.M. Scott) put together a program that drew attendees and exhibitors from all walks.

In terms of attendance, the 1995 conference was the best ever. Attendance has tripled in the past three years. We intend to build



Attendees examine outdoor exhibits at the STMA Conference and Exhibition in Bradenton, FL.

on this success with the 1996 Conference, which will be held in Anaheim, CA, January 24-28. The week began with a Saturday bus tour of local municipal, college and professional sports turf facilities. On Sunday, we were greeted by Bradenton Mayor **William A. Evers** and international sports turf experts **Dr. James Beard** (Sports Turf Institute) and **John Souter** (Souter of Sterling). **Tom Jadin** of Winnebago Mental Health Institute ended the day with some excellent guidance on stress management.

On Monday, we had a full day of education with break-outs on regional agronomics, equipment maintenance, sod installation, rebuilding and grooming infields, irrigation and a session highlighting several technological advances. The STMA Annual Awards Banquet was the highlight of Monday evening. **Larry Barnett**, American League senior umpire, capped off the banquet with a look inside baseball.

STMA Award Winners: (front row, left to right) Ed Birch; Jim Puhalla, project manager, Dave Dravecky Field, Boardman (OH) High School; Mike Williams, head groundskeeper, Binghamton (NY) Municipal Stadium; Timothy Moore, Chesapeake Chapter STMA; (back row, left to right) Joe Maruskin, Dave Dravecky Field; Steve Roser, SportScore Soccer Complex; Dan Bergstrom, Iowa State University; Chris Bunnell, Southern California Chapter STMA; Bob Curry, Covermaster; and Dr. David Minner, Iowa State University.

Awards of Distinction were given in the following categories: Harry Gill Memorial Award — **Dr. Henry Indyk** (Turfcon); Football Field of the Year — **Don Wirick** (Meriville High School, Meriville, IN); Soccer Field of the Year — **Steve Roser** (Sportscore); Research — **Dr. David Minner** (Iowa State University); Baseball Diamond of the Year (School, Municipal or Park) — **Dave Dravecky Field**, Boardman High School, Boardman, OH; Baseball Diamond of the Year (College) — **E.M. Stevens Baseball Field**, Trinity University, San Antonio, TX; Baseball Diamond of the Year (Professional) — **Binghamton Municipal Stadium**, Binghamton, NY, (Mets); and 1995 Scholarship — **Daniel Bergstrom**, Iowa State University.

The results of the election for the two open board of director positions were also announced at the banquet. **Mary Owen**, University of Massachusetts extension agent, and **L. Murray Cook**, stadium superintendent of the city of West Palm Beach, will each serve a two-year term. Other director positions remain unchanged through 1995.

On Tuesday, more than 60 exhibitors showcased their products and services on a full day of outdoor exhibits, hands-on demonstrations and education. The conference ended Wednesday with the seats still full for a half day of educational sessions. As the hotel emptied following adjournment, one attendee remarked, "That was like four years of education in four days."

STMA

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Sports Turf Managers Association **CHAPTER NEWS**

Midwest Chapter: "Take Me Out to the Ball Game" is the theme of the July 19 meeting. The event will begin with a tour of the Rockford, IL, Park District Sports Core, chosen by the STMA as the 1994-95 Soccer Field of the Year. The meeting will move to Marinelli Field, home of the Rockford Cubs, for a behind-the-scenes tour. Participants can stay for that night's baseball game. The Midwest

Chapter will charter a bus from Chicago for this meeting. More details will be announced soon.

Chapter board meetings are held the second Wednesday of each month. For more information about the July meeting, bus arrangements, or information about the chapter or upcoming events, call the Chapter Hotline, (708) 439-4727.

Colorado Chapter: The Colorado Chapter will hold a summer seminar/workshop at Coors Field in Denver on June 29. For more information on the

seminar, the Colorado Chapter or other upcoming activities, call: Ross Kurcab, Denver Broncos, (303) 629-9000; or Mark Leasure, Colorado Springs Sky Sox, (719) 597-1449.

