



## FACING THE CHALLENGES OF MIDDLE AGE

# Metro-North at 40

OTTO M. VONDRAK/PHOTOS AS NOTED

THE SCENE OUT THE PICTURE WINDOW is majestic as the train skirts the wide waters of the Hudson River. A single P32 pushes seven single-level coaches on a ribbon of welded rail, with the Hudson Highlands giving way to the bedroom communities of suburban New York. The coach interior is spartan, yet clean, brightly lit, and comfortable. Sixty years ago, these same rails were polished by New York Central's *20th Century Limited*, once the flagship of an extensive passenger operation. A generation later, crowded and derelict commuter trains would share space with Amtrak (and a handful of freights). As the bleak 1970s gave way to the optimistic 1980s, rapid change would also come to the commuter lines of the Northeast.

While state agencies had warned to the idea of subsidized commuter rail service, they lacked the authority to improve the trains and stations they didn't own or negotiate with workers they didn't hire. Massive industry deregulation and a need for an independent Conrail paved the way for the creation of Metro-North in 1983, leading the industry for decades as a shining example of drastic service turnaround and investment where it was needed most. How we got here is almost as strange a story as where we are.

### History

You could make a strong argument that the concept of "commuting" was invented here. Started as a Manhattan horsecar line in 1831, New York &

Harlem Railroad had grown into a full-fledged steam road building north to the suburbs of The Bronx and Westchester County by the 1840s. For the first time, it was practical to enjoy a home in the country and work in the city. In 1853 the railroad offered "commuted" discount fares and frequent schedules to encourage travel by train (and enticed new home construction and the development of the suburbs).

By 1852, the railroad stretched from midtown Manhattan more than 125 miles north to the village of Chatham, connecting with routes to Boston and Albany. The region became known as the "Harlem Valley," taking its name from the railroad that ushered in a period of rapid growth, not only in the



OPPOSITE: Celebrating its 110th birthday in February 2023, Grand Central Terminal remains the hub for Metro-North's Hudson, Harlem, and New Haven lines serving the suburbs of New York and Connecticut. OTTO M. VONDRAK PHOTO

LEFT: Conrail is just eight months old in this scene on the Harlem Line at Brewster, N.Y., on December 23, 1976. Steam escapes from the pilot of FL9 5052 (ex-NH 2052) on this cold winter day. ART DEEKS PHOTO, AUTHOR'S COLLECTION

BELOW LEFT: New Budd M-1 m.u. cars share yard tracks with 1960s vintage Pullman-Standard m.u. cars built for New York Central at North White Plains, N.Y., on July 23, 1976. GEORGE HAMLIN PHOTO

BELOW: By the 1990s, Metro-North's diesel fleet had been rebuilt with HEP replacing steam heat. MN 2007 (ex-NH 2031) and 2028 (ex-NH 2018) lead a northbound Hudson Line train at 125th Street in July 1989. LOU GERARD PHOTO



suburbs, but also created access to new markets for rural farmers and dairies. This growth caught the attention of shipping magnate "Commodore" Cornelius Vanderbilt, and NY&H became his first railroad property in 1864, forming the cornerstone of what would eventually become the mighty New York Central.

After dramatic fluctuations in revenue and traffic took their toll in the first half of the 20th century, New York Central and Pennsylvania Railroad merged in 1968 to form Penn Central, which led to a disastrous bankruptcy in 1970 that set forth a chain of events that continues to shape the landscape of American railroading today. As Northeastern railroads fell like dominoes one after another in Penn Central's wake — taking a large portion of the nation's economy with them — the government's answer was to pass legislation in 1973 to buy out the railroad properties, rationalize and rebuild them, and help return the region's rail network to profitability.

April 1976 saw the creation of Conrail, and billions were invested in the physical plant and rolling stock, while thousands of miles of track were abandoned or spun off. Within a few years, Conrail was making significant progress, but was still bound by the same archaic rules as

the other railroads when it came to competitive rate-making. Making their case to Congress resulted in the Staggers Act of 1980, which led to deregulation of the railroad industry. Again, Conrail made great strides, even declaring a profit for the first time in 1981, but one major problem remained for the freight railroad — the question of commuters.

