



Volume 67, Number 5 | May 2024

Commuter Rail Discounts for the Bronx and Queens

The MTA board has approved a pilot program to make transit an even more attractive option as congestion pricing launches in June. This is to offer a 10-percent reduction on the price of monthly commuter rail tickets within New York City. The program is designed to appeal to people in the outer boroughs who might consider switching to transit from driving into the Manhattan Central Business District.

The program is funded by the Outer Borough Transportation Account, created in 2018 by the New York State Legislature to provide \$50 million per year to improve transportation in the Bronx, Brooklyn, Queens and Staten Island in association with congestion pricing.

The commuter rail monthly ticket discounts would begin in July. They come on top of existing 10-percent discounts put in place systemwide on the LIRR and MNR in March 2022 to encourage post-pandemic ridership recovery. They complement the expansion of City Ticket, highly discounted one-way tickets valid for travel within

New York City, from weekend-only to all off-peak trains in March 2022 and to peak trains in August 2023.

The LIRR has 24 stations in Brooklyn and Queens and MNR has 13 stations in the Bronx, as well as a stop in Harlem. CityTicket will be valid for travel to and from Grand Central Terminal and Penn Station. MNR service will expand to the East Bronx following the completion of Penn Station Access, which will add four new stations at Hunts Point, Parkchester/Van Nest, Morris Park and Co-Op City. This project broke ground in December 2022.

The MTA estimates the cost of the discount to monthly tickets will be \$4 million per year. These costs will be totally paid for by the Outer Borough Transportation Account, which is also funding toll rebates announced for Bronx residents who use the Henry Hudson Bridge and Queens residents who use the Cross Bay Bridge.

MTA PRESS RELEASE, April 30

Electric Railroaders Association

Founded August 15, 1934 by E.J. Quinby P.O. Box 3323 New York, N.Y. 10163 https://erausa.org

Editorial Staff Editor-in-Chief

Jeff Erlitz

Associate Editor

Subutay Musluoglu

Circulation Managers

Robert Colorafi (Electronic) David Ross (Print)

Contact

erausa.org/contact

Subscriptions

The *Bulletin* is published monthly and sent free to all ERA members.

Back Issues

PDFs of previous issues can be downloaded at erausa.org/bulletin

In This Issue

Worldwide Electric Railway, Metro and Tramway Openings	3
Rail News in Review	3
London Overground Lines Assigned Names	17
Jacques Cooper, Designer of France's TGV, Dies	20
LIRR M9 Car Delivery History	22
Book Review	23
Travels with Jack May	24

Trip Notices

September 6-9, 2024: ERA convention in Edmonton and Calgary, Alberta, Canada. Visit https://erausa.org/conventions/2024/ for all the details.

Cover Photo

The season opening game for the New York Yankees was on Friday, April 5. As has been recent custom, the New York Transit Museum operated both the IRT Lo-V cars and the "Train of Many Colors" from Grand Central to 161 Street-Yankee Stadium in revenue service. After their arrival at 161 Street, the trains relayed north of 167 Street and were then posed on the middle track at 161 Street station. Jack May caught the train of Low-V cars just north of 161 Street in nearly perfect sunlight. Jack May photo

Donations

The ERA Board of Directors express their deepest appreciation for these member donations in March 2024.

\$500 to \$999

Richard Cotton

\$100 to \$499

Josh Howard

\$50 to \$99

Bill Closs

Up to \$49

Geoffrey McCarthy

ERA is a 501(c)(3) tax exempt corporation. Your donations are fully tax deductible and can be made either with your membership renewal or using our donation form on our website: www.erausa.org/donate. Your donation helps to maintain ERA's 90-year long tradition of traction education and entertainment!

Monthly Zoom Meeting

Friday, June 7, 2024 at 7:30 PM. (Note change of date!)

Presenting This Month: David Alff

Join Dave as he tells the story behind one of America's greatest infrastructural achievements: the electrification of the Northeast Corridor. It begins with Thomas Edison's experiments with electro-magnetic railways, which tipped off a decades-long battle between A.C. and D.C. traction. Turning to the corridor itself, we will see how the New Haven Railroad pioneered the development of overhead catenary, and how the Pennsylvania Railroad spent New Deal relief funds to string wire from New York to Washington. The talk will conclude by describing the physical and political challenges Amtrak faced when it electrified the corridor between New Haven and Boston in the 1990s.

David Alff teaches in the English Department at SUNY-Buffalo. Professor Alff is a new speaker to ERA with a unique and comprehensive view of a historic rail corridor. Don't miss this presentation!

How to Join Our Zoom Meeting

The Zoom registration link for this meeting is: https://us02web.zoom.us/meeting/register/tZUuceGprjoqEtPIOvDGwP2-NrP2xNgWwJ9A. You can sign in at 7:15 PM. The show begins at 7:30 PM. If you have any problems, email Paul Grether at grether@mindspring.com, or on the night of the meeting, text or call Paul at 404-434-0453.

A Message from President Bob Newhouser

Both Zoom moderators Paul Grether and I are away for most of the month of May. That meeting, originally scheduled for May 31, will now be held on June 7, 7:30 PM.

Our June 7 meeting will feature a fascinating presentation by David Alff on his recently published book, *Northeast*

Corridor—The Trains, The History, The People, The Region. This book has received favorable reviews by Bloomberg News, and will soon be reviewed by the Wall Street Journal. Don't miss this new speaker and topic!

Worldwide Suburban Electric Railway, Metro and Tramway Openings in April 2024

Date	Country	City	Segment	Distance (miles)	Rail/ Metro/ Tram
4/1	China	Shaoxing	Line 1: Huangjiu Town to Daqingsi	2.5	М
4/5	France	Paris	T3b: Porte d'Asnières to Porte Dauphine	2.0	Т
4/8	Qatar	Doha/Lusail	Al Wessil to Rawdat Lusail Tarfat South to Seef Lusail North	?	T
4/26	China	Qingdao	Line 6: Hengyunshan Road to Lingshan Bay	19.0	М
4/27	U.S.A.	Seattle	Line 2: South Bellevue to Redmond Technology	6.6	T

URBAN RAIL NEWS, APRIL 30

Rail News in Review

New York Metropolitan Area

Earthquake Rattles the Region

A magnitude-4.8 earthquake rumbled through the northeastern United States at 10:23 AM on Friday, April 5 according to the United States Geological Survey (U.S.G.S.), sending tremors from Philadelphia to Boston and jolting buildings in Manhattan and throughout the five boroughs.

The U.S.G.S. reported that the earthquake's epicenter was near Whitehouse Station, N.J., about 40 miles west of New York City. The agency estimated the depth of the bedrock rupture at 2.9 miles.

In the city, NYC Transit reported that no structural damage had been reported and there were no service disruptions. Likewise, both LIRR and MNR reported no damage and minimal to no service disruptions.

The same could not be said over in New Jersey where NJT's Raritan Valley Line is located on top of the epicenter of the quake. Across NJT's rail network there were minor intermittent service disruptions to enable crews to carefully inspect all bridges, as well as the general rights-of-way. Luckily, no major damage was reported and normal train service shortly resumed.

By the end of April, almost 100 aftershocks have rattled the region, centered on Somerset County but felt as far away as eastern Pennsylvania, southwestern Connecticut and central Long Island.

METROPOLITAN TRANSPORTATION AUTHORITY (MTA)

Arts & Design Book Released

The MTA celebrated the book launch of *Contemporary Art Underground*, which was released on Wednesday, April 24. It features 103 new artworks completed between 2015 and 2023 across New York's transit system and offers a behind-thescenes look at how these works were conceived, fabricated and installed.

Organized into ten chapters, the book journeys across the city's boroughs, from Manhattan and Queens to the Bronx, Brooklyn, and Staten Island, and beyond. Several chapters focus on monumental projects in major stations and reconstruction initiatives —the World Trade Center, Second Avenue Subway, Hudson Yards, Times Square, and Grand Central Madison — highlighting how they uniquely engage with and inform their surroundings.

The book, written by MTA's Arts & Design Director for 30 years, Sandra Bloodworth, and Deputy Director Cheryl Hageman, shares the stories behind these permanent works, from artist selection through the translation of an artwork into a large-scale, site-specific installation. It features an impressive roster of artists whose work is now publicly accessible, often for the first time and dives into how the mediums are chosen for their resilience in the transit environment, ranging from colorful mosaics and dazzling

glasswork to robust metal sculptures. MTA PRESS RELEASES, April 11 and April 24

Start of Congestion Pricing Announced

The MTA announced that Central Business District Tolling, the country's first congestion pricing program, will begin in the Congestion Relief Zone (south of 60th Street) early on Sunday, June 30, at 12:00:01 AM.

Eighty percent of the revenue generated (about \$1 billion annually) will go to capital improvements on NYC Transit subways and buses, ten percent to MNR and ten percent to LIRR. Projects to be supported by congestion pricing include ADA upgrades, new electric buses, new subway and commuter railroad cars, systemwide state-of-good-repair work and expansion projects like Second Avenue Subway Phase 2. For a sample of projects, view the map at https://new.mta.info/document/133541.

The MTA also opened the application portals for discount and exemption plans, with detailed information on who qualifies and how to apply. Those who wish to learn more about eligibility for discounts or exemptions, and/or apply can visit https://new.mta.info/tolls/congestion-relief-zone/discounts-exemptions.

MTA PRESS RELEASE, April 26

Reduced-Fare MetroCards Now Available at All Customer Service Centers

Riders aged 65 and over can now enroll in the Reduced-Fare program and receive their new Reduced-Fare MetroCards on the same day at Customer Service Centers (CSCs) across New York City. Riders with disabilities can also sign up for the Reduced-Fare program and receive in-person, individualized assistance from a station agent at CSCs and receive temporary Reduced-Fare cards while their applications are processed. Once fully enrolled, riders receive a Reduced-Fare MetroCard valid for two years and can reload their cards with either value or time. Station agents are available to assist those who have lost their cards or are experiencing problems by resolving the issue or issuing temporary Reduced-Fare MetroCards at the CSCs.

Reduced-Fare riders can head to the CSCs in all five boroughs at the following locations:

- 34 St-Penn Station 123
- · 125 St 4 5 6
- 161 St-Yankee Stadium 4 B D
- 168 St 1 A C
- Atlantic Av-Barclays Ctr 2345BDNOR
- · Coney Island-Stillwell Av B D N O
- Fordham Rd 4
- · Flushing-Main St 🕜
- Fulton St 2345ACJZ
- · Jackson Hts-Roosevelt Av 7 E D M R
- · St. George SIR
- Times Sq-42 St 1237 N Q R W
 In addition to visiting their nearest CSCs, riders can

receive assistance at Mobile Vans, the New York City Transit Customer Service Center located at 3 Stone Street in Lower Manhattan or apply via mail or online. All current Reduced-Fare MetroCard holders will receive a Reduced-Fare OMNY card at a later date.

MTA PRESS RELEASE, April 29

NEW YORK CITY TRANSIT (NYCT)

IRT Broadway Line Station Work

Starting on April 1 and continuing to April 22, the south-bound platform at 50 Street Station is out of service for some station renovation work.

The work consists of platform topping, column repairs, tile work and grouting. Navillus Contracting, Inc. is performing this work under contract A-37217. Southbound 1, 2 and 3 trains, when operating on local Track 1, bypass the station and resume normal operation at Times Square.

On April 22, this same contractor, under the same contract, started work on the northbound platform at 86 Street. As at 50 Street, northbound 1, 2 and 3 trains, when operating on local Track 4, bypass the station and resume normal operation at 96 Street. This work is scheduled to be completed on May 13.

Metropolitan Av/Lorimer St 😉 🕕 Stations Now Accessible

The Metropolitan Avenue **(G)** and Lorimer Street **(I)** Stations are now accessible to riders in accordance with the Americans with Disabilities Act (ADA). The project included the installation of six new elevators, three at each station, with one street elevator and two mezzanine-to-platform elevators at each station. In addition to the new elevators, two new platform stairs were built for better passenger circulation at Metropolitan Avenue, and six sets of stairs were built, four on the platform and two street-level, and one set of street-level stairs was newly refurbished to meet ADA compliance at Lorimer Street.

Other station upgrades include new tactile strips on platform edges, new ADA boarding areas, new accessible fare control equipment at both station entrances, as well as new station signage, broken tile replacement on the stations' ceilings and walls and a new public announcement system.

The newly installed elevators include new fire alarm systems, smoke and heat detectors and cameras inside the elevator cabs. Each elevator is also equipped with an emergency two-way communication system which gives riders the ability to communicate with dispatchers in the event of an emergency via standard voice communications or visually by answering on-screen questions, which improves communication for riders with hearing or speech disabilities. The mezzanine area around the new elevators was also regraded to create ADA-accessible pathways.

These station upgrades were fully funded by a grant from the Federal Transit Administration (FTA). This project



View south towards the new street-to-mezzanine elevator just off the northwest corner of Lorimer Street and Metropolitan Avenue on April 1. Marc A. Hermann/MTA photo

marks the completion of an ADA-improvement package of eight subway stations, which is MTA Construction & Development's first such package being delivered through innovative contracting tools such as design-build and project bundling. Metropolitan Avenue also received "State of Good Repair" work alongside these upgrades.

The ADA upgrades at Metropolitan Avenue provided an opportunity for Brooklyn-based artist Jackie Chang to add two new compositions to her existing installation of six mosaics, titled *Signs of Life*. The artwork is centered on graphic symbols and bold text to spark contemplation as "food for thought" for those traveling through the station. The new mosaics were added to the Metropolitan Avenue mezzanine, where all eight mosaics can now be appreciated by those entering and leaving the station.

At Lorimer Street, Brooklyn-based artist Chloë Bass was commissioned by MTA Arts & Design to create mosaic artwork for the reconfigured fare control area in the station's entrance. Titled *Personal Choice #5*, the artwork features various gestures of touch in three compositions, overlaid with text written by Bass. The artwork is a poetic representation of human connections. *Personal Choice #5* was unveiled as part of the station upgrade project that was celebrated during the press conference on location on April 1. MTA PRESS RELEASE, April 1

Museum Trains Operate to Yankee Stadium

On Friday, April 5, the New York Transit Museum operated both of their vintage IRT trains to the season opening game of the New York Yankees.

At about 8:30 AM, the museum trains left their respective yards at 207th Street and 239th Street and proceeded light to the original South Ferry Station. The Lo-V train waited on inner Loop Track B while the Train of Many Colors (TOMC) waited on outer Loop Track A.



The Train of Many Colors arrives at 161 Street-Yankee Stadium. Ray Raimundi/MTA photo

At about 10:45 AM the trains proceeded light to Grand Central via express Track 3, with no revenue trains between them. At about 11:00 AM, both trains loaded their passengers and fans and operated non-stop to 161 Street-Yankee Stadium.

After discharging their passengers, the Lo-V relayed north of Burnside Avenue while the TOMC relayed north of 167 Street. Both trains were then staged on Track M at 161 Street until the start of the game. They then returned to their respective yards.

Flushing Line 7 Station Work

Following up on the news item in last month's *Bulletin*, the station renovations on the southbound platforms at 82 Street-Jackson Heights and 111 Street Stations finally wrapped up on Friday, April 19. We had stated that it was supposed to be completed on March 31 but the contractors needed another three weeks.

Work on the northbound platforms at those two stations is supposed to get underway on Monday, May 6.

MTA PRESS RELEASE, April 19

Station Re-NEW-Vation Program

During April, the following stations were completed:

Station	Weekend
Jamaica-Van Wyck 🗉	April 6-7
Sutphin Blvd-Archer Av 🖹 🗓 🗷	April 6-7

In related news, the next group of stations to be included during the second quarter in this program were announced on April 23. These stations include:

- Rockaway Park-Beach 116 St A S
- Harlem-148 St 3
- 18 Av 🕦
- Bay Parkway
- Eastchester-Dyre Av 5
- Beach 90 St AS
- 116 St 6
- Gates Av
- Prince St R W
- Flushing Av G

- Grand Av-Newtown MR
- · Franklin Av S
- Greenpoint Av G

MTA PRESS RELEASES, April 7 and April 23

New R-142/142A Destination Signs

As some of you subway riders may have already noticed, the side destination signs on the R-142/142A fleet are getting replaced. The original liquid-crystal electronic signs are being exchanged for dot-matrix LED signs.



One of the new side destination signs on an R-142 on the ②. This sample was seen at Nevins Street on April 11. Jeff Erlitz photo

Though still mostly legible, the original signs were beginning to wear out. These tended to show up with "faded" lettering. The new LED signs are noticeably brighter and easier to read.

Westchester Yard to Get Flood Protection

The MTA has received a federal grant for \$33.2 million from the Federal Highway Administration through its Promoting

(Below) Aerial view of Westchester Yard. Google Maps

Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Discretionary Grant Program. The federal funding will be put towards strengthening resiliency efforts at the Westchester Yard on the 6 line, which is in a low-lying area, has repeatedly seen significant ponding during heavy rains and flash floods.

The 3 line was the busiest subway line in 2023, carrying approximately 140 million riders for the year, more than the LIRR and MNR combined. On an average weekday, it serves over half a million riders in the Bronx and Manhattan. The Westchester Yard houses all 49 trains that operate on the line, as well as much of the IRT work train fleet.

