



OPPOSITE: Three New Jersey Transit trains converge on the Northeast Corridor at Elizabeth, on August 26, 2017. MICHAEL W. SULLIVAN PHOTO

ABOVE: New Jersey DOT GP7 5908 (ex-Jersey Central) sits outside the shop building at Elizabethport in February 1983. The former CNJ shops were used by NJDOT and NJT until the Meadows Maintenance Complex was completed in 1987.

LEFT TOP: Two New Jersey Transit E8s move into position for a locomotive change at South Amboy in May 1983. A southbound train from New York will drop its GG1 electric and the cab units will take the train on to Bay Head.

LEFT: F40PH 4120 splits the signals at Middlesex on February 1, 1994. The train is on the Raritan Valley Line, the former Jersey Central to Raritan and High Bridge. STEVE BARRY PHOTOS



COMMUTING IN THE GARDEN STATE

NJ Transit at 40

STEVE BARRY/PHOTOS AS NOTED

ON APRIL 1, 1976, the railroad map in New Jersey turned blue. Save for a few short lines, Conrail took over the bulk of the Garden State's railroads, combining some of the largest Northeastern railroads that had declared bankruptcy in the wake of Penn Central's collapse in 1970. It was the dawning of a new age in freight reroading, one that would make a herculean effort to bring calm to the chaos. As part of that deal, however, Conrail also found itself in the passenger railroad business. Five of its component roads had commuter operations in New Jersey — Erie Lackawanna, Central Railroad of New Jersey, Penn Central (former Pennsylvania Railroad), Reading, and Pennsylvania-Reading Seashore Lines. All these

operations suffered from years of neglect, and all were losing money, despite regular subsidies from the state. Focused on rebuilding the freight network, the trains, stations, and staff required to operate a reliable commuter network were all a strain on the new government ward. Something needed to be done.

There was some relief on the way, and part of that had been set up a few years earlier. In 1966, New Jersey established its Department of Transportation, the first of its kind in the U.S. In 1967 it began to assist in the funding and operation of the Jersey Central and Erie Lackawanna commuter systems. This assistance later came to Pennsylvania Railroad (which became Penn Central after merging with New York Central

in 1968). Still, on Conrail's first day in 1976, it found itself as the second-largest regular passenger train operator in the country, with operations serving the New York metropolitan region, Philadelphia, Boston, Cleveland, and Chicago — the first two of those with lines in New Jersey.

New Jersey Transit was created in 1979, primarily to operate the state's bus lines. Its role in commuter rail operation slowly expanded, with timetables as early as 1980 bearing the NJT logo, even though those services were still being operated by Conrail. The new branding was a sign of things to come.

Changes came gradually in the 1980s as NJDOT first exited the Philadelphia market with the discontinuance of the former Reading/CNJ *Wall Streeter*/

Crusader through service operated with SEPTA between Philadelphia and Newark. N.J., in July 1981 (and NJT service to West Trenton was discontinued in 1982). The Budd Rail Diesel Cars running on the former PRSL were also discontinued, with service to Ocean City and Cape May ending in 1981 and to Atlantic City in 1982. These services did not enter Philadelphia directly; passengers transferred to the PATCO High Speed Line at Lindenwold for a rapid transit ride across the Benjamin Franklin Bridge over the Delaware River. The PRR main line was split at Trenton, N.J., with SEPTA operating commuter service on the south end into Philadelphia, and the northern end operated by NJDOT. In 1976, Amtrak completed its purchase of the Northeast Corridor from Conrail, managing operation of the complete route between Washington, D.C., and New York.

The Northeast Rail Services Act of 1981 was Conrail's out from the burdens of the commuter business. Under the terms of the act, each state agency currently under contract to Conrail would be required to make other arrangements by the end of 1982. Amtrak responded with a proposal of its own; because its original charter excluded short-haul operations, it proposed the creation of a new Amtrak Commuter subsidiary that agencies in Pennsylvania, New Jersey, New York, and Connecticut could all contract with. That idea quickly fell out of favor, as did a proposal for direct pooling of resources and cooperation between NJT, SEPTA, New York's Metropolitan Transportation Authority, and Connecticut DOT. Boston & Maine Railroad also approached the state of New Jersey with a proposal to operate the commuter trains on a contract basis, much as they did in 1977 for Massachusetts Bay Transportation

Authority in Boston. One of the provisions of the act was to allow a state to directly take over funding and operation of its commuter lines, which New Jersey ultimately decided to do.

