



# BUSPATROL

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## School Bus Safety Program

AI-Powered Automated  
Stop-Arm Enforcement

The World's Most Deployed School Bus Safety  
Program & Safety Tech Platform

**Safer Buses, Safer Kids.**





## Stop-Arm Violations: A National Problem that Needs to be Addressed

**130,963**

School Bus Drivers



Participated  
Across

**39** States





Stop-Arm Violations: A National Problem that Needs to be Addressed

**95,319**

**STOP-ARM VIOLATIONS**

OBSERVED IN ONE DAY

**= .73** **VIOLATION RATE**  
PER BUS  
PER DAY

2019 Results





“

TO AMPLIFY THE SHOCKING RESULTS FROM THIS SCHOOL YEAR WAS **THE FACT THAT OVER A SIX DAY PERIOD, SIX STUDENTS WERE KILLED, AND EIGHT STUDENTS AND TWO ADULTS WERE INJURED BY VEHICLES** EITHER VIOLATING SCHOOL BUS STOP ARMS OR HITTING STUDENTS AND ADULTS WHILE THEY WERE WAITING AT A BUS STOP.”

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– MIKE LAROCCO  
PRESIDENT NASDPTS



**NASDPTS**  
National Association of  
State Directors  
of Pupil Transportation Services



# U.S. Transportation Safety Agency to States: Enact Lifesaving Law to Permit Stop-Arm Cameras on School Buses to Issue Citations to Negligent Drivers

BusPatrol applauds the NTSB's Latest Safety Recommendations for Improved School Bus Safety Enforcement Measures.

NEWS PROVIDED BY

[BusPatrol](#) →

Apr 07, 2020, 17:30 ET

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LORTON, Va., April 7, 2020 /PRNewswire/ -- [BusPatrol](#), a leading school bus safety technology company, applauds the National Transportation Safety Board's (NTSB) recommendations encouraging the adoption of stop-arm cameras to deter drivers from illegally passing stopped school buses.

The National Transportation Safety Board (NTSB) today called on states to combat school bus stop-arm violations by enacting laws enabling local jurisdictions to install automated enforcement cameras on stop-arms and to issue citations to violators caught on camera.

On April 7, 2020, the NTSB released the abstract for its investigative report on the fatal collision involving four students who were crossing a road to board a stopped school bus in Rochester, Indiana, on October 30, 2018. Three of the student pedestrians, all of the same family, were killed.





We are a safety technology company entirely focused on improving school bus safety through our innovations and services.

- Leading stop-arm enforcement program provider
  - Deployed on the *most buses*
  - Protects the *most student riders*
  - Issued *more school bus citations* than all competitors
- Core business and dedication
  - Products, services and solutions built for pupil transportation



Footage from our school bus safety programs in NYS





 **BUSPATROL**

Safer Buses, Safer Kids.

## BUS ROUTE



School bus stops, stop-arm and lights are deployed and IoT devices activated



Automated Violation Analysis (AVA AI) cameras capture stop-arm events and identify violations



Video, GPS, and other supporting data sent to processing center via secure network

**SECURE  
NETWORK & DATA  
TRANSMISSION**



## QA & REVIEW



AVA AI filters footage to help prepare evidence package for reviewers



BusPatrol reviewers QA compiled video and evidence package



Video and supporting evidence package sent to law enforcement



**ALERTBUS PORTAL**

**SECURE ACCESS PROVIDED  
TO  
LAW ENFORCEMENT**





Law Enforcement use AlertBus platform to review evidence packages and issue citations or disapprove them



Citations are autogenerated and mailed to offender with web link providing access to video evidence