Conrail inherited commuter operations from its six component railroads making it the second-largest passenger operator in the country after Amtrak. While the commuter services were subsidized, there were still huge losses related to the associated labor contracts and the myriad support facilities like stations and repair shops. Once again, Conrail president Stanley L. Crane appealed to Congress for help realizing its stated goal of returning to profitability (and to the public sector); the result was the Northeast Rail Service Act of 1981,

which directed that all Conrail commuter services must be transferred to new operators by the end of 1982.

Suddenly, the clock was ticking as transit authorities up and down the Northeast Corridor scrambled to come up with a plan (except in Boston, where Conrail's commuter service was taken over in 1977 by Boston & Maine on behalf of the Massachusetts Bay Transportation Authority). It quickly became clear that the three major transit agencies would not be able to pool resources and form one single operating authority. In New Jersey, the state had briefly flirted with the idea of contracting with the newly formed Amtrak Commuter subsidiary, and was even approached by Boston & Maine before ultimately deciding on direct operation under NJ Transit. Philadelphia's Southeastern Pennsylvania Transportation Authority also chose direct operation of its commuter rail lines. After months of



ABOVE: New Brookville BL20GH units replaced venerable EMD FL9s on branch line shuttle trains starting in 2009. MN 110 leads a Danbury Branch train south along Umpawaug Pond at Redding, Conn., on October 10, 2011. OTTO M. VONDRAK PHOTO



RIGHT: A pair of CDOT BL20GH units lead a morning Waterbury Branch train along the elevated main line at East Bridgeport, Conn., on February 4, 2012. These units have recently been repainted to match the rest of the CT rail fleet, minus logos. OTTO M. VONDRAK PHOTO



BELOW RIGHT: Two trains pass each other at milepost 4 near 125th Street in Harlem. The Met Life (former Pan Am) Building marks the location of Grand Central Terminal at 42nd Street. The former New York Central office building is in its shadow. PAT YOUGH PHOTO

study, New York's Metropolitan Transportation Authority also decided that direct operation was the best option. Unlike NJT and SEPTA, the MTA created a brand-new subsidiary — Metro-North Commuter Railroad Co.

This mouthful of a name — containing the redundant “commuter railroad” in its title — would come to symbolize a turning point. Even though the name change took effect on January 1, 1983, the transition was not a smooth one. Metro-North was stuck with the same decrepit fleet of trains that Conrail ran the night before, serving run-down suburban depots on jointed track governed by block signals, interlocking towers, and train orders. Historic Grand Central Terminal was “grand” in name only, as decades of deferred maintenance had taken their toll. On top of it all, a strike on Monday, March 7, brought the new railroad to a standstill, stranding more than 90,000 daily commuters. At stake was who had ultimate authority to determine crew sizes — the unions or the MTA. The strike was broken six weeks later, on April 18, and arbitration found in favor of the railroad. It was a heck of a way to introduce a new service to a wary commuting public.

While it seemed Metro-North had everything going against it, the new railroad had experienced managers and employees dedicated to turning around

its fortunes. One of the first major improvements was the extension of third rail electrification on the Harlem Line from North White Plains to Brewster North (renamed “Southeast” in 2003), a project actually started in 1982 and completed in 1984. Included in the \$75 million project was the construction of 13 new high-level platform stations, as well as the delivery of 142 new M-3 electric multiple-unit cars built by Budd between 1984 and 1985. Wayside signals were phased out, modern cab signals installed, and towers were closed so all dispatching functions could be consolidated in New York. (Only S.S. 75 in New Haven, Conn., remained open until 2004.) The venerable ex-New Haven dual-mode FL9s were sent out for rebuilding to extend their useful service lives as there were no viable new options on the market at the time. New “Shoreliner” coaches built by Bombardier came in to replace the last of

the steam-heated legacy fleet.

