



Case Study of New York State's Work Zone Speed Safety Camera Program

Source: Getty Images.

In recent years, the use of speed safety cameras (SSCs)—also referred to as speed camera enforcement or automated speed enforcement systems—has gained increased national attention and application in work zones. SSCs are a Federal Highway Administration (FHWA) proven safety countermeasure and a National Highway Traffic Safety Administration (NHTSA) 5-star countermeasure to help reduce speeds and crashes. Jurisdictions can use SSCs as part of a comprehensive speed management program to target speeding-related safety problems.

This case study presents the experiences and lessons learned, to date, from the New York State work zone SSC program (also referred to as the Automated Work Zone Speed Enforcement (AWZSE) Program). The program, in operation since 2023, is run jointly by the New York State Department of Transportation (NYSDOT) and New York State Thruway Authority (NYSTA). The information presented below may be reflective of what other agencies may encounter when planning, deploying, and operating a work zone SSC pilot and program.

AUTHORIZING LEGISLATION

In September 2021, the State legislature authorized a 5-year SSC enforcement program for work zones located on a controlled access highway.¹

The authorizing legislation specifies several provisions for the program:

- **Violations.** Violations are to be issued to the owner of vehicles traveling 11 miles per hour (mph), or more, over the posted speed limit.
- **Penalties.** Penalties are to be organized as a tiered penalty structure.
 - \$50 – First violation
 - \$75 – Second violation if within an 18-month period of first violation
 - \$100 – Third and subsequent violations if within an 18-month period of first violation
- **Number of units.** A total of 30 mobile SSC units may be deployed, specifically 20 units for NYSDOT and 10 for NYSTA. The agencies are able to select work zones based on geographic areas and safety to maximize effectiveness.

Additionally, the State legislation requires a report to the Governor on May 1, 2024, and May 1, 2026, regarding the performance of the program, including:

- Crash data for work zones on eligible roadways with and without SSC units.
- The number of violations on eligible roadways with and without SSC units, broken out by how much the speed limit was exceeded.

NEW YORK STATE AUTOMATED WORK ZONE SPEED ENFORCEMENT PROGRAM GOALS

- Save worker and traveler lives
- Promote work zone safety
- Reduce speeds in work zones
- Improve driver behavior in work zones
- Complement existing work zone enforcement by State and local police

¹Authorizing legislation available at <https://www.nysenate.gov/legislation/laws/VAT/1180-E>.



- The number of notices of liability (NOL) issued for violations, the number adjudicated, the results of adjudications, and the quality of the adjudication process and its results.
- The number of fines and total amount of all fines paid after the first NOL.
- The revenue, expenses, and certain expenditures associated with the program.

These reports are intended to provide insights on the utility and effectiveness of the program, the overall cost of operating the program, and possible changes that may be needed. The May 1, 2024 report, which is a key source for the material within this case study, is available at: <https://www.ny.gov/programs/work-zone-safety-awareness>.

DESIGNING AND PLANNING A WORK ZONE SSC PROGRAM

After the SSC authorizing legislation was enacted, NYSDOT and NYSTA conducted many activities to establish the program in a relatively short period of time, as depicted in [Figure 1](#) below.