MTA PRESS RELEASE, April 17

LONG ISLAND RAIL ROAD (LIRR)

M9 Car Order Completed

On April 3, the LIRR received the final pair of M9 cars under the 202-car order. Built by Kawasaki Rail Car, initial assembly was performed at Kawasaki's Lincoln, Neb. plant with final assembly done nearby, at their Yonkers, N.Y. facility.

The first pair of cars were delivered almost exactly five and one half years ago, on October 26, 2018.

The following table is a summary showing how many cars were delivered during each year:

Year	Cars Delivered	Year	Cars Delivered
2018	2	2022	28
2019	38	2023	20
2020	50	2024	6
2021	58		

As you can see, the middle two years saw the most deliveries. A chart showing all of the individual delivery dates can be seen on page 22.

Master Tenant for Grand Central Madison Retail?

The MTA released a Request for Proposals seeking a developer to bring retail and dining to the LIRR's Grand Central Madison concourse. With 32 retail units available across



25,000 square feet of space, the master tenant would curate and manage a diverse and lively collection of retailers. The number of LIRR passengers traveling through Grand Central Madison has continued growing since its 2023 opening, currently running as high as 66,000 on the busiest weekdays (Tuesday-Wednesday-Thursday).

With the resurgence of commuters passing through the 700,000 square foot terminal, there is a growing demand for mixed-use retail and dining establishments. Last month, Tracks Raw Bar & Grill became the first restaurant to sign a lease to operate in Grand Central Madison and is expected to open this year. A survey conducted by the MTA last summer revealed a majority of commuters are traveling five times a week, 71 percent of users who previously traveled through Penn Station frequented its retail, and almost half of commuters, 47 percent, responded they would consider skipping a train for retail.

MTA PRESS RELEASE, April 2

Rob Free Appointed as 42nd President

MTA Chair and CEO Janno Lieber appointed Rob Free as the 42nd president of the LIRR. Free served as LIRR's acting president for the last six months. He began his career with the railroad as a station cleaner 31 years ago, rising through the ranks to become Chief Transportation Officer and Senior Vice President of Operations before becoming President.



Rob Free at Grand Central Terminal. Marc A. Hermann/MTA photo

Free is married with four children and has commuted by train from his home in Port Jefferson for 25 years.

MTA PRESS RELEASE, April 11

LIRR Celebrates 190th Anniversary

Various government and MTA officials celebrated the 190th anniversary of the founding of the Long Island Rail Road on April 24, 1834 with a press conference on the concourse in Grand Central Madison. The railroad holds the distinction of being the oldest railroad in North America operating continuously under its original name.



A sticker commemorating the anniversary has been applied to the sides of many of the railroad's passenger equipment. This example, seen on April 11 at Jamaica, is on an M9. Jeff Erlitz photo

To celebrate the occasion, the railroad invited the current longest-tenured Mail & Ride Monthly ticketholder, Phyllis Klecka of East Islip, who has been commuting on the railroad for 60 years. She was presented with a framed commemorative ticket thanking her for her many years of patronage.

Display cases opposite the ticket offices on the concourse contain a wide range of historic memorabilia going back to the 19th century.

MTA PRESS RELEASE, April 24

NEW JERSEY TRANSIT (NJT)

Light Rail Grade Crossing Improvements

NJT has been awarded a federal grant to work with Rutgers University's Center for Advanced Infrastructure and Transportation (CAIT) to implement AI-powered safety systems on light rail vehicles at grade crossings.

The primary focus of this initiative is to reduce accidents at light rail grade crossings and on rights-of-way. This project aligns with the goals of the Strengthening Mobility and

Revolutionizing Transportation (SMART) grant program and aims to elevate the state of New Jersey's transportation system.

In Stage 1 of this project, NJT and Rutgers University will prototype a tailored artificial intelligence-powered technology solution consisting of stationary cameras at five light rail grade crossings and forward-facing cameras in one Hudson-Bergen Light Rail vehicle. This technology will improve detection, while offering valuable guidance for future infrastructure enhancements in other areas of mass transit. The Stage 1 study will culminate in a network-wide implementation plan geared towards enhancing pedestrian and vehicle safety.



LRV 104 (Kinki Sharyo, 1999) is about to stop at the Atlantic Street Station on July 22, 2016.

focus1965 photo via Urban Electric Transit

The system will leverage cutting-edge AI algorithms, including deep learning, to analyze real-time camera video data from light rail grade crossings (captured by stationary cameras) and rights-of-way (captured by forward-facing cameras in light rail vehicles) using Edge Computing technologies. For grade crossing safety monitoring, the AI system will identify the activation of warning devices (e.g., signals and gates) and subsequently detect safety events, considering factors such as trespasser type (e.g., pedestrian or vehicle), time of occurrence, movement trajectory, weather conditions, proximity to the train's arrival and other critical factors.

In Stage 2, NJT will proceed with the implementation of the AI-powered technology at 50 grade crossings and five light rail vehicles on its light rail systems.

RAILWAY TRACK & STRUCTURES, April 2

PORT AUTHORITY TRANS-HUDSON (PATH)

Work at Grove Street Station Resumes

The second phase of rehabilitation work at the Grove Street Station began on April 6. World Trade Center-bound and Hoboken/33 Street-bound trains bypass the station on weekends from 6 AM Saturdays until 11:59 PM Sundays.

This station rehabilitation project includes replacing

floor tiles, patching and repainting throughout the station, refinishing platform columns and installing LED lighting along with 4.7 miles of electrical wiring in the station. This work is part of the Port Authority's overall efforts to renew and modernize the 116-year-old PATH system.

PORT AUTHORITY PRESS RELEASE, April 3

PATH Forward Program Announced

The Port Authority announced a comprehensive, \$430 million investment in the 116-year-old PATH system to upgrade stations, tracks, and other critical equipment. The two-year PATH Forward program focuses on improving reliability and modernizing stations on the fifth-busiest rapid transit system in the United States.

Infrastructure throughout the system, including railcars, bridges and tracks, will be repaired or replaced. At four PATH stations, major renovation work will upgrade floors, ceilings, stairways, electrical systems and more.

Service impacts at stations undergoing rehabilitation are expected to be limited to weekends in 2024, with some anticipated impact to weekday service expected in 2025. To allow riders to plan ahead, PATH will provide at least five months' notice ahead of anticipated service impacts. Riders can access that schedule and learn about upcoming community information sessions, including three already scheduled throughout April, on the PATH Forward website (https://www.panynj.gov/PATHforward).

Some of the key points of PATH Forward consist of:

Track, Bridge & Electrical Work

- Replacing tracks and switches and upgrading bridges
- Hackensack Bridge: Track switches on both sides of the lift bridge over the Hackensack River will be entirely replaced and rebuilt. In addition, the lift control system for this movable bridge will be rehabilitated
- Track stabilization: A variety of projects targeting the most critical, deteriorated segments of the track system will replaced
- Railcar rehabilitation: Key components of the rail cars will be replaced to reduce the time between mechanical breakdowns and failures
- Hoboken track work: The existing track switching network outside Hoboken station will be rebuilt and improved

Stations

- Grove St.: Rehabilitation is underway, with half of the 20-weekend project now complete. The remainder of the work began April 6
- Hoboken: Rehabilitation will address lingering Superstorm Sandy damage from corrosive seawater. The work includes floor reconstruction, wall tiling, upgrades to LED lighting and other finishes, as well as waterproofing and installation of a new fire alarm system. Five entry stairwells and six platform-to-mezzanine stairs will be rebuilt or refurbished, one at a time. Mezzanine stairs will be wider with improved visibility to the platform below.

The Hoboken rehabilitation was coordinated with and approved by the New Jersey Historic Preservation Office to ensure it preserves the historic character of the station, including restoring the station to the earliest color scheme that could be identified. The Hoboken Historic Preservation Commission was also consulted during design

- Exchange Place: Rehabilitation and reconstruction work will focus on the restoration of architectural, structural, electrical, and other support systems damaged by flood waters during Superstorm Sandy
- Newport: Work such as track, station, and platform reconstruction will address the impacts of damage by flood waters from Superstorm Sandy to architectural, structural, electrical, and other support systems. The renovation will help prevent and mitigate persistent leakage issues at the station.

PORT AUTHORITY PRESS RELEASE, April 5

Other U.S. Systems

CLEVELAND, OHIO

Railcar Replacement Program

The Greater Cleveland Regional Transit Authority (GCRTA) has launched a new webpage at https://www.riderta.com/rcrp, that provides in-depth information about the Railcar Replacement Program.

At a budget of approximately \$393 million, this program aims to replace GCRTA's 40 heavy rail cars and 34 light rail cars with 60 common railcars that can access both heavy and light rail platforms. Having a common railcar provides the benefits of reduced inventory and maintenance costs, streamlined mechanic and operator training, and increased rail route flexibility and customer access.

The program budget also supports necessary infrastructure upgrades such as rail station platform modifications needed throughout the rail system to accommodate the new narrower railcars. Content on the webpage will be updated regularly until the program reaches completion, currently planned for the fall of 2027.

Information on the webpage includes:

- · Program Overview
- · Milestones Timeline
- · Funding & Financial Impact
- · News & Updates
- · Photo Gallery

GCRTA PRESS RELEASE, April 4

LOS ANGELES, CALIF.

D Line Subway Extension Project

Los Angeles County Metropolitan Transportation Authority (Metro) announced that it has successfully completed tunneling for the D Line Subway Extension Project that will

connect downtown L.A. with West L.A. This major construction milestone was accomplished safely in one of the densest and most geologically challenging urban corridors in the L.A. region and nation.

With the completion of tunneling, Metro will continue to work with its two joint-venture contractors, Skanska-Traylor-Shea and Tutor-Perini/O&G, to complete seven new underground stations in Section 1 between Wilshire/Western and Wilshire/La Cienega, Section 2 between Wilshire/La Cienega and Century City and Section 3 between Century City and Westwood.

Contractors utilized the latest Tunnel Boring Machine (TBM) technology to excavate approximately 40–60 feet per day to help complete tunneling for the project. The 400 foot-long, 21 foot-diameter machines utilized closed face, pressurized TBM technology that minimizes ground settlement during excavation. The machines also lined the tunnel itself with precast concrete segments that were bolted together to form secure rings making them water- and gas-tight, preventing water and gas-related risks. This same TBM technology was successfully employed on Metro's 2009 Eastside Extension Project.

During five years of tunneling, Metro faced and successfully overcame many technical challenges like gassy ground, tar sands and abandoned oil wells. Near the La Brea Tarpits, for example, Metro's advanced TBMs made their way through tar sands, and used horizontal directional drillings to probe the earth so contractors could identify and remove potential objects before any TBM damage occurred. Metro also used the same methods to identify and avoid unmapped and abandoned oil wells underneath Beverly Hills High School.

Forecasted openings are 2025 for Section 1, 2026 for Section 2 and 2027 for Section 3 of the project.

Metro secured local funding to build the project via the 2008 Measure R and 2016 Measure M voter-approved transportation sales tax measures. These local funding sources were then matched by federal funding, which ultimately amounted to approximately half of the project's overall cost. LACMTA PRESS RELEASE, April 2

MINNEAPOLIS, MINN.

Blue Line to be Upgraded

Metro Transit will reportedly upgrade its Blue Line after 20 years of operation. According to a report from *MinnPost*, the project could cost around \$120 million to upgrade everything. Under the Blue Line State-of-Good-Repair Phase 3, the infrastructure that is anticipated to be replaced includes signals & signal components, turnouts & turnout equipment, rail in high wear areas (such as curves, tunnels, grade crossings) and communications equipment.

According to the report, \$8.75 million will go toward the rebuild of Lake Street/Midtown station with another \$101 million to rebuild track and signals between Cedar Riverside and Bloomington Central stations. \$12 million is expected to

be used to remove rusted structural members from 27 of its oldest light rail cars.

The original segment from Hennepin Avenue to the Mall of America cost \$715.3 million to build, and ridership exceeded expectations. Since then, Metro Transit expanded its platforms to handle three-car trains, expanded the size of its two park-and-rides serving the route, built a new light rail station, and bought more than 20 light rail vehicles from two different vendors.



Metro Transit Flexity Swifts 101+112 (Bombardier Transportation, 2003) are departing the Downtown East-Metrodome stop at the intersection of S. 5th Street & Park Avenue on June 14, 2006. At the time, the original light rail route was designated as the Hiawatha Line (Route 55). On May 18, 2013 the route was renamed the Blue Line. Jeff Erlitz photo

Back in 2017, Metro Transit completed some track work including the replacement of rail, switches and signals. In 2022, the agency replaced rail and completed signal work between Mall of America and Bloomington Central Station. Now, the agency will replace rail and signals this spring between Bloomington Central and Terminal 2 Stations. This is reported to cost \$18.6 million. Similar work will take place next year between Terminal 2 and Cedar–Riverside. There has not been a cost announced for this work.

For next year's work, Metro Transit stated that prior to construction, they will launch a communication campaign using its website, social media, text/email alerts, station and vehicle signage and station ambassadors to indicate when and where replacement bus service will be needed. On April 8, Met Council members met with Metro Transit staff at a Transportation Committee meeting.

Additionally, Metro Transit is expected to rebuild the Lake Street/Midtown Station. This is because elevators and escalators are breaking down repeatedly and there is a concern with drug use occurring at the station. The project manager had stated at a Transportation Committee meeting that the station sees a lot of foot traffic, combined with an increase at the station of repairs, replacement and damage

and vandalism over the past few years. To rebuild the station, the agency may remove the shelters on the platforms and replacing them with one canopy as well as replace elevators and escalators with stairways and a ramp.

Construction is slated to start in 2025 and finish at the end of 2026. Currently, 27 light rail vehicles are in Tallulah, La. to undergo work to remove rust. This is because the agency found the cars had rusted to where its maintenance staff could not handle the workload, even though the agency had started addressing the rust issue back in 2017. The president of the Amalgamated Transit Union Local 1005 said the work should have been done a lot earlier, which would have made it a lot more easier and a lot more efficient.

Met Council awarded a \$12 million contract to RailCar (a rail engineering and accident investigation firm) to perform maintenance work on the cars. To prevent the cars from becoming too rusted to work on, the Met Council also pledged to remove rust from light rail vehicles more often, every seven or eight years, moving forward. Some of the first-generation light rail vehicles will be returned this spring with new flooring and wall paneling.

RAILWAY TRACK & STRUCTURES, April 4

PHILADELPHIA, PENN.

30th Street Subway Station Renamed

SEPTA joined Drexel University and local, state and federal officials for a ribbon cutting to celebrate the newly reconstructed and renamed Drexel Station at 30th Street.

Drexel Station at 30th Street is one of SEPTA's most heavily used transit hubs. The station is served by the Market-Frankford Line, five Trolley lines, multiple bus routes, and provides convenient connections to Regional Rail at the nearby William H. Gray III 30th Street Station. Today's ribbon cutting served as the official unveiling of Drexel Station at 30th Street, along with accompanying signage and branding. This marks SEPTA's most recent station naming rights agreement, which helps generate revenue and improves the customer experience.



The ribbon-cutting ceremony at Drexel Station at 30th Street on April 8. SEPTA photo

The naming agreement is the latest development in Drexel's longstanding relationship with SEPTA. The University was one of the first partners in SEPTA's Key Advantage Program in 2022. SEPTA is an annual participant in Drexel's Co-Op program and first-year medical students in the College of Medicine have served as "Health Navigators" in support of SEPTA's SCOPE (Safety Cleaning Ownership Partnership Engagement) Program.

The project was initiated to modernize station infrastructure, increase capacity and improve circulation between transportation modes, and support the world-class development underway in the district. It was funded in part through a \$15 million U.S. Department of Transportation Better Utilizing Investments to Leverage Development (BUILD) Grant and \$34.2 million in Pennsylvania Department of Transportation funding, which was made possible by Pennsylvania Act 89.

Extensive renovations were completed as part of the station reconstruction project to better integrate the station into Drexel Square and the broader Schuylkill Yards district. Improvements include a new glass headhouse and canopy; upgraded elevators, escalators and stairs to improve accessibility; a modernized and expanded mezzanine with enhanced lighting and improvements to connections between transit services; and new flooring and tiling throughout.

The Market-Frankford Line and Trolleys remained in service at the station throughout construction. Before the project began, SEPTA installed a new elevator at 31st Street to ensure that station accessibility was preserved for riders. SEPTA closely coordinated construction activities with Drexel and community stakeholders throughout the project.

Drexel Station at 30th Street is the first station to debut the SEPTA Metro Wayfinding initiative, with new colorful, easy to identify station signage. The goal of SEPTA Metro is to create modern, welcoming, and accessible transit stations that everyone can use, no matter what language they speak or how well they know the SEPTA system. The completion of this station is a significant step forward for the initiative, and during 2024 more new signage will continue to debut at additional stations on the SEPTA Metro system.

SEPTA PRESS RELEASE, April 8

Regional Rail Equipment Contract Terminated

Citing four years of delays, poor workmanship and quality controls and zero deliveries, Southeastern Pennsylvania Transportation Authority (SEPTA) has terminated a \$185 million contract with Chinese SOE (state-owned enterprise) CRRC (China Railway Rolling Stock Corp.) for 45 bilevel railcars for the agency's Regional Rail lines. SEPTA so far had paid \$50 million to CRRC.

