Accelerating Progress: Making Transit Accessible for All New Yorkers

An assessment of the Metropolitan Transportation Authority's work to build an accessible transit system in New York

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Building an Accessible Transit System in New York

An assessment of the progress by the Metropolitan Transportation Authority in making transit accessible to all New Yorkers

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Executive Summary

The journey to make New York's public transportation system accessible to people with disabilities and other mobility challenges is at a critical juncture. Sustaining progress hinges on crucial funding from the implementation of the Congestion Pricing plan for New York City-- as well as concrete actions that will improve public transportation for all New Yorkers.

Public transit is the lifeblood of New York City, connecting 6.1 million riders to work, school, social activities, and healthcare every day. But for more than one million New Yorkers living with disabilities **-- roughly 13% of New York City's population --** accessing public transportation poses considerable challenges.

Currently, **only 30% of subway stations have elevators or ramps,** significantly limiting services for those with ambulatory disabilities and other access needs.

The first subways opened in New York in the early 1900s, when the rights and needs of people with disabilities were not considered in system design. But over time, tireless efforts by the disability community, transit advocates, and other leaders have made **transit access a recognized civil right** -- with the 1990 enactment of and the Americans with Disabilities Act, a key milestone in this long overdue shift.

That same year, the United States Department of Justice approved the **MTA's 30-year plan to make 100 Key Stations** accessible by constructing stair-free access to subway platforms. By 2022, all of these Key Stations were either accessible or under construction for accessibility.

Important as those efforts have been, they are still insufficient to meet the needs of all New Yorkers across the entire system. In 2022, the MTA entered into a landmark **settlement agreement to make at least 95% of the remaining inaccessible subway stations accessible by 2055** -- increasing the pace of upgrades from 6.3 to 9.8 stations per year. This settlement builds on the MTA's commitment in 2019 to allocate $5.2 billion in its 2020-2024 Capital Program for accessibility upgrades at nearly additional 70 stations.

To fulfill the terms of this historic settlement and build a fully accessible public transportation for all New Yorkers, the MTA must accelerate the pace of progress by 56%.

As this report shows, despite the MTA's progress, significant obstacles to achieving these ambitious accessibility goals remain, including **aging infrastructure, limited physical space, and the high cost of construction** in New York City.

As a matter of first priority, the MTA and political leaders must **ensure adequate capital funding levels** commensurate with the increased pace of required ADA upgrades for current and future capital programs.

Most urgently, the MTA's ability to deliver the remaining accessible stations it has committed to **hinges on the $15 billion in capital funding to be made available by the implementation of Congestion Pricing.**

The report also strongly recommends that the MTA:

- Implement additional **cost containment** measures;
- Bolster **infrastructure monitoring;**
- Improve the **geographic distribution** of accessible stations;
- Broaden **public engagement,** and
- Leverage existing and emerging technologies for **real-time data.**

Overcoming historic underinvestment, the MTA has begun delivering more rapidly on its commitment to transit accessibility. Increasing this momentum is imperative: the pace of progress directly impacts the lives and futures of millions of New Yorkers.

BUILDING ON ACCESSIBILITY PROGRESS

To date, the MTA has now **retrofitted a total of 148 stations with stair-free access** to subway platforms.

The MTA is investing roughly **$1 billion per year in accessibility upgrades,** with plans to make 14 additional stations fully accessible in 2024.

In recent years, the MTA has also **accelerated the pace of progress.**

- From 2015 to 2020, the MTA upgraded an average of 2.8 stations per year.
- Since 2020, this average has increased to 6.5, with 8 stations completed in 2023.

The MTA has also increased accessibility improvements for **riders with vision, hearing, cognitive, and other disabilities** across all modes:

- Tactile warning strips at more than 350 stations and upgraded public announcement and screen systems for clearer audible and visual service information.
- **Fully accessible bus ramps or lifts** and redesigned bus interiors to better accommodate mobility devices and strollers.
- **Access-A-Ride paratransit** system 'on-time' performance reached 94% in 2023 while simultaneously experiencing 24% growth in ridership since June 2022.

Table of Contents

Introduction: Making Public Transportation Accessible for Everyone

Public transportation is the lifeblood of New York City. It connects 6.1 million daily riders to work, school, social activities, and healthcare -- expanding opportunity and social mobility. Public transportation also reduces traffic congestion, helping reduce air and noise pollution and improving the quality of life in many neighborhoods across the city.

But for people with disabilities, accessing public transportation is a challenging experience. While many of the busiest stations in the subway system have been made accessible, fewer than one-third of subway stations today are accessible with elevators or ramps, greatly limiting access by New Yorkers with ambulatory disabilities.

New York's subway system, which opened in 1904, is undergoing substantial upgrades for enhanced accessibility, a formidable task due to the historically slow pace of retrofitting the system to accommodate riders.

Approximately 13% of the city's residents -- an estimated 1,049,494 individuals -- live with a disability that may restrict their ability to use the transit system. These disabilities are classified across various American Community Survey categories:[1]

- Ambulatory (7.9% of New Yorkers)
- Living Independently (6.8%)
- Cognitive Function (5.3%)
- Self-Care (3.4%)
- Vision (2.6%)
- Hearing (2.4%)

These figures underestimate the true number of New Yorkers with disabilities, as they exclude those with temporary or short-term disabilities, constituting potentially up to 5% of the working population, as well as those with developmental and mental illness.[2] This number also does not include commuters and visitors from outside New York City.

The occurrence of disability also increases as the population ages, and New York City's population is rapidly aging: the number of New Yorkers over the age of 65 is projected to grow by over 41% by 2040.[3] In addition, conditions that contribute to causes of disabilities are on the rise,[4] underscoring the critical need for universally accessible infrastructure to ensure all New Yorkers can navigate the city seamlessly.

According to the MTA's customer survey from the spring of 2023, a significant percentage of passengers use mobility devices, are deaf/hard-of-hearing, and/or are blind or low-vision:

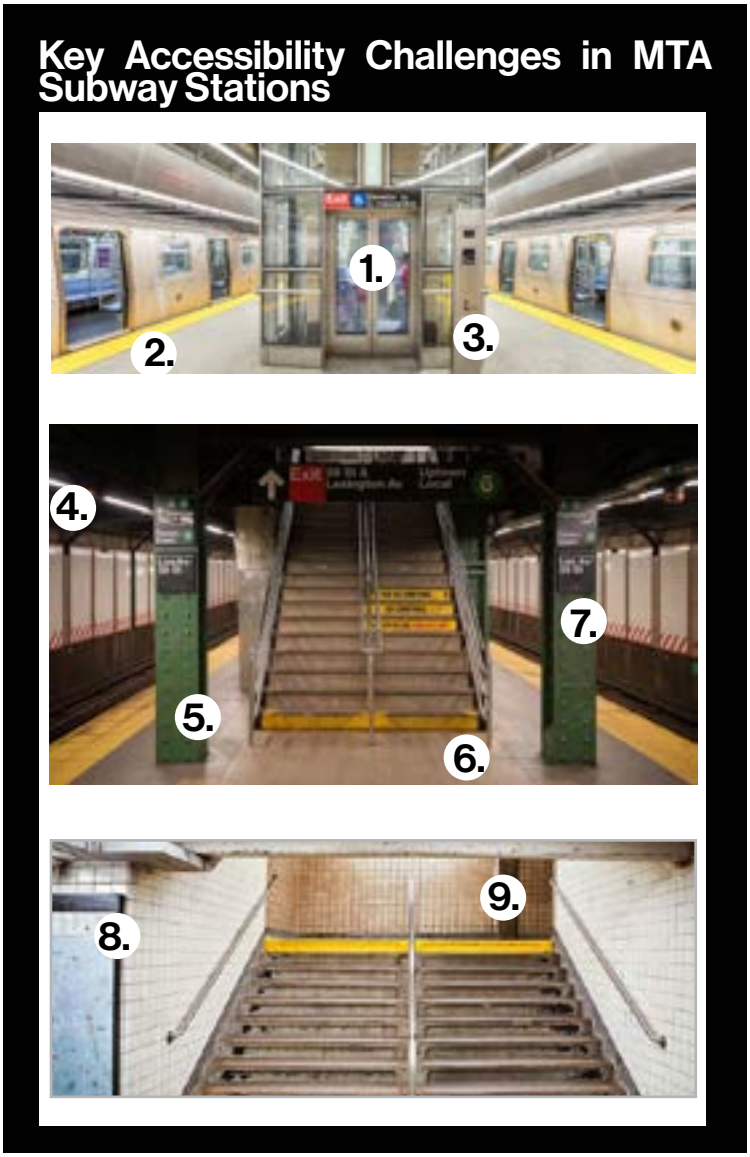
Percentage of Responses who Use Mobility Device/Deaf or Blind

	Subway	Local Bus	Express Bus	Access-A-Ride
Use any Mobility Device	4%	9%	9%	81%
Deaf/ Hard-of-Hearing	2%	3%	4%	10%
Blind/ Low-Vision	2%	4%	3%	13%
Total Survey Responses	~110,000	~21,350	~3,900	~3,100

Despite the clear and urgent need for accessibility, the New York transit system's age, financial constraints, and built environment present serious challenges. The subway environment presents particular challenges for riders, as illustrated below.

Key Accessibility Challenges in MTA Subway Stations

1. Elevators or ramps are available at only 30% of subway stations. In addition, out-of-service elevators and escalators can prevent accessibility to platforms and station entrances and exits, causing significant limitations for passengers who rely on them. Today, MTA-managed elevators are out of service less than 3% of the time systemwide, a rate that has nearly halved since the start of 2022.[5]



2. Many platforms do not align vertically or horizontally with subway car doors, making it difficult for passengers with mobility and visual impairments or strollers to board and disembark safely.

3. Some stations and train cars lack discernible audio and/or visual signals for train arrivals that assist individuals with visual and auditory impairments.

4. Inadequate lighting is a safety concern, especially for passengers with visual impairments or those who may feel vulnerable in dimly lit environments.

5. Some stations have narrow passageways, particularly during construction, making it difficult for people with mobility aids, strollers, or luggage to navigate.

6. Waiting areas without sufficient seating are particularly challenging for elderly passengers, pregnant individuals, or those with mobility issues.

7. Some stations (or areas of stations) lack braille, large-print signs, and wayfinding tiles, which are essential for passengers with visual impairments to navigate the system independently. In addition, newer digital information screens are situated parallel to the tracks, requiring riders to relocate to a position right in front of them – a challenge for individuals who have difficulty navigating the platforms.

8. The lack of translation services exacerbates the limited English proficiency challenge for riders, hindering their ability to access critical information.

9. Some stations have steep, narrow, and/or long staircases, which can be difficult if not impossible to navigate for people with mobility issues, the elderly, or parents with young children.

Benefits of Accessible Public Transportation

Accessible transportation options provide myriad benefits:

- **Increased economic and educational participation by persons with disabilities:** [6]The unemployment rate among working-age people with disabilities in New York State in 2022 was 11.9%, 7.6 percentage points higher than those who do not have a disability. Underemployment is also a major area of concern for people with disabilities. Offering accessible commuting options to people who cannot access existing transit leads to greater economic productivity, educational opportunities, and reduced poverty rates (currently twice the rate as among the nondisabled population) among this demographic.[7] Unpaid caregivers for people with disabilities would also have their time freed up to participate in economic activities.[8]

- **Improved health outcomes for persons with disabilities.** Increasing the ability of people with disabilities to travel independently commensurately increases their ability to access healthcare support,[9] wellness services, and community building spaces. Worldwide, the risk for people with disabilities of developing additional health conditions is markedly greater than that for individuals without disabilities.[10] In addition, the ability to engage with the community significantly improves mental and physical health outcomes.[11]

- **Accessible transit options benefit everyone.** Those pushing strollers, cyclists, seniors, and individuals with other temporary or permanent health conditions (including fractures, vertigo, balance issues, and joint or muscle pain) benefit enormously from access to ramps and elevators. So do riders with luggage, work-related cargo, or large shopping carts.