Among the many legacies inherited by Metro-North is the four-track Park Avenue Tunnel which funnels all three lines (Harlem, Hudson, and New Haven) into Grand Central. This massive project to sink the tracks below grade was largely completed in 1875, and also included grade separation above the streets of Harlem and across the Harlem River into The Bronx. Metro-North engaged in a study of the tunnel in 1984, which led to a plan for repairs and restoration. Construction began in 1987, which required taking one track out of service for almost a year at a time. Once the \$105 million project wrapped up in 1992, attention turned to the Park Avenue Viaduct. Between 1995 and 1998, the two-mile viaduct was completely rebuilt, which again required taking one track out of service for an extended period of time. The busy station at 125th Street underwent a



six-year renovation that was completed in 1999.

Opened in 1913, Grand Central Terminal replaced the earlier Grand Central Depot built on the same site. The beautiful Beaux Arts palace was built to accommodate 46 tracks and 30 platforms, with the Upper Level designed for intercity trains, and the Lower Level for commuter trains. Grand Central was saved from demolition and redevelopment, thanks to a preservation campaign mounted by

Jacqueline Kennedy Onassis that resulted in its listing on the National Register of Historic Places in 1975 and declared a National Historic Landmark in 1976.

Grand Central has been strictly the domain of commuter trains since Amtrak consolidated all its service to Penn Station in 1991. Reversing decades of neglect, the MTA embarked on a \$113.8 million interior restoration and renovation. All advertisements were removed, including the Kodak Colorama, the



ABOVE: Large newspapers and bulky briefcases have been replaced by tablets and laptop computers, but the advantages of commuting by rail remain the same. OTTO M. VONDRAK PHOTO

LEFT: A Grand Central-bound New Haven Line train uses the flyover ramp over the Harlem Line at Woodlawn Junction, N.Y., on November 3, 2020. The design of the junction allows for the smooth flow of uninterrupted traffic between the two lines. MATT CSERGE PHOTO

Westclox “Big Ben,” and others. The ceiling mural depicting the constellations was revealed under decades of soot and tar, and the new East Stairs were added opposite the West Stairs on the main concourse (following the original plans). The renovations were completed in 1998.

Though the majority of Penn Central's rail assets were transferred to Conrail in 1976, the company retained its extensive real estate holdings. Among them were Grand Central Terminal, as well





ABOVE: With the skyline of lower Manhattan forming the backdrop, two Metro-North "West of Hudson" trains pass each other on NJ Transit's (former Erie Main Line in Lyndhurst, N.J., on April 8, 2021. The New Jersey Turnpike and Hackensack River bridge are in the distance. MARC GLUCKSMAN PHOTO

ABOVE RIGHT: Metro-North F40PH-3C (ex-Amtrak 308) 4909 leads its train past the former Erie Railroad depot in Port Jervis, N.Y., on February 26, 2023. Built in 1892, the station served until it was replaced in the 1980s by a new platform, shelter, and parking lot located nearby. IAN PATRICK PHOTO

RIGHT: A Metro-North train emerges from underneath the historic Bush trainsheds at NJ Transit's (former Lackawanna) Hoboken Terminal on March 26, 2021. Removed in 1942, the terminal clock tower was replaced during a 2009 renovation. MATT CSERGE PHOTO

as the property underneath the Harlem and Hudson lines. These were leased to MTA until an option was exercised to purchase them outright from PC's corporate successor in 2018, completing the transaction in 2020. The completion of Long Island Rail Road East Side Access — since renamed Grand Central Madison — opened in January 2023, adding third and fourth levels of subterranean platforms to the terminal.

Today's Metro-North system consists of 124 stations on five lines, with few changes since 1983. On the Hudson Line, a new park-and-ride station at Cortlandt opened in 1996 to replace two smaller stations at Crugers and Montrose. A station to serve the neighborhood around Yankee Stadium had been proposed since the 1970s, but did not come to fruition until the opening of Yankees-153rd Street station in 2009. This station is also served by special Harlem and New Haven line trains on game days. Starting in 2001, Metro-North embarked on an ambitious project to replace and rebuild the Harmon Diesel and Electric Shop — the railroad's primary shop facility — portions of which dated to 1906. The final phase of construction was completed between 2015 and 2022.