Southern California Chapter: San Diego Jack Murphy Stadium will host the Southern California Chapter on Sunday, June 25, for a behind-the-scenes tour. Cost is \$30 and includes private sky box seating for the Padres-Rockies game. For information call Steve Wightman, (619) 525-8272 or Chris Bunnell, (619) 432-2421.



Coors Field: A Rocky Mountain Highlight



The Rockies groundskeeping crew has one mission: to keep the playing surface at Coors Field in top shape. Front row (left to right): Bob Swentzell, John Nichols, Mark Razum, Jose Gonzalez; back row (left to right) Reggie Fuentes, Mike Del Real, James Sowl, Tony Rivera, Javier Rivera and Andy Glass. Photo courtesy: CPS Distributors Inc.

By Katherine Buggy

Major League Baseball's newest diamond made its debut in April as the Colorado Rockies unveiled their pristine home ballpark, Coors Field in Denver. Fans were immediately impressed by the new facility and by the lush, green field in particular. "It's the most emerald-green diamond I've ever seen," remarked one Rockies fan, a sentiment shared by many who attended

the first game played there, an exhibition contest against the New York Yankees just before the Major League Baseball Players Association ended the strike that had crippled the game.

The Rockies are paying \$53 million toward the \$215.5 million cost of building the stadium, with Denver taxpayers contributing \$161.3 million and the stadium district chipping in the final \$1.2 million. The stadium is a masterpiece, and the diamond is the crown jewel.

"If there was an MVP award given for head groundskeepers, it would definitely go to Mark Razum," says Betsy Graff of Graff Turf Farms. Graff has worked closely with Razum since he started with the Rockies in October 1994.

Razum says that he has had an interest in sports field groundskeeping since he was a boy watching baseball games on TV. A native of Cleveland, OH, Razum began his career as a member of the



Forty-five miles of underground electric heating cables will keep the field at optimum temperatures. Photo courtesy: Randall & Blake, Inc.

the Athletics home field during spring training.

"During spring training of 1989, before the team's workout, [A's Manager] Tony LaRussa asked me to join him and the players on the field," Razum recalls. "He said to the players, 'I don't know about the rest of you guys, but these are the best fields that I've seen. The person responsible is Mark.' He began applauding me, and all the players joined him in applause. It was overwhelming for me to see guys like Dennis Eckersley, Carney Lansford, Terry Steinbach and Mark

McGwire applauding and appreciating my work."

Razum's status with the Oakland

grounds crew at Cleveland Municipal Stadium, then home of the Cleveland Indians, in March 1978. He credits much of his current success to his mentors, Harold and Marshall Bossard, who supervised him in Cleveland. "It was a privilege to learn the art of groundskeeping from men who were pioneers in the field of groundskeeping," says Razum. "I learned things from them that are not taught in school."

Razum left Cleveland in 1982 to manage the California Angels spring training facility in Casa Grande, AZ. Besides managing the baseball fields, Razum also assisted the head groundskeeper of the 18-hole golf course at the Francisco Grande Resort, which afforded him multilevel learning experiences in turf management.

Razum's reputation in the industry grew, and in 1984, Walt Jocketty, farm director for the Oakland Athletics, contacted Razum and hired him to build and maintain several new fields at Scottsdale Community College, which would become the team's new spring practice facility. In addition, Razum maintained the grounds at Phoenix Municipal Stadium,

organization grew, and he occasionally flew to Oakland to act as a consultant on problems with the Oakland Coliseum infield. The organization ultimately offered Razum the head position at the Oakland Coliseum for the 1989 season. He spent five seasons there before accepting the offer from the Colorado Rockies to become the head groundskeeper at Coors Field in April 1994. However, Razum was unable to participate in the initial field construction until after the conclusion of the 1994 season in Oakland.

