



## Case Study | Orangeburg County School District

Orangeburg Schools and MCA Enhance Fleet Communications and School Bus Safety with Advanced Mobile Two-Way Radios and Private Radio Systems

### OVERVIEW

#### A newly consolidated school system in need of a consolidated communications infrastructure

In 2019, the consolidation of four school districts in Orangeburg County, South Carolina, posed significant logistical challenges. The newly unified district now comprised 31 public schools—including elementary, middle, and high schools, along with three career academies—educating over 13,000 students.

The vast geographic spread of Orangeburg County, stretching over 75 miles east to west, further complicated the coordination of its extensive school bus fleet and the communication with administrators, safety personnel, and parents regarding any delays or incidents on the buses.

Recognizing the critical need for enhanced communication capabilities, the Orangeburg County School District (OCSD) sought to leverage technology to streamline operations. The community showed strong support for these advancements in 2020, approving a \$4 million bond referendum.

This funding boost enabled OCSD to implement vital technology upgrades, not only within the classrooms but also across their transportation network. By enhancing their communications devices and infrastructure, OCSD significantly improved their ability to manage school logistics and ensure student safety across their expansive district.



**Improving communications for 31 individual schools, serving over 13,000 students across a 76-mile area**

Motorola Solutions  
MotoTRBO Radios and  
Private Radio Systems

Improved Clarity &  
Coverage for  
Voice, Video, & Data

Enhanced Wi-Fi &  
Bluetooth  
Communications

Direct Connection to  
Public Safety & Emergency  
Services

PTT Functionality with  
Increased Capacity and  
Enhanced Features





MotoTRBO  
XPR 7550e



MotoTRBO  
XPR 5550e



MotoTRBO  
Capacity Max

“Turning around a school academically is something I had familiarity with, and something I felt we could achieve, but students who aren’t safe — whether that be on the playground or on buses — can’t be expected to learn. As educators, we need to take a holistic approach to our students’ learning and safety.” — Dr. Shawn Foster *County Superintendent*

## CHALLENGE

### Overcoming Obstacles: Upgrading OCSD's Mobile Radio Communications for Enhanced Student Safety

The Orangeburg County School District (OCSD) confronted a pressing communication dilemma: numerous school buses lacked radios, while others operated with models that had become obsolete, suffering from restricted coverage and insufficient capacity. Recognizing the urgency, district administrators, upon reviewing the fleet’s mobile communication capabilities, pinpointed the modernization of bus radios as an imperative.

The discovery that bus drivers relied on personal cell phones to relay essential information—a stopgap solution established before OCSD's collaboration with MCA—underscored the urgency for change. This makeshift method, as Dr. Foster and fellow administrators assessed, was not only inefficient but potentially hazardous, compromising the safeguarding of student welfare.

The requirement was clear: OCSD necessitated an innovative solution to safeguard students en route,

reinforcing safety protocols across the sprawling district. Embracing a forward-thinking approach was pivotal to fostering a secure and reliable transportation communication network.

Alongside the challenges with in-vehicle communications, OCSD faced additional hurdles concerning the strategic placement of base stations for their mobile and handheld radios. The existing stations were not adequately spaced to cover the newly expanded district efficiently.

Community residents lauded the OCSD Administrators for their astute planning and financial wisdom, as they judiciously allocated a substantial portion of the bond issue funds toward revamping the communications infrastructure. This commitment was a testament to their dedication to the well-being of all 31 schools and the 13,000 students entrusted to their care.

With the necessary funds secured and the issues clearly outlined, OCSD was poised to take the next critical step. What they required was a knowledgeable and reliable partner in the communications industry to transform their strategic plan into a tangible solution that would resonate throughout the community.



## SOLUTION

OCSD's leap forward in mobile communications manifested through strategic enhancements in equipment for both their drivers and fleet managers. Orchestrated in partnership with MCA, this initiative was designed to ensure the safety of students as they journeyed across the expanse of Orangeburg County's rural thoroughfares.

The transformation began with the implementation of MOTOTRBO™ 5550e Mobile Radios within each school bus. Chosen for their robust capabilities, these radios are armed with integrated Wi-Fi and Bluetooth 4.0, allowing drivers to maintain a lifeline to school administrators, security teams, and emergency responders with unparalleled clarity and ease.

For the pivotal interactions amongst fleet managers, faculty, and security personnel, the MOTOTRBO XPR7550e was the selected tool of choice. This line marries traditional two-way radio utility with the advancements of digital technology, facilitating a seamless blend of voice and data communications, bolstered with features such as Bluetooth® connectivity and Intelligent Audio, to keep administrative workflows smooth and responsive.