On January 1, 1983 — just over 40 years ago — NJ Transit absorbed the rail assets and employees from Conrail, establishing the Newark Division and the Hoboken Division (the two main terminals) for its commuter lines.

The Newark Division

Originating from Pennsylvania Station in Newark, the Newark Division consists of the Northeast Corridor, the North Jersey Coast Line, and the Raritan Valley Line. The Atlantic City Line, while not serving Newark, would be added in 1989. As initially construed, the Newark Division was made up of mostly former CNJ and PRR lines.

NJT's Northeast Corridor operation

begins at Trenton, passes through Newark, and terminates in New York's Pennsylvania Station. PRR first accessed the east side of the Hudson in 1908 when it completed its tunnels under the river. At first, only through trains ran directly into Penn Station; commuter trains terminated in Exchange Place in Jersey City, where passengers continued into New York either via ferry or the Hudson & Manhattan rapid transit line. By 1949, ferry service had ceased and Exchange Place was closed in 1961, with commuter trains going directly into New York. Also part of the Northeast Corridor is a two-mile shuttle, known as the "Dinky," between Princeton Junction on the main line and downtown Princeton.

The North Jersey Coast Line was a joint PRR-CNJ operation prior to Conrail. Jersey Central was the first to the shore, building a line from Elizabethport to Perth Amboy in 1873. From there, CNJ trains continued to Bay Head on the New York & Long Branch, which was leased in 1875. Meanwhile, PRR wanted access to the shore, building a branch off the main line at Rahway to a connection with CNJ at Woodbridge just north of Perth Amboy. PRR then also entered into a lease for NY&LB in 1882. PRR electrified its line, continuing across the Raritan River to South Amboy, where a locomotive change was implemented for trains continuing on to Bay Head. Ultimately, the CNJ routing from Elizabethport was eliminated, leaving an all-Pennsylvania routing to NY&LB.

RIGHT TOP: With Newark in the distance, a New York-bound NJT train behind an ALP-44 on the Northeast Corridor flies over the ex-Lackawanna electrified line into Hoboken as the PATH train heads east in January 1997.

RIGHT: E60 963 leads a Bay Head-bound train across the Raritan River into South Amboy in September 1990. The electric locomotive will be removed from the train in South Amboy and diesels will lead the train the rest of the way to Bay Head.

BELOW: A northbound train behind GG1 4877 approaches the Perth Amboy station in November 1983. NJT painted the 4877 into the Tuscan Red livery of predecessor Pennsylvania Railroad. STEVE BARRY PHOTOS

Jersey Central had its own waterfront terminal in Jersey City with a ferry connection to New York; this terminal is now Liberty State Park, and although the rails are gone, the station remains. From Jersey City, commuter service stretched west over what is now the Raritan Valley Line through Raritan to High Bridge and ultimately Phillipsburg on the Delaware River. The 1967 "Aldene Plan" took New York-bound trains off the CNJ at Aldene for a short trip on the Lehigh Valley to a connection with the PRR at Hunter Tower in Newark, where they could continue to Newark's Penn Station, allowing commuters to make connections to New York via rail or rapid transit. This rendered CNJ's Jersey City terminal obsolete, allowing the discontinuance of the ferry and closure of the station.