On the Harlem Line, only Thornwood station was closed by Metro-North in



1984 due to low ridership and the sharp curvature of the tracks which prevented construction of a new high-level platform. The park-and-ride at Brewster North was renamed "Southeast" in 2003 at the request of the town. After service to Chatham was discontinued in 1972, all trains terminated at Dover Plains (through freight service to Chatham ended in 1976, with most of the tracks removed by 1981). A six-mile extension north from Dover Plains to Wassaic that opened in 2000 represented the system's first route expansion, and included re-opening of the Tenmile River (former State School) station. Wassaic is home to a small layover yard and a 342-space parking lot for commuters (most of whom come from nearby Connecticut and Massachusetts).

The only privately constructed station on Metro-North is Merritt 7 on the New Haven Line Danbury Branch. Built by

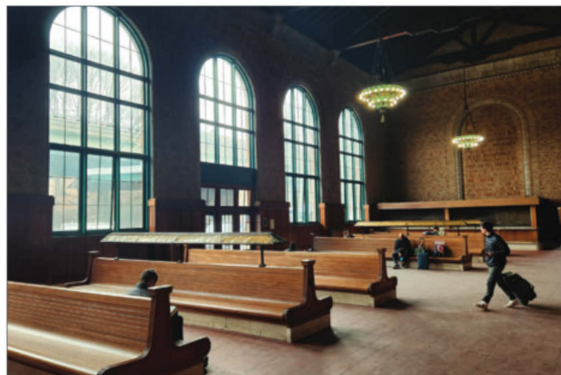
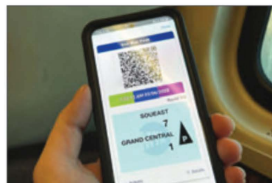
the same developers who built the suburban office park, the station opened in 1985, replacing a stop at nearby Kent Road. New Haven State Street station opened in 2002, less than a mile east from New Haven Union Station, to provide service a bit closer to downtown (albeit served only by a handful of rush-hour trains). Two infill stations have opened on the main line in recent years, including Fairfield Metro in 2011, and West Haven in 2013. Another station was proposed for Orange, but work was halted in 2017. In recent years, studies have examined the possibility of re-electrifying the Danbury Branch, and extending service north to New Milford over tracks currently owned and operated by Housatonic Railroad.

Launched in 2021, the Penn Station Access project includes the construction of four new stations in the East Bronx at Hunts Point, Morris Park, Co-op City,

and Parkchester/Van Nest, and gives Metro-North's New Haven Line access to Penn Station via Amtrak's Northeast Corridor route over Hell Gate Bridge. Construction is underway, with service expected to begin as early as 2027. Phase Two of this project would potentially see Hudson Line service extended south from Spuyten Duyvil down Amtrak's (ex-NYC) Empire Connection to access Penn Station. New stations would be built

at West 125th Street and West 62nd Street. No timeline or budget has been announced for this portion of the project.

Amid this growth, Metro-North shed significant mileage with the pending abandonment of the Beacon Line. Connecting the Hudson Line at Beacon, N.Y., with the Harlem Line at Dykemens (just above Brewster), and the Danbury Branch at Danbury, Conn., this strategic line was used for training purposes as well as occasional equipment moves and public excursions. Citing increasing maintenance costs and no plans for development of regular service, Metro-North filed for abandonment up to the Connecticut state line in 2021. Housatonic Railroad objected, claiming the loss of freight rights inherited from Conrail in 1993. With no new freight business developing, Housatonic dropped its objection in 2023, clearing the way for the abandonment petition to be approved.



**Current Operations**  
Metro-North operates three lines out of Grand Central Terminal, including the Hudson Line to Poughkeepsie, the Harlem Line to Wassaic, and the New Haven Line to New Haven, Conn., with branches to New Canaan, Danbury, and Waterbury. MTA and Metro-North operate the New Haven Line on behalf of Connecticut Department of Transportation, an agreement that dates back to 1970. In fact, the section from New Rochelle, N.Y., to New Haven is the only portion of the Northeast Corridor not owned or dispatched by Amtrak.