To upgrade the system's accessibility, the MTA has continued to improve processes, technology, and infrastructure. Accessible transit system components in which the MTA is investing heavily include:

- Accessible travel paths for riders with mobility devices, including vertical mobility access through elevators and ramps, accessible boarding areas, and wide-entry fare gates

- Navigation tools, including audio and visual messaging systems, accessible apps, and platform-edge tactile warning strips

- Bus entry lifts and ramps, and widened doors

- Accessible fare payment machines and customer service booths

A more complete list of accessible components is found in Appendix A.

Improving Stair-Free Accessibility

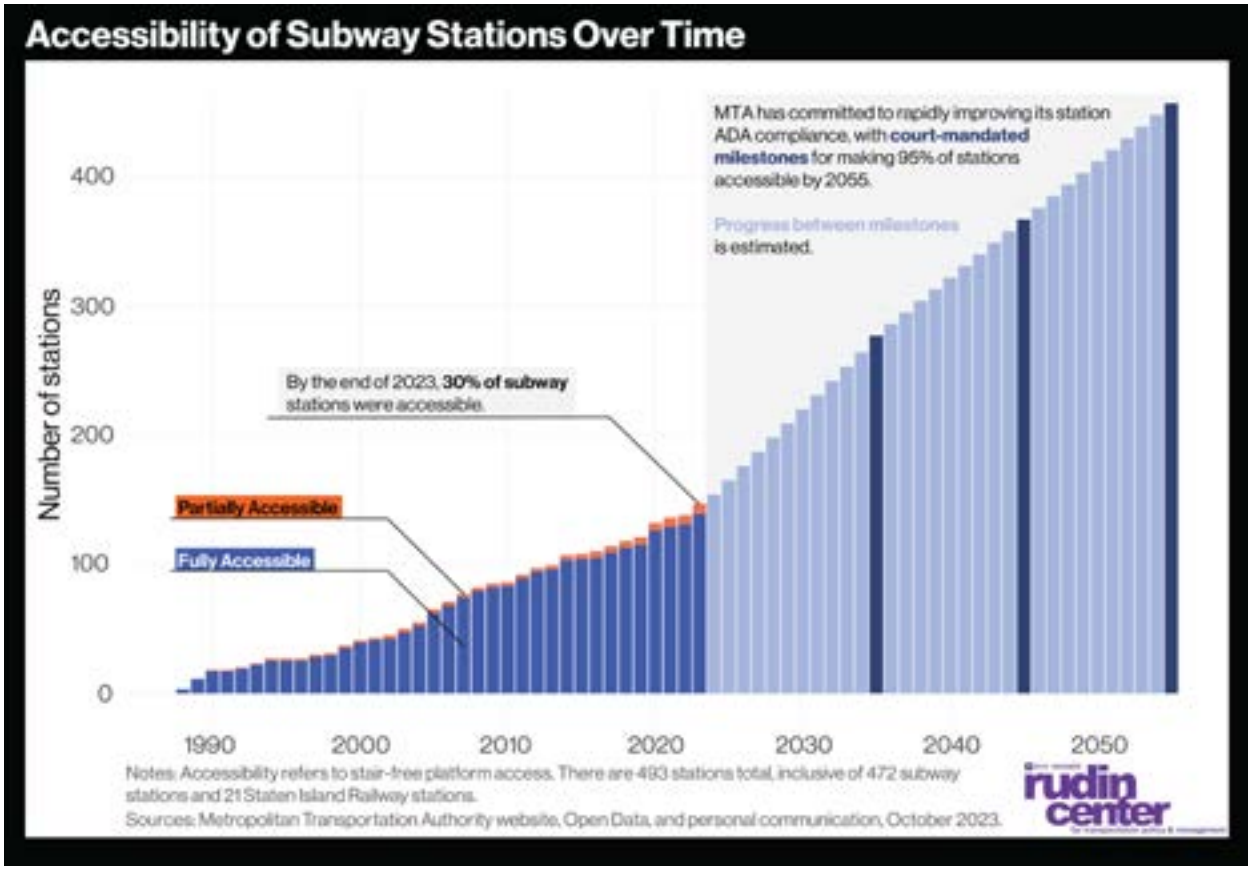
In recent years, the MTA has significantly increased the pace of accessibility upgrades. From 2015 to 2020, the MTA was upgrading an average of 2.8 stations per year for accessibility. Since 2020, that average has increased to 6.5 stations per year.

In 2023, MTA completed upgrades at 8 subway stations in addition to a location at Hoyt St completed by an outside developer.

This pace is anticipated to further increase in 2024, with 14 stations planned for completion.

	Station Count During Each Five-Year Period			New Since Last Program	
Captial Program	**Total**	**Not Accessible**	**Partially or Fully Accessible**	**Count**	**%**
1985-89	489	478	11		
1990-94	489	462	27	16	3%
1995-99	489	452	37	10	2%
2000-04	489	434	55	18	4%
2005-09	489	404	85	30	6%
2010-14	489	382	107	22	4%
2015-19	493	372	121	14	3%
2020-24	493	346	147	26	5%

The MTA's historic commitment of capital funding has resulted in significant progress, particularly in recent years, including making 147 stations accessible. However, the vast majority of subway stations remain inaccessible. The MTA is both legally obligated and internally committed to improving accessibility at a more rapid pace (9.8 per year on average), including by its agreement in litigation, to meet the goal of 95% accessible stations by 2055.



In light of the urgency and importance of improving accessibility throughout New York's public transportation system, this report will shed light on the current state of accessibility for individuals with disabilities within the subway and the MTA's other services. Due to the predominance of subway ridership among MTA modes, this analysis will focus primarily on subways, and employs the MTA's usage of stair-free access to determine accessibility of a subway station.

By examining the challenges, gaps, and opportunities, this report seeks to provide a resource for policymakers, planners, and advocates in their ongoing efforts to create a more accessible and accommodating public transportation system.

ADA Access Status 2024

Full ADA Accessibility (28%)
Partial ADA Accessibility (2%)
In Construction (8%)
Inaccessible (62%)

Note: There are 493 stations total, inclusive of 472 subway stations and 21 Staten Island Railway stations.
Sources: Metropolitan Transportation Authority website, MTA Open Data and personal communication, January 2024.

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Toward an Accessible Subway System

The subway system was initially built, starting in 1904, at a time when transit system design globally failed to adequately consider diverse rider needs. The path to upgrading and retrofitting the subway to become accessible has required massive efforts, including federal legislation, legal actions, advocacy by the disability community and others, and movement within the MTA.

The Americans with Disabilities Act

Accessibility efforts in New York preceded the Americans with Disabilities Act (ADA), in compliance with state and local human rights laws. Still, the ADA's passage in 1990 ushered in a nationwide[12] paradigm shift in how states look at and engage with those living with disabilities.

The ADA recognizes the inherent right of people with disabilities to live full lives by requiring the removal of barriers to access and other challenges they uniquely experience. The law's phrasing also shifted the articulation and view of disability from older models of charity and medical models to a rights-based model that recognizes dignity and agency of those who live with differences and/or impairments.

The ADA addresses accessibility in various categories by building nondiscrimination into healthcare, education, jobs, infrastructure, and public services, comparable to other civil rights legislation. This report will be limited to considering access to aspects of infrastructure and public services.

The ability to use public transportation is a deciding factor in the ability of people with disabilities and other impairments to access economic opportunity and to participate fully in the community.[13,14] The ADA recognizes the crucial importance of traveling, unencumbered, to job interviews, places of work, government offices, healthcare appointments, theaters, parks, restaurants, and all other places people choose to visit.

ADA and Public Transit

The ADA establishes requirements for public transit, including subways, commuter and intercity rail, buses, and paratransit options. It also specifies timelines for compliance with incremental levels of accessibility. The act deems noncompliance to be discrimination, in coordination with the relevant standards and guidelines issued by the U.S. Department of Transportation (USDOT).[15,16] The standards also cover emergency preparedness and responses for persons with disabilities.[17]

After the ADA was adopted, and in recognition of the monumental challenge of making New York City's system fully accessible, in 1990, the United States Department of Justice approved the MTA's plans to make 100 Key Stations accessible. These Key Stations are located in areas of geographic importance and/or serve high ridership numbers.

The ADA does not guarantee funding for meeting accessibility requirements. More recently, through the Infrastructure Investment and Jobs Act, the federal government has made available grants to help make transit systems more accessible to those with disabilities.[18] Public transit–related compliance requirements in the ADA are listed below:[19,20,21]

Americans with Disabilities Act (ADA): Public Transit–Related Compliance Requirements

1. Stations must be readily accessible to and usable by individuals with disabilities, including individuals who use wheelchairs and comply with the DOT's guidelines. These requirements include:

- New stations must be accessible in their entirety.
- Designations of Key Stations must be made in consultation with representatives of individuals with disabilities.
- Plans, milestones, and designations of Key Stations must be made in consultation with representatives of people with disabilities.

2. The ADA requires that buses be readily accessible to people with disabilities, including those using wheelchairs, specifically:

- All newly purchased buses
- Both new and used vehicles
- Remanufactured (e.g., refurbished, extension of life beyond five years)
- Hired or leased buses

3. Standards and timelines for compliance for passenger bus boarding and alighting areas are prescribed by the U.S. Secretary of Transportation. Such standards for bus stops and the timeline of compliance are specified in each new iteration of guidelines issued by the Secretary of Transportation.

4. Where fixed-route transit is not accessible, the ADA requires fixed-route service providers to make a paratransit system available to disabled riders, including wheelchair users and their caregivers. It must provide comparable service in geographic reach and response time to services and facilities afforded to those without disabilities, subject to undue financial constraints. The U.S. Secretary of Transportation may override this exception.

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Over decades, the MTA has made steady progress in efforts to adhere to ADA requirements, beginning with the 100 Key Stations. The pace rose significantly in recent years, due to political leadership to prioritize and fund accessibility, legal action by advocates, and actions by staff in solving accessibility issues with speed and creative solutions.

Legal Challenges

Over the past 50 years, legal challenges initiated by advocacy groups have played a crucial role in driving the MTA's efforts to improve accessibility, including by allocating greater resources, launching accessibility initiatives, and prioritizing inclusivity.

In 2022, the MTA entered into a landmark settlement agreement with individuals and organizations representing a class of individuals whose disabilities make the use of stairs difficult or impossible, and who require a stair-free path of travel. The settlement resolves two class actions, in state and federal court, which had been pending for more than five years, and represents the MTA's ongoing commitment to ensuring universal access to the NYC subway stations.