In October 1994 Razum moved to Aurora, CO, near Denver, and since then he has been inordinately busy preparing the field that has impressed fans and players alike. His preparations have included researching infield soils, purchasing tools, equipment, materials and supplies, consulting on and observing daily construction, interviewing and hiring crew members, establishing maintenance and labor budgets, setting up and organizing the ground-crew shop area and generally turning Coors Field into a first-class major-league facility. Assistant Head Groundskeeper Jose Gonzalez says, "This is groundskeeper's heaven. We have everything we need. Everything is brand new, and it's obvious that they [the

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Fast Facts About Coors Field

- **The Long Haul:** Dimensions down the left field line (347 feet) and the right field line (350 feet) are the longest in the National League except for "cozy" Wrigley Field in Chicago.

- **You Mean It's Not the "Live" Baseball?:** A study conducted by University of Denver Physics Professor Thomas M. Stephen concluded that a baseball hit at Denver's altitude will travel nine percent farther than a ball hit at sea level.

- **Nosebleed Seats:** A row of purple seats in the upper deck is called "Mile High Row" because it is exactly 5,280 feet above sea level.

- **Jurassic Ballpark:** When Rockies manager Don Baylor paces back and forth in the first-base

dugout at the new ballpark, he covers the same ground where 66-million-year-old dinosaur bones were discovered during the construction of Coors Field.

- **Water, Water Everywhere:** The irrigation system at Coors Field uses between 12,000 and 22,000 gallons of water per day. The complete system utilizes about 90 sprinklers. Hunter Industries supplied much of the irrigation equipment, including I-40 rotors in large turf areas and I-25 rotors in small turf areas, brass valves and quick couplers.

- **Good Wood:** 1,000 trees will be planted around Coors Field, offering pleasant scenery and an estimated \$162 million in environmental benefits.

Mark Razum Profile

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Rockies] want to take care of us.”

According to the players, his Oakland crew members, Colorado crew members and other who have worked with Razum, his trademark is attention to detail. “Just seeing the hard work that players go through to get to the major leagues motivates us to produce a field worthy of their efforts,” says Razum.

Blue/Rye Sod Mixture

The sod for Coors Field was grown on Graff Turf Farms in Fort Morgan, CO, by Randy and Betsy Graff, who also provided sod for World Cup soccer games at Soldier Field in Chicago in 1994 and for the renovation of Kauffman Stadium for the Kansas City Royals. The Coors Field sod is a bluegrass/ryegrass mixture selected by Randall & Blake Inc. (RBI), the company subcontracted for the construction project, and RBI’s consulting agronomists, Dr. Tony Koski and Mark Altman. Typically at Graff Turf Farms, the harvesting process will leave enough rhizomes to regenerate and produce the crop for the following year. However, RBI insisted upon a different growing technique for the Coors Field sod. To avoid contamination of the sod by the farm’s parent soil, RBI laid approximately two to three inches of the same sand that was being used at Coors Field and seeded it. RBI requested a heavy topdressing in the fall, which suffocated the various bluegrass strains, and as a result, the plants were slow to come up in the spring.

“It was a challenge and a big learning experience for us to use someone else’s guidelines and techniques,” admits Betsy Graff. “We also had one of the hottest summers and excessive wind conditions to deal with, which presented more challenges,” she adds. “When Mark [Razum] visited the farm for the first time, the grass was at its worst. He made several recommendations, including using a [Ransomes Motor 180] triplex mower and mowing in different directions every day at a 1 1/4-inch cutting height. We followed his advice and that of Dr. James Watson [an agronomist and consultant retained by the Rockies] and really saw more growing than in the past year — a big turnaround.”

Although the sod was in great shape at the harvest time, it was very thin (approximately 1/2-inch soil depth) because of the coarse sand layer in which it was planted. It appeared similar to washed sod. Installation was difficult and tedious. The big-roll (42 inches by 100 feet) method was used. Each roll had to be wrapped with netting in an effort to keep the soil intact.