The Hoboken Division

NJ Transit's new Hoboken Division was all-ex-Erie Lackawanna trackage



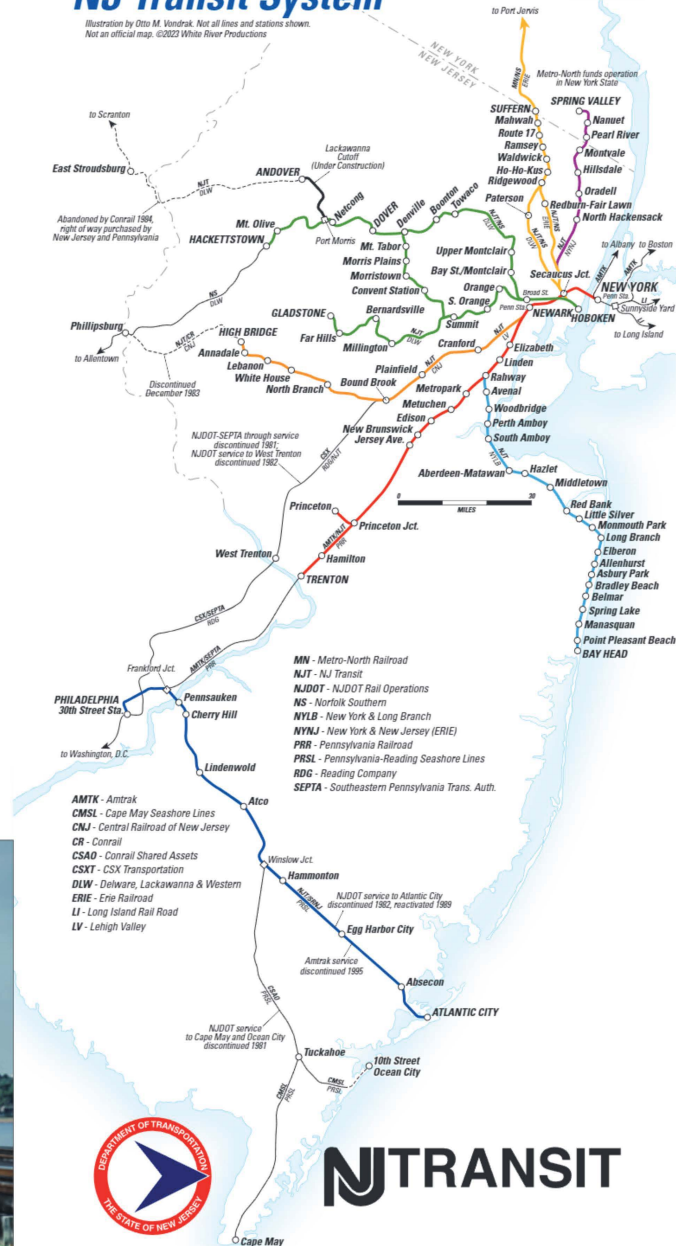
consisting of the Pascack Valley Line, the Main Line/Bergen County Line, the Morris & Essex, and the Boonton Line. These would get shuffled in later years as connections were added and portions of lines abandoned and removed.

The Pascack Valley Line was historically New Jersey and New York Railroad, which was purchased by Erie Railroad in 1896. NJ&NY continued as an Erie subsidiary until the Erie Lackawanna merger of 1960. The single-track line operates from Hoboken Terminal to Spring Valley, N.Y., just across the state line. This route is partially funded by the MTA, as part of Metro-North's "West of Hudson" services operated jointly with NJT.

The Main Line is also ex-Erie, with trains originating and terminating in Hoboken. As the name implies, it was the main line of the Erie Railroad. Commuter trains operate as far as Suffern, N.Y., once again just across the state line. In a

NJ Transit System

Illustration by Otto M. Vondrak. Not all lines and stations shown. Not an official map. ©2023 White River Productions



joint operation with Metro-North, some trains continue beyond Suffern, terminating in Port Jervis, N.Y. The Bergen County Line swings off the Main Line just west of what is now Secaucus Junction and serves a roughly parallel route until it rejoins the Main Line at Ridge-wood.

The Morris & Essex is the former main line of Delaware, Lackawanna & Western, along with the bucolic Gladstone Branch. At the time NJT assumed operations, it also included the Montclair Branch. The lines were electrified in 1930 and for years were served by multiple-unit trainsets. The primary M&E line runs as far as Dover, where electrification ends. The Gladstone Branch splits off at Summit and runs to its namesake town in New Jersey's horse country. The much shorter Montclair Branch terminated at a beautiful vest-pocket terminal in Montclair that remained in service until 1981.