The first case, Center for Independence of the Disabled, New York, et al. v. Metropolitan Transportation Authority, et al., no. 153765/2017, was brought in the New York Supreme Court on April 25, 2017, and alleged that the lack of elevators throughout the New York City subway system violated the New York City Human Rights Law. The second case, De La Rosa et al. v. Metropolitan Transportation Authority et al., no. 19-cv-4406, was brought in the Southern District of New York on May 15, 2019, and alleged that the MTA's failure to install elevators in stations when they were renovated violated Title II of the Americans with Disabilities Act, Section 504 of the Rehabilitation Act of 1973, and the New York City Human Rights Law.[22]

In 2022, parties to both lawsuits agreed to the following terms, contingent upon specific conditions:[23]

I. Ensure that at least 95% of the MTA's 364 currently-inaccessible subway stations (as identified in the settlement agreement) offer stair-free access by 2055 (or in progress toward accessibility; subject to terms including funding availability and inflation).

    a. The 81 stations included in the 2020-2024 Capital Plan for New York City Transit (the "Capital Plan") or previously approved Capital Plans will be made accessible.

    b. An additional 85 stations will be made accessible by 2035.

    c. Another 90 stations will be made accessible by 2045.

    d. Another 90 more stations will be made accessible by 2055.

II. Commit to allocating a minimum of 14.69% of the budget in the 2020-2024 Capital Plan specifically for the development of Accessible Stations.

III. Modify policies to require the addition of stair-free access during certain station renovation projects.

The lawsuit was finalized and approved by the Manhattan federal judge on April 7, 2023, and by the New York State court on April 24, 2023, with a deadline three decades away.[24,25](See Appendix D for Full List of Funding and Stations Approved.)

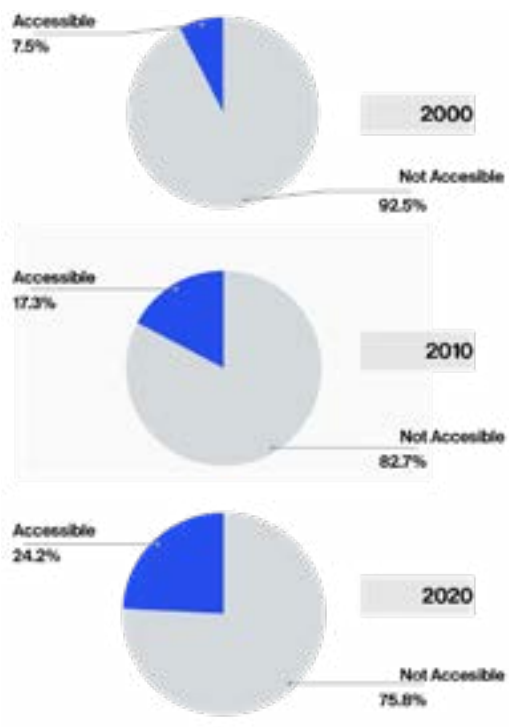
While this lawsuit played a crucial role in instigating significant changes, several cases continue to be brought against the MTA. These include:

- Brooklyn Center for Independence of the Disabled v. MTA (2021) alleges that the MTA does not maintain system elevators, claiming "On average, there are approximately 25 elevator outages per day, with median outage lasting 4 hours and with many outages lasting for months at a time."[26] The case is active.

- In 2022, the MTA faced a class action discrimination lawsuit led by New York Lawyers for the Public Interest representing plaintiffs who–due to horizontal and vertical gaps between subway platforms and cars, either had to abandon subway use or navigate hazardous conditions. According to the case, the MTA's failure to address and eliminate these gaps and incorporate safety features across the system, violates the New York City Human Rights Law, which prohibits discrimination against people with disabilities (NYC Admin Code 8-107 (15) (a)). This class action lawsuit seeks to mandate the MTA to eliminate these gaps. The city has moved to dismiss the case, which motion awaits the judge's decision.

These legal actions underscore the pressing need for thorough measures that address the finer details of accessibility, as well as the importance of maintaining accessible infrastructure. In addition, they help to demonstrate that accessibility is an ongoing process.

Accessibility Through the Years



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Recent Developments: Plans and Accomplishments Since 2020

The pace of subway accessibility improvements has markedly increased in recent years, both in number and scope, creating more stair-free access points and accounting for a wider range of disabilities. In addition, the MTA has worked to design and implement more innovative approaches to both internal project delivery processes and infrastructure improvements.

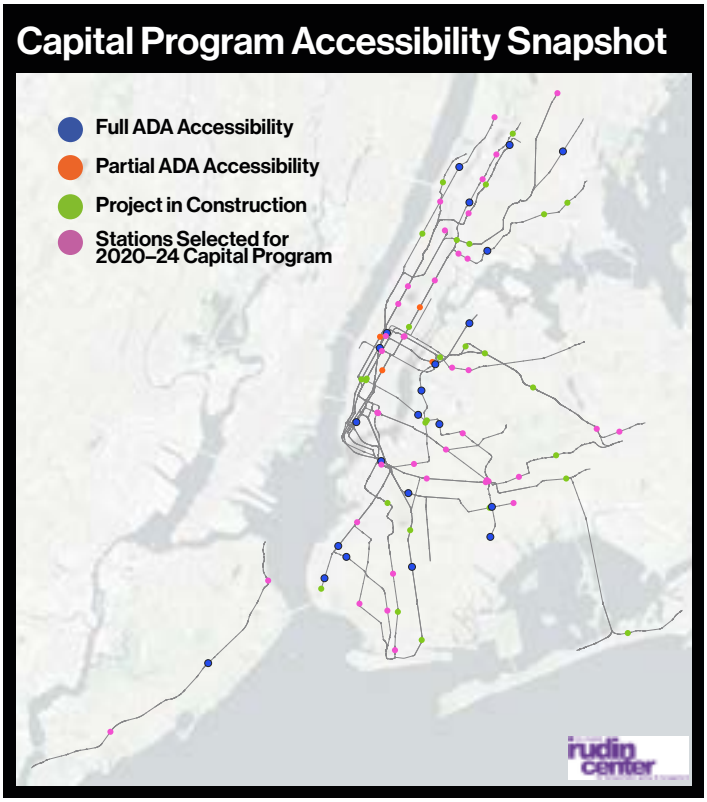
Key Infrastructure Improvements

The MTA presented its most ambitious transit improvement program to date in 2019: the 2020–2024 Capital Program, which sought to invest $54.8 billion into the region's crucial transportation infrastructure, including subways, buses, railroads, bridges, and tunnels.[27] This commitment surpassed the 2015–2019 program by a monumental 70%.[28] The Capital Program underscored key priorities, including a historic $5 billion investment to construct 67 newly ADA-accessible stations (now underway), with a focus on making stations accessible to more than 60% of passengers.[29][30]

Retrofitting older stations, combined with investments in modern signaling, system expansion projects, and new subway cars and buses all benefit accessibility by improving stair-free access and ensuring transit reliability.

In addition, the MTA introduced strategic prioritization of stations for accessibility upgrades, aligning with ADA guidelines and in consultation with riders and advocates. Mandated by subdivision 10 of section 1269-B of the NYS Public Authorities Law, the MTA took into account several goals in identifying stations for inclusion in the capital planning cycle:

- **Coverage:** Reduce gaps in accessibility by minimizing the distance between accessible stations.
- **Destinations:** Identify priority destinations– including schools, parks, retail centers, cultural hubs, and medical facilities – to align with community needs.
- **Demographics**: Analyze data about the demographics of the areas surrounding each station, including the proportion of seniors and individuals with disabilities, and the socioeconomic status of neighborhood residents.
- **Ridership**: Identify stations with high passenger traffic and those serving neighborhoods with projected growth to maximize the impact of accessibility investments.
- **Transfers**: Prioritize accessibility at major transfer points, where subway lines intersect or connect to bus or commuter rail services, to enhance the overall seamlessness of travel across the region.



- **Constructability and Cost**: Evaluate the feasibility and cost of retrofitting a station dependent on each site's specific conditions to optimize the allocation of resources and accelerate the delivery of accessibility improvements to our customers.[31]

Implementing the 2020–2024 Capital Program was both challenged and bolstered by the circumstances of the COVID-19 pandemic. For example, only $53 million was generated in farebox revenue, reflecting an 86% decline from the initially anticipated $343 million for the year. On June 17, 2020, the passenger count was approximately 945,000, around 86.5% less than the usual weekday ridership of over 7 million. In addition, Capital Program implementation funding was also unexpectedly impacted: although the MTA received approximately $4 billion in federal relief from the first stimulus bill adopted in Spring 2020, funding still fell short from a variety of sources, including reduced real estate activity and local and state assistance fees.[32] In addition, COVID-19 disruptions contributed to delays in the OMNY rollout.[33,34]

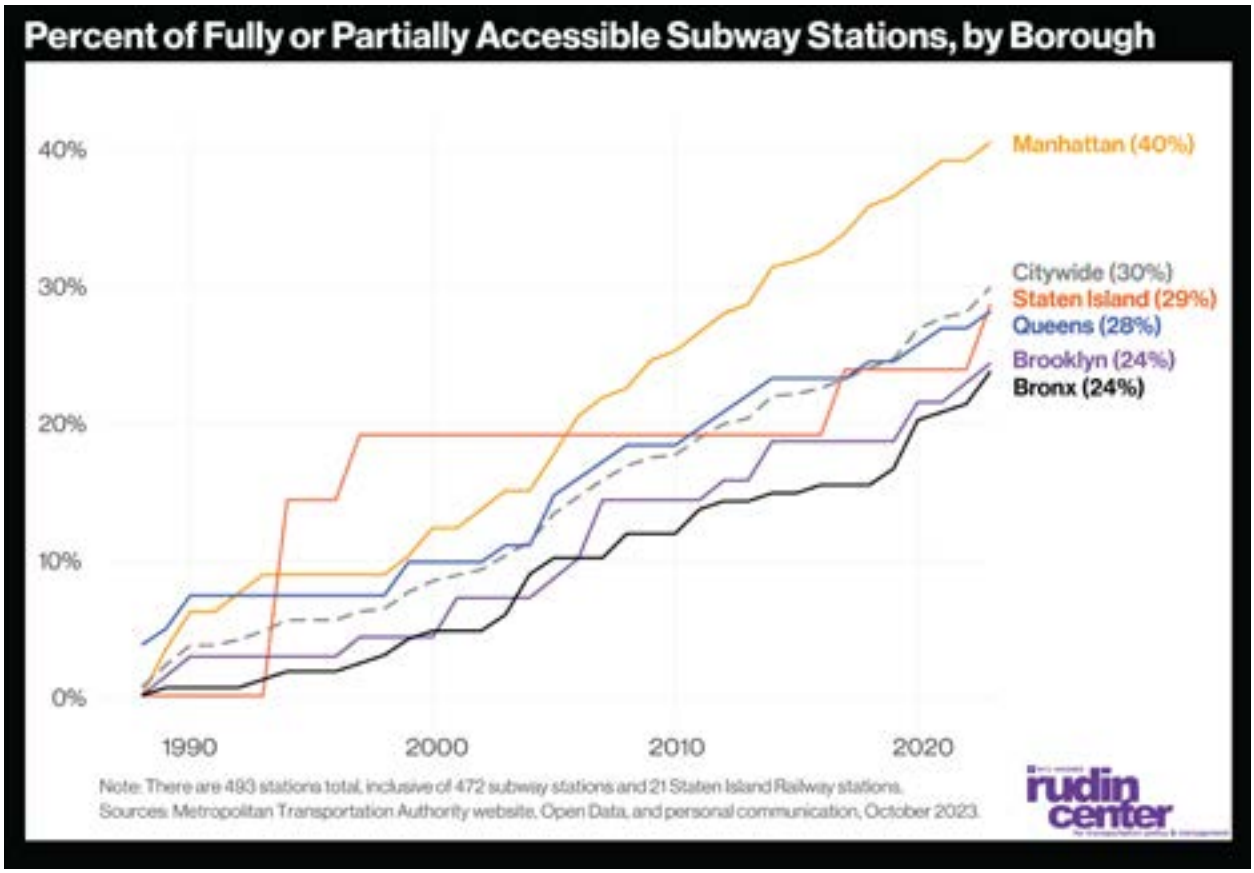
On the other hand, the MTA was able to utilize decreased ridership and temporary overnight closures to expedite $2.3 billion of funded work. This approach facilitated the swift completion of ADA accessibility work, resulting in the establishment of 15 newly accessible stations in 2020 and 2021. At the end of 2023, there were 147 stations offering stair-free access, with 30 more under construction.