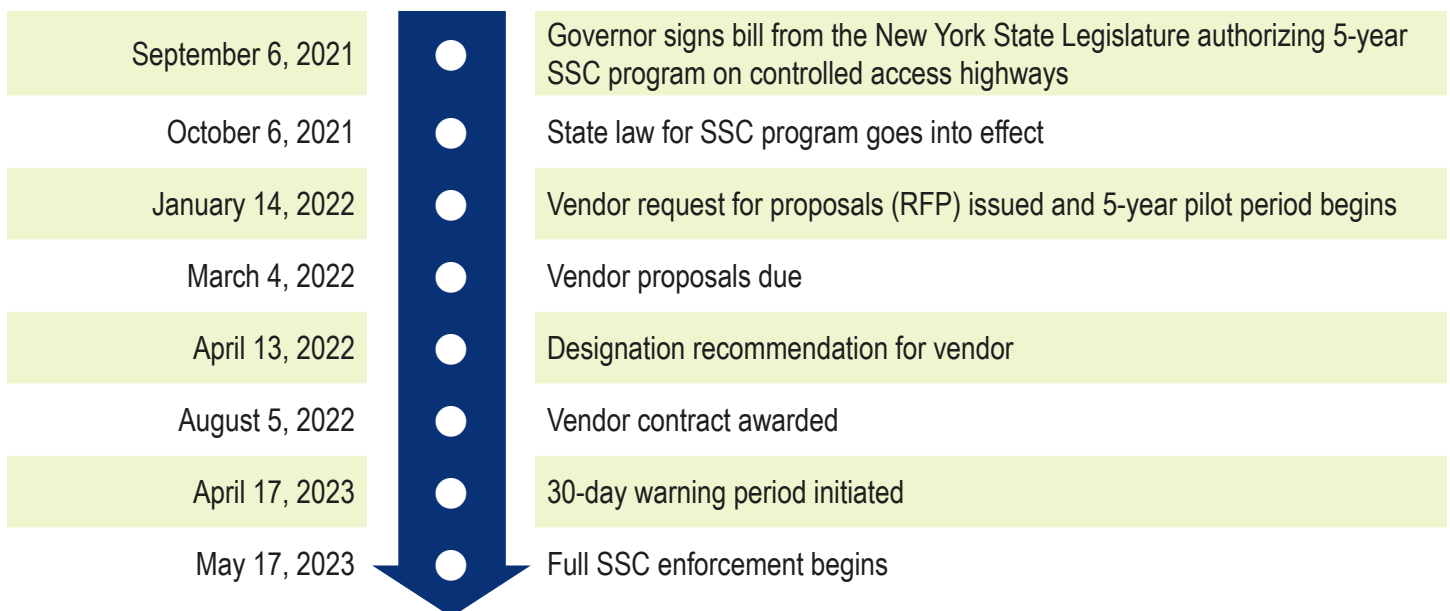


Figure 1. Chart. New York State Speed Safety Camera Program Development Timeline (Source: New York State Department of Transportation).

To develop and operate the AWZSE Program, NYSDOT and NYSTA hired contractors and established new, dedicated roles for full-time staff. Specifically, NYSDOT hired four staff members and one contracted staff, while NYSTA hired two staff members and assigned several existing staff to specific SSC program roles in addition to their regular duties. Roles and responsibilities include:

- **Contractor Staff:**
 - **Preward and postaward Consulting** to help develop a Request for Information (RFI) to better understand SSC program operations, a Request for Proposals (RFP) to select a vendor, and the AWZSE Program report to the Governor.
 - **SSC Vendor** to provide overall SSC services, including speed enforcement, payment management, court tracking, website management, and other program related tasks.
 - **Program Operations** staff contracted by NYSDOT for day-to-day coordination of SSC deployments between NYSDOT and the SSC vendor, plus some program management.
 - **Program Analyst** staff contracted by NYSDOT to assist with overall data analysis.
- **Agency Staff:**
 - **Dedicated Staff and Administration** at NYSDOT and NYSTA to provide overall program management and certification of all NOLs. The agencies have existing legal, contract, accounting and finance staff that have part-time responsibilities in coordination with the program.



NYSDOT and NYSTA incorporated several recommended practices when standing up the AWZSE Program:

- **Internal communications.** With 30 SSC units across the State and hundreds of construction contracts across 11 NYSDOT Regions and 4 NYSTA Divisions, internal communications are essential for a successful SSC program. Conducting effective communication can be a major challenge given the numerous coordinators and the contractor staff who coordinate the placement of work zone SSC units. There are 4 NYSTA staff members statewide who are aware of and responsible for every construction project in their jurisdiction, versus 11 NYSDOT regional staff who coordinate with hundreds of engineers in charge (EICs) across the State. Construction projects have many elements, from materials to staffing, to equipment, to weather, that can impact SSC operations.
- **End of contract responsibilities.** While New York State is not at the end of the SSC contract yet, the agencies are already planning for steps to be taken to close out the contract. Preparations need to be made early on for either the agency or potentially a new contractor to take over the data collection, payment systems, website, and court hearing processes. NYSDOT is in the process of starting those discussions to determine what will need to be done to manage that work.

Historically in New York, placing an additional speed limit sign in the work zone was not common practice unless the speed limit for the work zone was reduced. Soon after the SSC program began enforcement, NYSDOT and NYSTA received many public complaints indicating that the speed limit was not clearly known to drivers. To resolve this issue, controlled access highway work zones are now required by NYSDOT and NYSTA to have an additional work zone speed limit sign placed upstream of the work zone.

