

Enhancing Playability With Improved Drainage

Westmoreland Country Club
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Issue

Westmoreland Country Club, located north of Chicago, is prone to flooding after rain events because of heavy clay soil and a high water table. To make matters worse, the golf course's main drain line was constructed in the 1960s and is now inefficient and failing. Furthermore, village restrictions required the diameter of the main drain line to be reduced from 18 inches to 12 inches where it exits the property, causing water to back up onto the golf course following heavy rain. Depending on the amount of rain, parts of the course could be flooded for two to three days. The flooding not only disrupts play, it also has the potential to cause serious turf damage.

Action

Recognizing that extensive drainage improvements were necessary to remedy the problem. Westmoreland enlisted the help of a drainage company and a civil engineer to design a new drainage system. An experienced contractor was chosen to carry out the installation work.



Extensive drainage improvements have enhanced playing conditions at Westmoreland Country Club and help the course reopen quickly following rain events.

The new drainage system includes 11 miles of “waffle” drainage pipe that was backfilled with coarse sand. There are also 11 pumps, both electric and irrigation driven, that move water to retention ponds on the property. A transfer pump was installed to move water from the retention ponds to the irrigation reservoir, helping Westmoreland utilize more stormwater for irrigation. Lastly, a pipe was installed to move water from the irrigation reservoir to another storage pond at a higher elevation, increasing the facility’s total water storage capacity.

Results

Following the drainage improvements, Westmoreland has an easier time dealing with heavy rain events. Areas where standing water were common for two or three days after a rain event now drain in 24 hours or less. In addition, more storm water is captured on site and reused for irrigation, reducing consumption of expensive potable water. Furthermore, the golf course plays firmer, is quickly playable following rain events and the turf is no longer prone to severe flood damage.