SEPTA terminated the contract for cause, the authority said in an April 12 statement. SEPTA is assessing its options for recouping funds that have been spent on the project.

Carbodies are built in China and shipped to CRRC's Springfield, Mass., plant for final assembly. CRRC bid \$34 million below second-place Bombardier Transportation (now Alstom) and \$47 million below Hyundai Rotem. The

SEPTA contract was CRRC's first U.S. order for bilevels. More than two years ago, SEPTA CEO and General Manager Leslie S. Richards cited manufacturing problems including water-tightness test failures, poor wiring on interior control panels and other subassemblies, repeated brake test failures and emergency exit windows that did not meet safety standards.

CRRC MA states that they have been worked closely with SEPTA's project team, beginning with railcar design through initial vehicle production, and they remain committed to completing the project and continue to seek further discussions to resolve SEPTA's concerns.

CRRC originally established the Springfield facility, CRRC MA, in 2014 to build 400 rapid transit cars to replace aging rolling stock on the MBTA (Massachusetts Bay Transportation Authority) Orange and Red Lines. CRRC MA has delivered 130 thus far; the contract is three years behind schedule. Many have been removed from service for problems including a battery explosion, a derailment, loose brake bolts and faulty wiring. In March, MBTA updated its contract, agreeing to pay \$148 million more to speed production.



Rendering of bi-level cars for SEPTA. CRRC MA

U.S. officials and competitor rolling stock manufacturers such as Siemens Mobility, Alstom and CAF have stated publicly that CRRC's SOE status enables it to underbid on public contracts with artificially low prices.

Early this year, CRRC was placed on the U.S. Defense Department's (DOD) updated entity list, which officially designates CRRC as an extension of Communist China's military. It has also been flagged under Section 805 of the FY 2024 National Defense Authorization Act, which prohibits the DOD from purchasing goods or services produced by Chinese military companies identified on the Section 1260H List and entities they control. Bipartisan lawmakers on Capitol Hill have also called out the SOE in numerous congressional and senate hearings about the China threat. RAILWAY AGE, April 16

SAN FRANSISCO, CALIF. BAY AREA

Original BART Equipment Retired

On Saturday, April 20, BART fans caught a final ride on the

trains all of us will soon miss. Thousands of people, many wearing their favorite BART outfits, including those they made themselves, came to MacArthur Station to bid adieu to the historic legacy fleet and take their last ride on the 51½-year-old trains. The event included a celebration in the station plaza, a retirement ceremony and a final journey aboard three legacy trains brought from the yard just for the day. Some people traveled from outside the state just to attend the event.



The new and the old at MacArthur Station on April 20. Peter Straus photo

In the plaza, throngs of BART fans enjoyed food trucks and activities, including a stamp rally, as well as a raffle for legacy car number plates. There was also a Railgoods popup shop so folks could top off their collections of BART merchandise and purchase the latest product offerings, including a shirt made specifically for the day.

The party in the plaza was followed by a ceremony opened by BART Board President Bevan Dufty and including remarks by General Manager Bob Powers, FTA Region 9 Regional Administrator Ray Tellis, and BART Chief of Police Kevin Franklin. There were also representatives from groups who will receive legacy cars after successfully submitting proposals to repurpose the vehicles, including the Western Railway Museum, which is establishing a Rapid Transit History Center that will include three legacy BART cars; the Sierra Train House, a forthcoming residence and short-term rental in the Sierra Foothills constructed from a BART car; and the Original Scraper Bike Team, who will use a car for a bike shop, providing free repairs and bike repair lessons to local youth, as well as a clubhouse for community events and the organization's mentorship program.

At the end of the ceremony, it was time for the last hurrah aboard the legacy trains. Incredibly, the line to get on a train was so long it reached MacArthur Boulevard. Despite the line, everyone was able to get onboard a train.

The trip ran from MacArthur to Fremont Station — the reverse of BART's inaugural run in 1972. Some of the cars in service for that momentous day were hauling passengers for this last ride,

more than fifty years after their wheels first touched rail.

After the trains reached Fremont, they rode off into the sunset and came to rest at BART's Hayward Yard. A crowd on the station platform at Fremont, their cameras rolling, was there to see them off.

BART PRESS RELEASE, April 25

SEATTLE, WASH. AREA

Light Rail Opens on the Eastside

Starting April 27, passengers on the Eastside will be able to use Link light rail to travel to destinations throughout Bellevue and Redmond. The 6.6-mile initial segment of the 2 Line includes eight stations, with service every 10 minutes, 16 hours a day, seven days a week.

This is the first opening in a year of transit expansions. In August the 1 Line will extend into Snohomish County to Lynnwood, and in spring 2025, the 2 Line is expected to add two more stations in Redmond.

Voters approved the East Link extension in 2008 as part of the Sound Transit 2 ballot measure. The project broke ground in 2016, and the one-third mile-long Downtown Bellevue Tunnel was completed in 2020.



Downtown Bellevue Station on April 26, the day before the official opening. Doug Trumm/The Urbanist photo

In August 2023 the Sound Transit board authorized the opening of the initial segment of the 2 Line on the Eastside while construction to correct quality issues on the I-90 segment continues. Since last February, trains have been running simulated service between South Bellevue and Redmond Technology Station, during which all Link trains run a normal schedule without passengers.

Multiple contractors worked on the segment of the 2 Line that opened on April 27. Shimmick/Parsons Joint Venture was the contractor for the South Bellevue Segment. The Downtown Bellevue Tunnel was constructed by Guy F. Atkinson Construction, LLC. Stacy and Witbeck/Atkinson, a joint venture, completed the segment between Downtown



Map of the East Link section that currently operates. Sound Transit

Bellevue and the Spring District; Max J. Kuney Company was the contractor for the BelRed segment; and the contractor for the Redmond segment was Kiewit-Hoffman East Link Constructors, a joint venture between Kiewit Infrastructure West Co and Hoffman Construction Company of Washington. Mass Electric was the contractor for systems.

The full 2 Line is expected to open in 2025. The Downtown Redmond Link Extension is projected to open in spring 2025 with the Marymoor Village and Downtown Redmond stations. When completed, the I-90 segment will add the Mercer Island and Judkins Park stations to the 2 Line and connect to the 1 Line at the International District/Chinatown Station in downtown Seattle.

Bus routes will remain unchanged until the 2 Line crosses Lake Washington. Free parking is available at South Bellevue, BelRed and Redmond Technology stations. Secure bike parking is available at every station.

SOUND TRANSIT PRESS RELEASE, April 27

WASHINGTON, D.C.

Summer 2024 Red Line Construction

Starting in summer 2024, construction will begin on a new mezzanine at Silver Spring Station to provide access between Metro and the future Purple Line, which will be owned and operated by the Maryland Transit Administration (MTA). This new mezzanine will connect the Metro station platform with the Paul S. Sarbanes Transit Center and the future Purple Line station. It will also enhance connections for Metro, MARC Train and bus riders.

The Purple Line work requires Silver Spring Station to close for several months. Knowing the closure would be necessary, Metro coordinated with MTA to schedule additional improvements and upgrades, including critical maintenance between Glenmont and Fort Totten. The extended closure on the Red Line will allow WMATA to complete this work in conjunction with the closure necessary for the Purple Line, rather than multiple disruptive closures of smaller segments on the Red Line.

The Red Line will be closed between Glenmont and Takoma from Saturday, June 1, through Saturday, August 31, 2024.

The closure will extend to Fort Totten through Saturday, June 29, 2024.

METRO RED LINE CONSTRUCTION WEBSITE

More Info on Metro Faregate Displays

Soon, fewer Metro riders will need to "see a station manager" when they get an error message while trying to tap in or out of a Metrorail station. Instead of getting stuck at the faregate, Metro will begin installing upgraded software technology.

Starting April 29, riders will begin to see new messages on the faregate display screen if their SmarTrip® card is expired, invalid, or deactivated. Riders will then be able to address the issues quickly and independently by buying a new card through a mobile wallet, or at the fare vending machine, and transfer any value, if needed.

Metro is also fixing another issue that occurs when the fare system does not record the SmarTrip card tapping both on entry and exit during a trip, leading to a "See Station Manager" error. That won't be a problem going forward. As part of these improvements, faregates will automatically open and charge either the regular fare or reduced fare if using one of Metro's reduced fare programs. The display screen will show the charge for the trip and the current SmarTrip balance.

Currently, when a rider's SmarTrip card triggers an error at the faregate, the station manager must intervene, check the fare card to determine the issue, and help the passenger through the faregate. This happens more than 4,000 times a day.

These upgrades are made possible by Metro's fare system modernization project. Newer, faster, more high-tech faregates have cleared the way to offer more options for contactless payment, faster transaction processing, improved reliability and enhanced programming capabilities. WMATA PRESS RELEASE, April 29

International

BUDAPEST, HUNGARY

Metro and Light Rail Extensions Funding Boost

Budapest public transport authority BKK has been successful in its application for Forints 10 billion (\$US 27.35 million) of funding from the Hungarian government, which will enable preparations to begin for extending Metro line M1.

The three-kilometer extension of M1 north from Mexikói út will closely follow an existing motorway to terminate at a new railway station north of Rákosrendező, where the orbital line from Rákos/Ferencváros crosses over the Budapest-Szob main line. Building the extension will cost Forints 77 billion. An additional Forints 29 billion will be required to replace the aging M1 fleet supplied in 1973.

The Forints 10 billion provided by the government will also fund design work for extending light rail Line 3 to Pesterzsébet, Line 42 to Gloriett-telep, and building a connection between lines 47 and 49 at Deák tér and lines 12



The first of the Ganz-MÁVAG cars for Metro line M1, No. 21 was delivered on March 24, 1973. It is seen here at Mexikói út, Line M1's eastern terminal, on January 27, 2023.

S. Franke photo via Urban Electric Transit

and 14 at Lehel tér, running parallel to Metro line M3.

Following the completion of design work, tendering for the Deák tér to Lehel tér line could start in 2027 for opening in 2030. The government's decision to allow projects to proceed where the confirmation of European Union funding appears imminent will also enable planning to begin for projects on the HÉV commuter network.

These include rebuilding lines H8 and H9 and connecting them with Metro line M2 at Örs vezér tere. A new fleet would be procured to operate on the combined lines.



Urbos 3 No. 2212 (CAF, 7/2015) is arriving at the Örs vezér tere stop on route 3 on August 27, 2022. XXL1219 photo via Urban Electric Transit

BKK is also planning to build a new connection between Line H5 in the north of the city and lines H6 and H7 in the south, running via the mainline Nyugati terminus in the city center. INTERNATIONAL RAILWAY JOURNAL, April 3

DOHA/LUSAIL, QATAR

Tram Network Expands

Qatar Railways Company (Qatar Rail) launched full operation on the new Pink Line and the remaining stations on the Orange Line of the Lusail Tram network on April 8.

The new Pink Line shares infrastructure and six stations with the underground Orange Line from its southerly terminus at Legtaifya to Tarfat, from where the Pink Line continues on its own alignment north to Seef Lusail-North, adding another four stations. All stations are currently operational, except Al Sa'ad Plaza, an interchange with the network's future east-west Purple Line.

The extended Orange Line runs from the previous terminus at Al Wessil to Naifa, from where the line continues north into an anticlockwise, uni-directional single-track loop that it will share with the future Turquoise Line, serving nine stations in Lusail city center. This includes Downtown Lusail, where the line interchanges with the future east-west Purple Line. The most northerly station is Rawdat Lusail from where the line returns south via Lusail Stadium and Al Yasmeen.

The Lusail City stations are the first at-grade stations to open on the network. Public awareness campaigns have commenced to alert pedestrians and road users of the potential risks of light rail operation.



Citadis 305 No. 002 (Alstom, 1/2018) on, at the time, non-revenue trackage, January 2022. Alstom photo

The initial seven-kilometer underground section of the Orange Line opened in January 2022. The service operates the same hours as the Doha Metro, from 5:30 AM to midnight Saturday to Wednesday, 5:30 AM-1:00 AM on Thursdays, and 2:00 PM-1:00 AM on Fridays.

The network is operated with a fleet of 28 five-section Alstom Citadis LRVs. The at-grade sections are entirely catenary-free, drawing power from Alstom's track-mounted APS system.

RKH Qitarat, a joint venture of RATP Dev, Keolis and Hamad Group, operates and maintains the Lusail Tram network as well as the Doha Metro under a contract signed

with Qatar Rail in 2017. INTERNATIONAL RAILWAY JOURNAL, April 9

LISBON, PORTUGAL

CRRC Low Bidder for Metro Fleet

Lisbon Metro received two proposals from a tender to supply 24 three-car metro trains with an option for an additional 12 sets, with CRRC Tangshan making the low bid of €115.07 million.

This is significantly below the base price for the contract of €138 million. The other confirmed bidder, Stadler Rail Valencia, submitted an offer worth €134 million.



ML90 M204 (Sorefame/Siemens, 1993) on the Blue Line at São Sebastião heading towards Santa Apalónia on April 13, 2016. Aleksandr Prodan photo via Urban Electric Transit

The procurement was launched in November and the contract will have an execution period of 54 months.

The new fleet will help to support increased demand on the network following the completion of projects to extend the Circle and Red lines. The contract option will enable the replacement of future life-expired trains.

CRRC Tangshan has had some success in the Portuguese market, with deliveries of 18 LRVs to Porto Metro underway.

Another CRRC subsidiary and supplier withdrew a bid for a Bulgarian contract last month amidst claims of using state subsidies to undercut European-based firms, which prompted a European Commission investigation.

INTERNATIONAL RAILWAY JOURNAL, April 11

LYON, FRANCE

Rail System Operator to be Replaced

Public transport authority Sytral Mobilités has awarded RATP Dev a 10-year contract to operate the Metro and light rail networks in the city of Lyon from January 1, 2025.

RATP Dev will be responsible for operating four Metro lines totaling 70 kilometers, serving 44 stations and operated with

a fleet of 102 trains. Lines B and D of the Lyon Metro feature driverless operation and, like Line A, have a fleet of rubbertired trains.

As well as the Metro network that carries 50 percent of all traffic on Lyon's TCL public transport network, RATP Dev will operate seven light rail lines totaling 71 kilometers that serve a total of 128 stops, with a fleet of 107 LRVs.

The contract also covers the operation of two funicular railways and the 13-km Rhônexpress light rail line between Lyon Part-Dieu station in the city center and Lyon-Saint Exupéry Airport. Operated with six LRVs, it serves intermediate stations at Vaulx-en-Velin and Meyzieu.

RATP Dev will be responsible for rolling stock and infrastructure maintenance, as well as network security.

During the term of the new contract, RATP Dev will be involved in the delivery of major projects for Sytral Mobilités, including the automation of Metro Line A and the modernization of Lines C and D.

On the light rail network, new lines T9 and T10 are due to enter service, as well as an extension to line T6.



Citadis 402 No. 907 (Alstom, 1/2021) has just departed the Beauvisage CISL stop and is operating northbound on the Boulevard des États-Unis on route T4 on June 5, 2023.

František Vaňásek photo via Urban Electric Transit

RATP Dev says that it will work to further improve service quality and customer satisfaction, deploying digital technology and introducing a preventative maintenance regime to improve fleet availability and service frequency.

Particular attention will be paid to stations and stops to make them safer and more welcoming, mainly through the deployment of more staff.

To accelerate the decarbonization of the Lyon network, RATP Dev will present proposals for sourcing its electrical power requirements from green suppliers, giving priority to local power generation. The environmental impact of metro and light rail operations will be measured to assist Sytral Mobilités in meeting its targets.

Rival contract operator Keolis has operated the TCL network for over 30 years. Although it will continue to

operate the bus and trolleybus networks in Lyon, the loss of TCL's metro and light rail lines is a significant blow.

RATP Dev says that it will work closely with Keolis to ensure a smooth transition to the new contract.

INTERNATIONAL RAILWAY JOURNAL, April 10

PRAGUE, CZECH REPUBLIC

Trams Through Wenceslas Square

In February, the long-awaited reconstruction of the upper part of Wenceslas Square began. After more than 40 years, the tram connection between Vinohradská třída and the most important square in Prague will be restored, in which it is hoped to significantly ease public transport in the city center. Prague integrated transport (PID) has already come up with a plan for which tram lines could run on the new tracks.

The new tram line, which will connect Vinohradská Street with Wenceslas Square, will make it possible to reduce congestion on Ječná Street and Karlova Square, according to the designers. It will also improve the options for alternative routes during emergencies in the city center. At the same time, PID believes that this will increase the speed and regularity of tram transport in Prague.

PID also came up with a concrete plan for which trams should run along the square in the future. In its conceptual document, PID states that tram lines 6, 13 and 21, operating at standard intervals of eight minutes at peak times, 10 middays, 15 minutes on weekends and 20 minutes late in the evening are proposed for the daily service of the new line on the square. In night traffic, line 95 is proposed to operate in the square.