The Boonton Line was initially a freight bypass of all the towns on the Morris & Essex. When NJT started, the west end of the Boonton Line was in Netcong. It then briefly joined the electrified M&E at Dover, splitting off again at Denville. Just beyond Denville, the line passes through its namesake town on its way to Hoboken Terminal.

Of the Hoboken Division lines, only the M&E and its branches were electrified. All other lines were the domain of diesels when they were acquired by NJT.

NJ Transit's primary maintenance facility is the Meadows Maintenance Complex (MMC) in Kearny, N.J., a \$123 million project which opened in 1987 and allowed the closure of two smaller facilities in Harrison and Elizabethport. Major storage yards and layover facilities can be found at Hoboken Terminal and Sunnyside Yard in Queens, N.Y. A number of smaller yards can be found on the outlying lines as well.

Changes Afoot

In the 40 years since the Newark and Hoboken divisions were established, things have been far from static for NJ Transit. The first route cut came in 1983 when the Raritan Valley Line was truncated from Phillipsburg to High Bridge. Meanwhile, Conrail still owned much of the trackage that NJT was operating on, and it decided to abandon the Main Line in New York state in favor of the freight-only Graham Line in 1984. This forced NJT/Metro-North off the Main Line between just north of Harriman to Howell's Junction. Several communities with downtown depots found their new station on the Graham Line to be well outside of town. On the plus side, electrification was extended on the North Jersey Coast Line (former New York & Long Branch) from South Amboy to Long Branch in 1984.



ABOVE: ALP-44 4402 leads a New York-bound train through the PATH station at Harrison on May 2, 1993. The train has just come off the Passaic River bridge after departing Newark.

RIGHT TOP: Lackawanna m.u. cars that entered service in the early 1930s await their next assignment at the layover yard in Summit in October 1982. Summit is where the Gladstone Branch leaves the Morris & Essex (former Lackawanna main line).



RIGHT BOTTOM: Jersey Arrow III 1306 rolls westbound into the station at Bernardsville on the Gladstone Branch on July 22, 2021. The Gladstone Branch is mostly single-track with passing sidings and has the feel of an interurban. STEVE BARRY PHOTOS



In 1991, the Waterfront Connection was completed which allowed a direct connection between the two divisions for the first time. This gave more flexibility in the origination and termination point of trains; North Jersey Coast Line and Raritan Valley Line trains could now travel to Hoboken as well as Newark/New York. Expansion came in 1994 when the Boonton Line was extended beyond Netcong to Mount Olive and Hackettstown. With the explosive growth of the western suburbs in the last 30 years, it is possible further expansion could come, including a return to Phillipsburg.

Possibly the most significant addition to the NJT map has been the Kearny Connection in the meadows east of Newark. This established a direct connection between the M&E and Northeast Corridor. Most electrified M&E trains were removed from Hoboken and instead routed to New York Penn Station as "Midtown Direct" service. To balance out the traffic, a handful of Corridor trains were also rerouted to Hoboken Terminal.

The short Montclair Branch off the M&E became more significant when it was connected to the Boonton Line just a short distance away, a connection that had never existed before. The Boonton Line was renamed the Montclair-Boonton Line, with the original Boonton Line east of the new connection abandoned. This allowed Midtown Direct service to

New York, thanks to dual-mode locomotives that could traverse the non-electrified west end with diesel power and switch to electric at Montclair.

Changes have also come to the Meadowlands of northern New Jersey. The Main Line/Bergen County Line passes underneath the Northeast Corridor in the meadows, but there never was a connection there. The new Secaucus Junction station was constructed in 2003, allowing passengers on the former Erie to transfer to trains heading directly into New York on the Corridor. Also in the Meadowlands, a new spur was constructed in 2009 to serve the sports complex of the same name and help alleviate game-day traffic. For a brief time, NJT operated a joint service with Metro-North offering special through trains from New Haven, Conn., to the Meadowlands on home game days.

A number of infill stations have been

added to the system since 1983. In 1999, Hamilton opened on the Northeast Corridor. The Raritan Valley Line got two new stations, one at Bridgewater in 2000 and one at Union in 2003. Ramsey Route 17 park-and-ride serving the Main Line and Bergen County Line opened in 2004. Two stations were added in 2008 — Wayne Route 23 on the Montclair-Boonton Line and Mount Arlington serving the Morris-town and Montclair-Boonton lines. The most recent additions are Pennsauken Transit Center in 2013 on the Atlantic City Line and Westmont on the Bergen County Line in 2016. Another infill station is in development at North Brunswick on the Northeast Corridor.