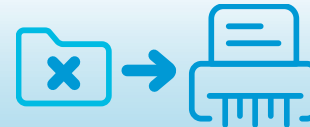


Motorist makes payment online or at a designated municipal office

*\* See Scenario for Contested Citations*



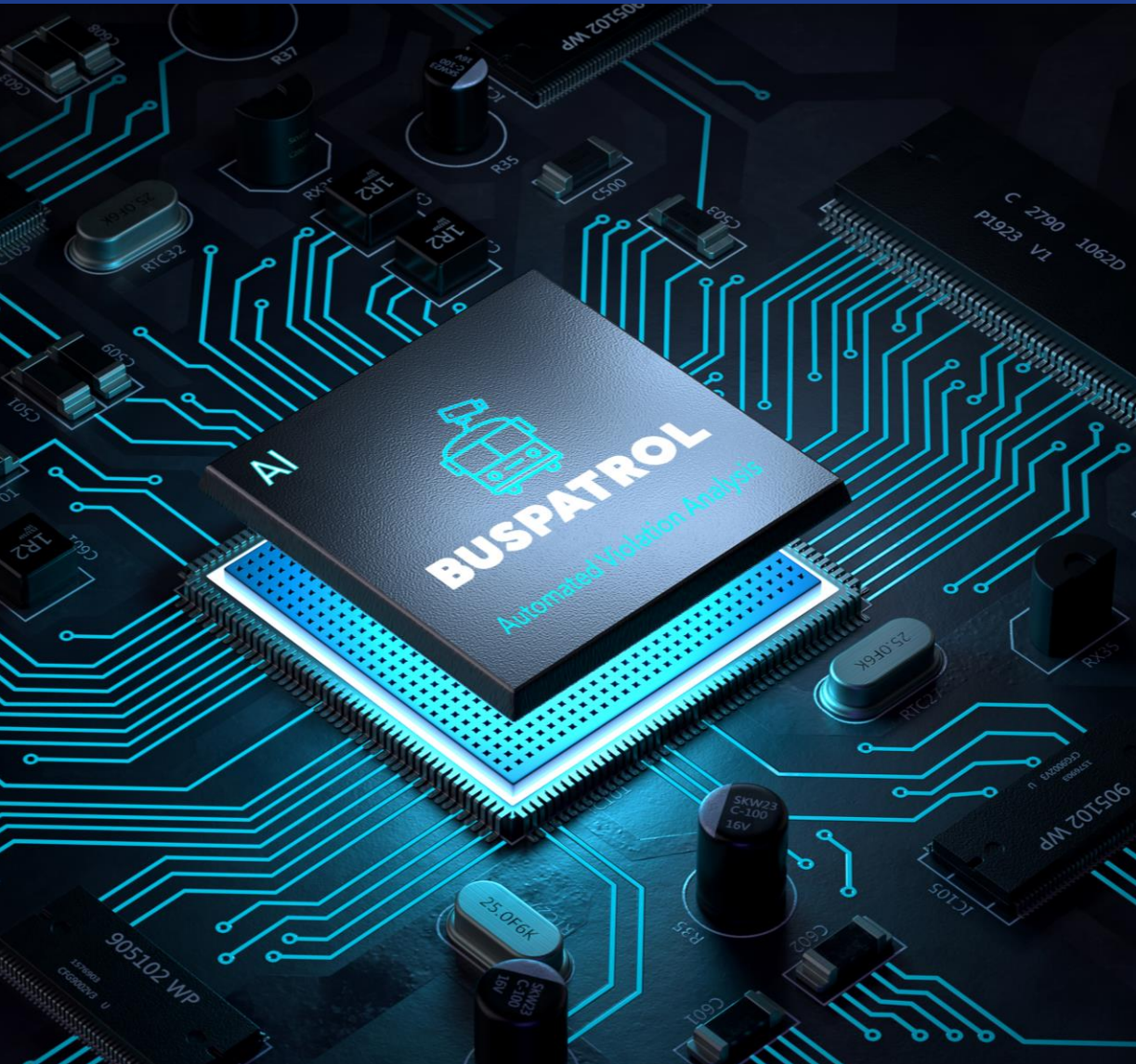
Call center available to educate drivers on how to change behavior



All citation data is purged from DVR, cloud, and servers, according to PA law.