Notably, SSC is one of many tools to manage speeds. The AWZSE program is not the only enforcement program in New York to influence motorist behavior in work zones. In coordination with the State Police and local law enforcement, New York implements police presence in work zones and uses a partner program called “Operation Hardhat” where police officers are present within the work zones, dressed as highway maintenance workers, to identify motorists who are distracted by electronic devices while driving, disobey flagging personnel, speed through the work zone, or violate the State’s Move Over Law, which applies to both emergency and maintenance vehicles. (See [Figure 2](#).)

NYSDOT and NYSTA also experienced a variety of challenges and lessons learned, such as:

- **Outreach to peer agencies.** Outreach to States that have already implemented a similar program can help overcome challenges and guide SSC program development. New York relied heavily on existing SSC programs to understand what was necessary to implement a successful SSC program. While each State has its own laws and guidance, this outreach can help inform the staff responsible for the program and may help program managers understand what steps are necessary and in what order they need to be completed.
- **New revenue and adjudication processes.** An SSC program may not necessarily align with the existing roles and responsibilities of a DOT. Agencies need to be prepared to understand the management of revenue finances and court hearings in order to manage these functions in the program.
- **Short-term work zones.** Short-term work zones are more challenging for deploying SSC units. To maximize the effectiveness of the SSC deployments, they should be able to be stationary for at least 2 hours. NYSDOT has a lot of semi-mobile work (e.g., guiderail repair, bridge inspection, pavement work, and tree trimming) that is not always ideal for a full-day deployment. While the agency will deploy SSCs to these work zones, the deployment is generally very short in duration and is challenging because of the time required for the SSC unit operator to set up the signs and calibrate the system.



Figure 2. Social Media Post. New York State Department of Transportation leveraged social media to communicate with the traveling public about the speed safety camera program (Source: New York State Department of Transportation (NYSDOT)).



Figure 3. Photo. New York State work zone speed safety camera enforcement vehicle (Source: New York State Department of Transportation (NYSDOT)).

OPERATING A WORK ZONE SSC PROGRAM

Work zone SSC operations began across New York State on April 17, 2023, and, following a 30-day warning period (i.e., only warnings were issued for speeding vehicles instead of NOLs and associated fines), have been in continuous operation since that time. Since operations began, there have been 30 SSC units operating, with 20 units for NYSDOT and 10 for NYSTA. (See [Figure 3](#).) Each SSC unit is available for deployment 7 days a week, 24 hours a day with a maximum duration of 8 hours per 24-hour period for each deployment. This is based on contract requirements, which helps to simplify the hiring process for the contractor; while the agencies do night work, it is not always predictable in most areas of the State. The operational requirements for New York State’s AWZSE Program are shown in [Table 1](#).

Authorization Date	2021
Authorization Type	Program
Type of Infraction	Civil
Speeding Threshold	11 mph
Worker Presence Required?	Yes
Allowable Roadway and Work Zone Characteristics	Up to 20 work zones on New York State Department of Transportation (NYSDOT) controlled access highways; up to 10 work zones on New York State Thruways
Motorist Notification Requirements	Signs giving notice when cameras are in use
Fine Structure	1st: \$50 2nd: \$75 3rd-plus: \$150
Allocation of Excess Fine Revenues	If motorist pays: 100% to NYSDOT/NYSTA If adjudicated: 80% to NYSDOT/NYSTA; 20% to city, town, village, or county where citation issued

Table 1. Chart. New York State Work Zone Speed Safety Camera Operational Requirements.

Work zone selection is based on a number of factors including: geographic area, roadway and work zone characteristics, speed limit, and safety in order to maximize effectiveness. The geographic areas and roadways eligible for work zone SSC enforcement are depicted in [Figure 4](#). Both NYSDOT and NYSTA deploy SSCs in varied types of work zone settings, including both construction and maintenance activities and both long-term and short-term work zones. In practice, there are rarely enough work zones on controlled-access facilities to be very selective about where to deploy all SSC units. Workers need to be present in the work zone, as well as signing to inform drivers of the work zone speed limit and the use of SSC systems at each area of deployment. Finally, the deployment location selection considers road grade, curvature of the road, and visibility for coming traffic (at a minimum).