And Then There's Atlantic City

Commuter rail to Atlantic City ended less than a year before NJT took over operations from Conrail in 1983. Service in South Jersey was never high on

NJT's list, but Amtrak saw potential in a new market when casino gambling was approved for the shore resort. Amtrak rebuilt the former PRSL line and inaugurated service in 1989; NJT followed a few months later. Amtrak ran from 30th Street Station in Philadelphia non-stop to Atlantic City, while NJT ran from the PATCO connection at Lindenwold with a handful of intermediate stops.

Amtrak could never market the service properly (even with a direct connection to Philadelphia International Airport) and terminated its trains in 1995. NJT service was then expanded west from Lindenwold, crossing the Delair Bridge into Philadelphia and terminating at 30th Street, allowing direct connections with Amtrak and SEPTA. New stations opened at Cherry Hill and Pennsauken.

In 2009 and 2011, a group of casinos contracted with NJT to run Atlantic City Express Service (ACES) non-stop

between New York and Atlantic City. It was an unusual operation in that the trains had a P40 diesel on one end and an ALP-44 electric on the other. The P40 would lead out of New York unpowered, with the ALP-44 pushing the train through the Hudson River tunnels. After leaving the tunnel, the P40 would be fired up and run down the Northeast Corridor to Frankford Junction in Philadelphia. The train would then change directions, with the unpowered ALP-44 leading the train from Frankford Junction to Atlantic City.

Isolated from the rest of NJT's operations, the Atlantic City Line has no servicing facilities of its own. All trainsets are shuffled to NJT's Meadows Maintenance Complex in North Jersey, dead-heading up the Northeast Corridor. It is not uncommon to see an NJT diesel-powered Atlantic City trainset on the Corridor on weekends as a result.



Modernizing the Fleet
NJDOT gave NJT a bit of a head start in fleet modernization as it went through the ragtag Conrail roster. NJDOT purchased 13 new GP40P diesels for CNJ service in 1968. These venerable units are still in service; they were rebuilt in the 1980s as GP40PHs when head-end power was installed, replacing the as-built steam generators. They were rebuilt again in 1991 as GP40PH-2s. One, NJT 4109, was returned to its as-delivered CNJ livery in 2019.

The diesel-powered trainsets serving Hoboken were extremely well-worn when NJT purchased 32 U34CH diesels (see page 36) and a fleet of Pullman-Standard "Comet" coaches for Erie Lackawanna in 1970. A handful of the original coaches soldier on, but all of the U34CHs were off the roster by 1994.

Over on the Northeast Corridor, the Pennsy was using heavyweight MP54 multiple-unit electric cars, the newest of which were built in 1937 and refurbished in the 1950s. NJDOT ordered stainless-steel m.u.s. from St. Louis Car Company, dubbed "Jersey Arrows," which entered service in 1968. The MP54s were not completely eradicated until 1974, however, when the married-pair Arrow IIs arrived from General Electric.

Arrow IIIs followed between 1976 and 1979, intended to replace the truly ancient 1930s Lackawanna m.u. cars on the Morris & Essex. The M&E modernization

LEFT: NJ Transit is very proud of their predecessor heritage, a program started in 2019. Invited press photographs NJT 4109 restored to CNJ colors and ALP45 4519 wrapped in honor of Erie Lackawanna as an NS freight rolls by on October 8, 2019. OTTO M. VONDRAK PHOTO

BELOW LEFT: Pennsylvania Railroad—"wrapped" ALP46 4636 shoves Train 3720 into the Newark Penn Station, itself opened by PRR in 1935. The massive Dock Drawbridge can be seen in the background on January 15, 2020. DUNCAN MARA PHOTO

BELOW: NJT GP40PH-2 4101 shoves its train back into Hoboken Terminal on November 6, 2022. The unit was restored to its late 1970s NJDOT appearance in 2022. OTTO M. VONDRAK PHOTO



program was delayed a few years, so the new cars initially ran on the North Jersey Coast Line and Northeast Corridor. Once the project was complete in 1984 (which included converting the line to high-voltage a.c.), the Arrow IIIs received their intended assignment. The original Arrows were eventually demotored and rebuilt as Comet 1B coaches in the 1980s and removed from the roster by 2008. The Arrow IIs were retired by 1987. The Arrow IIIs continue to work on NJT, primarily on the Morris & Essex.

