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Connolly Bros. completes innovative irrigation system for Turner Hill's residential development

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Connolly Brothers recently teamed up with civil engineers H.L. Graham, landscape architect Ryan Associates and environmental engineers Norfolk Ram Group to design an innovative irrigation system for Turner Hill. The Turner Hill property spans over 300 acres and is distinguished by its highly acclaimed championship golf course and residential estate community. The team was assembled to create a system and solution to collect rainwater from paved ways and rooftops, that can be used to irrigate Turner Hill's current and future residential development areas, and as a backup irrigation system for the entire property.

"The Connolly team was an excellent partner in the project. They brought very good expertise to the project and were incredibly professional from beginning to end," said John Gillis, project supervisor at Turner Hill.

The team designed a 165,000 gallon storage tank that exceeded requirements and expectations. According to officials at Connolly Bros., the thought process behind one massive storage tank for 29 acres of land is very intuitive. Previously, The Residences at Turner Hill were irrigated via the golf course irrigation system, but when the golf course water sources were low, and as the residential component started expanding, the need for a backup system became apparent.

The logistics and controls for the entire system were designed to be simple enough to allow any property manager or any landscape irrigation contractor to manage the system. The system was originally designed to have three separate 50,000 gallon fiberglass tanks. The Connolly Team pointed out that there was a more cost efficient method of installing the system, and worked together to come up with a design for a single reinforced concrete tank to be placed deep in the ground allowing water to be gravity fed to the tank. The group concluded that the excavation required to install the tank deep in the ground would be cost prohibitive, and came up with the idea to install a lift station to fill the tank, which allowed the top of the tank to be located just 3 feet below grade. Submersible pumps (that are retrievable for maintenance) are set within the storage tank. The pumps have timers and automatic controls, and pressurize the stored water through the residential irrigation system on the hill.

The team approach to this project was extremely effective, and the result is a system that effectively re-uses on-site storm water for on-site residential irrigation. The finished system is completely functional and time tested. "The irrigation system project is a great example of how creativity and collaboration create innovative solutions," said Jay Connolly of Connolly Bros.