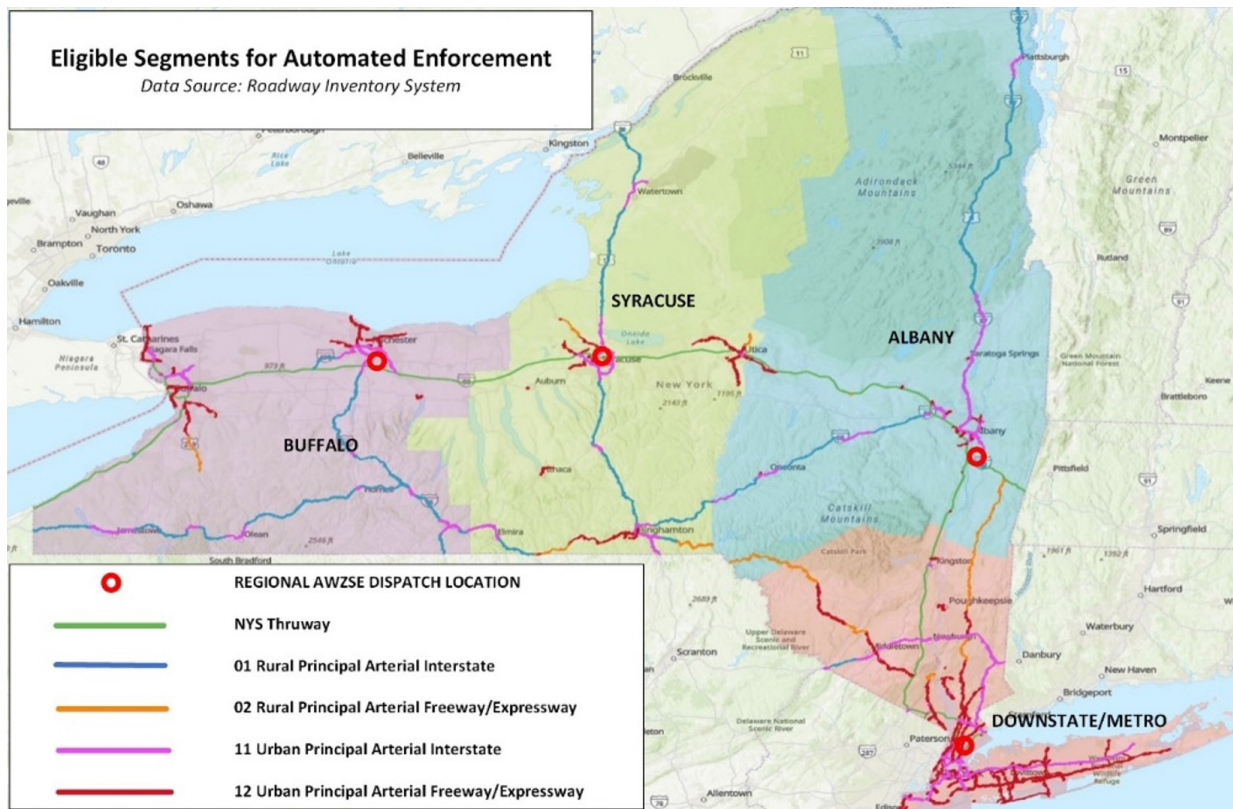


Figure 4. Map. Eligible roadway segments in New York State for Work Zone Speed Safety Camera Enforcement within the four geographic regions (Source: New York State Department of Transportation (NYSDOT)).

All New York State work zone SSC deployments are requested by staff at NYSDOT or NYSTA, scheduled, and conducted in coordination with the agency EIC by verifying the deployment 24 hours in advance. NYSDOT also coordinates with maintenance supervisors.

As shown in [Table 2](#), New York State’s AWZSE Program had 2,319 deployments for an average of 323 deployments per month from April to December in 2023 (i.e., the period covered by the first program report to the Governor), with over 146,000 NOLs issued and a 7.1-percent repeat offender rate. [Figure 5](#) depicts the location of each work zone SSC deployment in 2023 and relative number of violators detected at each location.