Unfortunately, RBI crews’ hurried installation of the sod resulted in wide seams and grade disturbance. Heavy,

uneven topdressing and brushing done about two weeks after installation in an effort to remedy the problem instead put the turf in shock during a crucial grow-in period and widened the seams. The seams were filled in with sand by hand. Thanks to diligence and mild weather conditions, the grass is growing well now. In March, Razum introduced Princeton 104 Kentucky bluegrass into the original mix, which enhanced the color and durability of the field. A special feature of Coors Field is a 6,000-square-

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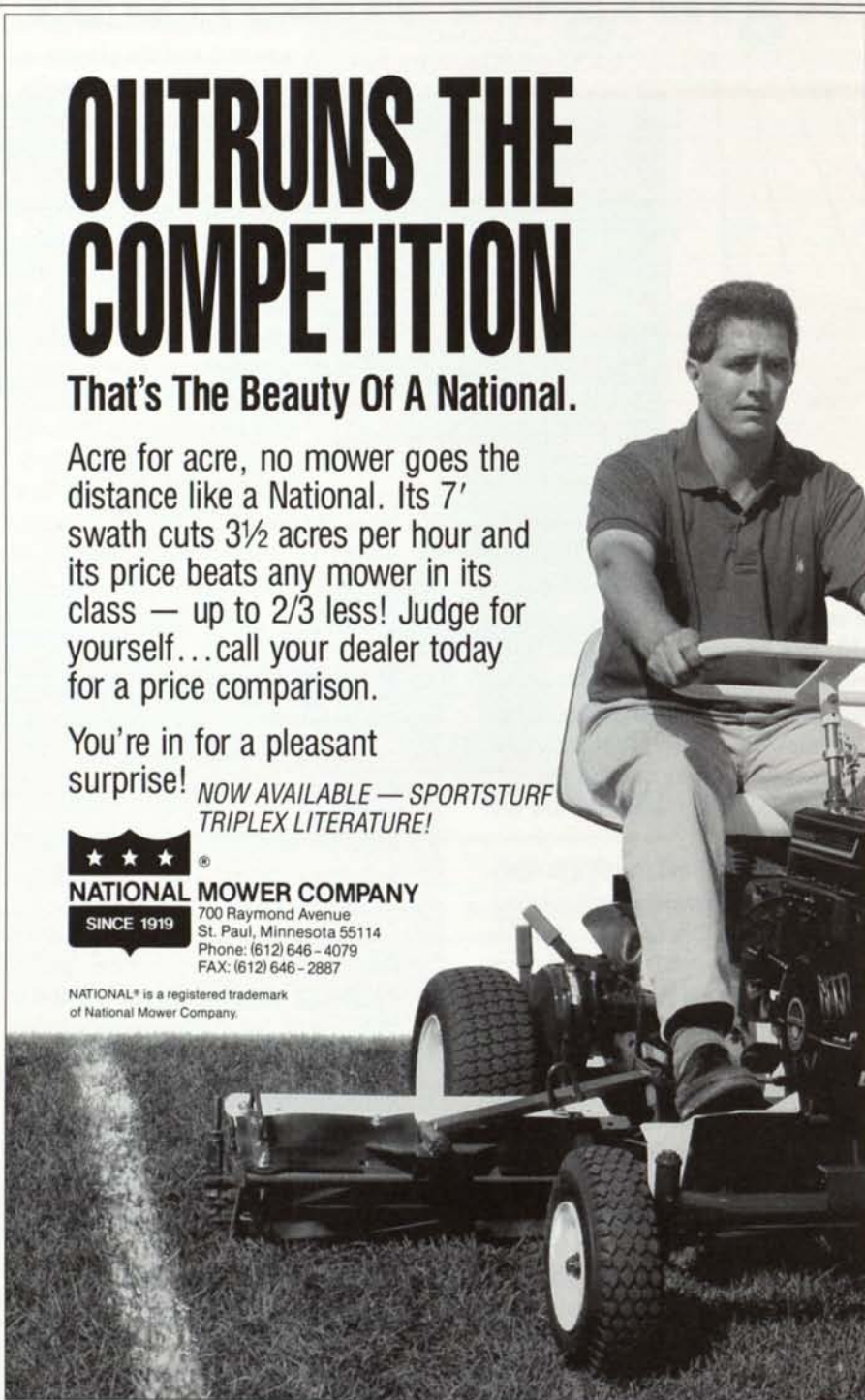


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foot sod farm behind the centerfield fence in full view of the fans.

