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2014 Achievement Awards



2014 VACo Achievement Awards

Deadline: June 2, 2014

Application Form

All applications must include the following information. Separate applications must be submitted for each eligible program. **Deadline: June 2, 2014.**

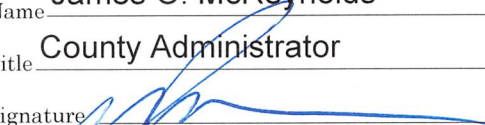
Program Information

Locality York County
Program Title The Talking Yorktown Trolley
Program Category 8. Transportation

Contact Information

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Signature of county administrator or chief administrative officer

Name James O. McReynolds
Title County Administrator
Signature 

Call for Entries

**2014 VACO Achievement Award Program
Nomination Summary
York County, Virginia**

Program Title: “The Talking Yorktown Trolley” – Implementation of a fully integrated automatic voice announcement and public address system for trolley passengers

Program Category: Transportation

For 13 consecutive years, York County General Services has successfully managed a small fleet of public transit trolleys that run throughout the streets of Historic Yorktown, a popular tourist attraction within the Historic Triangle that also includes Colonial Williamsburg and Jamestown. The busy tourist season, beginning in the spring and running through fall, has become synonymous with seeing the iconic blue trolleys moving passengers within Yorktown from attraction-to-attraction. The trolley service annually transports nearly 100,000 passengers throughout Yorktown each season.

In 2013, each trolley was outfitted with a DR600 talking bus system, an advanced vehicle logic unit with a fully integrated receiver that can track the location of a vehicle and automatically make audible and visual stop announcements at the appropriate location using internal/external speakers and destination signs.

When the technology was put into service in 2013, it was met with rave reviews from drivers and passengers alike.

York County's fleet of trolleys was designed to create a nostalgic, old-world feel. All three of the trolleys are outfitted with the antique look of mahogany woodwork and brass trimmings. They are also equipped with modern amenities including air conditioning, televisions and more. The County currently operates three trolleys, purchased with state and federal grant money, and can transport nearly 30 passengers at a time. The newest trolley to the fleet was acquired in 2013 with funding by Williamsburg Area Transit Authority (WATA). And while York County had a goal to maintain the nostalgic look and feel that passengers were accustomed to seeing, staff wanted to create ways to improve the overall passenger experience and improve the safety program. So York County began an initiative to install a talking bus stop announcement system on not just the new trolley, but the older trolleys in the fleet as well.

Before the new talking bus system was launched, the driver of the trolley was relied upon to manually announce each stop along the fixed route with approximately 10 stops. This required the driver to take his/her time and attention away from the road and at times one hand off of the wheel to grab the gooseneck microphone. The driver was also relied upon to effectively announce and project loudly enough to be heard throughout the

trolley, which at times could be difficult with a full load of passengers. Furthermore, the service was difficult to use for those passengers that were hearing-impaired, as there no were no visual aids that could assist passengers with their need to know where they were along the route.

Over the last few years, technology within the transportation industry has vastly improved the safety of not only drivers, but also passengers and pedestrians alike. Technological enhancements have presented numerous challenges to local governments and transit agencies trying to satisfy the demand for safer transportation and enhanced customer service. With regards to our specific trolley operation, it became clear that our drivers had to divert their attention from the steering wheel and road to grab a microphone and make manual stop announcements. With the large amount of pedestrian and vehicular traffic within Yorktown during the busy tourist season, it became clear that the safety of our visitors and drivers was being compromised. Furthermore, technology improvements are helping agencies support ADA initiatives in an effort to communicate information to passengers that may be visually and/or hearing disabled.

With these advantageous enhancements becoming available within the transportation sector, York County felt a need to move forward with an initiative to utilize this technology in an effort to enhance the overall safety

and customer service experience of riding aboard one of our nostalgic trolleys.