The MTA's progress was reflected in its 20-Year Needs Assessment, which was released in October 2023. This assessment reviewed essential capital requirements and identified three significant obstacles: aging infrastructure, climate change, and changing rider needs. It also emphasized the objective of enhancing system accessibility, including plans to:

- Continue investing in ADA accessibility projects to ensure that 90% of all subway rides take place between fully ADA accessible stations by 2045;
- Make 95% of commuter rail stations accessible by 2045; and
- Make MTA bridges more accessible to pedestrians and cyclists.

Accessibility Improvements by Borough

The MTA's accessibility improvements vary by borough, which may become a factor for some riders' home location choice. Manhattan has by far the highest proportion of subway stations offering full or partial stair-free access (40%), likely due to both Manhattan's higher ridership as well as the high concentration of transfer stations. Of the 100 accessible Key Stations, 42 are in Manhattan.

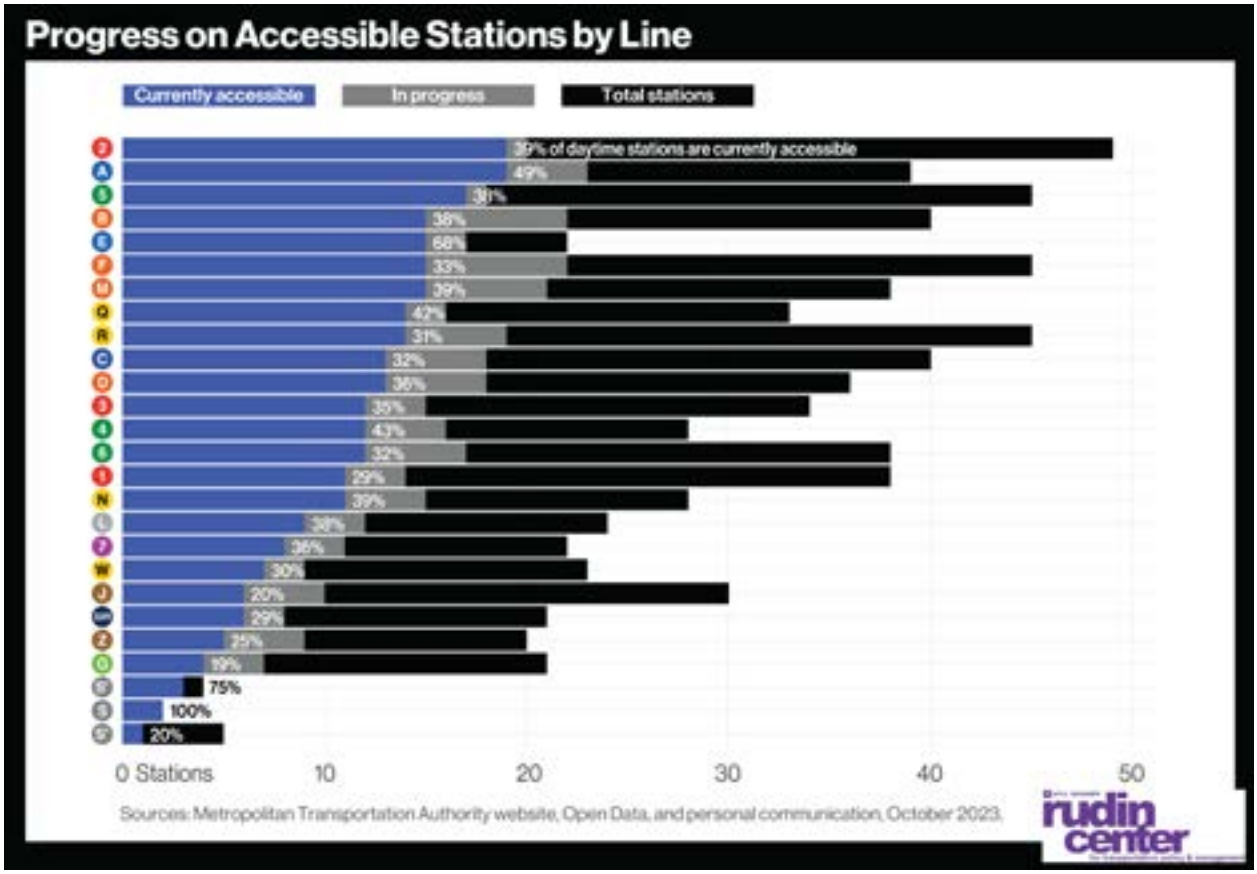


Brooklyn, the borough with the largest number of subway stations, has proportionally fewer accessible stations (24%) than the overall network (30%). The percentage of accessible stations is slightly lower in the Bronx (24%), and higher in Queens (28%) and Staten Island (29%). Station improvements by borough have followed a similar growth pattern since 2010. Manhattan has maintained the highest rate of accessible stations, while Brooklyn and the Bronx have remained in line for lowest rates of station accessibility.

The MTA has been making progress to bridge these gaps. Since 2020, almost half (46%) of the stations made ADA accessible have been in Brooklyn. Approximately 6% of stations in Brooklyn and the Bronx have been upgraded since the start of 2020. However, the gap between accessible stations in the outer boroughs and Manhattan remains prominent. At the completion of the current capital program, Manhattan will continue to be the borough with the highest proportion of accessible stations (52%), followed by Queens (43%), The Bronx (42%), Staten Island (38%), and Brooklyn (37%).

Accessibility Improvements by Subway Line

A rider with mobility challenges or other disabilities requires two accessible stations on their subway line: one to board the train and another to exit or transfer. Understanding which lines have more accessible stations can help identify gaps in accessibility within the subway network and could suggest lines that the MTA should prioritize in its upcoming capital programs.



On most subway lines, between 29% and 39% of stations on their daytime routes were accessible at the end of 2023 (shown in blue in the figure above). The 2 and A lines currently have the most accessible stations (19), and the E line has by far the highest percentage of accessible stations (68%). Outside of the shuttles, the G line has the fewest stations and the lowest percentage of accessible stations (19%), followed by the J line (20%) and Z (25%). The 2020–2024 Capital Program allocates funding across most lines (shown in gray in the figure above). However, most of the subway lines with the lowest rate of accessibility will continue to be among the lowest accessible lines at the completion of that capital program.

Zoning for Accessibility (ZFA)

The MTA introduced the Zoning for Accessibility (ZFA) initiative, an approach to addressing accessibility challenges in collaboration with the New York City government. Approved by the New York City Council in October 2021, this initiative was designed to increase the number of accessible subway stations by strategically siting them on properties adjacent to stations in cooperation with real estate developers.

The ZFA has two chief components:

- **Transit Easement:** At a development site within 50 feet of a transit station, a developer may be required to dedicate and maintain a station access point, which the MTA can use for construction of elevators or stairs. As part of this certification, developers would receive benefits such as a zoning floor area exemption, modified parking requirements, or flexibility with other zoning regulations.

- **Transit Improvement Bonus:** This program offers developers the opportunity to finance elevators, ramps, or station access points for the MTA in exchange for a density bonus of up to 20% to help cover the costs of these improvements. To qualify, development sites must be within a certain distance of a station in most of Manhattan and the densest areas of Brooklyn, the Bronx, and Queens. Each bonus application requires its own land use review and approval, resulting in accessibility improvements at no cost to the MTA.

Since ZFA was adopted in October 2021, five sites have been approved for accessibility improvements in Queens, Manhattan, and Brooklyn:

- Beach 36 Street Station in Queens: An easement that will facilitate the construction of an elevator to the Manhattan-bound platform.

- Queensboro Plaza Station in Queens: An easement and zoning bonus at 25-01 Queens Plaza North for an elevator and stair connecting the street to the station's mezzanine level is currently under construction (completion estimated by mid-2025).

- 57 Street Station in Manhattan: A zoning bonus for 41 West 57th Street for providing street and platform elevators at the station is currently under construction (completion estimated by mid-2025).

- 5 Avenue–53 Street Station in Manhattan: An easement at 665 Fifth Avenue for a future elevator connecting the street to the northbound and southbound platforms (construction underway).

- Union Street Station in Brooklyn: An easement at 204 4th Avenue for a future elevator and stairway connecting the street to the southbound platform.[35]

By partnering with New York City to develop new zoning benefits for developers, the MTA's Zoning for Accessibility initiative showcases an innovative process to improve accessibility. ZFA is likely to yield even further results, building on initial successes, and may serve as a model for other scenarios where MTA's needs overlap with surface-level improvements.[36,37]

Beyond Vertical Accessibility

An accessible system must extend beyond vertical access into serving individuals with vision, hearing, cognitive and other disabilities. To this end, the MTA has begun to explore new methods and technologies for serving more riders, including the "Living Lab" and technology enhancements.

A "Living Lab"

Between October 2019 and January 2020, the MTA launched an Accessible "Living Lab" at the Jay St-MetroTech Station in Downtown Brooklyn. This Accessible Station Lab gave riders the opportunity to test 15 new features in a live station environment. Riders gave feedback to New York City Transit about physical infrastructure and smartphone apps designed to make subway travel easier for everyone, including people with vision, hearing, mobility, and cognitive disabilities, and to inform future deployments. The program evaluation was conducted by the NYU C2SMART Center. Key developments included new floor treatments, tactile signs and maps, and apps, as shown in the image below.

1. **Colorful wayfinding floor strips,** designed by the Systemwide Accessibility team and produced by Color Reflections, use bright colors to provide assistance to guide commuters to the correct platforms.

2. **Tactile guideways and braille** were used to assist commuters who are blind or have low vision and use white canes or service animals for travel assistance. The guideways are blue so they stand out to all riders, especially those with low vision.

3. **Accessible boarding area markers,** the brightly colored floor decals, indicate a designated train boarding space typically located near the center of the platform. This is where the conductor's car usually stops and where the gap is minimized, facilitating easier boarding for commuters.

4. **Tactile station environment maps** utilize a library of textures, a map key, and large print and braille to help riders – especially those who are blind or low-vision -- to orient themselves to the station by identifying:

    a. Their location in the station

    b. The relative location of important station features like elevators and escalators, MetroCard vending machines, and the station booth; and

    c. The new tactile guideways, which help guide blind or low-vision users through the station.

