

University of Dubuque Practice Facility

It's What You Can't See That Counts

When it rains in Dubuque, stormwater runoff has to be let into the surrounding city storm sewer and streams at a controlled rate or downstream flooding or damaging erosion and silt will result. Since water from roofs and artificial surfaces such as tennis courts, parking lots, and the football stadium runs off much more quickly than from natural surfaces, engineers design detention ponds to hold the excess water to control drainage rates.

Veterans Memorial Training Center on the University of Dubuque campus is a recent and much-welcomed addition to the school's athletic program. With a little larger than half-size indoor playing field featuring artificial turf, football, baseball, softball, soccer and lacrosse players can practice year round. But as yet another new facility fills in open space on the campus, there is even less space for stormwater detention ponds.



As designers worked to determine how to control stormwater runoff, they realized that, about 150 feet west and many feet underground from the new facility, lay an old abandoned lead mine shaft. If stormwater was to find its way into the old mine, erosion, sinkholes and lead contamination could easily result.

Faced with these restrictions, engineers made the choice to hide the detention facility indoors, under the practice field.

Made up of a series of oversized, molded plastic arches, the storm chambers are designed to fill with water during a storm and then allow that water to slowly percolate out through the gravel base to pipes that direct it to an adjacent storm sewer. The chamber is large enough to handle the runoff from a 100-year storm and serves the new practice facility as well as the adjacent Chlapaty Recreation and Wellness Center and the UD football field.

The underground storm chambers have proven successful on the campus before, with this being the eleventh and largest such facility installed.

