

Floodwall with Passive Floodgates Signals Commitment to Patients and Community

Columbus Regional Hospital, the only hospital serving Bartholomew County, Indiana, is now protected from future flooding thanks to hazard mitigation and a floodwall with passive floodgates.

The floodwall with passive floodgates, built with hazard mitigation funds from the Federal Emergency Management Agency (FEMA) and Columbus Regional Hospital, will protect this vital hospital from catastrophic flood damage, should the area be hit with flooding as was the case in 2008.

On June 7, 2008, nearby Haw Creek, a small tributary, came out of its banks due to flash flooding in the northern part of the floodway. The unprecedented flooding quickly filled the basement and rose six inches on the first floor of the building, forcing the hospital to evacuate 157 patients and knocking out primary and emergency electrical systems, boilers, chillers, and transport system.

The floodwater rose quickly as employees worked feverishly to evacuate patients and vital equipment. When the water entered the first floor “that’s when we knew we were in really big trouble...” said Jim Bickel, President and CEO. The hospital vowed that it would not happen again.

The hospital sustained more than \$180 million in damages, a figure that would have reached much higher if it wasn’t for the resourcefulness of hospital teams, tireless efforts of employees, and close coordination with Federal, State, and local officials. Critical functions and equipment were moved to nearby locations and plans quickly enacted to contain damages and costs.

Working closely with FEMA, insurers, and area contractors, the hospital was able to reopen in 6 months rather than 12-15 months as initially projected.

Once the massive cleanup was completed, the hospital turned its attention to flood mitigation. Columbus Regional Hospital engaged an engineering firm to study the Haw Creek watershed and recommend plans for flood mitigation. The study evaluated possible flood-control measures including diversion channels, retention areas, buyouts of homes in flood-prone areas and regulations on building in flood-prone areas.

As a critical lifeline entity, FEMA and Columbus Regional Hospital determined that passive flood mitigation measures should be installed since relocation was not financially practicable. A flood barrier system encircling the hospital was deemed the most cost effective and reasonable solution.

FEMA approved and provided 75-percent funding and a floodwall was designed to protect the entire hospital campus. Construction on the \$4.7 million floodwall started in June 2011 and was completed in April 2012. The 2,400 foot floodwall was built two feet higher than the 100-year flood elevation and includes 15 passive floodgates at all entry points, which allow unimpeded access by vehicles and pedestrians during dry times, and automatically deploy without reliance on power or personnel if flooding occurs.

Columbus Regional Hospital has also strengthened its Flood Emergency Response plan to protect against future disasters. Hospital officials are more involved with county emergency management officials and stay abreast of weather conditions, particularly upstream.



As Jim Bickel, President & CEO, stated, "We talk about disaster planning a lot. It certainly is a priority. It (the flood) brought it home to us how important it really is."



Aerial view of the flooded hospital



Plan view of the hospital with the proposed floodwalls