5. As part of the Accessible Station Lab pilot, riders tested different apps to offer wayfinding solutions, including:

    a. MagnusCards, which are designed to simplify the subway experience by providing cues for individuals with cognitive disabilities.

    b. NaviLens, which offers audio information from wayfinding signs for individuals who are blind or have low vision.

    c. Aira, which connects individuals who are blind or have low vision with professional agents, who assist in navigation through the station, providing real-time support through the app.

    d. ClickAndGo Wayfinding, which offers comprehensive audio directions, location descriptions, and high-contrast maps for individuals who are blind or have low vision.

    e. Waymap, which personalizes audio guidance by calibrating to the user's walking style. It also provides detailed step-by-step directions for individuals who are blind or have low vision.

Key Technology Improvements

The MTA's advancements in technology contribute to a more accessible and efficient public transit experience for all passengers, with an emphasis on people with visual and auditory disabilities.

The implementation of the **OMNY Digital Fare System** has facilitated a more convenient method for passengers to pay for subway and bus fares using contactless cards and phones.[38] At the beginning of 2023, the MTA marked the achievement of 1 billion taps via OMNY, demonstrating the successful modernization of its systems despite some technological hiccups along the way.[3940] The addition of simpler payment technologies enhances the user experience, especially easing how riders with motor and cognitive disabilities access stations and buses. OMNY is not yet available on AAR trips.

The **myMTA app** provides tools for trip planning, real-time updates, and schedules. The MTA employs real-time service alerts through various channels, including multilingual WhatsApp customer service, to keep passengers informed about service changes and disruptions. A live subway map offers real-time tracking of train locations and elevator outages.

NaviLens, facilitates independent station navigation for visually impaired individuals. Using QR-like codes and augmented reality features, users can access real-time train information, receive audible cues, and tap into multilingual support. The technology marks a significant milestone in indoor navigation without relying on traditional GPS or Bluetooth. NaviLens will be further implemented by the MTA through the USDOT SMART Grant Program, and piloted in the Accessible Station Lab.

Hearing induction loops are installed in subway station booths and at Help Point Intercoms, though not throughout subway stations. This technology improves sound for people with assistive hearing devices, allowing them to hear announcements more clearly.

Key Milestones in MTA Accessibility

1990s

American with Disabilities Act (ADA)

Early 2000s

100% Accessible Bus Fleet

2003

Digital Real-Time Messages

2018

myMTA App

2019–2020

Accessible Station Lab

2020

Customer Info Center (CIC)

2021

First All-Agency Chief Accessibility Officer: Quemuel Arroyo

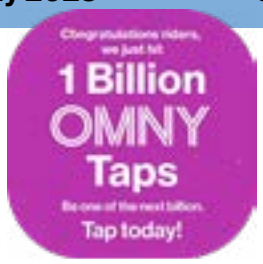
2022

Historic Settlement Agreement to Achieve 95% Accessibility

Spring 2023

Bus Open Stroller Pilot Program

July 2023



OMNY Milestone

Summer–Fall 2023

Quantum Self-Securement System Pilot

2023

Wide-Aisle Turnstile Pilot

New R211 Subway Cars

New Electric Buses

Recent Developments: Looking Ahead

Initiatives undertaken since 2020 represent a noteworthy enhancement in the MTA's journey toward achieving complete accessibility. The current Capital Program demonstrates a substantial commitment to accelerating investments in accessibility enhancements. However, the MTA has not yet shared detailed plans concerning explicit means of expediting accessibility improvements or implementations of successful pilots from the Living Lab. It will take a concerted and coordinated effort among government agencies and the private sector to achieve full accessibility in accordance with the settlement agreement.

Ongoing Challenges of Accessibility Upgrades in the NYC Subway

New York City's public transit system was largely built before accessibility was a consideration in planning. In addition, in the 1980s, plans for upgrades were deprioritized in favor of paratransit service.[41]

Today's MTA must grapple with these historical oversights as well as other ongoing challenges to achieving full accessibility — including chronic underinvestment, insufficient resources to upgrade for accessibility, aging infrastructure, constraints of the physical environment, and the complexity of a 24-hour system. The need to address these obstacles is paramount.

Aging and Complex Infrastructure

Subway stations are extraordinarily complex and varied environments, presenting substantial challenges to structural modification and modernization. Key structural challenges in subway stations include:

- **Aging Infrastructure:** Most subway stations were built before 1970 and now require extensive maintenance, repair, and renovations to bring the infrastructure to a state of good repair and address other challenges, including climate change. With crumbling concrete and scant space allotted to power modern technologies, accessibility measures are difficult to implement without considerable prerequisite work. Platforms in many stations are in a condition that can hinder accessibility.[42] According to the 20-year Needs Assessment, "over 5,000 platforms, 4,000 platform components, and 2,400 street vents, as well as ventilators, electrical utility rooms and other elements in poor condition" will require replacement.[43]

    - Approximately 350 elevators and 150 escalators in subway stations will reach the end of their useful lives and require replacement within the next 20 years.[44]

- **Station Complexity:** Many subway station layouts are extraordinarily complex, connecting some combination of multiple fare areas, mezzanines, platforms, underpasses, and overpasses.[45] This vastly increases the need for elevators, ramps, navigation tools for visually impaired riders, and upgraded audio announcement alternatives for hearing-impaired riders. This complexity and variety also often require the customization of accessibility assets for each station, reducing the MTA's capacity to design, purchase, and implement at scale.

- **24-Hour Service**: Because the NYC transit system operates 24 hours per day, seven days per week, construction must take place while trains continue to run. This process can slow construction due to requiring parts of stations to remain open for riders, slowing down trains as they pass the work site, and/or substituting rail service with bus shuttles.

- **Platform Alignment:** Subway cars present challenges to riders with disabilities in terms of platform alignment: Wheelchair and other mobility device users, as well as people with visual impairments, can be stymied by the distance between the platform edge and train doors, the change in height between the platform and the train, and both these factors varying across stations make the subway hard to use.

Physical Space Limitations

- **Elevator Bank Space:** Elevator installations require a significant amount of space, which was not accounted for during the early construction of subway stations. In addition to the elevators themselves, sufficient space for elevator machinery and pedestrian egress and sight lines beyond the structure must be maintained. Furthermore, as elevator banks must be installed both within stations and on the sidewalks above, there is often insufficient sidewalk space for both an elevator that opens to the street and ample pedestrian egress. In addition, above-ground spaces can be occupied by private real estate, parks, or utilities, adding complexity and expense to property acquisition and elevator installation. Elevated stations are often close to neighborhood buildings, making it difficult to find space to install elevators and ramps.[46]

- **Competing Underground Infrastructure:** Existing underground utilities, including water, sewer, gas, and electrical connections, can block new or expanded underground infrastructure. The MTA must avoid or route around these utility lines. In addition, utility maps are often outdated, increasing the work required to design and install additional infrastructure.

Funding Constraints and High Costs of Construction

The ADA established standards and timelines for compliance without associated funding for public transit systems. These requirements challenge resource-strained transit agencies across the United States.

Accessibility upgrades are subject to extraordinarily high costs of construction, largely due to the challenges of aging infrastructure and physical space constraints described elsewhere in this report.

The MTA has reported that accessibility upgrades amount to $48–63 million per subway station — with elevator installation accounting for only 20% of that cost.[47] The remainder includes excavation and construction of new mezzanines, overpasses, and other support infrastructure required for elevator installation. Additional costs include:

- **Real estate:** Acquiring property or rights to place an elevator in buildings. For example, the Second Avenue Subway required $250 million in such real estate costs.
- **Utilities relocation:** Water, sewer, electricity, and communication utility lines are dense and often un- or mis-mapped. During the Second Avenue Subway construction, relocations cost $250 million.
- **Logistics:** The cost of moving construction materials to the correct location is exceptionally high in New York City.
- **High labor wages:** According to MTA analysis, NYC wages are 46% above peer cities in the United States and twice as much as peers internationally.
- **Continuing 24/7 subway service during construction:** This requires additional work to ensure site safety during construction, as well as redundant wiring, service changes, and substitutes.[48]
- **Consultant costs:** Much of the technical work is conducted by outside consultants.[49]

While MTA's new subway construction has previously amounted to the highest costs in the world on a per-mile basis,[50] ADA-related construction costs are within the realm of costs in other U.S. systems. Still, at $63 million for accessibility upgrades at elevated stations, and $49 million for underground stations,[51] costs are extraordinarily high at the scale of the remaining 326 stations.

The MTA is beginning to address these cost challenges, and recently sped up the timeline of accessibility contracts to five times the 2020 rate.[52,53]The organization has more recently adopted cost-cutting measures, such as standardizing contract terms and conditions, including bundling elevator contracts together, developing longer (15-year) maintenance terms, and minimizing work setups that require service changes.[54]

Even once cost containment is fully in place, upgrading New York City's transit system for accessibility will require a large infusion of funding. Elevators and escalators, as well as other digital and physical improvements, require substantial monitoring and maintenance subject to several of the same costs above, including labor, materials, and service changes.

Due to the significant costs associated with accessibility improvements, new funding sources, including allocations from congestion pricing, will be essential to securing funds to reach the current goals.

Climate Change Impacts

Superstorm Sandy, as well as more recent storms, wreaked havoc on the subway systemwide, causing flooding, power outages, and corroded equipment.[55] The MTA reports that in the next 20 years, they will need to "reduce water infiltration conditions at approximately 40 station locations." [56]Climate change adaptation and transit accessibility are deeply intertwined: Extreme weather events can limit functioning of accessibility assets, like elevators and escalators, thereby making stations inaccessible. Moreover, extreme weather can require increased coordination for emergency action, including evacuations, especially challenging when evacuating people who use mobility devices.[57] The MTA should accelerate the development of its comprehensive plan for managing extreme weather events, as was recently noted by the New York State Comptroller in a September 2023 report.[58]

Beyond the Subway: Accessibility Needs on Other Modes

While the subway carries most New Yorkers, improving accessibility beyond subway stations and trains will provide a choice of mobility options to all passengers, regardless of their mobility or sensory needs. This section will briefly summarize the accessibility improvements and ongoing challenges of other MTA modes.

Buses

Bus accessibility has significantly evolved since the 1970s. In September 1975, individuals with disabilities were granted half-price bus fares. By the summer of 1981, the city introduced its first buses equipped with platform wheelchair lifts.[59] Ten years later, the MTA partnered with the NYC Department of Transportation to establish a fully accessible bus network. The nation's first and largest fully accessible bus system enables passengers with mobility challenges to conveniently access buses through the deployment of ramps or lifts. Although these lifts occasionally malfunction, particularly on the high-lift express buses, the bus network has largely served as a lifeline for riders with disabilities since 1991.[60]

Some ongoing accessibility challenges around buses are largely outside of the MTA's control. Often, bus lanes and stops are obstructed by double-parked vehicles and other barriers, impeding buses from traveling efficiently or approaching the curb effectively. At some stops, the absence of seating arrangements poses an untenable situation for passengers who cannot endure prolonged standing. Moreover, bus stops are often neglected during weather events. Inadequate snow clearance around bus shelters, which falls within the domain of the city, not the MTA, often impedes access to boarding or renders some stops inaccessible.