Service on Metro-North's three main lines is frequent, with most stations hosting departures nearly every 20 minutes during "peak" travel from 5:00AM to 9:00AM and again from 4:00PM to 8:00PM, dropping to hourly or half-hourly during the "off-peak" times. All three lines are generally split into two zones, with overlapping local service. On the Hudson Line, the split is at Croton-Harmon. On the Harlem Line, the split is at White Plains, though the northern section from Southeast to Wassaic is often regarded as a third zone or "branch." The split on the New Haven Line is at Stamford, and rush-hour through trains to New York are operated from both New Canaan and Danbury. Waterbury branch trains terminate at Bridgeport.

LEFT TOP: Customers are encouraged to use the new TrainTime app to purchase tickets. Once on board, you are prompted to "activate" your ticket to be scanned by a conductor.

LEFT MIDDLE: The Hudson Line terminus of Poughkeepsie, N.Y., retains much of the grandeur from its opening day in 1918, though the newsstand and snack bar were victims of pandemic restrictions. The station is also an Amtrak stop.

LEFT BOTTOM: Designed by architect Cass Gilbert and opened in 1920, New Haven Union Station is as busy as ever, serving Metro-North, CTRail, and Amtrak trains, as well as local and regional bus routes.

BELOW: Southeast lies at the northern end of the Harlem Line electric zone, and offers a spartan transfer to diesel shuttles operating north to Wassaic. OTTO M. VONDRACK PHOTOS



Not all commuters are destined for New York. Metro-North is unusual as it hosts a fair number of "reverse" commuters who travel north from New York to corporate centers in Yonkers, Tarrytown, White Plains, Greenwich, and Stamford. The New Haven Line sees the highest amount of reverse commuting, as well as intrastate rides between major cities like New Haven, Bridgeport, South Norwalk, and Stamford. Reverse commuters are not just tech and finance people; Metro-North carries a significant number of building staff and service workers to hospitals and care centers, as well as domestic and childcare workers between Manhattan, The Bronx, and the suburbs.

The new combined MN and LIRR TrainTime app was introduced in 2022, allowing customers to look up schedules, plan trips, and purchase tickets from their phones. Ticket vending machines are still available at every station, and some outlying stations still post ticket agents during rush hours.

West of Hudson, things get a little interesting. Metro-North's 95-mile Port Jervis Line originates from NJ Transit's historic Hoboken Terminal, but MTA funds only the portion north of the state

line at Suffern, N.Y. MTA also funds service to three stations in New York located at the end of NJT's Pascack Valley Line to Spring Valley. Metro-North pools equipment and crews with NJT for operation on these lines, though Metro-North began leasing the tracks north of Suffern from Norfolk Southern starting in 2003. Almost all trains departing Port Jervis make all local stops to Suffern, one additional stop at the park-and-ride at Route 17 in Mahwah, N.J., and then run express to Secaucus Junction — allowing a transfer connection to New York Penn Station — and Hoboken Terminal. Most trains departing Spring Valley make all stops to Secaucus Junction and Hoboken, with two morning trains that run express from Nanuet. At Hoboken, commuters have the option of boarding a Port Authority Trans-Hudson train or a ferry to complete their trip to Manhattan.

The oldest cars in the fleet are the Budd M-3 m.u. cars built between 1983 and 1984, and operate in married pairs. As of this writing, only a handful remain in service to protect some rush-hour schedules. Arrival of 336 Bombardier M-7As between 2004 and 2006 allowed

#### Rolling Stock

All service in East of Hudson electrified territory is provided by a fleet of electric multiple-unit (EMU) cars. An under-running 600-volt d.c. third rail powers the Hudson Line from New York to Croton-Harmon, and from New York to Southeast on the Harlem Line. Overhead wire on the New Haven Line from Woodlawn Junction to Pelham, N.Y., was replaced with third rail in 1993. Trains switch over to 11,000-volt a.c. catenary for the main line run to New Haven and the branch to New Canaan (the Danbury Branch was also electrified until 1961).

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RIGHT: Metro-North GP35Rs 108 (ex-Chicago & North Western 831) and 101 (ex-Reading 3641) lead a welded rail train south through the curve at Spuyten Duyvil in The Bronx on May 23, 2021. These diesels were acquired to replace GE B23-7s leased from Conrail. Amtrak's Empire Connection to Penn Station is on the left.