The Soil

The rootzone mix is a 90/10 sand and peat moss mix. Although Razum prefers a 12- to 16-inch rootzone depth, at Coors Field it varies from 7.5 to 13 inches.

The infield soil mix is a blend of two types of soil, a clay/sand mixture (approximately 40-percent clay, 20-percent silt and 40-percent sand) and another clay/sand mixture (approximately 80-percent clay and 20-percent sand) with the intention of creating a 70 clay/30 sand mix with the soil base. Turface and washed mortar sand are combined as an amendment to the clay base. The objective of this technique is to create a firm clay base that will retain moisture. The Turface and mortar sand layer acts as a shield to protect the clay base from drying out. The rich, red color is an aesthetic bonus of this clay selection. The warning track is made from crushed lava rock with approximately 10-percent clay added for better binding.

Denver's weather can be unpre-

dictable, but the field should be able to withstand any weather conditions. The heavy snowfall on Opening Day 1994 was motivation enough to purchase a heating system. Forty-five miles of underground electric heating cables broken down into three zones, each with its own thermostat, will keep the field at optimum temperatures during the freezing days and nights. Razum also uses an Evergreen Growthcover in colder areas of the stadium. In the event of torrential downpours, RBI's patented Graviturf drainage system is guaranteed to remove up to five inches of rain per hour from the field.

"I haven't lived in snow conditions for 13 years," explains Razum. "I was a little nervous about how it would affect the field. Learning how to best use the warming system was difficult at first. There wasn't much printed information that I could research. But with the help of Drs. Watson and Koski and [San Diego Jack Murphy Stadium Head Groundskeeper] Steve Wightman and some experimentation of my own, I have reached a comfort

level. It is great to see the benefits of the heating system."

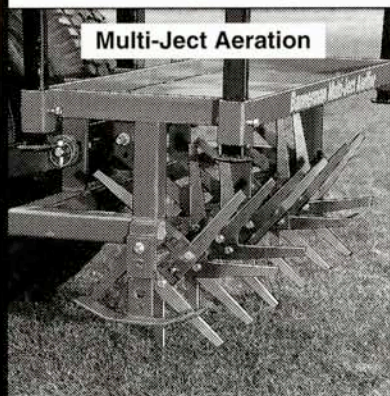
Fertilization

Since the new sand is unable to hold nutrients for long periods of time, the crew will monitor the soil closely and treat it as needed. Among the fertilizers being used are Par Ex with IBDU (a slow-release fertilizer), Scotts Fluid Minors, Nutriculture products and, depending on soil analysis, Roots with iron, Agri-Plex and Ferromec AC for iron supplement.

Few, if any, multimillion-dollar projects are completed without unforeseen difficulties. Coors Field is clearly not an exception. However, because of the hard work and dedication of Mark Razum and everyone involved in the project, Coors Field is a mile-high marvel. □

Katherine Buggy is a freelance writer who also studies English literature at Denver's Metro State College and considers herself a great fan of baseball and ballparks.

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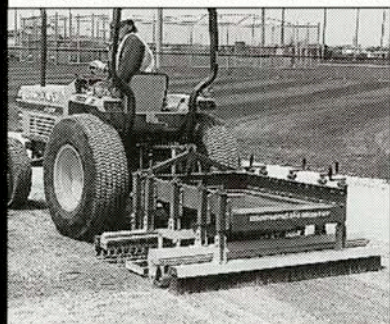
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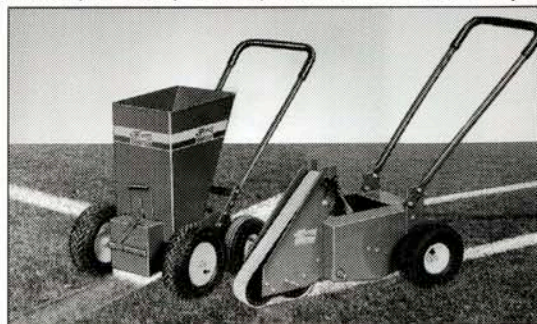