Inside buses, passengers report encountering further hurdles. Some bus drivers lack adequate training in operating lift/ramp or securement equipment, leading to prolonged boarding and securement time, delaying both the passengers already on board and those waiting at further stops.[61]

The MTA has recently launched several initiatives to improve the on-board rider experience. For example, newer buses have wider doors and ramps with clear yellow markings for easier navigation. In addition, the MTA has launched several initiatives to improve the bus experience for riders with mobility devices and strollers:

- **Open Stroller Bus Program**: The Open Stroller Pilot program,[62] launched in February 2022 on specific routes, designated specific areas for open strollers, making it easier for parents and caregivers to travel with children. The Designated Stroller Areas are separate from the Wheelchair Securement Areas, designed to avoid competition for space between caregivers and passengers with disabilities on transit.

- **Wheelchair Securement Pilot:** In July 2023, the MTA introduced a six-month pilot program featuring the Quantum Self Securement Station installed on 10 buses along the M7 route. The program aims to measure the device's effectiveness in using a single button mechanism to streamline the boarding and securing process.[63]

- **Flexible Seating:** The Department of Buses and Systemwide Accessibility teams are developing innovative seating designs, including more flexible options in the wheelchair securement and priority seating areas, aimed at accommodating diverse customer needs and reducing conflicts for the same seating or standing space on the bus.[64]

In addition, the MTA has pursued Automated Bus Lane Enforcement (ABLE) on 500 buses to ticket vehicles blocking bus lanes. According to the company, 80 percent of drivers who received tickets did not repeat the violation, and bus speeds along the M14 route sped up by 24% above the previous baseline of 8.18 miles per hour (the slowest bus speeds in the U.S.[65]). In May 2024, the MTA will also ticket vehicles blocking bus stops and double-parking on bus routes.[66] More broadly, increasing efficiency is key to the bus network's reliability and viability as a travel option for people with disabilities, and reduces their need to navigate to accessible subway stations.

Commuter Rails

The MTA is simultaneously improving accessibility in its commuter rail services, Metro-North Railroad (MNR) and Long Island Rail Road (LIRR), both on railcars and at stations. However, because commuter rail stations are still not 100% ADA-compliant, riders can encounter the same issues they do at subway stations.

Riders report that navigating commuter rail services like the LIRR or Metro-North from busy hubs such as Grand Central Station or Penn Station is a substantial challenge, especially for visually impaired individuals. Ongoing challenges include elevator availability and uptime, a lack of sidewalks, and complaints about the unintelligibility of announcements delivered on station loudspeaker systems.

Metro-North Railroad

Only 68% of Metro-North's 124 stations are equipped with wheelchair ramps and/or elevators. The following table lists the number of accessible and non-accessible stations on each Metro-North line:

Line	State Control	Accessible Stations	Inaccessible Stations	Total
Danbury-New Haven	CT	5	2	7
Harlem	NY	24	11	35
Harlem-New Haven	NY	2		2
Hudson	NY	20	8	28
New Canaan-New Haven	CT	4		4
New Haven	CT/NY	16	13	29
Pascack Valley	NY	2	1	3
Port Jervis	NY	5	4	9
Waterbury-New Haven	CT	1	5	6
All (Grand Central Terminal)	NY	1		1
	Total	80	44	124

A 2014 lawsuit, **Westchester Independent Living Center v. Metropolitan Transportation Authority,** compelled Metro-North to enhance accessibility at key stations like Grand Central Terminal, Stamford, and White Plains, as mandated by the Americans with Disabilities Act (ADA). As a result, Metro-North installed elevators at the Port Chester station.

Another accessibility issue involves insufficient communication with passengers, particularly the unintelligibility of announcements delivered on station loudspeaker systems. In response, a 2017 MTA-funded $124 million capital project is aimed at upgrading communications by improving destination display boards, upgrading public address and audio/visual systems at approximately 20 stations, and providing wireless internet access.[67]

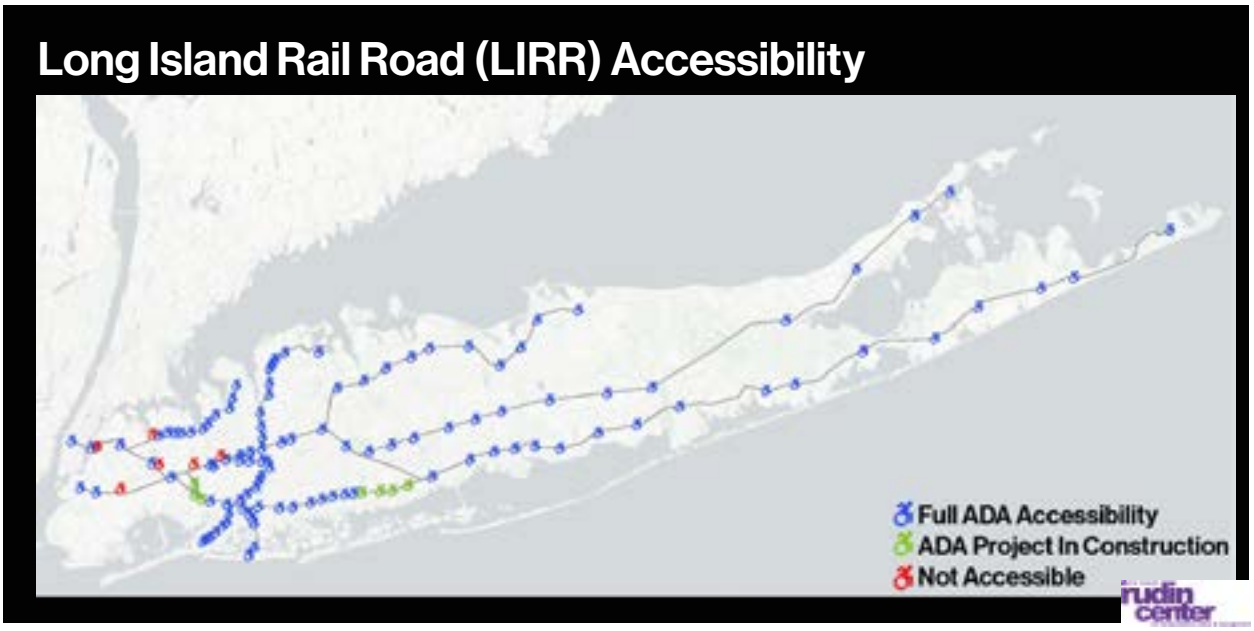
Metro-North Railroad (MNR) Accessibility

Long Island Rail Road (LIRR)

As of February 2020, 113 of the 126 LIRR stations (89%) have wheelchair ramps and/or elevators. Ongoing challenges persist for the Long Island Rail Road (LIRR), including:

- **New schedules leading to increased congestion:**[68] The LIRR's new schedules have led to increased congestion at stations, which can make it more difficult for passengers with disabilities to navigate.
- **A class-action lawsuit highlighting accessibility issues:**[69] The lawsuit claims that wheelchair- or scooter-dependent passengers have only a 10-minute window, from the track announcement to train door closure, to access the platform.
- **Difficulty locating accessibility assistance:** Passengers with disabilities have reported facing further hurdles, including locating LIRR crew members and ensuring the deployment of the bridge plate to board the train. Additionally, at Penn Station, where only one elevator serves two tracks, finding a functioning elevator within this time frame is particularly challenging.[70]

In 2019, the Suffolk Independent Living Organization filed a federal lawsuit against the MTA and LIRR alleging ADA violations in the renovation of Amityville, Copiague, and Lindenhurst stations on the Babylon line.[71] As part of the 2022 settlement with Disability Rights Advocates, the MTA and LIRR committed to installing elevators and implementing essential station accessibility upgrades at these stations.



In the Capital Program 2020–2024, there are approximately 209 commuter rail stations in New York State, with 168 currently either offering stair-free access or under construction to offer stair-free access. Currently, 84% of full-service LIRR and Metro-North stations are fully accessible, with ongoing improvements at 11 additional stations. The goal is to make 93% of LIRR stations accessible, aiming for 100% accessibility in the next decade. On Metro-North, 78% of stations serving 93% of customers will be accessible.[72]

A full list of accessible stations is available on the MTA's website, but the MTA recently launched an app, TrainTime, that offers real-time status and exact locations of elevators, escalators, and ramps.[73]

Paratransit

In accordance with ADA requirements to accommodate customers who are unable to utilize traditional bus or subway services due to disability, the MTA offers the Access-A-Ride (AAR) Paratransit Service. The program was created in 1991 and serves all five boroughs using vehicles owned or contracted by the MTA.

AAR is heavily used: The system provided 7,524,520 trips from December 2022 to November 2023. This number marks a 20% increase over the same period the prior year, during which 6,252,502 trips were provided.[74]

Despite high usage, AAR has historically suffered from customer dissatisfaction and excessively long trips, with some customers referring to the service as "Stress-A-Ride."[75] Key obstacles reported by riders include scheduling requirements (calling a day before, without much flexibility in timing trips).

These challenges were exacerbated by the pandemic, during and after which AAR, like transit agencies around the world, suffered from driver shortages, leading to a low customer satisfaction rating of 44%. In the Fall of 2021, users reported prolonged wait times and irregular pickup and drop-off schedules that made the service unreliable. For example, on-time performance (broker pickups arriving within 30 minutes of reservation time) hit a post-pandemic low of 83% in October 2021 (by comparison, on-time performance reached 95% in November 2023, the most recent data available). In addition, provider no-shows, when providers do not arrive within the 30-minute pickup time window and the ride is not provided, reached a high of 10.66 per 1,000 trips in November 2021. That number dropped to 1.3 per 1,000 trips in November 2023.[76]

In addition, the lengthy AAR eligibility approval process, subject to guidelines set by the Federal Transit Administration (FTA), can impede riders from promptly utilizing the service. While the process requires in-person assessments, there are currently only five location options for screenings citywide (one each in The Bronx, Staten Island, and Queens, two in Brooklyn, and a location under construction in Manhattan).[77] Offering online assessments, geographic diversity and scheduling options can help to streamline the approval process for users, MTA administrators, and caregivers.

As part of the functional assessments, the FTA requires applicants to demonstrate whether they can go up or down subway stairs, board a train or bus, and ride or navigate the transit system independently. Advocates for riders with disabilities call the process unnecessarily time-consuming, and do not account for disabilities where stair usage is not relevant.[78] The MTA should partner with the FTA in revising these requirements to consider the broad range of disabilities when assessing potential AAR riders.

Furthermore, AAR has historically cost the MTA a substantial amount to operate ($487 million in 2022) due to both inefficiencies and heavy use of the system.[79] Increased subway accessibility will lead to an estimated 30% reduction in AAR riders, presenting significant cost savings.[80]

More recently, the MTA has adopted several new initiatives to increase efficiency and customer satisfaction:

- **Cost-Effective Strategies:** Over the last decade, the MTA has adopted several cost-effective strategies, including the transition of nearly 70% of trips to "broker" services that utilize for-hire vehicles. This transition has not only saved the MTA money but also provided passengers with more efficient and flexible service.

- **Technological Enhancements:** The MTA has embraced technological advancements to improve the paratransit experience. Passengers can now book and track trips through user-friendly web and mobile applications, making the experience more convenient for customers, and potentially saving the MTA millions of dollars per year.

- **Improved Vehicle Technology:** Vehicles used in paratransit services have been equipped with newer technologies for better trip routing and tracking. This investment ensures that passengers receive reliable and direct trips.

- **Expanded E-Hail Pilot Program:** The pilot program in which AAR-eligible riders can opt for on-demand pickup from transportation network provider vehicles, such as those operated by Uber and Lyft, recently tripled the number of customers from 1,200 to 3,600. The MTA also restructured the program to be more financially sustainable. This pilot has the potential to significantly improve flexibility and spontaneity for AAR customers, while further reducing per-trip costs below traditional AAR trips. The MTA aims to continue expanding the program's benefits while keeping costs manageable.