**\*\*Payment options also include phone and mail, including payment plans**

Artificial intelligence and machine learning provide benefits to communities, partners and program providers.



- Most effective stop-arm safety solution
- Efficiency benefits: Capture and process **ALL** stop-arm events across entire fleet
  - Scalable solution for efficient citation management

**AI-POWERED ENFORCEMENT PROVIDES  
GREATER BEHAVIORAL CHANGES, EDUCATION  
AND SAFETY**



**MORE VIOLATIONS  
IDENTIFIED**



**A LOT MORE  
TICKETS ISSUED**



Bus Moving



1

School bus stops, stop-arm and lights are deployed and IoT devices activated



2

AVA AI stop-arm cameras capture stop-arm events and identify stop-arm violations



3

Video, GPS, and other supporting data sent to processing center



4

AVA AI filters footage before sending to QA reviewers



BusPatrol is the only stop-arm enforcement program provider with a full-fleet commitment



## Equitable Access to Technology

Safety-First Methodology means **every bus, every kid, every neighborhood** are safeguarded.

**A CHILD'S LEVEL OF SAFETY SHOULD  
NOT BE DETERMINED BY THEIR ZIP CODE.**

Providing value-added technology to improve safety has led to industry-leading win rates and program adoption with schools



**\$0**

**MODERNIZING ENTIRE SCHOOL BUS FLEETS WITH SAFETY TECH AT NO COST**





## IMPROVING STUDENT SAFETY & SECURITY



### BENEFITS FOR SCHOOL DISTRICTS

- Full-fleet oversight for authorized officials
- Reduces costs to retrieve footage
- Emergency response management
- COVID-19 mitigation (contact tracing)