Category	NYSDOT	NYSTA	Total
Deployments	1,573	746	2,319
Total Incidents of Speeding	132,669	67,361	200,030
Rejected Speeding Incidents	26,775	21,594	48,369
Warnings Issued	1,836	4,282	6,120
Notices of Liability Issued	104,198	41,879	146,077
1st Violations (\$50)	84,817	42,777	127,594
2nd Violations (\$75)	7,102	1,181	8,283
3rd-Plus Violations (\$100)	1,919	176	2,095
Repeat Rate	9.6%	4.0%	7.1%

Table 2. Chart. Number of Deployments, Violations, and Repeat Offenders in New York State’s Work Zone Speed Safety Camera Program in 2023 (Source: New York State Department of Transportation (NYSDOT)).

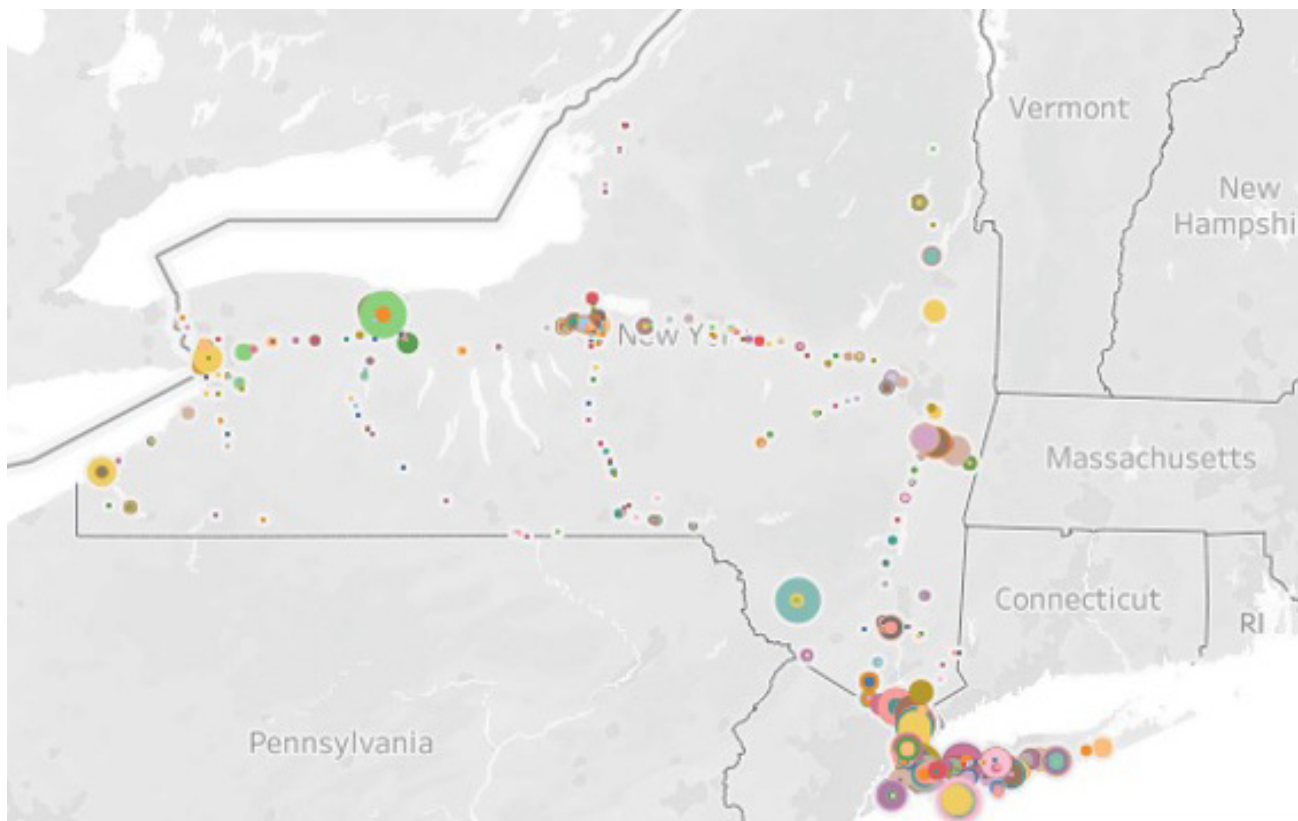


Figure 5. Map of 2023 Work Zone Speed Safety Camera Deployments in New York State, where the size of each circle represents the number of violations detected (Source: New York State Department of Transportation (NYSDOT)).