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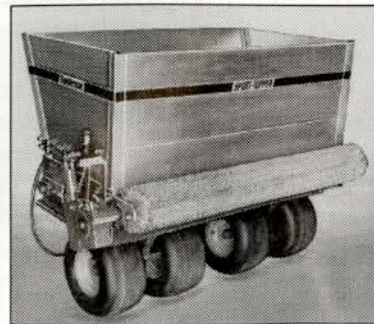
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The Beam Clay 1994-1995 High School/Municipal Baseball Diamond of the Year:

Dave Dravecky Field in Boardman, Ohio

By Bob Tracinski

Boardman, OH, High School's Dave Dravecky Field represents the same determination to overcome adversity that distinguished its namesake during his major-league career. The commitment and participation of a variety of local supporters have been vital in turning an unusable field into an attractive community-wide asset and the Beam Clay 1994-1995 Baseball Diamond of the Year in the School, Municipal and Park Division.

Sportscape International, Inc., of Boardman was retained to renovate the diamond. Company President Jim Puhalla served as project manager. Puhalla says, "The baseball field was originally constructed in 1970. Design and construction problems plagued the facility from the time it was completed. The original grass infield was lower than the outfield and the surrounding area by up to two feet, a problem which caused water to pool in the infield. The original soil contained 64-percent silt and clay with a percolation rate of 1/100 of an inch per hour. This combination resulted in frequent rainouts.

"Ten years after its construction, in an effort to correct design problems, the grass infield was replaced with a skinned surface. But by 1989 continuing drainage problems compelled Boardman High School to schedule as many away games as possible, all but abandoning the home diamond."

Athletic Director Al Burns adds, "Our teams are highly competitive in all sports. We have 59 different sports teams in grades seven through 12, and

club and intramural level teams as well.

"This community is 100 percent behind our entire sports program, and they're nuts about baseball."

The Boardman Dugout Club, a local booster organization, made a commitment to raise funds to refurbish the facility. Area businessmen Charlie Smithberger and Jim Pondillo, co-chairmen for project, put together a simple business plan. Smithberger says, "We worked with Puhalla to define our needs, then developed a four-year plan with each step scheduled and costed. Operating under

an agreement with the Boardman Board of Education, we raised funds for the reconstruction of the facility, including the repair of fences, enlargement of dugouts and relocation of water lines, as well as the field renovation. We received 100-percent cooperation from the school, from Al Burns — who coordinated our efforts with the school — from the high school's maintenance director, Dick Cornell, from the coaches, students, parents and the community at large.

"The major part of the fund-raising

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The baseball diamond at Boardman High School, now known as Dave Dravecky Field, has been reconstructed to eliminate structural defects like the depressed infield of the original facility. Photo courtesy: Jim Puhalla.

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Diamond of the Year

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effort was the sale of advertising for the outfield fence. These were sold at \$1,000 each on a four-year program, with the first year's contribution being \$400, the second year's \$300, then \$200 and \$100. This corresponded with our need for funds, as the major renovation efforts were the most costly, but ongoing work also would need to be financed."

Smithberger credits Frank Dravecky, father of Dave Dravecky, as a tremendous asset to the project. "This man has been a driving force for baseball throughout his life, working with our kids at all levels," relates Smithberger. "Now that he is retired, this field is his labor of love, and he performs much of the ongoing regular maintenance. He's been an inspiration to the entire community."

Smithberger also has high praise for Puhalla. "We couldn't have accomplished this without his guidance, professionalism, attention to detail and downright passion for this project," says Smithberger. "He's one of those rare people who, if you give him his own horn and ask him to toot it, he wouldn't do it loudly enough."

Puhalla and Joe Maruskin started a landscape business in 1977. Shortly afterward, the young company worked on its first sports field and immediately realized the need for specialists in this area. As its reputation spread, primarily by word of mouth, the company began to work on more sports facilities.