**LIVE**

STREAMING & REMOTE VIDEO ACCESS

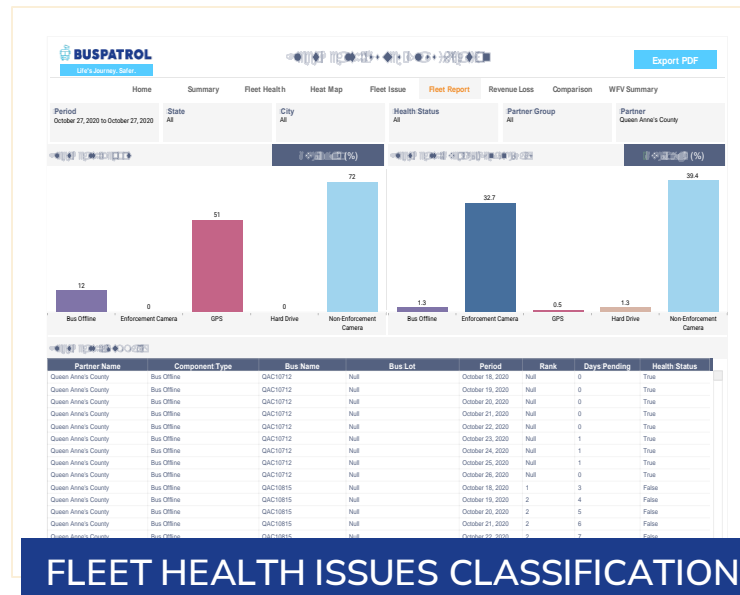
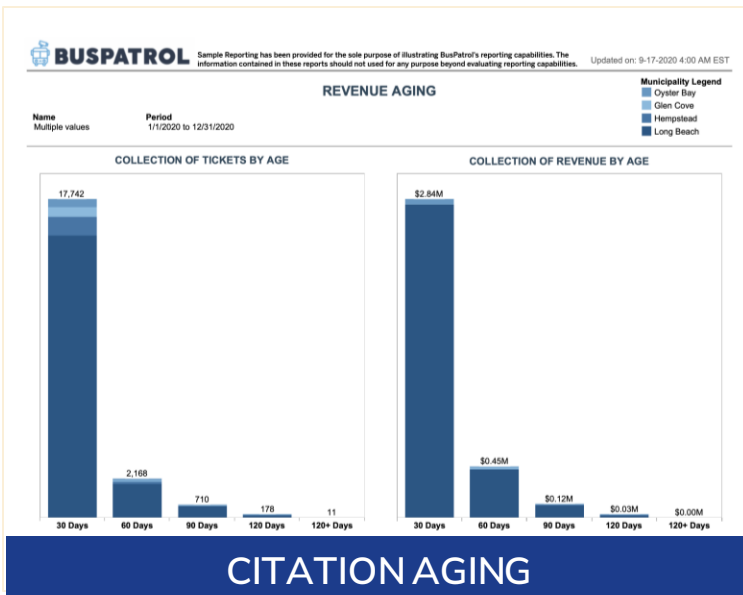
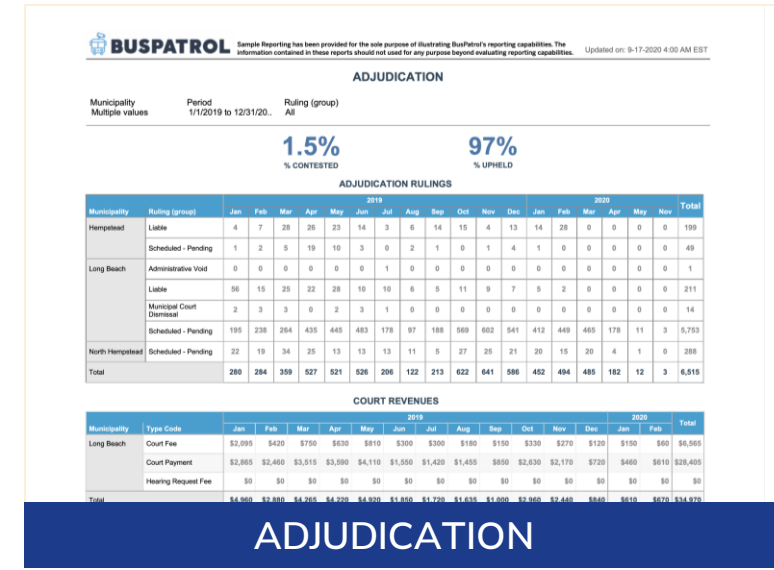
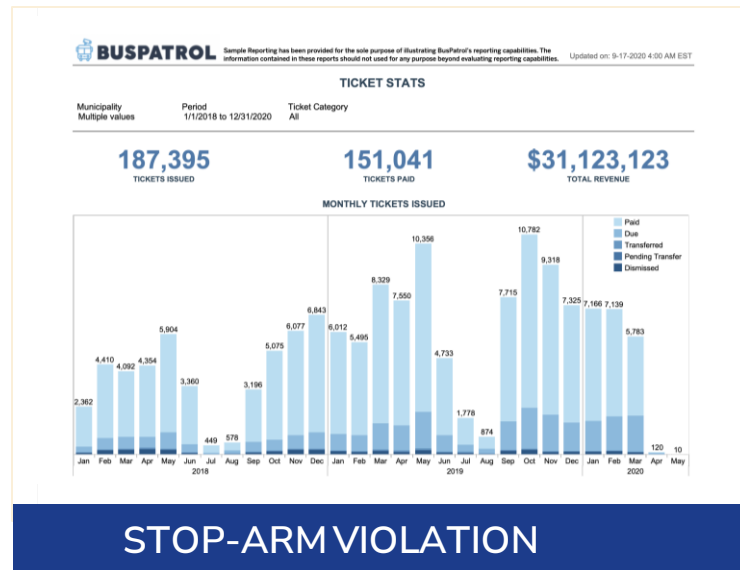
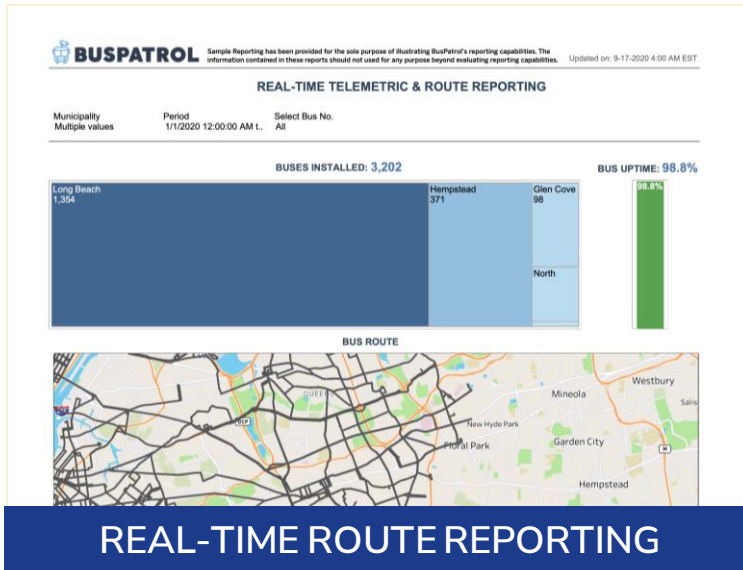