In addition to providing SSC enforcement services, the SSC vendor manages all payment processing, court tracking, and website management for both NYSDOT and NYSTA through separate contracts with each agency. Payments are accepted by online portal, mail, or phone or Interactive Voice Response (IVR). In 2023, NYSDOT and NYSTA collected a total of \$5.4 million in SSC fines, while the average payment collected rate for both agencies as of December 31, 2023, was 81.8 percent. Despite this revenue, the combined \$6.8 million in expenditures of NYSDOT and NYSTA for the AWZSE Program (shown in [Table 3](#)) resulted in a cumulative net total of \$2.4 million.

Category	NYSDOT Amount	NYSTA Amount	Total Amount
AWZSE Program Contractor	\$3,272,677	\$1,531,115	\$4,803,792
Pre and Post-award Consulting	\$349,574		\$349,574
Program Analyst	\$69,396		\$69,396
Program Operations	\$225,252		\$225,252
Staff and Administration (including fringe and benefits)	\$720,349	\$185,532	\$905,881
Marketing	\$476,623		\$476,623
Other Miscellaneous Costs	\$25,430		\$25,430
TOTAL	\$5,139,301	\$1,716,647	\$6,855,948

Table 3. Chart. Total New York Automated Work Zone Speed Enforcement (AWZSE) Program Expenditures for 2021–2023 (Source: New York State Department of Transportation (NYSDOT)).



In New York State, violators may dispute a NOL. A total of 1,901 violations issued in 2023 were disputed; of those, 92 disputes were accepted, 1,588 were rejected, and 221 remained pending as of April 2024. Preliminary data indicated this led to 90 hearing requests, 18 of which were found not liable while 72 remained in process as of April 2024.

LOOKING AHEAD

The authorizing legislation for New York State's AWZSE Program requires annual reports to the Governor. Speed data have demonstrated the need for speed management strategies in work zones, with 9.0 percent of NOLs being issued for vehicles traveling more than 20 mph over the speed limit, including speeds up to 139 mph. Overall, the average percentage of vehicles traveling in a work zone with SSCs at more than 10 mph over the speed limit ranged from a high of 3.5 percent in July 2023 to a low of 2.3 percent in December 2023. SSC data can help identify problem areas for increased coordination with New York State Police and local law enforcement for increased monitoring and enforcement of the speed limit.

Overall, NYSDOT and NYSTA continue to enhance the work zone SSC program as one tool for improving work zone safety through reduced vehicle speeds and fewer crashes. The agencies are constantly evolving and improving SSC program operations as things come up. NYSDOT and NYSTA plan to continue using the work zone SSC vehicles allowed by the legislation and make a determination on advocating for SSC program renewal in the future.

FOR MORE INFORMATION

New York State Automated Work Zone Speed Enforcement Program website

<https://www.ny.gov/work-zone-safety-awareness/automated-work-zone-speed-enforcement-program>

New York Department of Transportation and Thruway Authority 2023 Report Automated Work Zone Speed Enforcement

https://www.ny.gov/sites/default/files/2024-05/2023_Work_Zone_Camera_Report.pdf

The FHWA and NHTSA Speed Safety Camera Program Planning and Operations Guide

https://highways.dot.gov/sites/fhwa.dot.gov/files/Speed_Safety_Camera_Program_Planning_and_Operations_Guide_2023.pdf

National Work Zone Safety Information Clearinghouse ("Speed Safety Cameras" subheading under Smart Work Zones)

<https://workzonesafety.org/topics-of-interest/smart-work-zones>

FHWA Proven Safety Countermeasures ("Speed Safety Cameras" subheading under Speed Management topic)

<https://highways.dot.gov/safety/proven-safety-countermeasures>

NHTSA Countermeasures That Work: Speed Safety Camera Enforcement

<https://www.nhtsa.gov/book/countermeasures-that-work/speeding-and-speed-management/countermeasures/enforcement/speed-safety-camera-enforcement>

POINTS OF CONTACT

Martha Kapitanov

FHWA Office of Operations

202-695-0736

martha.kapitanov@dot.gov

Phillip Bobitz, P.E.

FHWA Office of Safety

717-221-4574

phillip.bobitz@dot.gov

Jeffrey A. King

FHWA Office of Safety

602-382-8991 | 202-409-2421

jeff.king@dot.gov

Rebecca Gibson-Schott

NYSDOT

Transportation Systems Management
and Operations Bureau