Line 6, which now connects the center of Wenceslas Square with IP Pavlova Square via a lengthy route via Karlovo Square and Ječná Street, is proposed to run through the new Muzeum stop, thereby shortening its journey to IP Pavlova from the center of Wenceslas Square by approximately five minutes . This change in the route should relieve the congestion of tram sections in Ječná street and Karlova náměstí.

Line 13 will provide a new connection from Čechov and Vršovicky náměstí to tram line 22. From the center of Vršovice and the Náměstí Míru stop, line 13 will continue as it does today to the Museum, but further to the center of Wenceslas Square, to Masaryk nádraží, to Náměstí Republiky and through Malostranská and Prague Castle on Malovanka. In the event that there is not a strong enough demand for the new connection with line 13 via Chotkova street, it is possible to consider rerouting it via Letenské náměstí and Strossmayerovo náměstí, PID states in the document.

In the Muzeum to Olšanské cemeteries section, line 13 will be replaced by line 21. From its current final stop at Radlické, it will reach Anděl and then continue via Újezd and Národní třída to Vodičkova street, from where it will turn to the Muzeum and continue along Vinohradská street to Olšanská hřbitovy.

However, further expansion of the tram network in the vicinity of Wenceslas Square is expected in the coming years. The tracks should return in front of the Hlavní nádraží (main railway station) building and, after several decades, reconnect the upper part of Wenceslas Square via Opletalova Street to Bolzanova Street.

Trams ran in the upper part of the square until 1980. Compared to the original situation, the tracks will be on



Map showing tram routes 6, 13, 21 and night route 95 operating through Wenseslas Square. PID

the side of the square and a promenade will be created in the middle. Workers will repair sidewalks and roads, plant greenery, repair the Muzeum subway station and create an underground reservoir for collecting rainwater. The city also plans to slow down the traffic of cars on the square, which will partially run along the tram tracks.

Wenceslas Square is 682 meters long and approximately 60 meters wide. In 2020, the reconstruction of the lower part of the square began, which the city mostly completed last fall. Then work continued on two smaller areas near the tracks from Jindřišská to Vodičkova street, which were already prepared for the construction of the tram line in the upper part.

CNN PRIMA NEWS, January 30

SEVILLE, SPAIN

Work Starts on Metro Line 3

Spanish authorities marked the start of work on the northern section of Line 3 of the Seville Metro on April 8.

The northern section of Line 3 will run for 7.55 kilometers from Pino Montano in the northern outskirts of the city to Prado de San Sebastián in the center of Seville, where it will connect with Line 1.

Line 1 opened in 2009 and runs for 18 kilometers from Ciudad Expo to Olivar de Quintos, serving 22 stations. It is operated with a fleet of LRVs supplied by CAF.

Pino Montano is home to 30,000 people, half of the total population of the northern district of Seville. It will be served by three stations on Line 3.

The double-track Line 3 will run mainly underground and serve a total of 12 stations, one of which will be on the surface. Civil works on the project have started with the rolling stock maintenance depot and the 1.35-km connection to Line 3 itself, at the northern end of the line between Pino Montano Norte and Los Mares.



Urbos 3 No. 304 (CAF, 2011) is turning off Avenida de la Constitución and is about to arrive at route T1's terminal at Plaza Nueva on October 29, 2014. Dmitry Zolotarev photo via Urban Electric Transit

Extending the Seville Metro forms part of the Ministry of Transport and Sustainable Mobility's policy of developing safe and sustainable public transport, prioritizing and encouraging the use of low-emission modes such as rail.

Under an agreement signed with the Andalucía regional government at the start of 2023, the ministry is providing €650 million to meet 50 percent of the €1.3 billion cost of building the northern section of Line 3.

This co-financing model was adopted for construction of Metro Line 1 in Seville, as well as the Málaga Metro network in Andalucía. Work on Line 3 is due to take eight years to complete. The Andalucía regional government is responsible for tendering works contracts. In conjunction with the local authorities concerned, it will also be responsible for operating and maintaining Line 3. Tendering has begun for preliminary works on Metro Line 2, which will run east-west across Seville from Torreblanca to Triana.

INTERNATIONAL RAILWAY JOURNAL, April 9

London Overground Lines Assigned Names

By Subutay Musluoqlu (ERA #6474)

An important news item from London in February was the announcement by Transport for London (TfL) that for the first time, unique line names would be assigned to the routes and services of the London Overground network.

The Overground came into being as a unique branded network in November 2007. This followed decades of discussion for the creation of an orbital metro around London which would complement the traditional London Underground rail system of shallow sub-surface and deep-tube lines.

Falling under the umbrella of TfL, the executive agency responsible for managing transportation services for the Greater London Authority, the Overground's core network is mostly comprised of select commuter railway lines which were once operated by other entities, and as such the history of the Overground's creation is long and complex, so some background history is in order.

Most of the lines which form the current national rail network in Great Britain were once owned and operated by the legacy British Rail national railway (BR). BR was formed in 1948 when the four largest private railways in Great Britain were nationalized. Some local regional railways were included while others which were already under local government control, such as the London Underground, were excluded.

In the wake of World War II, the rebuilding and modernization of the British rail network was a daunting and expensive endeavor, mirroring the challenges faced by the nation as a whole. The United Kingdom's recovery from the war was a struggle, confronting the limits of its economic power as its



Bombardier 378135 seen on September 21, 2018 at Wandsworth Road on the soon to be named Windrush Line. Justin Foulger photo

once sprawling and mighty global empire was diminishing.

Throughout the 1950s there was an ambitious effort to transition away from steam power to dieselization and electrification of key lines. This did not come cheap, and by the 1960s there was growing public pressure to reduce the need for subsidies. This and other factors led to a retrenchment known as the Beeching cuts, when one third of the

need for subsidies. This and other factors led to a retrenchment known as the Beeching cuts, when one third of the network and half of the stations were permanently closed. Named after Dr. Richard Beeching, then the chairman of the British Railways Board, this period is recognized as one of the lowest points in the history of railways in Britain, the nation that invented the railway.

While some high-profile modernization projects on key trunk lines survived and were carried through into the 1970s and 1980s, the Beeching cuts were a mortal injury to BR, leading to a death spiral in which the degradation of service led to passenger dissatisfaction and a drop in ridership, which in turn led to less revenue and even further service cuts.

The 1979 ascent to power of Prime Minister Margaret Thatcher and the Conservative Party led to a move to privatize government assets and relieve the British treasury of the costs of providing certain public services, with the view that the free market would yield efficiencies and better service. Privatizing British Rail was seen as a high priority.

The ensuing debate lasted for 15 years, during which time British Rail enjoyed some limited successes but continued to decline in service reliability. The need to replace aging infrastructure and rolling stock continued to grow, matched by an equally growing refusal by the Conservatives to provide any public funding to alleviate the situation.

The deteriorated state of affairs was most visible on the Greater London commuter rail network, which was then under the auspices of Network SouthEast, one of BR's three major passenger rail sectors at the time. Not a day would go would by without some interruption in services due to a train breakdown or a serious infrastructure failure.

Eventually BR's privatization was initiated in 1994 and completed in 1997, all during the premiership of Thatcher's successor John Major. In a strange twist, the breakup was finalized after the Conservatives had been soundly defeated in the 1997 general election, which brought to power the Labor Party led by Prime Minister Tony Blair. Though the Labor Party had promised during its campaign to reverse privatization, once in power that promise fell by the wayside as privatization was seen as too far along and rooted in place.

Under privatization, services once provided by BR were franchised out to Train Operating Companies (TOC), while the physical assets and infrastructure remained in public ownership, initially in the form of an entity known as Railtrack, which evolved into today's Network Rail, which is classified as a non-departmental public body of the Department for Transport.

Ownership of locomotives, electric multiple units, diesel multiple units, and coaches went to rolling stock companies, which in turn lease the equipment to the TOCs.

In the years following the breakup of BR and the transition to a franchise model, it became apparent that the benefits of privatization were oversold. Performance targets were missed by the TOCs, service improvements were limited, and in many places it continued to degrade. Infrastructure renewal ran over budget and behind schedule. One of the positive successes was the replacement of aging rolling stock. Thousands of new cars were purchased, even though delivery of several of the new classes were delayed.

Overall however, the promise of market efficiency and less reliance on the public purse did not come to pass. Quite the contrary, accounting for inflation, the British treasury continued to fund public transport at levels higher than it did before privatization.

With privatization, the same pattern of franchising occurred in the London area, as the once singular Network SouthEast brand gave way to an assortment of colors and liveries, accompanied by years of confusion over timetables, conflicting priorities, and a general lack of proper coordination and oversight. Before long, there were ever growing calls for a return to some form of increased government control.

In 2000 Transport for London was created as a new arm of the Greater London Authority. TfL became the successor to London Transport, and in 2003 it regained full control of the London Underground which had itself been the subject of a problematic private-public partnership effort.

As the franchises began to encounter trouble, an opportunity presented itself. The Silverlink TOC operated four distinct routes around London under the Silverlink Metro brand — the North London Line, the West London Line, the Watford DC Line (the DC is for direct current third rail), and the Gospel Oak to Barking Line. When Silverlink's franchise came up for renewal, TfL stepped in and took over, awarding an operating concession in 2007.

TfL set about to establish a recognizable brand by introducing the name Overground and using the widely recognized roundel symbol, substituting orange for the

Companies Park Vestered Auction (Companies Park Vestered Auction (Compan

Map of the London Overground network which will go into effect later this year.

OR LONDON

MAYOR OF LONDON

traditional red. Orange was also used as the mode-specific color in branding and publicity for all the lines, on the Tube map, and on trains and stations.

Other lines have been added to the network, including the East London Line, which was once part of the Underground and includes the Thames Tunnel, recognized as the first tunnel built under a navigable waterway. It first opened in 1843 for use by horse drawn carriages, and was converted to railway use in 1869.

Several extensions have been built, and lines still operated by diesel DMUs were electrified. Today, the standard-gauge, fully electrified Overground network has a route length of almost 104 miles with 113 stations. It is equipped with a mix of overhead catenary energized at 25 kV 50 Hz and third rail energized at 750 V DC.

TfL had inherited an aging fleet of comprised of eight distinct classes. A comprehensive program of rolling stock replacement has yielded a newer, more reliable fleet of 507

cars arranged in a mix of 4- and 5-car Alstom Aventra Class 710 EMUs (similar to the Elizabeth Line fleet) and 5-car Bombardier Capitalstar Class 378 EMUs.

Responsibility for the London Overground is slightly complicated. Compared to the other passenger services in the UK, it is considered a hybrid. Most of the infrastructure is owned by Network Rail, but TfL is responsible for a few small segments. TfL sets Overground fares and policy, but it's considered part of the National Rail network and the trains are shown in the national timetable. The services are operated by a concessionaire which is awarded and managed by TfL, and since 2016 the service has been operated by the Arriva Rail London TOC. It is a generally successful operation with an on-time performance that has been consistently over 90 percent.

In 2023, TfL announced it would explore naming each of the lines to enhance the clarity and identity of each service with its own distinct line name. Keeping in the London tradition of using names rather than numbers, letters, or color-names, TfL conducted a series of public consultations and internal discussions. The names were finalized and announced on February 15, shown in the table below.

Previous service name (legacy line names)	New line name	Color
Romford to Upminster	Liberty Line	Gray
Euston to Watford Junction (Watford DC Line)	Lioness Line	Yellow
Stratford to Richmond / Clapham Junction (North London Line / West London Line)	Mildmay Line	Blue
Gospel Oak to Barking Riverside	Suffragette Line	Green
Liverpool Street to Cheshunt / Enfield Town / Chingford (Lea Valley Lines)	Weaver Line	Maroon
Highbury & Islington to Clapham Junction / New Cross / Crystal Palace / West	Windrush Line	Red
Croydon (East London Line / South		

The line namings did not come without controversy, as most things now are in our modern age. There has been much commentary opining that the namings were more focused on feelings and identity as opposed to geography. While we will not wade into those discussions here on the other side of the ocean, for those who are interested in learning more about the debates regarding the line namings, I highly recommend visiting the blogs listed below as sources.

The final roll-out of the new line names, along with updated maps, marketing materials, signage, and wayfinding is scheduled for this coming autumn. The orange roundel will remain as the overall brand logo for the entire Overground Network.

Sources:

Transport for London - London Overground Line Naming page https://tfl.gov.uk/modes/london-overground/overground-line-naming

Wikipedia - London Overground https://en.wikipedia.org/wiki/London_Overground

Wikipedia - British Rail https://en.wikipedia.org/wiki/British_Rail

Railway Gazette International - The Six New Names for London Overground Lines and What They Mean, February 15 https://www.railwaygazette.com/uk/london-overground-routes-get-new-names/65937.article

Ian Visits blog - No more orange - new tube map shows the

renamed London Overground lines, February 15 https://www.ianvisits.co.uk/articles/no-more-orange-new-tube-map-shows-the-renamed-london-overground-lines-70250/

London Connections - The Big Split: Overground Line Names, by John Bull, February 15

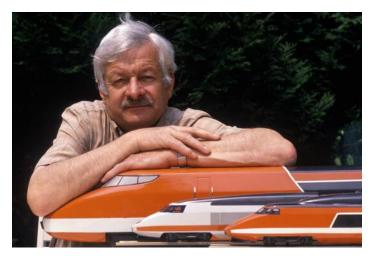
https://www.londonreconnections.com/2024/the-big-split-overground-line-names/

Prospect Magazine - The People's Overground, by David McAllister, February 20

https://www.prospectmagazine.co.uk/views/columns/64915/the-peoples-london-overground-sadiq-khan-transport

Jacques Cooper, Designer of France's TGV, Dies

By Subutay Musluoglu (ERA #6474)



Jacques Cooper with models of his TGVs on May 22, 1990. Marc Deville/Gamma-Rapho photo via Getty Images

Jacques Cooper, the man most responsible for the recognizable look of the first generation of French high-speed passenger trains (Train à Grande Vitesse — TGV), died on April 16, 2024, at the age of 93. Mr. Cooper is credited with devising the distinct slender nose of the TGV, as well as coming up with the dominant orange livery of the initial fleet of trainsets, which first entered service in 1981 with the opening of France's first high-speed railway line between Paris and Lyon.

Mr. Cooper had a long illustrious career in industrial design, which included a stint working in the United States in the mid-1950s under famed industrial designer Raymond Loewy. Readers may recognize Mr. Loewy as the designer of the Pennsylvania Railroad's GG1, the streamlined Art Moderne

electric locomotive which entered service in 1935 and plied up and down the Northeast Corridor for the following 48 years.

Mr. Cooper was born on January 23, 1931, in the French commune of Chantilly. His father was British, and his mother was French. He showed an interest and aptitude in drawing from an early age, and later studied in the Ecole Boulle in Paris, which specializes in architecture, applied arts, arts & crafts, and design. Upon graduation in 1951 he served in the French Army for two years and soon after fulfilling his service, he left for the United States.

Upon his return to France in 1957, Mr. Cooper went to work for the French automaker Renault. In 1960 he moved over to the French division of General Motors, landing at Frigidaire, which was then owned by GM. There he helped design a variety of products such as refrigerators, washing machines, and other household appliances. He briefly left Frigidaire for Arthur Martin, a maker of home heaters, but soon returned to Frigidaire.

In 1966 Mr. Cooper joined Brissonneau and Lotz, a noted locomotive and railcar manufacturer whose origins dated back to the early days of French railway development in the 1830s. At the time Brissonneau and Lotz was busy building the class of EMUs which would inaugurate service on the Paris RER three years later.

Interestingly, Brissonneau and Lotz also did some automotive design and manufacturing in those days and was a frequent partner with brands such as Renault, Opel, and Porsche. It was during this time Mr. Cooper played a key role in the design of the Porsche 914, an experience which was later cited as having influenced his design of the TGV.

In 1972, Brissonneau and Lotz was acquired by Alstom (then known as Alsthom). Société Nationale des Chemins de fer

Français (SNCF — French National Railways) was pursuing its high-speed rail program and Alstom was tasked with developing the train which would work the future network. The company's leadership directed Mr. Cooper to draw on his sports car work to "design a train which did not look like a train."

Thus began Jacques Cooper's involvement with the TGV program. His work first yielded the prototype known as TGV 001, powered by a gas turbine, as the high-speed rail program was then flirting with using trains powered by gas instead of electricity. Eventually, SNCF made the smart decision to pursue an electrified high-speed rail system, leading to the September 1981 opening of the Ligne à Grande Vitesse Sud-Est (LGV — South-East High-Speed Line).

While at Alstom, Mr. Cooper also designed the rolling stock for the Cairo and Santiago metros, the Nantes tramway, and locomotives for China. He retired sometime in the 1990s to his house in Suresnes outside Paris. The cause of his death has not been disclosed.

When the time came to design the second fleet of TGVs for the 1989 opening of the LGV Atlantique from Paris to Le Mans and Tours, SNCF moved away from Cooper's orange livery and tapped another noted French industrial designer, Roger Tallon. Mr. Tallon, also known for his Paris Métro rolling stock designs in the early 1990s, kept Cooper's basic silhouette for the TGV Atlantique trains but favored a blended livery of blue and dark silver.

Subsequent TGV fleets cycled through several color themes, dominated in recent years by a series of variations of SNCF's house livery of carmillon. However, except for some aerodynamic modifications and further streamlining, as seen in the latest generation TGV-M fleet currently being delivered, the basic look of the TGV has essentially remained the same.