The Pullman-Standard Comet I coaches were supplemented by Comet II coaches from Bombardier in 1982 and Comet IIBs in 1988. Comet III coaches came equipped with a center door for high-level platforms in 1990, followed by Comet IVs in 1996. Comet V coaches from Alstom followed in 2004 and, finally, NJT's new multi-level coaches were delivered in 2006.

The passenger diesel that everyone was buying in the early 2000s was the EMD F40PH, and NJT was no exception. They remained the backbone of the fleet until PL42ACs from Alstom arrived in 2003. Four ex-Amtrak P40s were briefly on the roster starting in 2007.

On the electric side, NJT actually had ex-Pennsylvania Railroad GG1s on the roster in 1983, working the New York & Long Branch. (Under NJDOT/Conrail, the Gs could still be found on the Corridor.) Worn-out ex-Amtrak E60s replaced

RIGHT: Secaucus Junction opened in 2003 to provide direct transfers between the NJT Newark Division trains on the upper level and Hoboken Division services on the lower level. GINO GALANTE PHOTO

BOTTOM RIGHT: The restored Hoboken Terminal shows off the details of its Beau-Arts design, including gilded mouldings and a stained-glass skylight. Opened in 1907 by Delaware, Lackawanna & Western, it is the anchor of NJT's Hoboken Division services. OTTO M. VONDRAK PHOTO

BELOW: Built in 1903, Newark Broad Street Station is a former Lackawanna facility serving the Morris & Essex, Montclair-Boonton, and Morristown lines. It is also a terminal for the Newark Light Rail line connecting to Newark Penn Station. OTTO M. VONDRAK PHOTO



the GG1s until new power could be ordered.

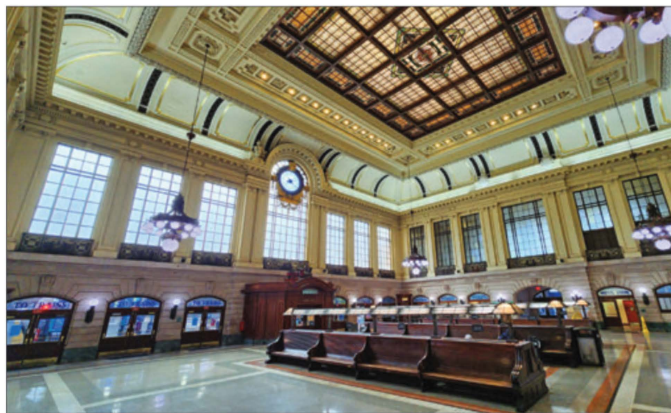
The first new electrics for NJT were 32 ALP-44s from ABB delivered in the 1990s. Between 1999 and 2009, 65 ALP-46s and ALP-46As from Bombardier arrived, and all the ALP-44s were retired in 2011. Finally, NJT got into the dual-mode game with 35 ALP-45DPs from Bombardier.

Future Expansion

With the majority of commuter rail investment directed toward northern New Jersey, a study was launched to explore the expansion of service elsewhere in the state. The Monmouth Ocean Middlesex Line was first proposed in 1996 to connect Lakehurst with either the North Jersey Coast Line at Red Bank, or the Northeast Corridor at Monmouth Junction, using a combination of former CNJ and PRR tracks now operated by CSAO

for freight. Despite additional study in 2010, there has been no advancement on this proposal.

Moving to northwestern New Jersey, the Lackawanna Cutoff project proposes to restore service to Scranton, Pa., over the former Delaware, Lackawanna & Western route that was abandoned by Conrail in 1984 and sold off to private owners. First proposed as an Amtrak route expansion in 1979, NJDOT soon took up the project for restoration of service. After decades of legal battles, the states of New Jersey and Pennsylvania purchased their portions of the 88-mile route in 2001. Work began on Phase 1 between Port Morris and Andover in 2011, with four miles of track laid at the present time. The next phase involves rehabilitation of Roseville Tunnel and additional track construction scheduled for 2025. Revenue service to Andover is scheduled to begin in 2026.



