

A photograph of an MTA Long Island Rail Road train at sunset. The train is silver and black, with its headlights on. The background shows a city skyline with several tall buildings. The sky is a mix of orange and grey.

The MTA Long Island Rail Road 2020/21 LaserTrain Results

The Long Island Rail Road is a commuter rail system in the southeastern part of New York, USA, stretching from Manhattan to the eastern tip of Suffolk County on Long Island. It is the busiest commuter railroad in North America and one of the world's few commuter systems that runs 24/7 year-round.

CHALLENGE

The LIRR Forward Plan was initiated in 2018 to address all train delays caused by matters within the railroad’s control. The LPS LaserTrain was deployed as part of an aggressive leaf-fighting strategy aiming to reduce slip-sliding and flat spots on train wheels.

SOLUTION

Continuing to improve on success in 2020, The LIRR added a second 25mph LaserTrain and increased the running speed to cover more of the network daily. Both LaserTrains operated up to 18 hours per day, cleaning 2/3rds of the network. To minimize slip-sliding, all vital parts were cleaned every 24 hours.

Treatment was effective, with 88% less slipping trains after 12 hours, and instances that did occur were mainly on sections that were not cleaned by the LaserTrain.



RESULTS

Compared to 2019, LIRR reported:

- Low-adhesion delays reduced by **66%**
- **27%** less cars taken out of service due to flat wheels
- Wheel truing labour costs decreased by **38%** (or \$102,000) in October-November alone
- On-time performance in November was **95.3%** – an improvement of 4.6 percentage points

Benefits



Safety



Capacity



Service

Less wheel truing results in longer wheel life. The LIRR have calculated that for each year of extended life, \$500,000 in shop labor and materials costs will be saved.

In 2021, The LIRR announced their best annual on-time performance (OTP) since modern record-keeping began in the 1970s, with 96.3% of trains operating to schedule over the course of the year.

“The initiative has yielded major year-over-year improvements in service while ultimately paying for itself through reduced labour and material costs.”

LIRR President Philip Eng.