Installing and maintaining our fleet of school buses requires a team of certified and trained field service technicians



- Competitive advantage to get equipment on buses more efficiently, more rapidly, with greater quality than any other provider.
- Technicians must complete a **rigorous 7-day training program.**
  - Includes one-on-one training by a member of our Advanced Technician group.
  - Technicians receive certification levels based on their ability to meet installation standards.





Modern cloud-based infrastructure delivering our underlying data model and analytics

## PAID MEDIA **TV Program Advertising**

To reach a broader public audience, BusPatrol will develop a new PSA campaign announcing the Suffolk County program. The campaign highlights the partnership as a national model for school health and safety technology.



### POLITICAL NEWS NETWORKS

**news12**  
LONG ISLAND

**CNN**

**FOX NEWS**  
channel

**MSNBC**

### FAMILY-ORIENTED ENTERTAINMENT NETWORKS

**Disney**

**Hallmark**  
CHANNEL

**nickelodeon.**

**OWN**  
OPRAH WINFREY NETWORK

**TNT**





**PAID DIGITAL Digital Advertising**

Targeted & Data-Driven Education Campaigns



**Google Ads**



**EST. REACH**

**2 Million+**  
Impressions

\*Ads run on desktop, mobile & Connected TVs

\*\*Ads run on desktop, mobile, tablet.



**AUDIENCE TARGETING**

- Car Owners (18+)
- Nassau Parents of School-Age Children
- Education Community
- School Officials & Political Influencers



**TACTICS AND REACH**

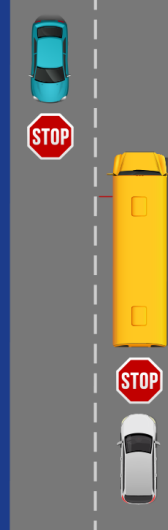
Tactic	# Impressions
Sight & Stream - Pre-Roll, Connected TV, Over-the-Top <sup>1</sup>	990,740
Display Ads <sup>2</sup>	781,250
Facebook/IG Ads <sup>2</sup>	250,000
<b>Total</b>	<b>2,021,990</b>