Bridging the gap between mobile and handheld radio communications, MCA championed the deployment of additional base stations to enhance district-wide coverage. Utilizing the robust architecture of MOTOTRBO™ Capacity Max, the system was architected for optimal performance, efficiency, and scalable growth, ensuring swift and dependable voice and data exchanges. This bolstered network, part of Motorola's TRBOMAX suite, extended OCSD's reach, claiming the broadest coverage in South Carolina with up to 95% network availability.

Uniting the MOTOTRBO XPR 5550e mobile radios with strategically placed base stations and the versatile MOTOTRBO XPR 7550e handheld units, MCA curated an all-encompassing communication ecosystem. This network elevated OCSD's operational safety and empowered them with the capability to prompt immediate action from first responders during critical incidents, safeguarding their most valuable asset — the students.

## RESULTS

The Orangeburg County School District (OCSD) has significantly elevated its transportation safety protocols. With the recent technological enhancements, OCSD bus drivers now possess the swift capability to report everything from routine disturbances to critical emergencies. This immediate communication capacity has greatly improved the security and efficiency of student transportation to and from school and during off-campus activities.

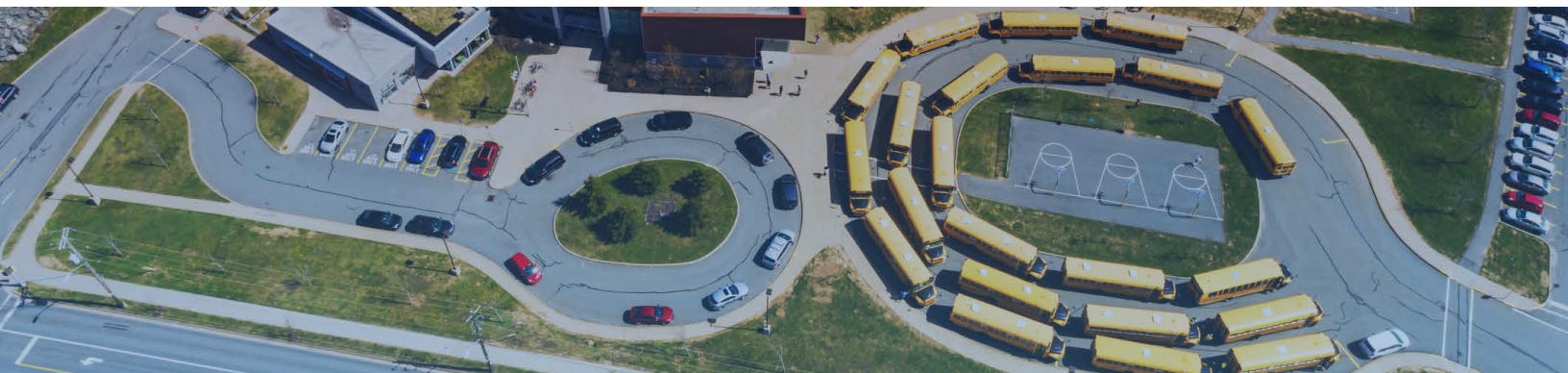
Leveraging the expansive reach of CapacityMax™, which blankets the region from the Upstate to Hilton Head, the OCSD has effectively closed the communication gaps, ensuring that students remain in constant contact with school officials and emergency services. This comprehensive network reassures both parents and educators that students are under vigilant protection at all times.

The collaboration between MCA and the proactive OCSD administrators and faculty has been instrumental in orchestrating this pivotal upgrade. Through MCA's solutions, OCSD now boasts superior signal clarity and an unwavering communications network, setting a new standard for student safety in transit.



"Parents can now rest assured that their children are safe not only at school, but as they travel to and from school as well." —

Dr. Shawn Foster  
County Superintendent



## About MCA

MCA is one of the largest and most trusted technology integrators in the United States, offering world-class voice, data, and security solutions that enhance the quality, safety, and productivity of customers, operations, and lives.

More than 65,000 customers trust MCA to provide carefully researched solutions for a safe, secure, and more efficient workplace. As your trusted advisor, we reduce the time and effort needed to research, install, and maintain the right solutions to make your workplace better.

Our team of certified professionals across the United States delivers a full suite of reliable technologies with a service-first approach. The MCA advantage is our extensive service portfolio to support the solution life-cycle from start to finish.

### MCA Headquarters

📍 135 N Church St #310  
Spartanburg, SC 29306

☎ 800.596.8205

✉ info@callmc.com

💻 [www.callmc.com](http://www.callmc.com)

The MCA logo is displayed in a large, white, sans-serif font. The letter 'C' is stylized with a blue circular graphic element inside it, consisting of concentric arcs and dots, resembling a network or signal. The background of the entire page is a dark blue gradient with abstract, glowing white and light blue geometric patterns, including a complex network of lines and dots in the upper right corner.