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Bd. update

GUEST COLUMN

TRACK & FIELD

Isolate Your Track

Eliminating water buildup from running tracks

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RAY WOFFORD

Building a track-and-field complex is a costly undertaking, but with proper initial planning and maintenance, this investment can pay dividends to the athletes and community it serves for many years.

There are many considerations regarding the design and construction of running tracks, but one aspect that will ensure track longevity and performance is addressing the need to evacuate water and keep debris off the track surface.

Running-track surfaces are engineered to withstand rainfall. However, a running track's worst enemy is a flooded surface of standing water, called "ponding." Not only can this make an active competition nearly impossible and unsafe, but over time, ponding causes major damage to the track, delaminating the synthetic surface and asphalt base, and severely shortening its usable life.

Water buildup on a track, especially in freeze-thaw zones, can wreak havoc on an expensive track surface after just a few years. Additionally, water runoff from secondary areas can bring sediment, debris and pollutants, causing further surface deterioration and requiring extensive maintenance.

Manufacturers have developed surface drainage systems that help isolate the track to effectively carry away storm water from the track surface, eliminate ponding, and protect the track from runoff and debris from the field and bleacher areas.

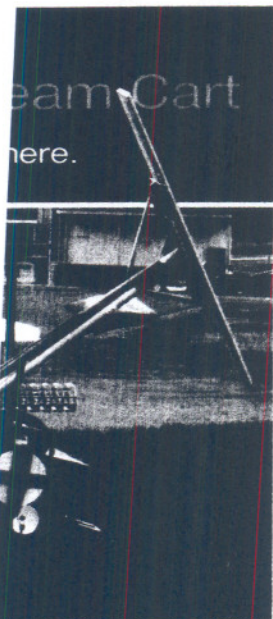
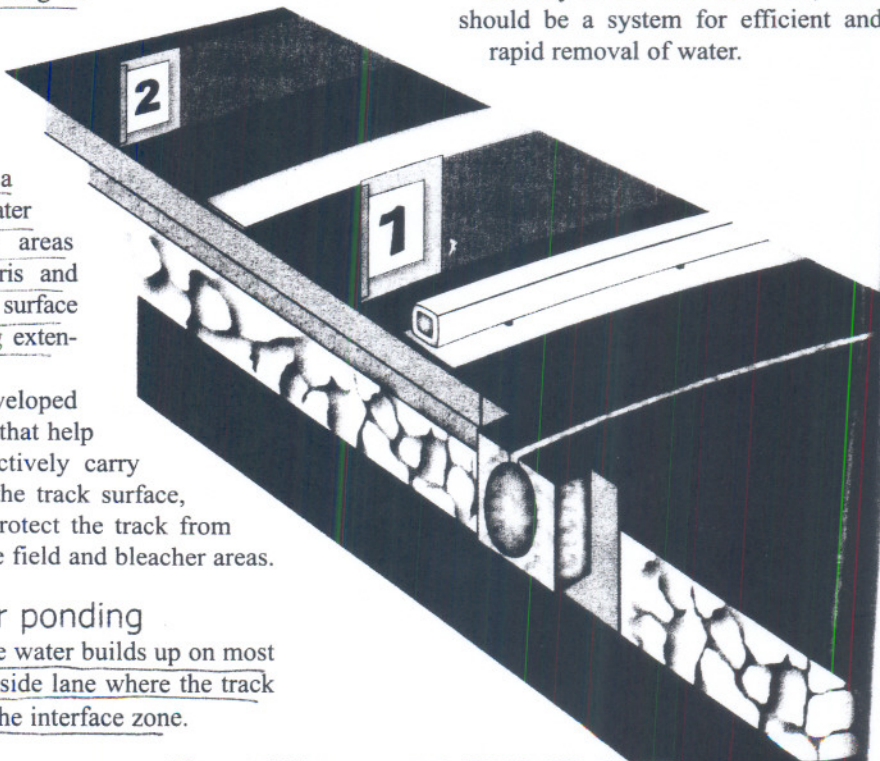
The worst area for ponding

The problem area where water builds up on most tracks is at the furthest inside lane where the track meets the field surface—the interface zone.

Water buildup is caused by several factors. First, most tracks have a slight slope from side to side, generally sloping to the inside. In high schools, this slope may be up to 2 percent. The majority of tracks have a slope of between 1 and 1.5 percent, while the National Collegiate Athletic Association (NCAA) mandates that its tracks have a maximum slope of 1 percent. Because of this, the water moves to the most inside lane.

Second, while most infields have a sub-surface drain system, there is typically runoff where the edge of the field slopes slightly downward to meet the track surface. Excess liquid in this area can spill onto the track surface. In some instances, the reverse happens as runoff from the track surface spills onto the field, where the underdrain cannot handle the runoff.

Directly at this interface zone, there should be a system for efficient and rapid removal of water.



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The solution

Professional associations recommend a trench drainage system that runs around the entire inside perimeter of the track to provide a continuous line of drainage and ensure a smooth and safe transition between the track and field. This complete trench system also serves as a barrier, preventing debris and sediment leaving the field to spill onto the track, which may discolor or damage the surface.

Manufacturers offer two major types of trench drain systems. Each accommodates different types of track surfaces, various facility uses and the preferences of the designer and owner of the complex.

For manufactured track surfaces, a modular slot drain system enables the "carpet-style" rubber track surface to be dressed over the channel and the slots cut out. These drainage systems are used at most high-profile venues and by some colleges and high schools. They are available in straight and radiused channels to fit around a 400-meter track. The unobtrusive slots create a minimal visual distraction and trip hazard, compared to a grate, making them ideal for the "D" area. With the slotted-trench drain system, the supporting concrete can be poured level with the top of the channel, providing an excellent anchor for securing track material.

For a poured track surface, either a channel-and-grate trench drain system or a slot-drain system can be used. Channel-and-grate systems are somewhat more economical and general-purpose in nature, and can be provided with a canopy cover (curb) if needed. Various grate types are offered.

Another aspect to isolating the track is protecting the outside track area from nearby bleacher and seating areas. Here, melting snow, storm-water runoff, dirt and debris can flow downward, spilling onto the track and causing possible impaired conditions, staining and ponding. Manufacturers recommend placing grated trench drainage to separate these areas and also to position drainage around the exterior of the track perimeter as needed to create a totally safe haven for the track surface.

When designing and installing drainage for running tracks, it is also useful to review the specifications issued by the American Sports Builders Association, as well as the International Association of Athletics Federations (IAAF).

Protecting the life and performance of your track surface requires planning an effective trench drain system. Consult with your system provider for advice and assistance from initial design through installation and maintenance.

The rewards of preparing the right system the first time will save in expensive retrofit work and will keep you in the game for many years to come.

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