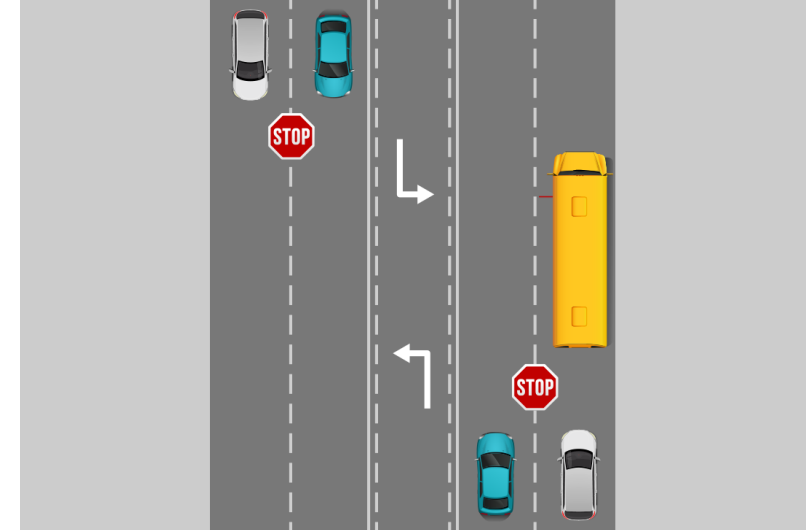
**STOP-ARM VIDEO  
ENFORCEMENT IS COMING  
TO SUFFOLK COUNTY**



**REMINDE YOURSELF  
OF THE SCHOOL BUS  
STOPPING LAW  
TO PROTECT OUR KIDS!**



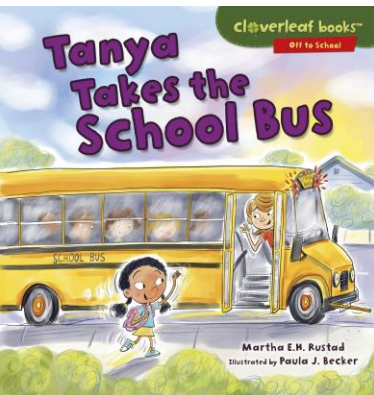
**TWO-LANE:**  
Vehicles traveling in both  
directions **MUST** stop.



**MULTI-LANE PAVED ACROSS:**  
Vehicles traveling in both  
directions **MUST** stop.

Optimized for FB, Instagram and other social media channels.





**EDUCATING NASSAU'S CHILDREN**

**Teaching Kids about the “Danger Zone”**



Audience	Channels	PSA Material Produced
<p>Parents with Preschoolers (2-5 Years)</p>	<ul style="list-style-type: none"> <li>• YouTube and online video and audio platforms</li> <li>• Social media targeting young parents with children</li> <li>• Digital media platforms</li> </ul>	<ul style="list-style-type: none"> <li>• 3D animated children’s music video addressing the “danger zone” with catchy standalone song for audio platforms.</li> <li>• Exercise and coloring book (printable) to highlight the risks associated with the “danger zone” and how to cross safely.</li> </ul>
<p>Parents with Early School-Age Children (6-8), Preteens (9-12), Teenagers (13-17)</p>	<ul style="list-style-type: none"> <li>• Social media platforms</li> <li>• Schools as a distribution channel</li> <li>• Drivers Ed and DMV (for student drivers)</li> </ul>	<ul style="list-style-type: none"> <li>• Material for school districts to educate:                         <ul style="list-style-type: none"> <li>- Presentations, videos, exercise handouts for teachers to use in classrooms.</li> <li>- Handouts for parents and PTAs.</li> <li>- Email and social content for schools to share</li> </ul> </li> <li>• Social media video campaigns to educate</li> <li>• Website with additional info and downloads</li> </ul>





**UPFRONT**  
**\$0.00**  
**COST**



## End-to-end program management and services



Supply & Installation  
of all Hardware



Issuance of  
Citations



Secure Cloud Software



Payment Processing



Requests for  
Court Hearings



Evidence Packages



Expert Testimony



Call Center



Media Campaign



Training



Monthly Reporting



Ongoing Support  
& Maintenance



**ONCE THEY KNOW THE LAW  
IS BEING ENFORCED, THEY STOP.**

**98% OF THE VIOLATORS  
WHO GET A TICKET**

**VIA STOP-ARM SAFETY PROGRAMS**

**DON'T ILLEGALLY PASS A  
SCHOOL BUS A SECOND TIME.**