RIGHT BOTTOM: An elevated view of Harlem-125th Street station on the afternoon of August 30, 2018, shows a wide cross section of the Metro-North diesel and electric roster. This area has historically been a busy commercial and residential neighborhood, enjoying a bit of a resurgence in recent years.

BELOW: Bracketed by Metro-North and CDOT P32s, the railroad's employee Holiday Train special makes its way north on the Hudson Line at Annsville Creek causeway near Peekskill, N.Y., on December 13, 2021. The end cars are former Lackawanna Phoebe Snow observation cars, while the middle car is a former New York Central coach, and are normally used for inspection trains. MARC GLUCKSMAN AERIAL PHOTOS



ABOVE: In a scene that has not changed much since the New York Central days, a set of M-7As crosses over the Bronx River on March 24, 2020, at Scarasdale, N.Y., on the Harlem Line. GREGORY GRICE PHOTO

LEFT TOP: MN GP40FH-2 4906 leads a train of Bombardier Comet IV coaches over the Moodna Viaduct, approaching the station at Salisbury Mills, N.Y., on the Port Jervis Line, on July 15, 2022. This route was once part of Erie Railroad's freight-only Graham Cut-off, and became the primary route after the Main Line was abandoned by Conrail between Harriman and Otisville in 1984. MARC GLUCKSMAN AERIAL PHOTO

LEFT BOTTOM: A Hudson Line train sails past Breakneck Ridge, viewed from the opposite shore of the Hudson River on October 28, 2020. The distinctive rocky cliffs of the landmark 1,260-foot peak have long been a photographer's favorite. A flag stop for hikers is also located near here. MATT CSERGE PHOTO

CTrail. The BL20GHs are currently being rebuilt by MotivePower with Cummins QSK50 prime movers as part of a program started in 2019.

"West of Hudson" is home to an interesting collection of diesels assigned to the equipment pool used by NJT and MN on the Port Jervis and Pascack Valley lines. In 1987, Morrison-Knudsen rebuilt 21 EMD GP40s into HEP-equipped GP40FH-2s, combining the standard cab and frame of a GP40 with the cowl from retired Burlington Northern F45s. Six units (4900-4905) are owned by Metro-North and currently painted in silver, red, and blue. Metro-North also owns a single GP40PH-2, numbered 4906, also wearing silver, red, and blue. Eight F40PH-3C units (4907-4914) round out the fleet of rebuilt EMD diesels. All these are expected to be replaced in the next few years by a new series of Siemens Charger SC-44s currently on order.

The first new coaches to arrive on the property included 43 "Shoreliner" cars built by Bombardier in 1983 (based off a Pullman-Standard "Comet" design built in 1970 for NJDOT), followed by 34 "Shoreliner II" cars in 1987-1988. The coaches were equipped with trap doors to allow boarding at both high- and low-level platforms. Delivery of these cars allowed Metro-North to mercifully retire

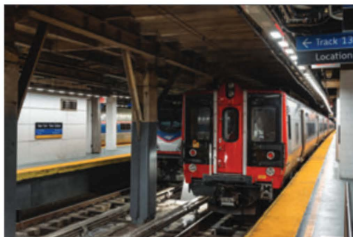
retirement of the M-1 "Metropolitan" cars and the oldest New York Central-era ACMUs from the 1960s. While MTA Long Island Rail Road ordered 416 Kawasaki M-9 cars to upgrade the fleet and prepare for expanded service, Metro-North has yet to exercise its option for these new cars. For whatever reason, there was never an "M-5" series built for MN or LIRR.

The New Haven Line fleet of m.u. cars is unique as they have to operate off both d.c. third rail and a.c. catenary. The first Budd M-2 "Cosmopolitan" m.u. cars were delivered in 1972, followed by Tokyu Car M-4s in 1988, and Morrison-Knudsen M-6s in 1994. The delivery of 471 Kawasaki M-8s between 2014 and 2018 allowed the retirement of the older cars, with the last of the M-2s exiting the roster in 2018 (which included the nation's last commuter bar cars retired in 2013). CDOT has an option to order an

additional 60 M-8s to upgrade its Shore Line East service that operates from New Haven to New London, as well as a projected service expansion over Amtrak's Hell Gate Bridge route from New Rochelle into New York Penn Station.

