

Livonia Maintenance Facility Case Study

Rejuvenating shops and facilities for the next generation of train fleets

Our sprawling system of maintenance facilities, shops, and yards—some of which were built over 100 years ago—need modernization to support new passenger fleets.



NYCT Livonia maintenance facility

We need to talk about Livonia

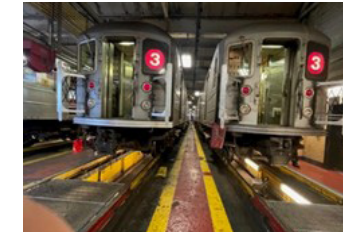
Visitors to New York City Transit's (NYCT) Livonia Maintenance Facility in East New York, Brooklyn, would be forgiven for thinking they had stepped back in time to the industrial revolution, rather than a vital 21st century repair facility responsible for maintaining all of the trains for the subway's 3 line and the Times Square Shuttle.

Railcar maintenance facilities are essential to keeping our passenger railcars in good working order. They should be able to efficiently and safely manage all inspection and cleaning tasks, and perform comprehensive maintenance for 21st century railcars.

Instead, as you step inside the hulking brick building at Livonia, the walls are cracked and deteriorating. When it rains, water leaks through the roof then pools on the floor because several of the drains have collapsed or become too clogged to use. In the winter, a single boiler heats the facility and much of the warmth escapes through the holes in the walls and ceiling. Over the years, we have created additional makeshift bathrooms and locker rooms because the shop was built without facilities for women.

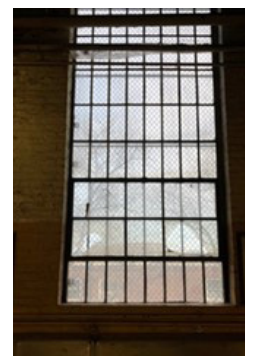
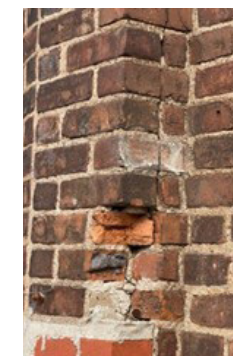
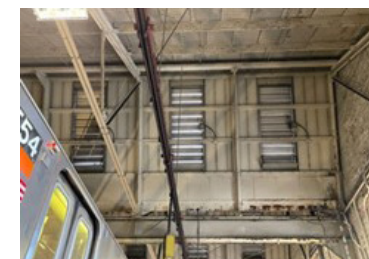
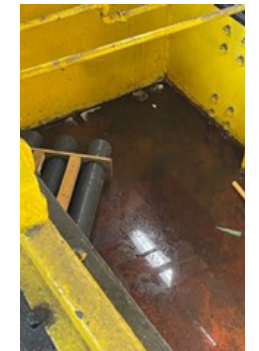
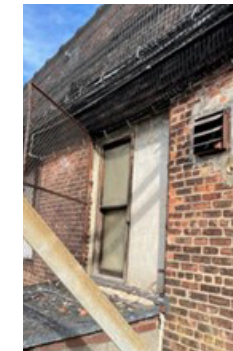
These conditions must be improved. Livonia was built to service trains in 1922. Since then, designs have changed—and the facility can't keep up. Our newest trains have roof-mounted air conditioning units, and with Livonia's low ceilings, we can't access them for maintenance. As a result, we are unable to replace any trains along the 3 line—even though all of the 2 trains have received more modern railcars.

The low ceilings and narrow aisles also restrict the use of cranes and the ability to move other equipment and trains around within the shop, forcing employees to inefficiently shift trains back and forth like a puzzle. The trenches underneath the trains are too shallow and cramped for our mechanics, requiring them to squat to do their work.



3 line, NYCT

Livonia Shop in various states of disrepair



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This isn't an isolated issue, but we have a plan

When these facilities are unable to function efficiently—or even at all—service suffers. If you've ever been frustrated by a completely empty train flying past you in a station late at night, it's probably traveling to a far-flung facility because its home shop doesn't have the right tools to care for it properly.

Until we update and reconfigure Livonia, we won't be able to modernize trains on the 3 line—denying riders of the comfort, convenience, and reliability they deserve. If we fail to act, it could force riders on those trains to endure car failure rates over five times more than those of a new fleet and workers to spend more time making costly and time intensive repairs in unsuitable conditions.

At Livonia, we're evaluating different design options which would either reconfigure or completely replace the existing facility.



Crumbling exteriors at Livonia

In either case:

- » We must address all structural and component deficiencies.
- » We must add more administrative and employee space, including offices, workshops, restrooms, and locker rooms—for employees of all genders—to ensure the space is a safe and dignified facility for our staff.
- » We must install overhead cranes for removal and installation of HVAC units.
- » We must reconfigure the tracks, so our employees have sufficient space to work between railcars and to access side-mounted equipment on the cars.
- » We must minimize disruption. While we're doing this work, we need to ensure parts of the facility remain operational so that we can continue to service trains.
- » Finally, we must concurrently begin replacing the R62/R62A fleet.

As the R62/R62A cars (the older cars serving the 3) are approaching the end of their useful life, we will soon need to replace them to avoid increasing delays and service disruptions. We have plans to replace them with brand new railcars (referred to as the R262s), which would mean a more reliable, comfortable, and convenient ride for you. But we can't do that unless we first update Livonia.



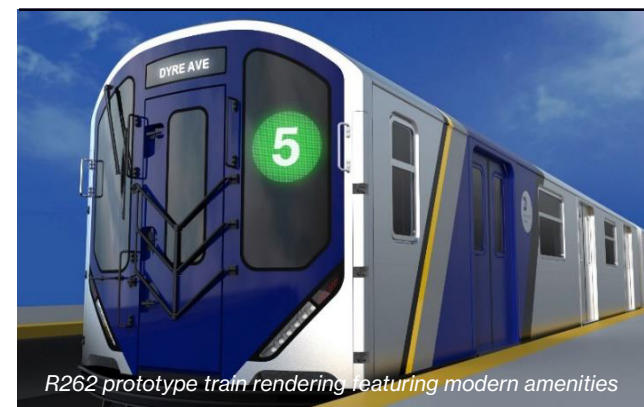
Interior photo of R62 from 1983

You might know the R62s as the railcars with the orange bucket seating. This is an interior shot of an R62 from 1983, the year they were introduced.



Interior photo of the newer R142 train on the 2 line

Newer R142 railcars on the 2 line feature brighter lighting, streamlined seating, upgraded HVAC, and digital route and destination signs.



R262 prototype train rendering featuring modern amenities

Future R262s will replace the aging R62 and feature modern amenities like car-specific digital wayfinding, wider doors, advanced HVAC, and smoother braking.