In 1985, as Puhalla was working on the infield renovation of Youngstown State University's baseball diamond, he connected with Marshall Bossard, a sports turf guru who passed along more than advice. Bossard's stickler attitude and understanding of the role the sports field plays in the game reinforced Puhalla's commitment to the sports field specialty.

Puhalla says, "Much of my knowledge of this profession has come through experience and experimentation. Bossard and others within the industry have generously shared their expertise, and I've joined in their commitment to always learning, always looking for a better way."

Planning and Designing

Puhalla says the baseball diamond at Boardman High School presented fairly

typical problems in redesign and renovation. "In this part of the country, the single most common problem is standing water on the infield due to inadequate surface drainage," says Puhalla. "Poorly planned contours stop water from running off the field, and since internal drainage won't work in the skinned areas, positive surface drainage has to be established if the field is to be safe and playable.

"When we approach a project of this kind, we try to meet four goals, ranked in order of importance. The first is to make the facility safer and more usable. The second goal is to make the field easy to maintain, which normally follows after the first goal has been met. The third goal is to provide a facility that assists the performance of the athlete by offering the best possible conditions on which to perform. Finally, we aim to make the fields aesthetically pleasing. Of course, all these goals must be met within the limitations imposed by the project's budget.

"A survey of the existing topography is essential to field construction and reconstruction. When we refurbish a baseball diamond, we first do a topographical survey of the infield, outfield and surrounding areas to determine how water moves through and around the property. Then we come up with a solution to permanently fix the problem. Each set of conditions, and thus each field, is different.

Reconstruction

"Renovation of Dave Dravecky Field began with the application of a layer of subsoil over the entire infield. The infield was raised two feet to allow for positive surface drainage and to prevent outfield and sideline drainage onto the infield surface. Bossard's infield shaping strategy that moves the water off the infield with no internal drainage is the basis of my designs.

"After the placement of subsoil, six inches of topsoil were spread on the infield. We rebuilt the pitcher's mound with a sand and clay mix. To increase permeability of the skinned areas, calcined clay was incorporated into the 60-percent sand/40-percent silt clay used in those areas.

"The infield was sodded with a 50-percent bluegrass/50-percent-perenni-

al ryegrass sod, and the outfield was slit-seeded with a similar mixture. The project required 2,500 cubic yards of on-site subsoil, 750 yards of topsoil, 225 tons of sand-clay mix and 2,500 square yards of sod. The renovation project was completed in 1993."

The athletic department purchased new mowers and a scoreboard and installed internal drainage in the form of a graveled French drain at the perimeter of the field.

Dave Dravecky Field is busy from April through early September as the prime site for the Boardman High School varsity and junior varsity baseball games and practices plus the Boardman Community Baseball Colt League's summer play. It hosts a total of 65 games and 45 practices each year.

"This field is able to support competition in a wide variety of weather conditions," says Puhalla. "In its first season of use the diamond performed so well that the Boardman High School team was able to play several home games on days when weather conditions had forced postponement or cancellation of games at other local fields," he adds.

Skinned Area Maintenance

Skinned areas of the field receive daily attention during the season, notes Puhalla. "After the area is moistened to allow for surface penetration, a nail drag is used to keep the sand-clay soil loose. Next, a mat drag is used to break up the soil clumps and to level the surface. Dragging begins six to 12 inches from grass edges and works toward the middle of the skinned areas to prevent loss of sand-clay soil into the grass. Holes at the pitcher's mound, batter's box and bases are filled, tamped and hand-raked each day. The field is chalk-lined for each game and is frequently moistened before games to control dust.

"Edging is performed twice a year: at the end of May, following the high school season and before the start of summer leagues, and at the beginning of October to prepare the diamond for the coming year. Before edging, a high-pressure water hose is used to remove any of the skinned-area sand-clay mix that has accumulated at the grass edge.

"Resodding of worn areas around the pitcher's mound, home plate and the bases is also completed in October.