Recommendations

The MTA has made commendable progress in its effort to improve accessibility, particularly in recent years. . But as the agency prepares to make 95% of subway stations accessible to all by 2055, **the pace of progress must increase by 51%,** despite the continuing challenges of strained resources and an aging system.

To achieve this goal, this report recommends the following steps that the MTA and their partners should take:

Ensure capital funding levels commensurate with the increased pace of accessibility improvements

- **Implement the Central Business District Tolling Program (CBDTP):** CBDTP is expected to generate $15 billion in revenue for the MTA's current Capital Program, so essential to delivering the remaining station accessibility improvements to which the agency has committed. In addition to the critical resources it will provide to the MTA, CBDTP will reduce traffic blocking bus and paratransit customers, and improve air quality for New Yorkers.

- **Adequately fund ADA upgrades in MTA's 2025-2029 Capital Program:** Given the further acceleration of ADA upgrades expected in line with the terms of the settlement agreement, fully funding these projects will be paramount. The MTA will publish its draft 2025-2029 Capital Program later this year and must continue to prioritize funding accessibility projects.

Explore further cost containment measures

- **Project delivery:** Increase the utilization of bundling ADA construction needs with other construction to reduce costs associated with track clearance.

- **Expand the contractor pool**: Growing the number of contractors with capacity to complete ADA projects would not only bring down costs by increasing competition, but also increase MTA's capacity to complete projects at a rapid pace.

- **Widely disseminate lower-cost physical implementations.** Using on-floor navigation markings, directional signage, and improved indicators of stair-free paths through stations, the MTA can improve accessibility of all stations for a breadth of users, particularly those with cognitive, hearing, and vision impairments. These improvements would be especially beneficial as interim enhancements for stations slated for upgrades in the more distant future.

- **Resourced partnerships:** Expedite Zoning for Accessibility projects to increase the pace of elevator installation established through real estate partnerships.

Bolster infrastructure monitoring, management, and planning to account for both real-time needs.

- **Measure elevator reliability:** As the MTA makes progress improving their own elevator uptime, privately-managed elevators should be more closely tracked, holding partners accountable for their performance.

- **Travel trends:** Based on new ridership patterns, plan accessibility improvements to stations predicted to grow in usage in the coming years, especially in the outer boroughs, where ridership growth rates are exceeding those in Manhattan at several locations.

- **Geographic diversity:** Ensure that station accessibility upgrades are more evenly distributed by borough and subway line, so riders throughout New York City can benefit from accessible trips and enjoy greater home location choice.

Broaden the public engagement processes.

- **Participatory processes:** Involve disability advocates to a greater extent in the planning and design process for station prioritization and improvements, building on the success of the Living Lab. The Advisory Committee for Transit Accessibility's role can be expanded, providing input by integrating perspectives from disability advocacy groups, transit experts, and community leaders during the planning and design stage of subway station renovations and new railcar procurements.

- **Public information:** An accessibility dashboard on the MTA website — more readily available and searchable than on the current metrics site — should highlight key milestones, challenges, and planned initiatives. Publicly sharing ongoing work will improve transparency and facilitate open dialogue about prioritization, building trust with and gaining feedback from passengers.

- **Build awareness:** Conduct sensitivity training for customer-facing staff, police, infrastructure engineers, and vendors to enhance their understanding of accessibility requirements and best practices. These trainings will help to design and operate systems, processes, and customer service with increased awareness of needs and methods of interactions.

    - Consider supporting and building awareness around the "Hidden Disabilities Sunflower," a lanyard that draws attention to those whose disabilities may not be visible but who may need "a helping hand, understanding, or more time."[81] This effort is valuable in fostering sensitivity and understanding among officials and fellow travelers, and is now in use at Pace University.[82]

- **Educational partnerships:** Partner with service organizations and schools to allow travel mentoring programs to educate individuals with mobility and cognitive challenges about navigating the system according to their needs. A similar program in London helps to foster individuals' self-assurance and independence in navigating the public transportation system.[83]

- **Expand emergency protocols for extreme weather events:** Review safety and emergency plans, especially for events requiring station evacuations, conduct audits with user groups, and develop extreme-weather event planning with a focus on accessibility.

Make greater use of existing and emerging technologies.

- **Real-time information:** Offering real-time data about elevator status – visual and auditory, on trains, on dynamic station signage, in connecting buses, and in apps – will greatly benefit riders en route, avoiding situations where riders who rely on elevators are stuck in stations, uninformed about their exit options.

- **Expand OMNY rollout:** By expediting the rollout of OMNY to Access-A-Ride customers, the MTA can help to facilitate payment and help streamline the use of fare discount programs.

- **On-Demand Assistance:** As station agents systemwide are tasked with leaving their booths to provide face-to-face customer services, riders who push elevator or other assistance buttons in other areas of the station may not be able to reach a station agent immediately, instead being routed to the Rail Control Center. The MTA should explore developing a direct communication line between on-platform needs and station agents' mobile devices to ensure urgent needs, such as being stuck on the platform due to a broken elevator, are met.

- **Outage reporting:** Develop a tool within the myMTA app or other means to report an elevator or escalator outage or unusable condition, such as unsafe behavior by a fellow passenger.

- **Applied intelligence:** Utilize AI to streamline processes; in particular, vastly expand the use of bus lane camera enforcement software to track bus stop blockages, to help improve egress between bus stops and boarding, launching in 2024.[84]

- **Customer service technology:** Expand the use of chatbots for customer service, which will improve language access and provide customer service for navigation assistance and real-time awareness of accessible travel routes.

- **Explore emerging technologies:** New tools can be developed in collaboration with private sector partners, including improved real-time audio interpretation of subway station and bus stop surroundings for riders who are blind or have low vision. Furthermore, the audio can be shared in multiple languages to improve language access among low-English proficiency riders. In addition, new technologies can scan station environments using LIDAR to identify accessibility challenges, such as ramp gradients, physical obstacles, and lighting and noise levels.[85] The field of accessibility technologies continues to grow, and it is recommended that the MTA continue its Living Lab work to test and scale beneficial tools.

Conclusion

The journey toward achieving universal accessibility in New York City's public transportation system is at a critical juncture -- with a unique opportunity to correct historical oversights in funding and awareness.

The MTA's recent prioritization of accessibility upgrades is a commendable stride toward a fully inclusive transit system that benefits all New Yorkers. Sustaining this momentum is imperative — and the pace of progress directly influences the lives of millions of New Yorkers.

The infusion of funds from congestion pricing presents a unique opportunity to propel accessibility improvements. With an allocated commitment of $5.2 billion in the 2020–2024 Capital Program for accessible stations, the success of this endeavor hinges on a fully funded Capital Program, inclusive of the $15 billion generated through the implementation of congestion pricing.

Sustained investment in universal accessibility will not only enhance the daily experiences of all riders but also pave the way for a more equitable and interconnected future for New York City.

Appendix A: Components of MTA's Accessible Transit System

To make the transit system accessible to all New Yorkers, the MTA offers accommodations to individuals with mobility, vision, hearing, cognitive, and other disabilities, including:

- **Elevators and Ramps:** Elevators are a pivotal element of MTA accessibility, allowing individuals with mobility impairments to access platforms and different levels within stations without navigating stairs. Elevator uptime is a key component of accessibility. Ramps are also essential for facilitating easy transitions between platforms and station areas.

- **Handrails:** Handrails installed on ramps and stairs provide crucial support for individuals with mobility challenges. Handrails are also placed at the designated on-board spaces for wheelchairs and other assistive devices.[86]

- **Signage:** Backlit, large-print, high-color contrast, and tactile braille signs play a vital role in communication for riders with visual impairments. These signs provide essential information about station facilities, directions, and platform locations.[87] Text-based announcement boards could help those who are deaf or hard-of-hearing.

- **Audio and Visual Information Systems:** Providing real-time information to passengers with visual or hearing impairments is essential, especially during service changes and emergencies. Help Points and Public Address Customer Information Screens convey information both audibly and visually to riders. Bus stops offer audio announcements and a stop button for customers to flag down buses that may not otherwise make a stop.

- **Accessible Restrooms:** Fewer than one-quarter of subway stations currently have open restrooms,[88] complicating travel for individuals who may be experiencing incontinence from medical conditions. Stations with public restrooms must offer accessible restroom facilities, ensuring convenience and dignity for riders.

- **Fare Vending Machines:** Accessibility extends to vending machines, including OMNY card vending machines,[89] by ensuring that riders with disabilities can independently purchase fares and manage their travel. Industry standards must be adhered to for accessibility in UI,[90] audio cues, an option for an earphone jack, braille markings, and hardware as specified by the accessibility board.[91]

- **Fare Payment:** Seamless fare payment includes low- or no-contact payment options, and should be expanded to all modes of travel.

- **Accessible Station Booth Windows:** Station booth windows are designed to be accessible to individuals using wheelchairs or mobility aids, with sills located no more than 36 inches above the ground to facilitate communication and transactions.

- **Service Entry Gates:** Service entry and newer wide gates offer accessibility for users with mobility devices, ensuring that passengers of all abilities can independently access and exit subway and rail systems.

- **Platform-Edge Warning Strips:** To enhance safety, platform-edge warning strips are installed to provide high-contrast indicators of edges.

- **Navigation:** Tech-enabled indoor navigation tools, such as those modeled on Wi-Fi–based geolocation services, increase safety and facilitate independent travel for those with visual impairments, blindness, and cognitive disabilities in indoor station environments as well as in locating connecting transit services.

- **Platform-Edge Doors (In development):** Currently in the planning stage at the MTA, platform-edge doors can prevent riders from falling onto the tracks.

- **Bus ramps and lifts:** To allow riders with mobility devices and other access needs to board buses, all New York City Transit buses have either fold-out ramps or lifts at the buses' front entrances for ramps, or mid-bus doors on express/coach buses (for lifts).

- **Bus stops:** Audio announcements of approaching and incoming buses provide essential service and situational awareness.