Today the TGV is a symbol of the great success of the French high-speed rail system. The TGV design and technology has been exported to Italy, South Korea, Spain, and the United States, as seen in Amtrak's Acela and their soon to be introduced Avelia Liberty. All a testament to Mr. Cooper's work and his lasting legacy.

Sources:

1. Le Monde, April 17

https://www.lemonde.fr/en/france/article/2024/04/17/designer-of-france-s-high-speed-tgv-train-dies_6668740_7.html#

2. *La Vie du Rail* website, April 24 https://www.laviedurail.com/actualites/ le-designer-du-premier-tgv-est-mort/

3. *La Vie du Rail* website, October 26, 2018 https://www.lettreducheminot.fr/materiel/ etait-vie-rail-38-ne-tgv-cartons-de-jacques-cooper/

4. Wikipedia France - Jacques Cooper https://fr.wikipedia.org/wiki/Jacques_Cooper#Masse1991 as well as the pages for Roger Tallon, the TGV, and the LGV Sud-Est and LGV Atlantique



A 1976 sketch of the TGV by Jacques Cooper, pretty close to its final appearance. La Vie du Rail website

LIRR M9 Car Delivery History

By Jeff Erlitz (ERA #3997)

As noted in the news section on page 6, the delivery of the LIRR's fleet of M9 cars has now been completed. With that,

we can now present the complete list of all car deliveries, in car number order.

