Project Title: C-07-08: Photovoltaic Noise Walls
PIN: R021.02.881
Responsible Unit: New York State Thruway Authority (NYSTA)
Project Manager: Tatro, Gary

Project Goal:
The goal of this project is to investigate the economic feasibility of installing noise walls of various material types at sites along the Thruway that can accommodate the installation of solar panels or retrofitting existing noise barriers consistent with federal Type I warrants.

Actions Proposed:
• Research various noise wall materials, such as but not limited, to wood, concrete, and plastic, and make recommendations for installations, taking into account installation costs, expected service lives, and sound absorptive qualities of each wall type. Develop installation techniques to mount the solar panels on the various wall types.
• Establish a demonstrative net-metering agreement with a prototypical electricity supplier to the facility and quantify the electric production of the solar noise wall on a monthly basis. Concurrently track the rate charged by the utility per kilowatt-hour of electricity.
• Use monthly data collected above to determine the payback period for the solar noise wall.
• Share data with interested parties and encourage enactment of legislation that will allow state agencies to enter into net-metering agreements with Utilities. This legislation will encourage the increase of the state’s renewable energy supply portfolio by removing the existing institutional barriers (Utilities are currently not obligated to enter into net-metering agreements with State owned facilities; this benefit is primarily available only to residential consumers).
• Using the Thruway-wide Noise Barrier Prioritization Study as an example, identify the percentage of proposed barrier locations that have an advantageous southern facing exposure and can be tied into an existing Thruway facility that consumes electricity where photovoltaic noise barriers could be cost effective.

Anticipated Work Products and Accomplishments:
This study proposes to develop conceptual plans, specifications, construction guidelines and life cycle cost/payback data needed to make the decision on the viability of innovative noise barrier materials and installing solar noise barriers.

Proposed Budget: $350,000