



## Beyond Vape Detection: Texas School District Adopts Smart Sensor System to Improve Student Safety

By Monique Merhige, Security Technology, August 1, 2022



Castleberry Independent School District (ISD), located in River Oaks, Texas, is a public school district that includes the City of River Oaks, a large portion of Sansom Park, and a small portion of the City of Fort Worth.

The district consists of six educational institutions within six locations and oversees three elementary schools, one middle school, one high school, and one alternative learning center. In the 2021-2022 academic year, the district's 518 staff members provided a quality learning environment to a total of 3,650 students.

Castleberry ISD covers approximately 5.438 square miles and is in a densely populated community. Even in a small school district, however, vaping reared its ugly head.

Vaping has become a popular alternative for many individuals, including teenagers, instead of using cigarettes. In 2021, 2.55 million U.S. students reported using a tobacco product, with **2.06 million students reporting they used e-cigarettes** (a form of vaping), according to the Federal Drug Administration and Centers for Disease Control and Prevention's 2021 National Youth Tobacco Survey.

Prior to the COVID-19 pandemic, vaping incidents within the ISD school district could easily be addressed. Then, students began to take their vaping habits into private areas that were not actively monitored due to privacy laws forbidding video cameras and any type of audio recordings.

Unfortunately, the vaping epidemic haunting schools nationwide reached both Castleberry ISD's middle school and high schools with full force. School administrators recognized that vaping had become a large concern when evidence of vape pod boxes were left scattered throughout their various campuses. The superintendent prompted the school to come up with a mitigation plan quickly and researched the various vape detection sensors available.

### FOLLOWING UP ON A RECOMMENDATION

With a positive recommendation from a school in Pennsylvania dealing with similar issues, the IT, Security, and Technology Departments at Castleberry were all interested to learn more about **IPVideo Corporation's HALO IoT Smart Sensor**. But little did the school know that **this particular sensor could be used for multiple purposes—not just for vape detection**.

The HALO sensor can also be used for air quality monitoring, gunshot detection, noise alerts, and emergency key word alerting. The sensor also does not use a camera or record audio, which means it can be used in private areas—including bathrooms—for detection.



The biggest challenge for Castleberry ISD before and during the pandemic was vaping in the bathrooms. With the recent return of students and staff, the administrators were not only looking for a way to curb vaping, but also ensure that air quality was as clean as possible to prevent the transmission of the COVID-19 virus.

When the school administrators were shown HALO, they recognized that the smart sensor went beyond just vaping and that it could also monitor air quality. School administrators saw a huge advantage in this feature for the custodian staff whose responsibilities increased during the pandemic. Today, custodians are now considered the first line of defense to help stop the spread of the virus at schools by putting extreme cleaning measures in place to disinfect all areas.

“Our decision to select HALO was based on the versatility of the sensor and the positive reviews from other schools,” says Samuel Cervantez, safety/security coordinator at Castleberry ISD. “We also liked the simplicity of the product and how there were no re-occurring charges or fees associated with HALO. **We made the right decision deploying HALO within our school district as it’s protecting our school privacy areas and also providing security while protecting individual privacy.**”

### SMART SENSORS IN ACTION

Cube Cabling Company recommended that the district purchase 64 HALO sensors, which were installed after spring break in 2022 in the Irma Marsh Middle School, Castleberry High School, and Reach High School (including the TRUCE Learning Center located in Reach High School).

Most of the sensors were installed in the bathroom stalls and foyers to help stop vaping. **When students returned to school post-pandemic, however, there was a spike in vaping and HALO uncovered an air quality issue that would have never been found in the older buildings.** Alarms were triggered in restrooms, indicating that they were not properly ventilated. HALO alerted administrators that the air quality was poor due to faulty ventilation fans in the bathroom. This allowed administrators to quickly replace the broken fans and fix the issue.

“Training also went extremely smoothly for staff members as demonstrating the map of the sensors was extremely easy for users to understand,” Cervantez says.

### A MULTI-USE APPROACH

With a mixture of 200 plus interior and exterior video surveillance cameras districtwide, student safety has always been a top priority for Castleberry ISD. Cameras were placed in hallways outside bathrooms to capture snapshots of students coming out of bathrooms when the HALO sensor picked up on vaping. This allowed administrators to be alerted through email with an actual video clip of the suspect. **HALO sensors can also alert staff to damage through an alarm triggered if any of the sensors are tampered with or disengaged by students.**

Selecting a smart sensor that could go above and beyond just vape detection was crucial in response to the COVID-19 pandemic. Ensuring good air quality to help reduce the risk of spreading an infectious disease was also important. And with the recent uptick in active shooter incidents, Cervantez says the Castleberry ISD **feels secure knowing that the sensors also offer gunshot detection.**

“Once we eliminate our school vaping problems, we plan to continue to use the device for school security,” he adds.

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