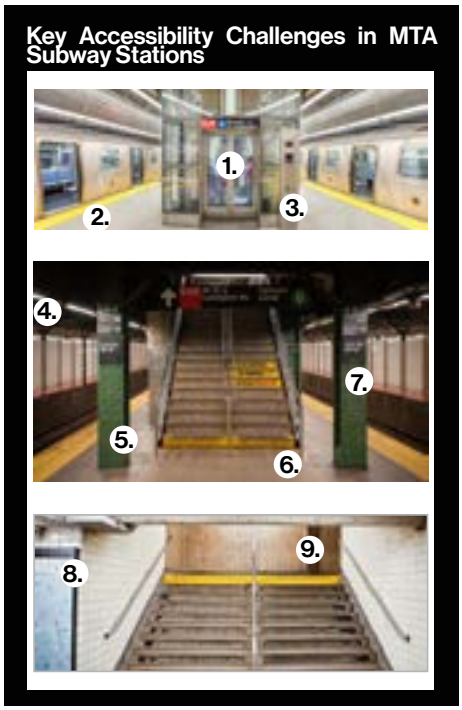
Appendix B: Brief Timeline of Legal Developments[92]

Year	Lawsuit	Outcome
1979	Eastern Paralyzed Veterans Association (EPVA) v. Metropolitan Transportation Authority	In December 1982, the New York State Supreme Court ruled in favor of the EPVA. The court's decision was based on a state law requiring wheelchair access for projects funded by the state. The MTA appealed, arguing that this law didn't apply to subway stations and that the projects in question were repairs, not renovations. After the ruling, work on 10 renovation projects was paused, and the MTA suspended 78 others due to concerns of legal challenges. The MTA sought an exemption from the state law, citing high costs and limited benefits of station accessibility. They proposed an on-request paratransit service, which was rejected by the EPVA. The EPVA's offer to make 27 key stations accessible was also rejected by the MTA.
2010	United Spinal Association v. Metropolitan Transportation Authority Disability Rights Advocates (DRA)[93]	In July 2011, DRA reached a settlement with the MTA that resulted in installation of an elevator at the Dyckman Street subway station.
2014	Westchester Independent Living Center v. Metropolitan Transportation Authority (DRA)[94]	DRA's lawsuit against Metro-North and the MTA, held them accountable for violating the ADA by using significant taxpayer funds to renovate the Port Chester Station without including a stair-free pathway across the station. As a result, elevators were installed.
2016	Bronx Independent Living Services v. Metropolitan Transportation Authority (DRA)[95]	In March 2019, the Court's decision emphasized that the Middletown Road station renovations, regardless of cost, had to adhere to accessibility requirements mandated by the Americans with Disabilities Act. The MTA lost the lawsuit, being obligated to add ADA improvements to all major renovations in the future.

2017	Center for Independence of the Disabled New York v. Metropolitan Transportation Authority (SDNY) (DRA)	Simultaneously with the previous case, a class-action lawsuit was filed against the MTA by six disability rights organizations and three wheelchair users. This legal action was prompted by the MTA's inability to properly maintain the limited number of elevators in the subway system, resulting in frequent and unanticipated elevator breakdowns.
2018	Jorge v. New York City Transit Authority	Settlement agreement requiring the government to translate critical documents, accept paperwork in the applicants' native language, and provide interpreting services during hotline calls, at application centers, and during disability evaluations.
2019	Forsee v. Metropolitan Transportation Authority (DRA) (De La Rosa, et al. v. Metropolitan Transportation Authority, et al. Case No. 19-cv-04406 (ER) (SDNY)	In 2022, plaintiffs and the MTA signed a historic settlement agreement that will make at least 95% of the NYC subways' 364 currently inaccessible stations accessible by 2055. The settlement agreement mandates the MTA to allocate 14.69% of each 5-year Capital Plan budget for station accessibility, unless unforeseen critical needs arise. If unexpected needs do emerge, the MTA must allocate no less than 8% of the total Capital Plan to station accessibility. This represents a significant commitment to making stations accessible for people with disabilities, marking a departure from past practices. Moreover, the agreement ensures that station accessibility will be integrated into many renovation and rehabilitation projects. In total, the MTA commits to making 85 additional stations accessible by 2035, another 90 by 2045, and the final 90 by 2055, in addition to the 81 stations already slated for accessibility in the 2020 - 2024 Capital Program.
2019	Suffolk Independent Living Organization v. Metropolitan Transportation Authority (DRA)[96]	In an agreement, the MTA and LIRR have agreed to install elevators as well as make other essential updates, under the oversight of an independent expert, to bring the Amityville, Copaigue, and Lindenhurst LIRR stations into full compliance with the ADA. Work on these projects was to be completed by June 2023, with funding to come out of the MTA's 2020–2024 Capital Program.

2020	Fair Fares NYC extended to Access-A-Ride[97]	Fair Fares NYC was established in 2018 to provide low-income subway and bus riders with a half-fare payment option, but did not extend to Access-A-Ride (AAR) users. Advocates threated to litigate the issue, and the Human Rights Administration and the MTA ultimately agreed to extend the Fair Fares program to include AAR users.
2021	Brooklyn Center for Independence of the Disabled v. Metropolitan Transportation Authority[98]	No outcome finalized
2022	Britt v. Metropolitan Transportation Authority (Access-A-Ride Paratransit Users Sue the MTA for Equal Fare Discounts)[99]	No outcome finalized.
2022	Goldenberg v. Metropolitan Transportation Authority (concerning vertical and horizontal gaps between platforms and trains)[100]	No outcome finalized.

Appendix C: Citations for Report Images



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Appendix D: Status of 81 Stations in Settlement Agreement as of 12/31/2023

Station	Services	Borough	Accessibility	Year Declared
Canarsie–Rockaway Parkway	L	Brooklyn	Fully accessible	2020
Brooklyn Bridge–City Hall/Chambers Street	J	Manhattan	Fully accessible	2020
59th Street	N; R	Brooklyn	Fully accessible	2020
86th Street	R	Brooklyn	Fully accessible	2020
Astoria Boulevard	N; W	Queens	Fully accessible	2020
Eastern Parkway–Brooklyn Museum	2; 3	Brooklyn	Fully accessible	2020
Bedford Avenue	L	Brooklyn	Fully accessible	2020
First Avenue	L	Manhattan	Fully accessible	2020
Bedford Park Boulevard	D	The Bronx	Fully accessible	2020
Greenpoint Avenue	G	Brooklyn	Fully accessible	2020
Gun Hill Road	5	The Bronx	Fully accessible	2020
Times Square–42nd Street	S	Manhattan	Fully accessible	2021
Avenue H	Q	Brooklyn	Fully accessible	2021
57th Street–Seventh Avenue	N; Q; R; W	Manhattan	Fully accessible	2021

Court Square–23rd Street	E; M	Queens	Partially accessible	2021
Livonia Avenue	L	Brooklyn	Fully accessible	2022
170th Street	4	The Bronx	Fully accessible	2022
Dyckman Street	1	Manhattan	Fully accessible	2023
Hoyt Street	2; 3	Brooklyn	Fully accessible	2023
Eighth Avenue	N; R; W	Brooklyn	Fully accessible	2023
East 149th Street	6	The Bronx	Fully accessible	2023
Grand Street	L	Brooklyn	Fully accessible	2023
Court Square–23rd Street	G	Queens	Fully accessible	2023
New Dorp	SIR	Staten Island	Fully accessible	2023
28th Street	6	Manhattan	Partially accessible	P
50th Street	C; E	Manhattan	Partially accessible	P
168th Street	1	Manhattan	Selected for 2020–24 Capital Program Funding	
110th Street	6	Manhattan	Selected for 2020–24 Capital Program Funding	
Seventh Avenue	B; D; E	Manhattan	Selected for 2020–24 Capital Program Funding	
Lexington Avenue/59th Street	N; R; W	Manhattan	Selected for 2020–24 Capital Program Funding	

Lexington Avenue/59th Street	4; 5; 6	Manhattan	Selected for 2020–24 Capital Program Funding	
Delancey Street/Essex Street	J; M	Manhattan	Selected for 2020–24 Capital Program Funding	
Delancey Street/Essex Street	F	Manhattan	Selected for 2020–24 Capital Program Funding	
42nd Street–Bryant Park/Fifth Avenue	B; D; F; M	Manhattan	Selected for 2020–24 Capital Program Funding	
18th Avenue	D	Brooklyn	Selected for 2020–24 Capital Program Funding	
Jefferson Street	L	Brooklyn	Selected for 2020–24 Capital Program Funding	
Nostrand Avenue	A; C	Brooklyn	Selected for 2020–24 Capital Program Funding	
36th Street	D; N; R	Brooklyn	Selected for 2020–24 Capital Program Funding	
Kings Highway	N	Brooklyn	Selected for 2020–24 Capital Program Funding	
Norwood Avenue	J	Brooklyn	Selected for 2020–24 Capital Program Funding	
Myrtle Avenue	J; M	Brooklyn	Selected for 2020–24 Capital Program Funding	
Hoyt–Schermerhorn Streets	A; C; G	Brooklyn	Selected for 2020–24 Capital Program Funding	
Avenue I	F	Brooklyn	Selected for 2020–24 Capital Program Funding	
Neptune Avenue	F	Brooklyn	Selected for 2020–24 Capital Program Funding	
Wakefield–241st Street	2	The Bronx	Selected for 2020–24 Capital Program Funding	

Kingsbridge Road	4	The Bronx	Selected for 2020–24 Capital Program Funding	
167th Street	D	The Bronx	Selected for 2020–24 Capital Program Funding	
Burnside Avenue	4	The Bronx	Selected for 2020–24 Capital Program Funding	
Third Avenue–138th Street	6	The Bronx	Selected for 2020–24 Capital Program Funding	
Brook Avenue	6	The Bronx	Selected for 2020–24 Capital Program Funding	
33rd Street–Rawson Street	7	Queens	Selected for 2020–24 Capital Program Funding	
Parsons Boulevard	F	Queens	Selected for 2020–24 Capital Program Funding	
Briarwood	F	Queens	Selected for 2020–24 Capital Program Funding	
Clifton	Staten Island Railroad	Staten Island	Selected for 2020–24 Capital Program Funding	
Broadway	N; W	Queens	In Progress	
46th Street–Bliss Street	7	Queens	In Progress	
Van Cortlandt Park–242nd Street	1	The Bronx	In Progress	
Classon Avenue	G	Brooklyn	In Progress	
New Lots Avenue	3	Brooklyn	In Progress	
Broadway Junction	A; C	Brooklyn	In Progress	

Broadway Junction	J	Brooklyn	In Progress	
Broadway Junction	L	Brooklyn	In Progress	
96th Street	B; C	Manhattan	In Progress	
81st Street–Museum of Natural History	B; C	Manhattan	In Progress	
Harlem–148th Street	3	Manhattan	In Progress	
Huguenot	Staten Island Railroad	Staten Island	In Progress	
137th Street–City College	1	Manhattan	In Progress	
149th Street–Grand Concourse	2; 5	The Bronx	In Progress	
Church Avenue	B; Q	Brooklyn	In Progress	
Sheepshead Bay	B; Q	Brooklyn	In Progress	
Rockaway Boulevard	A	Queens	In Progress	
Queensboro Plaza	7; N; W	Queens	In Progress	
Woodhaven Boulevard	J	Queens	In Progress	
149th Street–Grand Concourse	4	The Bronx	In Progress	
Mosholu Parkway	4	The Bronx	In Progress	
14th Street/Sixth Avenue	1; 2; 3	Manhattan	In Progress	

68th Street–Hunter College	6	Manhattan	In Progress	
Kings Highway	F	Brooklyn	In Progress	
Parkchester	6	The Bronx	In Progress	
Westchester Square–East Tremont Avenue	6	The Bronx	In Progress	
Junius Street	3	Brooklyn	In Progress	
14th Street/Sixth Avenue	L	Manhattan	In Progress	
Metropolitan Avenue/Lorimer Street	L	Brooklyn	In Progress	
Bay Ridge–95th Street	R	Brooklyn	In Progress	
181st Street	A	Manhattan	In Progress	
Tremont Avenue	D	The Bronx	In Progress	
Northern Boulevard	M; R	Queens	In Progress	
Steinway Street	M; R	Queens	In Progress	
Seventh Avenue	F; G	Brooklyn	In Progress	
Woodhaven Boulevard	M; R	Queens	In Progress	
Metropolitan Avenue/Lorimer Street	G	Brooklyn	In Progress	
14th Street/Sixth Avenue	F; M	Manhattan	In Progress	
Beach 67th Street	A	Queens	In Progress	

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