So before the 2013 season began, York County installed a talking bus stop announcement system on each trolley with the help of grant funding provided by Williamsburg Area Transit Authority (WATA). The concept relies largely on GPS coordinates to work properly and effectively. Before the technology could be put in place, the trolley route, in addition to every stop, had to be methodically planned out, timed and mapped for proper functionality. After mapping was complete, York County staff then had to decide on proper language and wording of each stop. This is what passengers would effectively hear and see on a destination sign when the trolley drove upon a GPS “trigger.” A lengthy installation process was completed on each trolley, and included installation of modems, GPS hardware, antennas, interior destination signs, operator control units and external speakers.

After putting all of the hardware in place, it was time to finally put the talking bus to work. When the trolley season began in 2013, York County officially launched the new service. It was met with rave reviews from drivers and passengers alike. More importantly, the new service improved the overall safety and the delivery of public service.

Each trolley was outfitted with a DR600 Talking Bus system, a Digital Recorders product. The DR600 is an advanced vehicle logic unit (VLU) designed to be the on-vehicle platform for the overall intelligent transportation system. The unit is essentially the brains behind the operation. The system is able to communicate, collect and distribute data with all of the vehicle electronics, and serves as a fully integrated automatic voice announcement and public address system.

The DR600 is physical mounted inside each trolley and is connected to the vehicle electronics through two positive locking 37 position Circular Plastic Connectors (CPC). The system utilizes a powerful state-of-the-art processor and delivers a combination of fast real-time processing and reliable communications all in one package. The power supply of the unit is fully protected and conditioned within a rugged enclosure and can withstand rugged conditions and extreme temperatures.

The unit supports the integration of GPS technology. A GPS antenna mounted on the roof of each trolley is connected to a port that allows us to program each stop into the DR600 system.

The DR600 supports internal and external announcements. It announces stops to passengers at a reasonable volume level, while simultaneously announcing the vehicle's route and destination to waiting

passengers at a volume appropriate for curbside intelligibility. The system is also tied in with each trolley's existing PA microphone to provide instant driver override for emergency or priority announcements.

The unit also controls and stores all of the stop information for the internal and external signs. Both the internal and external destination signs on each trolley are updated and are designed to correspond to the internal and external announcement.

In summary, both the internal/external destination signs and internal/external speakers work in conjunction with one another at all times based on the programmed GPS coordinates of the trolley. As the trolley crosses a "trigger," the system simultaneously and automatically manipulates the visual and audible technology and interacts with passengers.

The talking bus hardware for all three trolleys, including the GPS antennas and DR600 units were purchased for a total of \$17,367.00. Professional installation totaled \$5,619.00. Grant funding was provided by Williamsburg Area Transit Authority (WATA).

The new service has improved both the delivery of public service and the County's commitment to safety by accomplishing the following:

- Trolley drivers no longer have to take their attention off of the road or the wheel to announce stops. There are no buttons for the driver to push or engage. Safe driving is the number one goal and drivers can keep their eyes and attention on the road, and hands on the steering wheel.
- The ability for drivers to forget to announce stops is removed. In addition, those drivers who aren't proficient at annunciating and speaking loudly enough over the microphone no longer have to concern themselves with making announcements.
- The talking bus system clearly announces each trolley stop automatically when the trolley enters the respective GPS coordinates for the stop. This accommodates those passengers who may be visually impaired and cannot read the internal destination sign.
- Both an internal and external destination sign electronically displays the stop information in conjunction with the announcement over the internal and external speaker. This accommodates those

passengers who may have hearing difficulty and cannot hear the audible announcement.

- The program has an external speaker that makes announcements to those who are not on the trolley and may be waiting at a stop or may be pedestrians walking in the street. The external announcement informs prospective passengers of where the route takes them and alerts them that the trolley is approaching the stop.

We are confident that this new technological enhancement has improved the overall customer service experience of stepping aboard one of our trolleys. We feel it's made our trolleys much safer, as drivers can now revert all of their attention back to the road. We've also become adaptable to those that may suffer from visual or audible disabilities. Passengers can clearly see and hear where the trolley is taking them.