On the diesel side, Metro-North's iconic fleet of ex-New Haven FL9s rolled its last revenue miles in February 2009, replaced by a fleet of 31 General Electric P32AC-DM dual-mode diesels built between 1995 and 2001. They can be found hauling trains on all three lines, with four units owned by CDOT (228-231) wearing a sharp rendition of the McGinnis-inspired New Haven scheme.

To handle branch line and shuttle services that do not operate into Grand Central, 12 BL20GH units were delivered by Brookville Equipment Corp. in 2008; 110-115 are in MN paint, while 125-130 are owned by CDOT and currently wear paint based on the same design used by



ABOVE: As part of the Penn Station Access project, a set of Metro-North M-8s was hauled into Penn Station to check clearances on February 27, 2023. GREGORY GRICE PHOTO



RIGHT TOP: A northbound Hudson Line train approaches Dobbs Ferry, N.Y., with the George Washington Bridge and New York City skyline 20 miles distant on January 30, 2017. STEVE BARRY PHOTO

RIGHT BOTTOM: Opening in January 2023, the new Grand Central Madison (formerly East Side Access) station adds new Long Island Rail Road service two levels under Grand Central Terminal. OTTO M. VONDRAK PHOTO



the last of the "legacy" equipment, much of which was steam-heated and lacked modern amenities. The 49 "Shoreliner III" coaches built between 1991 and 2002 introduced a center door for rapid loading and unloading at high-level platforms. An additional 11 "Shoreliner IV" cars joined the fleet between 1996 and 2022. All cars sport either a blue stripe representing ownership by MTA, or a red stripe representing CDOT, though cars of different liveries are mixed in pool service on all three lines.

Coaches for West of Hudson are contributed to the NJT pool for operation on the Port Jervis and Pascack Valley lines. The majority of the fleet includes 65 Alstom "Comet V" coaches shared with NJT, though some cars carry MN logos. Nineteen Bombardier "Comet II" coaches built between 1983 and 1987 and previously assigned to West of Hudson were transferred east and rebuilt in 2009.

The non-revenue fleet includes two Brookville BL14CGs (401-402), as well as eight EMD GP35Rs (101-108) initially rebuilt by Conrail in 1993 to replace B23-7s that had just come off a 10-year lease to MN. Metro-North maintains a modest fleet of non-revenue freight cars assigned to work service, including box-cars, gondolas, flatcars, and hoppers. Metro-North's official inspection train used for special occasions by management includes MN 1 and MN 2, ex-Lackawanna tavern-lounge observation cars once assigned to the *Phoebe Snow*, and

MN3, an ex-New York Central stainless-steel coach.

#### New Challenges

When Metro-North celebrated its 30th birthday in 2013, the railroad faced a number of challenges, including its first accident resulting in fatalities. On May 17, a southbound New Haven Line train derailed between Fairfield Metro and Bridgeport stations. A train traveling in the opposite direction collided with the derailed train, injuring 65 passengers. Investigation by the National Transportation Safety Board determined the cause of the derailment was a broken compromise joint bar (used to join two different sizes of rail), and criticized the railroad's track inspection procedures. On December 1, a southbound Hudson Line train derailed on the sharp curve leading into Spuyten Duyvil station in The Bronx, killing four passengers and

injuring 61 of the 115 on board. The NTSB investigation revealed the train was traveling 82 mph in a section of track rated for 30, and that the engineer's previously undiagnosed sleep disorder was the reason for his inattention to the curve's speed restriction.

As a result of these incidents, plus two more in 2013 where a track worker was killed on the New Haven Line on May 28, and another derailment at Spuyten Duyvil involving a CSX freight train on July 18, Federal Railroad Administration Director Joseph Szabo demanded an immediate investigation by MTA into the safety culture at Metro-North. The results of "Operation Deep Dive" were released to Congress in March 2014, and revealed an overemphasis on on-time performance, a poor safety culture, and an ineffective training program. Improved training and a revamped safety culture were implemented. Part of the

railroad's response was to revamp its training programs and enforce reduced speeds systemwide, as well as accelerate the installation of positive train control — a project completed at the end of 2020. Despite these improvements, speed restrictions and padded schedules remain in effect, extending commuting times for many riders.