ABOVE: ALP-46A 4651 leads a northbound train on the North Jersey Coast Line from South Amboy into Perth Amboy on April 15, 2016. The movable bridge sits where the Raritan River empties into Raritan Bay.



LEFT: The single-track Gladstone Branch has several passing sidings, many at stations. In February 2000, two sets of Jersey Arrow m.u. cars meet in the snow at Far Hills. The train on the right is heading for Summit where passengers will transfer to a Morris & Essex Line train to continue. The train on the left has only one more station to serve before arriving at Gladstone. STEVE BARRY PHOTOS

Challenges Past and Present

With things humming along as the 2010s began, NJT seemed to have a lot going for it. The system was in good repair and all customers were riding in modern equipment. Then on October 29, 2012, Hurricane Sandy made a predicted hard left turn into New Jersey. Despite being downgraded to a tropical storm, Sandy still packed a lot of punch. As a precaution, NJT suspended all service on the Sunday before the storm, moving equipment to what was considered a safe haven.

Once the storm cleared, the impact was devastating. All routes, particularly the North Jersey Coast Line and Atlantic City Line, had significant washouts. Wires were down in electrified territory. Substations were under water, killing power to the electrified lines. Many stations, including Hoboken Terminal, were flooded. Morgan Drawbridge on the NJCL received damage when unmoored boats and a trailer collided with it. But most devastating were the 65 locomotives and 267 rail cars damaged from flooding when they were parked in low-lying areas.

NJT bounced back from the storm, with most lines back in service within a week or so. It took two weeks to get the Morris

& Essex up and running. Still, with an equipment shortage and some lingering damage, reduced service remained in effect months later. In the aftermath of the storm, NJT built new storage yards, particularly at North Brunswick, that would be higher and drier. Substations were also elevated. A canal adjacent to Hoboken terminal that allowed a storm surge to inundate the building was filled in.

NJT's management took a hit in the aftermath. Several news outlets determined NJT management knew that flooding was likely in the yards where equipment was stored. As a result, new management was put in place and new storm contingency policies adopted.

On September 29, 2016, a Pasack Valley Line train crashed through the bumpers at Hoboken Terminal, killing one and injuring 114 others. In an unfortunate circumstance, the single fatality was a woman standing on the platform crushed by falling debris. Investigation revealed the engineer suffered from an undiagnosed sleep disorder. A follow-up federal probe into NJT's safety and training practices found deficiencies, many of them attributed to the retirement of veteran managers and employees with no one to replace them. At the end of 2020, NJT met the federally mandated deadline for the systemwide installation of Positive Train Control (PTC), a new technology capable of automatically controlling train speeds and movements, thereby reducing the risk of accidents

due to human error.

State and federal mandates limiting travel and exposure in response to the COVID-19 pandemic forced many commuters to work from home starting in March 2020. Where NJT saw record ridership in FY 2019 (July 2018–June 2019) with 87.9 million riders, that number quickly dropped to 65.1 million in 2020, and bottomed out to 19.1 million in 2021. As pandemic restrictions were lifted, NJT saw growth in ridership to 39.3 million in 2022. Plummeting ridership has put a strain on the agency as it not only struggles to maintain basic service, but also plans to meet future growth. With remote working becoming the "new normal," planners are finding it difficult to predict future commuting patterns and make recommendations for expansion.

On to the Future

Like most transit agencies, NJ Transit faces some uncertainty over the next few years. No one knows where the ridership numbers will settle in the post-COVID world. Plans that were made before 2020, anticipating continued ridership growth, now have the agency running at well under capacity, with the accompanying hit to the farebox. Still, expansion plans are in place; the Lackawanna Cut-Off project could get a real boost thanks to Amtrak's interest in running trains to Scranton over the route. A lot has happened in 40 years, and the next 40 could be just as exciting for NJ Transit. ☐