

Project Purpose

Irrigation Design to qualify for Silver LEED® Certification.

The owner's desire for LEED® Certification led to an irrigation system design that utilizes air-conditioning cooling tower "blow-down" as the primary source for drip and turf irrigation.

The irrigation system for the City North project was designed to capture, store, clean and supply potentially wasted blow-down water for drip and turf watering.

The system includes a 20,000 gallon underground storage tank to capture blow-down water and two pumps for circulation and distribution of water to the landscaping.



Role of Irrigation Consultant

The irrigation consultant provided:

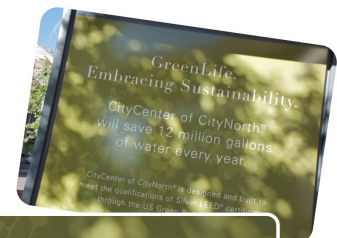
As Irrigation Consultants, we attended design and coordination meetings, provided construction documents and drawings, observed the construction process in the field, and confirmed construction records drawings.

We coordinated between the project engineers in terms of piping and valves between the cooling towers, storage tank, and pump control vault, as well as the makeup potable water meter.

Special Factors

The City North project is unique in that it is projected to obtain more than 90 percent of its annual irrigation supply from the air-conditioning cooling towers blow-down water.

The project contains a small turf area, but the bulk of the system is installed with drip irrigation. There is a 20,000-gallon fiberglass storage tank beneath the parking lot; a submersible booster pump; and a separate vault for filtration, controls, and all electrical cabinetry. A fertigation system also is included to enhance plant performance. The cooling tower water satisfies the LEED® requirement for "other than potable water."



CityCenter of CityNorth® is designed and built to meet the qualifications of Silver LEED® certification through the US Green Building Council®.

Significance

The project is a candidate for LEED® certification due to its use of non-potable water. Since the cooling tower blow-down water is not generated 24/7, but is a function of the air-conditioning, a large storage tank is required. A booster pumping system was designed to extract the water from the tank.

A challenge was keeping the water as clean as possible in the tank. An Ultraviolet (UV) filter was utilized to continuously re-circulate the water for this purpose.