Number Date Number Dat	Car	Delivery	Car	Delivery	Car	Delivery	Car	Delivery
9001 3/26/2019 9051 7/2/2020 9101 1/8/2021 9151 10/15/2021 9003 2/5/2019 9053 12/20/2019 9103 1/2/20/201 9153 10/15/20/2019 9003 2/5/2019 9053 1/2/20/2019 9104 1/2/20/201 9153 10/15/20/2019 9104 1/2/20/2019 9104 1/2/20/2019 9104 1/2/20/2019 9105 1/2/20/2019 9107 3/6/20/20 9111 1/2/20/20 9116 1/2/20/2019 9105 1/2/20/2019 9107 3/6/20/20 9117 3/6/20/2019 9107 3/6/20/20 9112 1/2/20/2019 9107 3/6/20/20 9112 1/2/20/20 9118 3/6/20/21 9165 1/2/5/20/21 9165 1/2/5/20/21 9105 1/2/20/20 912 1/2/20/203 917 1/2/20/20 912 1/2/20/203 917 1/2/20/20 912 3/6/20/20 912 1/2/20/203 917 1/2/20/20 912 3/6/20/20 912 1/2/20/203 917 1/2/20/20 912 1/2/20/20 912 1/2/20/20 912 1/2/20/20 912 1/2/20/20 912 1/2/20/20 912 1/2/20/20 912 1/2/20/20 913 1/2/20/20 913 1/2/20/20 913 1/2/20/20 913 1/2		-		-				
9002 64/2019 9052 7/2/2020 9103 1/2/2021 9152 10/15/2021 9004 2/5/2019 9053 1/2/20/2019 9103 1/2/20/201 9153 10/15/2021 9004 2/5/2019 9054 1/2/20/2019 9104 1/2/20/201 9155 11/2/10/201 9005 10/2/2018 9055 1/2/3/2020 9105 2/19/2021 9155 11/2/10/201 9006 10/2/2018 9056 1/2/3/2020 9106 2/19/2021 9155 11/2/10/201 9007 64/2019 9057 1/17/2020 9107 2/19/2021 9157 11/3/2023 9008 3/26/2019 9058 11/2/2020 9106 2/19/2021 9156 11/2/10/201 9007 64/2019 9059 61/5/2020 9108 2/19/2021 9156 11/2/2021 9109 63/2021 9159 11/3/2023 9009 12/17/2019 9059 61/5/2020 9110 63/20/201 9159 11/2/2020 9010 12/17/2019 9059 61/5/2020 9110 63/20/201 9150 12/10/2021 9101 1/9/2020 9061 6/25/2020 9111 4/9/2021 9161 12/10/2021 9011 19/9/2020 9062 6/25/2020 9112 4/9/2021 9165 12/10/2021 9013 11/5/2020 9063 15/20/2020 9114 4/9/2021 9162 12/10/2021 9013 11/5/2020 9063 15/20/2020 9114 3/2/10/201 9163 12/7/2023 9014 11/5/2020 9064 11/2/20/2020 9114 3/2/10/201 9163 12/7/2023 9015 3/19/2019 9065 2/14/2020 9115 2/2/5/2021 9165 12/15/2021 9016 3/19/2019 9065 2/14/2020 9116 2/2/5/2021 9165 12/15/2021 9016 3/19/2019 9065 2/14/2020 9116 2/2/5/2021 9165 12/15/2021 9016 3/19/2019 9065 5/14/2020 9116 2/2/5/2021 9166 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 11/4/2022 9018 4/18/2019 9067 5/13/2020 9116 3/5/2021 9167 11/4/2022 9018 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 11/4/2022 9020 7/3/2019 9073 3/3/2020 9119 11/11/2022 9170 3/16/2023 9027 7/3/2019 9073 3/3/2020 9119 3/16/2023 9172 12/10/2023 9027 7/3/2019 9073 3/3/2020 9123 3/16/2023 9172 12/10/2023 9027 7/3/2019 9073 3/3/2020 9123 3/16/2023 9173 1/2/2022 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 12/2022 9028 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/2/2022 9029 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/2/2022 9029 9026 9/202019 9076 3/18/2020 9126 4/2/10/203 9176 1/2/2029 9029 9029 902/2019 9076 3/18/2020 9126 4/2/10/203 9176 1/2/2029 9029 9029 9029 9029 9029 9029 90								
9003 25/2019 9053 12/20/2019 9103 12/20/201 9153 10/15/2021 9004 12/5/2018 9055 12/3/2020 9106 21/9/2021 9155 11/21/2021 9006 10/26/2018 9055 12/3/2020 9106 21/9/2021 9156 11/21/2021 9006 10/26/2018 9056 12/3/2020 9106 21/9/2021 9156 11/21/2021 9007 64/2019 9057 11/7/2020 9107 21/9/2021 9157 11/3/2023 9008 3/26/2019 9058 11/7/2020 9109 6/30/2021 9158 11/3/2023 9009 12/17/2019 9059 6/15/2020 9109 6/30/2021 9159 12/10/2021 9010 12/17/2019 9050 6/15/2020 9110 6/30/2021 9159 12/10/2021 9010 12/17/2019 9060 6/15/2020 9110 6/30/2021 9160 12/10/2021 9011 13/9/2020 9062 6/25/2020 9111 49/2021 9161 12/10/2021 9012 14/2020 9063 1/30/2020 9113 3/21/2021 9163 12/10/2021 9013 11/5/2020 9063 1/30/2020 9113 3/21/2021 9163 12/7/2023 9014 11/15/2020 9063 1/30/2020 9114 3/21/2021 9163 12/7/2023 9014 11/15/2020 9064 1/30/2020 9114 3/21/2021 9163 12/7/2023 9016 3/19/2019 9066 2/14/2020 9115 22/5/2021 9166 12/15/2021 9016 4/18/2019 9066 2/14/2020 9116 2/25/2021 9165 12/15/2021 9017 4/18/2019 9066 3/13/2020 9116 3/5/2021 9166 12/15/2021 9018 4/18/2019 9066 5/13/2020 9118 3/5/2021 9166 12/15/2021 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9169 11/16/2022 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9170 3/6/2020 9020 8/7/2019 9070 3/3/2020 9120 11/11/2022 9170 3/6/2020 9021 8/7/2019 9073 3/3/2020 9120 11/11/2022 9170 3/6/2023 9022 8/7/2019 9073 3/3/2020 9120 11/11/2022 9170 3/6/2023 9022 8/7/2019 9073 3/3/2020 9120 11/11/2022 9170 3/6/2023 9024 9/5/2019 9073 3/3/2020 9120 11/11/2022 9170 3/6/2023 9025 9/202019 9073 3/3/2020 9126 4/21/2023 9171 12/2022 9028 9/7/2019 9073 3/3/2020 9126 4/21/2023 9171 12/2022 9029 9/202019 9074 3/3/3/2020 9126 4/21/2023 9171 12/2022 9029 9/202019 9075 3/18/2020 9126 4/21/2023 9177 11/2/2022 9029 9/202019 9079 3/3/3/2020 9126 4/21/2023 9177 11/2/2022 9029 9/202019 9079 3/3/3/2020 9136 6/2/2023 9177 11/2/2029 9029 10/4/2019 9080 9/1/20/2020 9136 6/2/2023 9179 12/20/2029 9030 10/4/2019 9081 10/12/2020 9138 6/2/2021 9189 6/10/2022 9031 10/11/2019 9081 7/2/2020 9136 6/2/2022 9139 6/10/2022 9033 11/16/2021 91								
9004 25/2019 9054 12/20/2019 9104 12/20/201 9155 11/21/2021 9006 10/26/2018 9056 12/32/2020 9106 21/96/2021 9156 11/21/2021 9007 64/2019 9057 11/71/2020 9106 21/96/2021 9157 11/32/203 9008 3/26/2019 9058 11/71/2020 9108 21/96/2021 9157 11/32/203 9008 3/26/2019 9058 11/71/2020 9108 21/96/2021 9158 11/32/203 9009 12/71/2019 9059 6/15/2020 9110 6/30/2021 9158 11/32/203 9001 12/71/2019 9059 6/15/2020 9110 6/30/2021 9158 11/32/203 9010 12/71/2019 9059 6/15/2020 9110 6/30/2021 9150 12/10/2021 9011 19/2020 9061 6/25/2020 9111 49/2021 9161 12/10/2021 9012 19/9020 9062 6/25/2020 9112 49/2021 9161 12/10/2021 9013 11/15/2020 9063 13/90/2020 9113 32/12/2021 9163 12/7/2023 9014 11/5/2020 9063 13/90/2020 9114 32/12/2021 9163 12/7/2023 9015 3/19/2019 9065 21/41/2020 9115 22/55/2021 9165 12/15/2021 9017 4/18/2019 9065 21/41/2020 9115 22/55/2021 9165 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9166 12/15/2021 9018 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 11/42/202 9019 7/3/2019 9069 3/3/2020 9117 3/5/2021 9167 11/42/202 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9119 11/11/2022 9169 3/16/2023 9021 8/27/2019 9071 3/6/2020 9112 21/10/2023 9171 3/16/2023 9022 8/27/2019 9071 3/6/2020 9122 21/10/2023 9171 12/12/2022 9022 8/27/2019 9073 3/3/2020 9120 11/11/202 9169 3/16/2023 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 12/12/202 9025 9/5/2019 9073 3/13/2020 9124 3/12/2021 9174 12/12/202 9026 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 12/12/202 9027 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 12/12/202 9028 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 12/12/202 9029 9026 9/5/2019 9075 3/18/2020 9125 42/10/2033 9172 12/12/202 9029 9026 9/5/2019 9076 3/18/2020 9126 42/12/203 9176 12/12/202 9028 9/5/2019 9076 3/18/2020 9126 42/12/203 9176 12/12/202 9029 9030 10/4/2019 9069 3/18/2020 9130 43/02/2021 9179 41/22/202 9031 10/12/1019 9086 9/5/20/202 9130 43/02/2021 9186 6/5/2022 9033 10/4/2019 9086 9/5/20/2020 9130 4/30/2021 9180 6/02/202 9034 10/25/2019 9086 9/5/20/2020 9131 4/12/								
9005 10/26/2018 9056 1/23/2020 9106 2/19/2021 9156 11/21/2021 9007 64/2019 9057 11/17/2020 9106 2/19/2021 9157 11/13/2023 9008 3/26/2019 9058 11/17/2020 9108 2/19/2021 9157 11/13/2023 9008 3/26/2019 9058 61/5/2020 9108 2/19/2021 9158 11/13/2023 9009 12/17/2019 9059 61/5/2020 9109 6/30/2021 9160 12/10/2021 9101 12/10/2021 9010 12/10/2021 9010 12/10/2021 9160 12/10/2021 9011 19/2020 9061 6/25/2020 9111 4/9/2021 9161 12/10/2021 9012 1/9/2020 9062 6/25/2020 9111 4/9/2021 9162 12/10/2021 9013 11/5/2020 9063 1/30/2020 9113 3/21/2021 9162 12/10/2021 9013 11/5/2020 9063 1/30/2020 9113 3/21/2021 9162 12/10/2021 9014 11/5/2020 9064 1/30/2020 9114 3/21/2021 9162 12/10/2021 9016 3/19/2019 9065 2/14/2020 9114 3/21/2021 9164 1/27/2023 9016 3/19/2019 9066 2/14/2020 9115 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 11/4/2022 9018 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 11/4/2022 9018 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 11/4/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 11/4/2022 9019 7/3/2019 9069 3/3/2020 9120 11/11/2022 9169 3/16/2023 9022 8/27/2019 9070 3/3/2020 9120 11/11/2022 9169 3/16/2023 9022 8/27/2019 9071 3/6/2020 9122 11/0/2023 9171 12/12/2022 9023 9/5/2019 9073 3/3/2020 9120 11/11/2022 9169 3/16/2023 9022 8/27/2019 9073 3/3/2020 9122 11/0/2023 9171 12/12/2022 9024 9/5/2019 9073 3/3/2020 9122 11/0/2023 9171 12/12/2022 9024 9/5/2019 9073 3/3/2020 9123 11/12/2023 9176 12/2022 9024 9/5/2019 9073 3/3/2020 9123 11/12/2023 9176 9/20/203 9026 9/20/2019 9076 3/18/2020 9128 4/21/2023 9176 9/20/203 9028 9/27/2019 9077 3/3/2020 9128 4/21/2023 9176 9/20/203 9028 9/27/2019 9077 3/3/2020 9128 4/21/2023 9176 9/20/203 9028 9/27/2019 9078 3/18/2020 9128 4/21/2023 9176 9/20/203 9028 9/27/2019 9078 3/18/2020 9136 4/21/2023 9176 9/20/203 9028 9/27/2019 9078 3/18/2020 9136 5/14/2021 9186 4/21/2023 9176 9/20/203 9028 9/27/2019 9089 91/20/200 9136 5/14/2021 9186 9/27/2024 9038 11/13/2019 9089 91/20/200 9135 5/14/2021 9186 9/27/20								
9006 10/26/2018 9056 1/23/2020 9106 2/19/2021 9156 11/21/2021 9007 64/2019 9057 11/17/2020 9107 2/19/2021 9158 1/13/2023 9008 3/26/2019 9058 11/17/2020 9108 2/19/2021 9158 1/13/2023 9009 12/17/2019 9059 6/15/2020 9109 6/30/2021 9159 12/10/2021 9010 12/17/2019 9060 6/15/2020 9109 6/30/2021 9159 12/10/2021 9011 19/2020 9061 6/25/2020 9111 4/9/2021 9161 12/10/2021 9012 1/9/2020 9062 6/25/2020 9111 4/9/2021 9161 12/10/2021 9013 1/15/2020 9063 6/25/2020 9111 4/9/2021 9161 12/10/2021 9013 1/15/2020 9063 1/30/2020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9163 1/27/2023 9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9165 12/15/2021 9016 3/19/2019 9065 2/14/2020 9116 2/25/2021 9165 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9165 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9166 12/15/2021 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/6/2023 9020 7/3/2019 9070 3/3/2020 9119 11/11/2022 9169 3/6/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9169 3/6/2023 9021 8/27/2019 9071 3/6/2020 9122 1/10/2023 9171 12/2022 9023 9/5/2019 9073 3/13/2020 9122 1/10/2023 9171 12/2022 9023 9/5/2019 9073 3/13/2020 9122 1/10/2023 9171 12/12/2022 9024 9/5/2019 9075 3/18/2020 9124 3/12/2021 9174 1/28/2022 9024 9/5/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2033 9026 9/20/2019 9076 3/18/2020 9125 4/21/2023 9175 9/29/2033 9026 9/20/2019 9076 3/18/2020 9124 3/12/2021 9174 1/28/2022 9028 9/27/2019 9077 3/18/2020 9125 4/21/2023 9176 9/29/203 9026 9/20/2019 9077 3/18/2020 9128 4/30/2021 9174 1/28/2022 9028 9/27/2019 9077 3/18/2020 9128 4/30/2021 9179 4/1/2022 9028 9/27/2019 9077 3/18/2020 9128 5/14/2021 9186 4/20/203 9176 9/29/203 9026 9/20/2019 9077 3/18/2020 9138 5/14/2021 9186 6/20/20 9033 1/01/2019 9086 9/3/2020 9136 5/14/2021 9186 6/20/20 9033 1/01/2019 9087 1/25/2020 9138 6/14/2021 9186 6/20/20 9039 1/11/2019 9087 1/25/2022 9148 8/1/2021 9199 6/10/2022 9033 1/11/20								
9007 64/2019 9057 11/7/2020 9108 21/9/2021 9157 11/3/2023 9009 12/17/2019 9058 11/17/2020 9108 21/9/2021 9158 11/3/2023 9009 12/17/2019 9059 61/5/2020 9108 63/0/2021 9159 12/10/2021 9010 12/17/2019 9060 61/5/2020 9110 63/0/2021 9160 12/10/2021 9011 19/2020 9061 67/5/2020 9111 49/2021 9161 12/10/2021 9012 19/2020 9062 65/5/2020 9112 49/2021 9162 12/10/2021 9013 11/5/2020 9063 1/30/2020 9113 3/21/2021 9163 12/10/2021 9014 11/5/2020 9063 1/30/2020 9113 3/21/2021 9163 12/7/2023 9014 11/5/2020 9064 1/30/2020 9114 3/21/2021 9164 1/27/2023 9015 3/19/2019 9065 2/14/2020 9116 2/5/2021 9166 1/5/5/2021 9166 3/19/2019 9065 2/14/2020 9116 2/5/2021 9166 1/5/5/2021 9016 3/19/2019 9066 2/14/2020 9116 2/5/2021 9166 1/5/5/2021 9016 3/19/2019 9066 2/14/2020 9116 2/5/2021 9166 1/5/5/2021 9018 4/18/2019 9068 6/13/2020 9116 1/5/2021 9166 1/5/2021 9018 4/18/2019 9068 6/13/2020 9118 3/5/2021 9168 1/14/2022 9018 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/5/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9071 3/5/2020 9120 11/11/2022 9170 3/16/2023 9022 8/27/2019 9071 3/5/2020 9122 1/10/2023 9171 12/12/2022 9023 9/5/2019 9073 3/5/2020 9122 1/10/2023 9171 12/12/2022 9023 9/5/2019 9073 3/3/2020 9122 1/10/2023 9171 12/12/2022 9024 9/5/2019 9073 3/3/2020 9122 1/10/2023 9171 12/12/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/13/2020 9123 4/12/2023 9175 9/29/2033 9026 9/20/2019 9075 3/18/2020 9125 4/21/2023 9176 9/29/2039 9028 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2039 9028 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2039 9028 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2039 9028 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2039 9028 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2039 9028 9/27/2019 9078 10/2/2020 9136 4/30/2021 9180 4/12/2022 9038 11/15/2019 9084 7/23/2020 9135 5/14/2021 9186 6/2/2023 9031 10/1/2019 9084 7/23/2020 9135 5/14/2021 9186 6/2/2023 9039 11/17/2019 9089 11/17/2020 9135 5/14/2021 9186 6/2/2024 9044 11/2/2019 908								
9008 3/26/2019 9058 1/17/2020 9108 2/19/2021 9158 1/13/2023 9009 12/17/2019 9059 6/15/2020 9109 6/30/2021 9159 12/10/2021 9101 12/10/2021 9101 19/2020 9061 6/25/2020 9111 4/9/2021 9161 12/10/2021 9011 19/2020 9062 6/25/2020 9111 4/9/2021 9162 12/10/2021 9012 1/9/2020 9062 6/25/2020 9112 4/9/2021 9162 12/10/2021 9013 1/15/2020 9063 1/30/2020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9166 1/27/2023 9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9166 12/15/2021 9016 3/19/2019 9065 2/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9066 5/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9067 5/13/2020 9118 3/5/2021 9167 1/14/2022 9018 4/18/2019 9067 5/13/2020 9118 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 3/3/2020 9118 3/5/2021 9167 1/14/2022 9018 4/18/2019 9069 3/3/2020 9118 3/5/2021 9168 1/4/2022 9019 9070 3/3/2020 9119 1/11/12/2022 9169 3/16/2023 9022 8/27/2019 9070 3/3/2020 9120 11/11/2022 9169 3/16/2023 9022 8/27/2019 9071 3/6/2020 9120 11/11/2022 9169 3/16/2023 9022 8/27/2019 9071 3/6/2020 9122 1/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9122 1/10/2023 9171 1/21/2022 9025 9/20/2019 9075 3/18/2020 9123 3/12/2021 9174 1/28/2023 9025 9/20/2019 9075 3/18/2020 9123 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9176 9/29/2023 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9176 9/29/2023 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9176 9/29/2023 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9176 9/29/2023 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9176 9/29/2023 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9176 9/29/2023 9025 9/20/2019 9076 3/18/2020 9126 7/28/2023 9177 1/28/2022 9025 9/20/2019 9076 3/18/2020 9126 7/28/2023 9178 1/28/2022 9025 9/20/2019 9076 3/18/2020 9126 7/28/2023 9178 1/28/2022 9025 9/20/2019 9078 10/2/2020 9126 7/28/2023 9178 1/28/2022 9025 9/20/2019 9078 10/2/2020 9136 5/14/2021 9184 4/22/2029 9031 10/14/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9031 10/14/2019 9086 9/3/2020 9136 5/14/2021 9186 6/10/2022 9039 11/								
9009 12/17/2019 9059 6/15/2020 9109 6/30/2021 9159 12/10/2021 9010 12/17/2019 9060 6/15/2020 9110 6/30/2021 9160 12/10/2021 9011 1/9/2020 9061 6/25/2020 9111 4/9/2021 9161 12/10/2021 9012 1/9/2020 9062 6/25/2020 9112 4/9/2021 9162 12/10/2021 9013 1/15/2020 9063 1/30/2020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9164 1/27/2023 9014 1/15/2020 9066 1/30/2020 9114 3/21/2021 9166 1/27/2023 9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9117 3/5/2021 9166 12/15/2021 9018 3/19/2019 9068 5/13/2020 9117 3/5/2021 9168 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9170 3/16/2023 9021 8/27/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9122 1/10/2023 9171 1/21/2022 9028 9/27/2019 9072 3/6/2020 9122 1/10/2023 9171 1/21/2022 9028 9/27/2019 9073 3/13/2020 9122 1/10/2023 9171 1/21/2022 9028 9/20/2019 9075 3/18/2020 9122 1/10/2023 9171 1/21/2022 9028 9/20/2019 9075 3/18/2020 9124 3/12/2021 9173 1/28/2022 9025 9/20/2019 9075 3/18/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9176 9/29/2033 9027 9/27/2019 9077 10/2/2020 9125 4/21/2023 9176 9/29/2033 9027 9/27/2019 9077 10/2/2020 9125 4/21/2023 9176 9/29/2033 9027 9/27/2019 9078 10/2/2020 9125 4/31/2021 9174 1/28/2022 9029 10/4/2019 9080 10/9/2020 9129 4/30/2021 9180 4/12/2029 9031 10/11/2019 9081 10/2/2020 9135 5/14/2021 9180 4/12/2029 9031 10/11/2019 9081 10/2/2020 9135 5/14/2021 9180 4/12/2029 9031 10/11/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9031 10/11/2019 9088 10/21/2020 9135 5/14/2021 9186 5/6/2022 9031 10/11/2019 9088 10/21/2020 9135 5/14/2021 9186 5/6/2022 9031 11/15/2019 9088 10/21/2020 9136 6/3/2021 9189 5/6/2022 9031 11/15/2019 9089 9/11/2020 9136 6/3/2021 9199 6/10/2023 9044								
9010 12/17/2019 9060 6/15/2020 9110 6/30/2021 9160 12/10/2021 9011 19/2020 9061 6/25/2020 9111 4/9/2021 9161 12/10/2021 9012 19/2020 9062 6/25/2020 9112 4/9/2021 9162 12/10/2021 9013 1/15/2020 9063 1/30/2020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9164 1/27/2023 9015 3/19/2019 9065 2/14/2020 9116 2/25/2021 9166 1/21/5/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 5/14/2020 9116 2/25/2021 9166 12/15/2021 9016 3/19/2019 9067 5/13/2020 9118 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9018 3/16/2023 9012 7/3/2019 9069 3/3/2020 9118 3/5/2021 9168 1/14/2022 9022 8/27/2019 9070 3/3/2020 9120 1/1/11/2022 9169 3/16/2023 9021 8/27/2019 9071 3/6/2020 9120 1/1/11/2022 9169 3/16/2023 9021 8/27/2019 9071 3/6/2020 9120 1/1/11/2022 9169 3/16/2023 9022 8/27/2019 9073 3/13/2020 9122 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9122 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9124 3/12/2023 9175 9/29/2033 9026 9/20/2019 9076 3/18/2020 9124 4/21/2023 9176 9/29/2023 9026 9/20/2019 9076 3/18/2020 9125 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9077 10/2/2020 9129 4/30/2021 9178 1/28/2022 9029 9/27/2019 9078 10/9/2020 9129 4/30/2021 9179 4/1/2022 9031 10/14/2019 9081 10/9/2020 9129 4/30/2021 9180 4/12/2023 9031 10/14/2019 9081 10/9/2020 9139 5/14/2021 9180 4/12/2023 9031 10/14/2019 9081 10/9/2020 9139 5/14/2021 9180 4/12/2022 9031 10/14/2019 9081 4/23/2021 9134 4/30/2021 9180 6/10/2022 9031 10/14/2019 9088 10/21/2020 9138 5/14/2021 9188 6/10/2022 9031 10/14/2019 9088 9/11/2020 9134 5/14/2021 9185 5/6/2022 9031 11/15/2019 9088 9/11/2020 9136 6/23/2021 9188 6/10/2022 9031 11/15/2019 9089 9/11/2020 9144 8/12/2021 9198 6/10/2023 9044 7/16/2020 9099 1/14/2020 9144 8/12/2021 9								
9011 1/8/2020 9061 6/25/2020 9112 4/9/2021 9163 12/10/2021 9012 19/9/2020 9063 1/30/2020 9113 3/21/2021 9163 12/10/2021 9013 1/15/2020 9063 1/30/2020 9113 3/21/2021 9163 12/10/2021 9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9165 12/15/2021 9015 3/19/2019 9065 2/14/2020 9116 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9068 5/13/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9169 3/16/2023 9021 8/27/2019 9071 3/6/2020 9120 11/11/2022 9170 3/16/2023 9022 8/27/2019 9073 3/13/2020 9121 2/10/2023 9171 12/12/022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9174 1/28/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9174 1/28/2022 9025 9/20/2019 9073 3/13/2020 9123 3/12/2021 9174 1/28/2022 9026 9/20/2019 9075 3/18/2020 9124 3/12/2021 9174 1/28/2022 9026 9/20/2019 9075 3/18/2020 9126 4/21/2023 9175 9/29/2023 9027 9/27/2019 9076 3/18/2020 9126 4/21/2023 9177 1/28/2022 9028 9/27/2019 9077 10/2/2020 9126 4/21/2023 9177 1/28/2022 9029 9/27/2019 9077 10/2/2020 9126 7/28/2023 9177 1/28/2022 9031 10/11/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9032 10/11/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9031 10/11/2019 9080 10/9/2020 9130 4/30/2021 9179 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9033 10/25/2019 9083 7/23/2020 9136 5/14/2021 9186 6/10/2022 9034 10/25/2019 9085 9/3/2020 9136 5/14/2021 9186 6/10/2022 9035 11/1/2019 9086 9/3/2020 9136 6/14/2021 9186 6/10/2022 9036 11/1/2019 9086 9/3/2020 9136 6/14/2021 9186 6/10/2022 9037 11/15/2019 9087 10/21/2020 9136 6/14/2021 9186 6/10/2022 9038 11/1/2019 9089 9/11/2020 9136 6/14/2021 9186 6/10/2022 9039 11/15/2019 9087 10/21/2020 9136 6/14/2021 9186 6/10/2022 9040 5/28/2020 9099 1/1/30/202 9144 8/1/2021 9196 6/10/2024 9								
9012 189/2020 9062 6/25/2020 9112 4/9/2021 9162 12/10/2021 913 11/5/2020 9063 1/3/02020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9165 1/27/2023 9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9166 12/15/2021 9018 4/18/2019 9067 5/13/2020 9118 3/5/2021 9168 1/14/2022 9018 4/18/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9122 2/10/2023 9171 1/21/2022 9023 916/2019 9073 3/13/2020 9122 2/10/2023 9171 1/21/2022 9023 916/2019 9073 3/13/2020 9122 2/10/2023 9171 1/21/2022 9023 916/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/13/2020 9124 3/12/2021 9173 1/28/2022 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9173 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9176 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2023 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9078 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9031 10/11/2019 9081 4/23/2021 9134 4/30/2021 9181 1/28/2022 9034 10/12/2019 9089 4/23/2021 9134 4/30/2021 918 1/28/2022 9033 10/25/2019 9089 9/31/2020 9136 5/14/2021 9184 4/8/2022 9033 10/25/2019 9089 7/23/2020 9134 5/7/2021 9184 4/8/2022 9033 10/25/2019 9089 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9136 5/14/2021 9186 5/6/2022 9034 10/25/2019 9089 9/11/2020 9136 6/4/2021 9186 6/10/2022 9034 11/15/2019 9089 9/11/2020 9136 6/4/2021 9186 6/10/2022 9034 11/15/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/203 9045 7/16/2020 9095								
9013 1/15/2020 9063 1/30/2020 9113 3/21/2021 9163 1/27/2023 9014 1/15/2020 9064 1/30/2020 9115 2/25/2021 9166 1/27/2023 9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9165 1/27/2023 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9167 1/27/2023 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9167 1/27/2023 9017 4/18/2019 9068 5/13/2020 9118 3/5/2021 9167 1/4/2022 9019 7/3/2019 9068 5/13/2020 9118 3/5/2021 9168 1/4/2022 9019 7/3/2019 9068 5/13/2020 9119 1/1/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 1/1/11/2022 9169 3/16/2023 9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9171 1/21/2022 9022 8/27/2019 9073 3/13/2020 9121 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9178 1/28/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9075 3/18/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9075 3/18/2020 9124 3/12/2021 9173 1/28/2022 9025 9/20/2019 9075 3/18/2020 9126 4/21/2023 9175 9/29/2023 9026 9/20/2019 9075 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9134 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9083 7/23/2020 9134 5/7/2021 9185 5/6/2022 9035 11/1/2019 9087 7/23/2020 9136 5/14/2021 9185 5/6/2022 9034 11/15/2019 9087 7/23/2020 9136 5/14/2021 9185 5/6/2022 9034 11/15/2019 9087 7/23/2020 9136 5/14/2021 9185 5/6/2022 9034 11/15/2019 9089 9/11/2020 9136 6/3/2021 9189 6/10/2022 9034 11/15/2019 9089 7/22/2022 9146 8/12/201 9186 6/10/2022 9044 7/6/2020 9093 6/10/2022 9144 8/12/201 9199 6/10/2022 9044 7/6/2020 9099 6/10/2022 9144 8/12/201 9199 7/11/2023 9045 7/6/2020 9099 7/12								
9014 1/15/2020 9064 1/30/2020 9114 3/21/2021 9165 1/21/2021 9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9165 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9069 93/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9169 3/16/2023 9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9171 1/21/2022 9023 8/27/2019 9072 3/6/2020 9122 1/10/2023 9171 1/21/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/18/2020 9123 3/12/2021 9173 1/28/2022 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9125 4/21/2023 9175 9/29/2023 9027 9/27/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2023 9028 9/27/2019 9077 10/2/2020 9126 4/21/2023 9176 9/29/2023 9029 10/4/2019 9079 10/9/2020 9126 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9126 7/28/2023 9178 1/28/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9082 4/23/2021 9133 4/30/2021 9180 4/1/2022 9033 10/25/2019 9084 7/23/2020 9135 5/14/2021 9184 4/8/2022 9033 10/25/2019 9084 7/23/2020 9135 5/14/2021 9184 4/8/2022 9034 10/25/2019 9084 7/23/2020 9135 5/14/2021 9185 5/6/2022 9035 11/15/2019 9086 9/3/2020 9135 5/14/2021 9186 6/10/2022 9036 11/15/2019 9086 9/3/2020 9136 5/14/2021 9186 6/10/2022 9037 11/15/2019 9089 9/11/2020 9136 6/14/2021 9185 5/6/2022 9038 11/15/2019 9086 9/3/2020 9136 6/14/2021 9186 6/10/2022 9039 11/27/2019 9089 9/11/2020 9136 6/14/2021 9186 6/10/2022 9034 10/25/2019 9087 10/21/2020 9136 6/14/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9146 8/1/2021 9199 6/10/2022 9041 5/28/2020 9099 1/29/2021 9149 8/1/2021 9199 6/10/2022 9044 7/16/2020 9099 1/29/2021 9148 8/11/2021 9199 7/11/2023 9045 8/6/								
9015 3/19/2019 9065 2/14/2020 9115 2/25/2021 9166 12/15/2021 9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9122 1/10/2023 9171 1/21/2022 9022 8/27/2019 9073 3/3/2020 9122 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/3/2020 9122 2/10/2023 9172 12/10/2023 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9025 9/20/2019 9074 3/13/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9125 4/21/2023 9175 9/29/2023 9027 9/27/2019 9077 10/2/2020 9125 4/21/2023 9176 9/29/2023 9028 9/27/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9028 9/27/2019 9076 3/18/2020 9126 4/21/2023 9177 1/28/2022 9029 10/4/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9078 10/2/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9129 4/30/2021 9179 4/1/2022 9031 10/11/2019 9081 4/23/2021 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9032 10/11/2019 9084 7/23/2020 9133 5/7/2021 9181 2/25/2022 9033 10/25/2019 9084 7/23/2020 9135 5/14/2021 9185 5/6/2022 9033 10/25/2019 9084 7/23/2020 9135 5/14/2021 9185 5/6/2022 9034 11/1/2019 9086 9/3/2020 9136 5/14/2021 9185 5/6/2022 9035 11/1/2019 9086 9/3/2020 9136 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9089 11/2020 9138 6/2020 9138 6/2020 9185 5/14/2021 9186 6/10/2022 9034 17/5/2019 9089 11/13/2020 9144 7/8/2021 9189 6/10/2022 9034 17/5/2019 9089 11/13/2020 9144 7/8/2021 9196 6/10/2022 9040 11/27/2019 9099 9097 11/2020 9144 8/1/2021 9199 6/10/2022 9041 5/28/2020 9099 11/13/2020 9144 8/1/2021 9199 6/10								
