SITE REPORT
ROADWAYS

Flagler, Jacksonville, Florida

Rain Bird® Retrofit on St. Augustine Roadway Yields Impressive Water Savings

The property consists of 33 spray zones and 2 rotor zones along a linear roadway. The site was originally installed with Rain Bird VAN nozzles and PEB scrubber valves with PRS Dials regulated to approximately 35 psi. The site is operated by an ESP-MC 40-pedestal controller.

THE CHALLENGE

New irrigation restrictions imposed by Duval County have made it difficult to irrigate all of the zones adequately. The roadway also experiences constant vehicular traffic, has narrow bands of turf in many of the islands, and suffers from hot spots due to the large presence of asphalt and concrete. Coupling these challenges with expected increases in local water rates, the city projects a 100% cost markup from present-day costs.

HE-VAN High Efficiency Variable Arc Nozzles

THE SOLUTION:

Flagler's project leader, Brian Baker will work with Rain Bird, the authority in intelligent irrigation to find a more efficient, cost-effective solution. The existing VAN nozzles will be retrofitted with the new, more efficient HE-VANs (high-efficiency variable arc nozzles). These nozzles will help reduce hot spots, prevent over watering, and meet the requirements of the 2-day-per-week irrigation restriction.

Core Products Used:

- HE-VAN High Efficiency Variable Arc Nozzles

KEY OBJECTIVES

- ✓ **Reduce Run Times**
- ✓ **Increase Distribution Uniformity**
- ✓ **Improve Turf Health**
- ✓ **Meet Municipal Regulations**

RAIN BIRD®

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APPROACH:

Retrofit Existing Nozzles

In order to maximize the city's 14-hour watering window on Tuesdays and Fridays, Baker's team will retrofit four hundred (400) VAN nozzles with HE-VAN nozzles. **HE-VAN nozzles** will provide greater distribution uniformity, applying water more evenly and effectively within a shorter amount of time. HE-VAN's wind-resistant coverage will also eliminate dry spots previously caused by misting and airborne evaporation. Simultaneously, HE-VAN nozzles will prevent over watering, which has historically caused fungus, weed, and plant-health issues for the city.

> "The beauty of the HE-VAN is that with one simple change, we got a lot of benefits, like saving money, water, and time. We also anticipate decreased liability and reduced system wear and tear. Now we can confidently meet industry regulations and environmental challenges while providing a lush landscape that all can enjoy. That's a lot of payback for just changing a nozzle!
>
> CHRIS MELE
> VICE PRESIDENT,
> ECOSYSTEMS LANDSCAPE SERVICES

RESULTS:

A Significant Reduction in Consumption Cost

Faced with a 4-year commercial irrigation rate increase, the HE-VAN nozzles delivered an immediate savings of 11% in GPM. Coupled with the reduction in run time due to increased distribution uniformity, **the site has increased its water consumption savings by 36%. Based on historical run data, the water savings equates to an estimated 860,000 gallons per year, or approximately $2,500/year at current rates. An even more impressive $3,200/year savings is predicted**, given the projected rate increase for the next year. The customer believes the HE-VANs will pay for themselves within the initial months of installation.

An Environmentally Friendly Landscape

With water distributed more evenly thanks to the HE-VAN nozzle, **the watering window for the site has been reduced by 20%**. This gives the customer the ability to increase watering when needed, without violating local water regulations. It also has reduced liability and risk of system damage by eliminating the need to water during high-traffic periods of the day.