The railroad faced its second biggest challenge in the wake of global pandemic restrictions that were put in place starting in March 2020. In 2019, Metro-North posted record ridership totals of 86.6 million passengers, a 100,000-passenger increase over 2018, and its highest ever since 1983. With executive orders temporarily closing all non-essential businesses, ridership plummeted as remote work from home took the place of commuting. Ridership totals for 2020 were just 27.1 million, climbing up to 30.7 million in

2021. Metro-North counted 48.8 million riders in 2022, which is a modest gain compared with the last few years, but only about 60 percent of its pre-pandemic totals.

To put all this in perspective, nearly four million people from New York, Connecticut, and New Jersey would commute into New York City on a daily basis. Since pandemic restrictions have lifted, less than half of those people have returned to their offices. Across bus, subway, and rail, total ridership is down by one-third. Pre-pandemic, Metro-North recovered about 40 percent of its funding from the farebox. According to data supplied by MTA, that figure has dropped to an average of 20 percent, forcing heavy reliance on federal funding and increased fares.

Such a dramatic drop in revenue makes it difficult not only to maintain

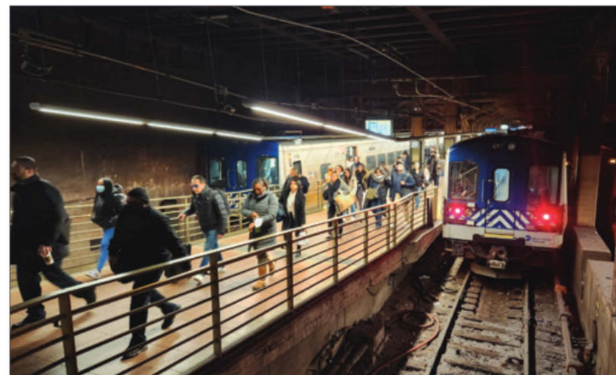
regular service, but also to plan for the future. Remote work is now the new normal, and we're unlikely to see a dramatic shift back to office culture any time soon. Some agencies estimate it may take a decade or more to restore ridership to previous levels. In the meantime, the railroad is still facing the future optimistically, looking to expand service to Penn Station and also replace its aging fleet of General Electric P32s with brand-new Siemens Chargers. Yet other improvements and expansions may be put on hold for a few years — maybe even indefinitely.

I recently spent a few days in New York to ride the trains and get a feel for how things are going in this new era of remote work and three-day office schedules. I rode trains on all three lines, rush hour and midday, diesel and electric. Trains were full, but not packed standing-room-only as they had been in the past. Even with the infusion of commuters from Long Island, Grand Central has yet to return as the buzzing hive of transportation it once was. Gliding on smooth welded rail along the Hudson River, you can see the parking lots of suburban stations. Some are full, but many are not. It's a stark reminder of the challenges Metro-North and many other American commuter railroads face in the 2020s. ■

*Dedicated to the hard-working men and women of Metro-North, especially those who took time to teach a young railfan about how the railroad worked; including John Alderucci, Bob Bang, Lew Catone, George W. Kowanski, Ron Yee, and Walt Zullig.*



LEFT TOP: Part of the New Haven Line's infrastructure includes movable spans like the Scherzer rolling lift bascule bridge over the Saugatuck River at Westport, Conn., built in 1905 and slated for future replacement. This busy route is shared with Amtrak as well as nocturnal freight trains operated by Providence & Worcester and CSX. MATT CSENJE PHOTO



LEFT BOTTOM: Commuters stream out of trains on the Upper Level of Grand Central Terminal on March 6, 2023. OTTO M. VONDRAK PHOTO

BELOW: Despite the march of technology, the time-honored tradition of conductors cutting paper tickets still survives. OTTO M. VONDRAK PHOTO