9016 3/19/2019 9066 2/14/2020 9116 2/25/2021 9166 12/15/2021 9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9171 1/21/2022 9022 8/27/2019 9072 3/6/2020 9122 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/13/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 1/28/2022 9026 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9027 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9028 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9028 9/20/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9077 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 9027 9/27/2019 9077 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9030 10/4/2019 9080 10/9/2020 9128 7/28/2023 9178 1/28/2022 9031 10/11/2019 9081 1/28/2021 9132 4/30/2021 9180 4/1/2022 9032 10/11/2019 9081 4/23/2021 9132 4/30/2021 9180 4/1/2022 9033 10/25/2019 9083 7/23/2020 9138 5/7/2021 9181 2/25/2022 9034 10/25/2019 9083 7/23/2020 9138 5/7/2021 9182 2/25/2022 9035 11/11/2019 9088 7/23/2020 9135 5/14/2021 9185 5/6/2022 9036 11/11/2019 9088 7/23/2020 9135 5/14/2021 9185 5/6/2022 9036 11/11/2019 9088 9/3/2020 9136 5/14/2021 9186 6/10/2022 9037 11/15/2019 9089 10/2/2020 9139 6/23/2021 9189 6/10/2022 9038 11/15/2019 9089 7/22/2020 9138 6/8/2021 9186 6/10/2022 9039 11/27/2019 9089 7/11/2020 9139 6/23/2021 9189 6/10/2022 9034 11/27/2019 9089 6/10/2022 9143 8/1/2021 9199 6/10/2022 9035 11/15/2019 9089 7/12/2020 9149 7/8/2021 9189 6/10/2022 9040 11/27/2019 9099 6/10/2022 9143 8/1/2021 9199 6/10/2022 9040 8/6/2020 9099 11/13/2020 9149 8/1/2021 9199 6/10/202 9041 5/28/2020 9099 6/12/2022 9146 8/1/2021 9199 7/11/2023 9045 8/28/2020 9099 7/22/2022 9146 8/1/2021 9199 7/11/2023 9046 8/6/2								
9017 4/18/2019 9067 5/13/2020 9117 3/5/2021 9167 1/14/2022 9018 4/18/2019 9068 5/13/2020 9118 3/5/2021 9168 1/14/2022 9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9171 1/21/2022 9022 8/27/2019 9072 3/6/2020 9122 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9073 3/13/2020 9123 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9176 9/29/2023 9027 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9079 10/9/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9128 7/28/2021 9179 4/1/2022 9031 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9082 4/32/2021 9131 4/30/2021 9181 2/255/2022 9032 10/11/2019 9082 4/23/2021 9133 5/7/2021 9181 2/255/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9184 4/8/2022 9034 10/25/2019 9084 7/23/2020 9135 5/14/2021 9184 4/8/2022 9035 11/1/2019 9086 9/3/2020 9136 5/14/2021 9185 5/6/2022 9037 11/15/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9088 10/21/2020 9136 6/23/2021 9188 6/10/2022 9039 11/15/2019 9087 10/21/2020 9136 6/3/2021 9188 6/10/2022 9034 11/15/2019 9086 9/3/2020 9136 6/3/2021 9189 6/10/2022 9040 11/27/2019 9086 9/3/2020 9136 6/3/2021 9189 6/10/2022 9040 11/27/2019 9086 9/3/2020 9136 6/3/2021 9189 6/10/2022 9040 11/27/2019 9089 9097 11/2020 9144 8/1/2021 9199 6/1/2020 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9199 6/1/2023 9045 7/16/2020 9099 6/1/2020 9144 8/1/2021 9199 6/1/2023 9045 7/16/2020 9099 1/29/2021 9148 8/1/2021 9199 7/11/2023 9045 7/16/2020 9099 1/								
9018 4/18/2019 9068 5/13/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9122 2/10/2023 9171 12/21/2022 9022 8/27/2019 9072 3/6/2020 9122 2/10/2023 9171 12/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9080 10/9/2020 9129 4/30/2021 9179 4/1/2022 9031 10/11/2019 9081 1/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/32/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9033 10/15/2019 9083 7/23/2020 9134 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9183 4/8/2022 9035 11/11/2019 9086 9/3/2020 9135 5/14/2021 9184 4/8/2022 9036 11/11/2019 9086 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/11/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9088 10/21/2020 9136 6/8/2021 9186 6/10/2022 9039 11/15/2019 9088 10/21/2020 9136 6/8/2021 9186 6/10/2022 9039 11/15/2019 9088 10/21/2020 9136 6/8/2021 9186 6/10/2022 9039 11/15/2019 9089 9/11/2020 9136 6/8/2021 9186 6/10/2022 9040 11/27/2019 9089 9/11/2020 9134 8/12/201 9190 6/10/2022 9040 11/27/2019 9098 10/21/2020 9134 8/12/201 9199 6/10/2023 9044 5/28/2020 9093 6/10/2022 9144 8/12/201 9199 6/10/2023 9044 5/28/2020 9099 1/1/3/2020 9140 6/23/2021 9199 6/10/2023 9044 7/16/2020 9099 6/22/2022 9146 8/12/201 9199 7/11/2023 9045 8/6/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/20								
9019 7/3/2019 9069 3/3/2020 9119 11/11/2022 9169 3/16/2023 9020 7/3/2019 9070 3/3/2020 9120 11/11/2022 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9171 1/21/2022 9022 8/27/2019 9073 3/13/2020 9122 2/10/2023 9171 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9074 3/13/2020 9123 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9079 10/9/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9032 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9035 11/1/2019 9085 9/3/2020 9133 5/7/2021 9183 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9186 5/6/2022 9036 11/1/2019 9086 9/3/2020 9135 5/14/2021 9186 5/6/2022 9036 11/1/2019 9088 10/21/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9088 10/21/2020 9136 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9136 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9136 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9144 8/12021 9196 6/10/2022 9044 7/16/2020 9093 6/10/2022 9144 8/12021 9196 6/10/2022 9044 7/16/2020 9099 1/1/2020 9146 8/2/2021 9199 6/10/2022 9044 7/16/2020 9099 1/1/2020 9146 8/12021 9199 6/10/2022 9044 7/16/2020 9099 1/1/2020 9146 8/12021 9199 6/10/2022 9044 7/16/2020 9099 1/1/2020 9146 8/12021 9199 6/10/2022 9044 8/12021 9199 6/10/2022 9144 8/12021 9199 7/11/2023 9045 8/6/2020 9099 1/29/2021 9148 8/11/2021 9199 1/1/17/203 9045 8/6/2020 9099 1/29/2021 9148 8/11/2								
9020 7/3/2019 9070 3/3/2020 9120 11/11/12/22 9170 3/16/2023 9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9172 11/21/2022 9022 8/27/2019 9072 3/6/2020 9122 2/10/2023 9172 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9176 9/29/2023 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9128 7/28/2023 9178 1/28/2022 9030 10/4/2019 9080 10/9/2020 9129 4/30/2021 9179 4/1/2022 9031 10/11/2019 9080 10/9/2020 9130 4/30/2021 9179 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9031 10/11/2019 9082 4/23/2021 9132 4/30/2021 9181 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9182 2/25/2022 9034 10/25/2019 9083 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9184 4/8/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9088 9/1/2020 9136 5/14/2021 9186 5/6/2022 9039 11/1/2019 9089 9/11/2020 9136 6/8/2021 9186 6/10/2022 9039 11/1/2019 9089 9/11/2020 9136 6/8/2021 9186 6/10/2022 9039 11/1/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9034 11/27/2019 9089 9/11/2020 9136 6/8/2021 9186 6/10/2022 9034 11/27/2019 9089 9/11/2020 9136 6/8/2021 9186 6/10/2022 9034 11/27/2019 9089 9/11/2020 9136 6/8/2021 9186 6/10/2022 9034 11/27/2019 9089 9/11/2020 9136 6/8/2021 9198 6/10/2022 9034 11/27/2019 9089 9/11/2020 9134 8/1/2021 9199 6/10/2022 9044 5/28/2020 9093 6/10/2022 9144 8/1/2021 9199 6/10/2023 9044 5/28/2020 9099 6/10/2022 9146 8/1/2021 9199 7/11/2023 9045 8/6/2020 9099 6/10/2022 9146 8/1/2021 9199 7/11/2023 9045 8/6/2020 9099 1/29/								
9021 8/27/2019 9071 3/6/2020 9121 2/10/2023 9171 1/21/2022 9022 8/27/2019 9072 3/6/2020 9122 2/10/2023 9172 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9076 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9029 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9128 7/28/2023 9178 1/28/2022 9030 10/4/2019 9080 10/9/2020 9129 4/30/2021 9179 4/12022 9031 10/11/2019 9080 10/9/2020 9130 4/30/2021 9179 4/12022 9032 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9184 2/25/2022 9034 10/25/2019 9084 7/23/2020 9133 5/7/2021 9184 2/25/2022 9035 11/1/2019 9085 9/3/2020 9134 5/7/2021 9184 4/8/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9038 11/15/2019 9087 10/21/2020 9137 6/8/2021 9186 5/6/2022 9039 11/27/2019 9089 9/11/2020 9137 6/8/2021 9186 6/10/2022 9039 11/27/2019 9089 9/11/2020 9137 6/8/2021 9187 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/3/2021 9189 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/3/2021 9189 6/10/2022 9040 11/27/2019 9089 9/11/2020 9134 6/8/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9144 7/8/2021 9190 6/10/2022 9042 5/28/2020 9091 11/13/2020 9144 7/8/2021 9190 6/10/2022 9044 5/28/2020 9095 7/22/2022 9144 8/1/2021 9199 6/10/2023 9045 8/6/2020 9096 7/22/2022 9144 8/1/2021 9199 6/10/2023 9046 8/6/2020 9099 1/15/2021 9148 8/1/2021 9199 1/1/2024 9048 12/10/2019 9098 1/15/2021 9148 8/1/2021 9199 1/1/2024 9049 8/18/2020 9099 1/29/2021 9149 8/1/2022 9149 8/1/2021 9199 1/1/2024 9049 8/18/2020 9099 1/29/2021 9149 8/1/2022 9149 8/1/2022 9149 8/1/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 1/1/1/2024								
9022 8/27/2019 9072 3/6/2020 9122 2/10/2023 9172 1/21/2022 9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9174 1/28/2022 9024 9/5/2019 9075 3/18/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9126 4/21/2023 9177 1/28/2022 9028 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9079 10/9/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/12/202 9031 10/11/2019 9080 10/9/2020 9130 4/30/2021 9180 4/12/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/12/2022 9031 10/11/2019 9082 4/23/2021 9132 4/30/2021 9180 4/12/2022 9033 10/25/2019 9083 7/23/2021 9133 5/7/2021 9184 2/25/2022 9033 10/25/2019 9084 7/23/2020 9133 5/7/2021 9184 4/8/2022 9034 10/25/2019 9084 7/23/2020 9133 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9133 5/7/2021 9184 4/8/2022 9035 11/1/2019 9086 9/3/2020 9135 5/14/2021 9186 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9088 10/21/2020 9136 6/4/2021 9186 6/6/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9186 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9186 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9034 1/27/2019 9089 9/11/2020 9138 6/8/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9099 11/1/3/2020 9144 7/8/2021 9192 6/10/202 9045 8/6/2020 9099 11/1/3/2020 9144 8/1/2021 9193 6/10/2022 9046 8/6/2020 9099 11/1/3/2020 9144 8/1/2021 9193 6/10/2022 9046 8/6/2020 9099 11/1/3/2020 9144 8/1/2021 9199 6/10/2023 9045 8/6/2020 9099 11/1/3/2021 9148 8/1/2021 9199 7/11/2023 9045 8/6/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 8/11/2022 9149 8/11/2021 9199 3/27/2024								
9023 9/5/2019 9073 3/13/2020 9123 3/12/2021 9173 1/28/2022 9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9176 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 9179 4/1/2022 9030 10/4/2019 9079 10/9/2020 9129 4/30/2021 9180 4/1/2022 9031 10/11/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9180 4/1/2022 9032 10/11/2019 9082 4/23/2021 9131 4/30/2021 9182 2/25/2022 9032 10/11/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9035 11/1/2019 9085 9/3/2020 9133 5/7/2021 9184 4/8/2022 9035 11/1/2019 9086 9/3/2020 9134 5/7/2021 9184 4/8/2022 9036 11/1/2019 9086 9/3/2020 9135 5/14/2021 9186 5/6/2022 9036 11/1/2019 9086 9/3/2020 9135 5/14/2021 9186 5/6/2022 9037 11/15/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9038 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9039 11/1/2019 9087 10/21/2020 9136 6/8/2021 9186 5/6/2022 9039 11/27/2019 9087 10/21/2020 9136 6/8/2021 9186 6/10/2022 9039 11/27/2019 9088 10/21/2020 9139 6/23/2021 9189 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9139 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9092 11/13/2020 9143 8/1/2021 9190 6/10/2022 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 7/12/204 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2024 9046 8/6/2020 9099 1/15/2021 9148 8/1/2021 9199 7/11/2024 9048 1/2/10/2019 9098 1/15/2021 9148 8/1/2021 9199 7/11/2023 9048 1/2/10/2019 9098 1/15/2021 9148 8/1/2021 9199 1/1/17/2023 9049 8/18/2020 9099 1/28/2021 9148 8/1/2021 9199 1/1/17/2023 9049 8/18/2020 9099 1/28/2021 9149 7/26/2022 9149 8/18/2020 9199 1/1/17/2023 9050 8/18/2020 9099 1/28/2021 9149 7/26/2022 9149 8/18/2020								
9024 9/5/2019 9074 3/13/2020 9124 3/12/2021 9174 1/28/2022 9025 9/20/2019 9075 3/18/2020 9126 4/21/2023 9176 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9177 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9129 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/11/2019 9082 4/23/2021 9131 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9182 2/25/2022 9034 10/25/2019 9083 7/23/2020 9133 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9035 11/1/2019 9086 9/3/2020 9135 5/14/2021 9185 5/6/2022 9037 11/1/2019 9086 9/3/2020 9136 5/14/2021 9185 5/6/2022 9037 11/1/2019 9088 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/1/2019 9088 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/1/2019 9088 10/21/2020 9137 6/8/2021 9186 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9186 6/10/2022 9039 11/2/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9039 11/2/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9199 6/10/2022 9041 5/28/2020 9091 11/13/2020 9144 8/1/2021 9199 6/10/2022 9045 5/28/2020 9099 11/13/2020 9144 8/1/2021 9199 6/10/2022 9045 8/6/2020 9099 6/10/2022 9144 8/1/2021 9199 6/10/2022 9045 8/6/2020 9099 6/10/2022 9144 8/1/2021 9199 7/11/2023 9045 8/6/2020 9099 6/10/2022 9146 8/1/2021 9199 7/11/2024 9046 8/6/2020 9099 6/10/2022 9146 8/1/2021 9199 7/11/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9199 3/2/2024 9048 12/10/2019 9099 1/29/2021 9148 8/11/2021 9199 3/2/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/2/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/11/7/2023 9050 8/18/2020 9099 1/29/2021 9149 8/11/2021 9199 1/11/7/2023 9050 8/18/2020 9099 1/29/2021 9149 8/11/2021 9199 1/11/7/2023 9050 8/18/2020 9099								
9025 9/20/2019 9075 3/18/2020 9125 4/21/2023 9175 9/29/2023 9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/32/2021 9131 4/30/2021 9182 2/25/2022 9032 10/11/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9032 10/11/2019 9083 7/23/2020 9133 5/7/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/11/2019 9086 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/11/2019 9086 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/11/2019 9086 9/3/2020 9136 5/14/2021 9185 5/6/2022 9037 11/15/2019 9087 10/21/2020 9136 5/14/2021 9186 5/6/2022 9039 11/15/2019 9088 10/21/2020 9136 5/14/2021 9186 5/6/2022 9039 11/127/2019 9088 10/21/2020 9138 6/8/2021 9186 5/6/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9189 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9189 6/10/2022 9040 11/27/2019 9089 9/11/2020 9138 6/8/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9144 8/1/2021 9190 6/10/2022 9041 5/28/2020 9093 6/10/2022 9144 8/1/2021 9199 6/10/2023 9045 8/6/2020 9093 6/10/2022 9144 8/1/2021 9195 7/12/203 9045 8/6/2020 9094 6/10/2022 9144 8/1/2021 9199 6/10/203 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9199 7/11/2023 9045 8/6/2020 9095 7/22/2022 9146 8/1/2021 9199 7/11/2023 9045 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9199 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 8/11/2022 9144 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9149 8/18/2020 910								
9026 9/20/2019 9076 3/18/2020 9126 4/21/2023 9176 9/29/2023 9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9078 10/9/2020 9128 7/28/2023 9178 1/28/2022 9030 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9031 10/1/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/1/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/1/1/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9133 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9135 5/14/2021 9185 5/6/2022 9037 11/15/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9038 11/15/2019 9087 10/21/2020 9137 6/8/2021 9186 5/6/2022 9038 11/15/2019 9088 10/21/2020 9137 6/8/2021 9186 5/10/2022 9038 11/15/2019 9089 9/11/2020 9139 6/32/2021 9186 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/32/2021 9189 6/10/2022 9040 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9139 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9044 7/16/2020 9093 6/10/2022 9143 8/1/2021 9191 6/1/2023 9045 8/6/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2023 9048 12/10/2019 9097 1/15/2021 9148 8/1/2021 9199 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9149 1/1/7/2023								
9027 9/27/2019 9077 10/2/2020 9127 7/28/2023 9177 1/28/2022 9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/11/2019 9083 7/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9083 7/23/2020 9133 5/7/2021 9184 4/8/2022 9035 11/1/2019 9086 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9135 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9186 5/6/2022 9038 11/15/2019 9087 10/21/2020 9137 6/8/2021 9186 6/10/2022 9039 11/27/2019 9087 10/21/2020 9138 6/8/2021 9187 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9040 7/16/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9044 7/16/2020 9093 6/10/2022 9143 8/1/2021 9191 6/1/2023 9044 7/16/2020 9094 6/10/2022 9143 8/1/2021 9193 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9199 6/1/2023 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9197 3/27/2024 9048 8/18/2020 9099 1/15/2021 9148 8/1/2021 9199 3/27/2024 9048 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9048 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 8/11/2021 9199 3/27/2024 9049 8/18/2020 9090 1/29/2021 9149 7/26/2022 9199 1/1/7/2023 9050 8/18/2020 9090 1/29/2021 9149 7/26/2022 9199 1/1/7/2023								
9028 9/27/2019 9078 10/2/2020 9128 7/28/2023 9178 1/28/2022 9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/10/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/11/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/11/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9038 11/15/2019 9087 10/21/2020 9137 6/8/2021 9186 5/6/2022 9039 11/27/2019 9088 10/21/2020 9138 6/8/2021 9187 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9040 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9139 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9042 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9044 7/16/2020 9093 6/10/2022 9143 8/1/2021 9191 6/1/2023 9044 7/16/2020 9094 6/10/2022 9143 8/1/2021 9192 6/1/2023 9045 8/6/2020 9095 7/22/2022 9146 8/1/2021 9195 7/11/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2024 9048 8/6/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 1/1/7/2023 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 1/1/7/2023 9049 8/18/2020 9099 1/29/2021 9148 8/1/2021 9199 1/1/7/2023 9049 8/18/2020 9099 1/29/2021 9149 8/11/2021 9199 1/1/7/2023 9050 8/18/2020 9099 1/29/2021 9149 8/11/2022 9149 8/11/2021 9199 1/1/7/2023 9050 8/18/2020 9090 1/29/2021 9149 7/26/2022 9199 1/1/7/2023								
9029 10/4/2019 9079 10/9/2020 9129 4/30/2021 9179 4/1/2022 9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/11/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9133 5/7/2021 9184 4/8/2022 9035 11/11/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/11/2019 9086 9/3/2020 9136 5/14/2021 9185 5/6/2022 9037 11/15/2019 9087 10/21/2020 9136 5/14/2021 9186 5/6/2022 9038 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9187 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9040 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9099 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2023 9042 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9192 6/1/2023 9044 7/16/2020 9093 6/10/2022 9143 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9146 8/1/2021 9194 7/11/2024 9046 8/6/2020 9095 7/22/2022 9146 8/1/2021 9199 7/11/2024 9048 12/10/2019 9097 1/15/2021 9148 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9199 1/17/2023 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/17/2023 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/17/2023 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/17/2023 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9146 8/1/2021 9199 1/17/2023 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9149 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 1/17/2023 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 1/17/2023 9049 8/18/2020 9090 1/29/2021 9150 7/26/2022 9199 1/29/2021 9150 7/26/2022 9199 1/1/17/2023 9200 1/1/17/2023								
9030 10/4/2019 9080 10/9/2020 9130 4/30/2021 9180 4/1/2022 9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/11/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9188 4/8/2022 9034 10/25/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9135 5/14/2021 9186 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9138 6/8/2021 9186 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2023 9042 5/28/2020 9092 11/13/2020 9144 8/1/2021 9199 6/1/2023 9045 8/6/2020 9093 6/10/2022 9144 8/1/2021 9199 6/1/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9199 7/11/2023 9045 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2023 9045 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 7/11/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9199 7/11/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/11/12/203 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/11/12/203 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 1/1/17/2023 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 1/11/17/2023 9050 8/18/2020 9100 1/29/2021 9149 7/26/2022 9199 1/11/17/2023 9050 8/18/2020 9100 1/29/2021 9149 7/26/2022 9199 1/11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9199 1/11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 1/1/17/2023 9050 8/18/2020								
9031 10/11/2019 9081 4/23/2021 9131 4/30/2021 9181 2/25/2022 9032 10/11/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9036 11/1/2019 9087 10/21/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9188 6/10/2022 9040 11/27/2019 9089 9/11/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2022 9043 7/16/2020 9092 11/13/2020 9142 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9192 6/1/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9192 6/1/2023 9045 8/6/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9146 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9199 1997 3/27/2024 9048 12/10/2019 9097 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9199 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 8/11/2021 9199 1/11/72023 9050 8/18/2020 9099 1/29/2021 9149 8/18/2020 9199 1/11/72023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 1/1/17/2023 9050 8/18/2020 9099 1/29/2021 9150 7/26/2022 9199 1/1/17/2023 9050 8/18/2020 9190 1/29/2021 9150 7/26/2022 9199 1/1/17/2023 9050 8/18/2020 9190 1/29/2021 9150 7/26/2022 9200 1/1/17/2023 9050 8/18/2020								
9032 10/11/2019 9082 4/23/2021 9132 4/30/2021 9182 2/25/2022 9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9186 5/6/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9042 5/28/2020 9091 11/13/2020 9142 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9191 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9192 6/1/2023 9044 7/16/2020 9093 6/10/2022 9144 8/1/2021 9192 6/1/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9195 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9197 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9197 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9197 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 11/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 11/29/2021 9149 7/26/2022 9190 11/17/2023 9200 11/17/2023 9200 11/17/2023								
9033 10/25/2019 9083 7/23/2020 9133 5/7/2021 9183 4/8/2022 9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9187 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9193 7/11/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9096 7/22/2022 9145 8/1/2021 9196 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9048 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9048 12/10/2019 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9090 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9090 1/29/2021 9150 7/26/2022 9190 11/17/2023 9201 11/17/2023 9201 4/3/2024								
9034 10/25/2019 9084 7/23/2020 9134 5/7/2021 9184 4/8/2022 9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9185 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9138 6/8/2021 9189 6/10/2022 9040 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9190 6/10/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9192 6/1/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9193 7/11/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9096 7/22/2022 9146 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9048 12/10/2019 9097 1/15/2021 9147 8/11/2021 9196 2/7/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9197 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9201 1/17/2023								
9035 11/1/2019 9085 9/3/2020 9135 5/14/2021 9186 5/6/2022 9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9189 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9190 6/10/2022 9042 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9194 7/11/2023 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9197 3/27/2024 9048 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9099 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9036 11/1/2019 9086 9/3/2020 9136 5/14/2021 9186 5/6/2022 9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/11/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9193 7/11/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9194 7/10/203 9046 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9196 2/7/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9197 3/27/2024 9048 12/10/2019 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9037 11/15/2019 9087 10/21/2020 9137 6/8/2021 9187 6/10/2022 9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9143 8/1/2021 9193 7/11/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9195 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9196 2/7/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9149 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9038 11/15/2019 9088 10/21/2020 9138 6/8/2021 9188 6/10/2022 9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9193 7/11/2023 9045 8/6/2020 9095 7/22/2022 9144 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9195 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9149 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9039 11/27/2019 9089 9/11/2020 9139 6/23/2021 9189 6/10/2022 9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9149 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9040 11/27/2019 9090 9/11/2020 9140 6/23/2021 9190 6/10/2022 9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023								
9041 5/28/2020 9091 11/13/2020 9141 7/8/2021 9191 6/1/2023 9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9042 5/28/2020 9092 11/13/2020 9142 7/8/2021 9192 6/1/2023 9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023								
9043 7/16/2020 9093 6/10/2022 9143 8/1/2021 9193 7/11/2023 9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9044 7/16/2020 9094 6/10/2022 9144 8/1/2021 9194 7/11/2023 9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023								
9045 8/6/2020 9095 7/22/2022 9145 8/1/2021 9195 2/7/2024 9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9046 8/6/2020 9096 7/22/2022 9146 8/1/2021 9196 2/7/2024 9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9047 12/10/2019 9097 1/15/2021 9147 8/11/2021 9197 3/27/2024 9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9048 12/10/2019 9098 1/15/2021 9148 8/11/2021 9198 3/27/2024 9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9049 8/18/2020 9099 1/29/2021 9149 7/26/2022 9199 11/17/2023 9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9050 8/18/2020 9100 1/29/2021 9150 7/26/2022 9200 11/17/2023 9201 4/3/2024								
9201 4/3/2024								
							9202	

