An encouraging sample of the developing rootzone system.

water would have involved well licenses and providing storage, as well as raising environmental issues.

Instead, the architects focused on how to prevent the spring water from causing wet and slippery field conditions and providing quick drainage during heavy rains. But the budget was tight because of the enormous amounts of money going into other parts of the project.

The usable surface area of the old quarry site had to be enlarged at a tremendous cost. The fields are at the base of a mountain. Big power shovels and giant dump trucks spent weeks taking out chunks of basalt stone as big as a car. Tons of fist-sized rocks and gravel had to be sifted out of the dirt. More than 7,000 cubic yards of rock and debris were hauled off. About 60 percent of it came from cutting away the hillside to make a place for the drill area. The upper field also had to be moved into the hillside to allow the old gridiron layout on the lower level to be widened 80 feet to accommodate soccer field dimensions.

The football layout actually measures a field and a half—160 x 360-ft. regulation sized field with a 160 x 180-ft. drill area added on at one end. In addition, there’s a 20-ft. apron around the football field and drill yard. Ditto for the soccer field.

By Dec. 21, the football field excavation had been completed and graded to a depth of 18 inches below the final field level. This allowed for a 6-inch layer of gravel under the 12 inches of root zone soil. Approximately 4,000 feet of perforated plastic drain lines were installed for the two fields. All the drain pipes and irrigation lines were placed at a minimum depth of 18 inches to reduce chances of their being punctured by the Vertidrain Aerator’s 16-inch tines.
There are four 4-in. perforated drain tiles which run the length of the football field and drill yard. At a midway point, these cross over and empty into a 12-in. collector tile. This line and one just like it from the soccer field discharge into an 18-in. tile that goes to the sewer main.

**Budget Feature: Sand Drains**

The only sand used in constructing the fields went into what are called "sand drains." After the 12 inches of root zone mix has been graded and rolled, a trencher dug grooves 4 in. wide x 12 inches deep every 10 feet running lengthwise down the football field. They are 20 feet apart on the soccer field, which isn't so close to the artesian spring. The sand drains are covered as the field is dragged. A total of 350 tons of Maui dune sand was used to fill the drainage grooves on both fields. Although it's too fine for root zone mixes, this sand works okay for these drains. Maui sand costs $40 a ton versus $60 a ton for good silica sand that comes from Australia.

Affordable drainage that works is important in the Pacific region. Low

continued on page 17

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budget fields are common and so are sudden, heavy downpours and shallow ground water on most sites. Ignore this and your field can be under water a lot. I'll say this: on football fields as high crowned as ours (18 inches), they do a surprisingly good job.

We decided to use compost as a big component in our root zone mix. From the outset, it was felt that repeated and aggressive aeration might be essential. Also, frequent top dressing. Compost sources were narrowed down to two good compost yards that offered consistent and comparable material. Also, their green waste turnover was large enough to meet our needs.

Mixing the Rootzone Mix
Approximately 3,500 cubic yards of compost was hauled in for the root zone mix-40 percent compost and 60 percent soil by volume. The soil and compost were blended on-site, using big front-end loaders with bucket capacities rated at about four cubic yards. To get a 40/60 proportion the loaders scooped four buckets full of compost for every six scoops of soil added to the pile.

Front end loaders also did the mixing by scooping and folding the compost and clay silt together repeatedly. In hindsight, I think a better mix could be gotten using a blade on a parking lot. After putting out the right proportions, windrowing them together repeatedly ought to give a good mix. Better still, Brewer Environmental, the big turf supply wholesaler in Hawaii, rents a big capacity Renco portable soil blender. It wasn't available when we needed it, but that's the way to go.

Sodding a field for football with Tif 419 Bermudagrass like we used would have cost around $35,000 to maybe $50,000 on the mainland. In Hawaii it would have been more like $150,000! You can see why we didn't lay sod. We went with sprigs.

Look for "Groundskeeper In Paradise, Part II" in next month's issue of SPORTSturf. Toma will detail his grow-in program and how his combination of aeration, fertilizers and biostimulants grew grass so tough their new Toro grunt-ed when they cut it.
The year 2000 was a year of firsts. Millions of people around the world watched and celebrated as December 31, 1999 changed to January 1, 2000, and the first day of a new millennium dawned around the globe, from time zone to time zone.

For the STMA, the year 2000 marked the beginning of its certification program, designed to increase professionalism in the industry, promote better and safer sports turf areas and establish credentials that signify a specific level of expertise. And no sooner had the new year begun then Ross Kurcab had been named the first Certified Sports Field Manager (CSFM).

The initiative and determination that Kurcab showed in being the first person to complete and submit the difficult requirements of certification, along with his work both locally and nationally in advancing his profession, have made Kurcab our choice for the 2001 sportsTURF Manager of the Year.

Troy Smith, assistant turfgrass manager with the Denver Broncos, has known Kurcab since 1989, when he served as an intern with the Broncos before assuming his current position with the club in 1994. Smith witnessed Kurcab's enthusiasm and energy as he prepared for certification.

"Ross was really set on being the first CSFM," Smith said. "He wanted to be number one, which is the way he is about everything."

After pushing for certification for a number of years, Kurcab, who served on the Certification Committee, helped develop the program for the STMA. He studied hard before taking the test in December of 1999, then sent his tests through Fed Ex to ensure they would be graded and

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approved by the end of the month. He passed, and, on January 1, 2000, became the organization’s first CSFM.

Kurcab is a 1984 graduate of Colorado State University, where he received his B.S. in Landscape Horticulture/Turfgrass Management. He has served as the turf manager for the NFL’s Denver Broncos since June of 1984, where he is responsible for the development and implementation of a year-round practice field program at the team’s training facility. In this position he must develop and maintain a yearly operational budget, hire and train new crew members, manage the surrounding landscape and maintain the practice field.

Kurcab has recently transferred the day-to-day operations of the practice facility to Troy Smith, while Kurcab oversees the design, construction, establishment and maintenance of the playing surface at Denver’s new $364.2 million stadium, slated to open in August 2001. He continues to serves as department head and supervisor of the practice facility.

Even with this busy schedule, Kurcab makes time for friends and his fellow turf professionals.

While in Denver, Dr. Tony Koski, a friend of Kurcab’s for nearly 13 years, stopped by the Broncos’ practice facility with his son to say hello. “Ross took the time to show us around, then asked my son if he wanted to get lunch. He then took us into the team’s locker room where all the players were gathered for lunch, and my son got to eat with the team, which was a big thrill for him.”

Past President Steve Guise awards Ross Kurcab for becoming the first Certified Sports Field Manager. Courtesy: STMA

Over the past several years Kurcab has run a day-long workshop at the training facility, giving a tour of the fields and facility that is extremely popular among attendees. He also hosts several smaller tours to whoever is interested in the facility, and is generous in doling out Broncos souvenirs and memorabilia.

Kurcab is a founding member and past president of the Colorado Sports Turf Managers Association, which he helped create in 1990. He currently serves as vice president and board member and frequently appears as a featured speaker for the organization’s meetings and activities.

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