Book Review

By Paul Grether (ERA #6933)

Old Man Thunder: Father of the Bullet Train

by Bill Hosokawa, published by Sogo Way, Denver, Colorado in 1997 hardcover, 224 pages, illustrated with some sections of black & white photos. ISBN 9780965958004.

Old Man Thunder is an interesting biography not just because of the topic, but because of the author. Bill Hosokawa was born in Seattle, Washington in 1905 to Japanese immigrants. A trained journalist, he worked in several newsrooms in the United States and abroad during the 1930s but moved back to the United States due to the pending birth of his son. Because of his Japanese ancestry he was interned by the United States Government during the Second World War. He edited the camp newsletter, and after being freed in 1943 he began a long and successful 38-year career as a writer and editor for the Denver Post while also a prolific book writer. He did not speak Japanese, but he describes in his introduction to the book how he conducted the research for this biography, which is interesting context.

Hosokawa's subject, Shinji Sogo, did not invent or design the Shinkansen, or "Bullet Train" as

it became known in the west. Rather the role he played was the top bureaucrat in the Japanese Government running Japan Railways (JR). He worked both in front line politics and behind the scenes in post-war Japan to make the first Shinkansen line happen. As such the book is not technical, except where technical issues impact the development of the story. (Author's note, the story of Hideo Shima, the JR Chief Engineer and "inventor" of the Shinkansen, is worth researching for further technical insights into the development of the technology.) Mr. Sogo was an interesting man in his own right, having an explosive temper but a master of politics.

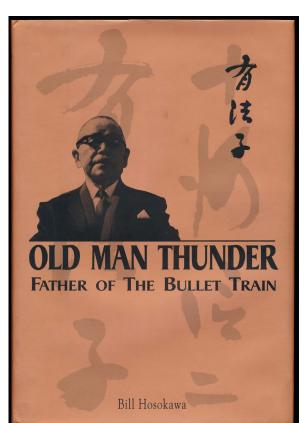
The context of JR in post-war Japan was similar to the railways in many countries. Wartime damage and wear and tear had taken their toll, and the railways were gradually losing market share to road and air travel. A unique Japanese factor was construction of the railways to narrow-gauge at the advice many decades ago of the British to economize construction. This limited capacity. Major investment of the mainline of JR between Tokyo and Osaka was needed. This was the JR Shinji Sogo was tasked with leading.

The back story of this biography, it is difficult to imagine

the tremendous risk Japan took to decide to invest in the Shinkansen project. While high speed rail technology is taken for granted today, this was many years before the French

Train à Grande Vitesse (TGV) technology was developed and other later contemporaries. The crux of this story is the continued intentional deceit by Shinji Sogo of the Japanese Government of the true costs of the project. If he had not repeatedly and masterfully misled the government, he knew political will would have evaporated and Shinkansen would never have been built.

This book will be of interest to those wanting to understand the political history of the birth of high-speed rail and what it took to shape national transportation investment policy in Japan into a very different path than the United States (highways and airports) and Europe (significant new rail expansion investments would not come until years later). The biography goes into significant detail on the life and personal experiences of Shinji Sogo but it was the force of his sometimesflawed personality that made Shinkansen happen.



Link to book information:



The ribbon-cutting ceremony for the launch of the Shinkansen bullet train between Tokyo and the Shin-Osaka station on October 1, 1964, in Tokyo. The Asahi Shimbun/Getty Images photo

Travels with Jack May

Britain and the Baltics — Part XXVII

By Jack May (Photographs by the author)

Monday, August 28

After our last breakfast in the Ibis in Tallinn, at about 8:45 AM our bus took the group to the city's waterfront terminal for our planned two-hour trip aboard a Tallink-Silja Line ferry to Helsinki. After our arrival we had to wait a bit while the tour organizers distributed our ferry tickets but soon we were able to board the Tallink Star, holding our tickets and passports aloft to be eyeballed by personnel stationed at the ship's entry point (I suspect the tour leader officially checked us in). We were scheduled to depart at 10:30 but left about 15 minutes earlier.

The ship was not particularly impressive, but for a two-hour journey, who needs luxury? It was a lot better than the Staten Island Ferry. I sat with the other American tour members outdoors in the stern of the ship for most of the journey. Other seats were available in a food court. For satisfying hunger and quenching thirst there was also a bar and a full-service restaurant, plus one could shop in boutiques and a supermarket (with convenience store prices) as well. Compartments lined the walls of the corridors, but I doubt many were occupied (I suspect the Star also makes overnight runs when assigned to different routes).



Helsinki's newest cars are 44 three-section 100-percent low-floor Škoda ForCity Smart units built in the past three years. No. 417 is shown approaching its Hietalahti terminal on Ruopholahdenranta in front of our hotel.

We arrived soon enough and were somehow herded (like cats) to allow a representative from Helsinki's transit operator to distribute day tickets. We traveled on our own via tram route 9 to the Raddison Blu Seaside hotel, only a short distance from the port. I suspect the group was divided among several vehicles, and certainly many other passengers from the boat joined us with their luggage in crowding aboard the tramcar,



A four-section Adtranz (now Bombardier) Variotram along
Mannerheimintie near Central Station in downtown Helsinki. (More about
these cars, which were built in 2000, in part XXVIII of this report.)

which became rather uncomfortable, so it was a relief to both members of our ensemble and regular passengers that we alighted a mere three stops after boarding.

There was plenty of time to get acclimated at the hotel, as our first event wasn't scheduled to begin until 2:00 PM, and would be a visit to the Toolo depot, with its attached tramway museum. Following that would be a fantrip from that location, starting at 4:30, so some members of the group were not in that much of a hurry to get to Toolo (true for at least two of us). The hotel, a modern upscale Radisson, was certainly a far cry from the quaint charm of the Gotthard Residents in Tallinn, but turned out to be the finest accommodations we had on the entire trip.



From the 2017 trip, a Valmet-built car works eastward on Kaivokatu in front of Saarinen's Central Station.



In this other photo from 2017, Valmet car 90 on route 2 (now route 7) is shown along gauntlet track on pedestrianized Mikonkatu.

Helsinki is the capital of Finland, a country with 5½ million inhabitants and Helsinki's metropolitan area has a population of 1.4 million. The city has a 50-mile-long meter-gauge tramway network with 10 lines (one runs only for ferry connections), and is also served by a 22-mile metro line and a large network of commuter railways, which reach out into its suburbs. In the past decade both the tramway and metro have expanded, and new cars have been added to their rosters. Also, plans have been put in motion for a 15-mile-long circumferential light rail line connecting suburban areas to the west, north and east of the city, as well as for a separate new tramway as part of a major bridge project (called the Kruunusillat Bridge) linking the city center to the island of Laajasalo in the southeast.

This was hardly my first visit to Helsinki, but rather my fourth, as it is a very inviting place — a very clean, attractive and cosmopolitan city with many points of interest and museums, albeit rather expensive for many tourists. I mentioned in an earlier part that my wife and I took the Tallink ferry from Tallinn to Helsinki with Julien and Martha Wolfe in 1991, and that we cruised the Baltic Sea just a year before this visit, in 2016.

On our way to the museum a few of us decided to make some intermediate stops in order to inspect (and photograph) Helsinki's only section of gauntlet track, which is located downtown near the central railway station. The bi-directional right-of-way is used by route 7 (see http://www.gleisplanweb.eu/Maps/Helsinki.pdf for a track map). The sky had clouded up after we arrived at the beautiful station (built by the architect Eliel Saarinen and opened in 1919), so I didn't take any photos, and am instead including some from my visit the previous year (when weather conditions were actually worse). Saarinen's son Eero probably overshadowed his father, as he designed three major, impressive architectural projects in the U. S., specifically Gateway Arch in St. Louis, Dulles Airport in the Washington, D. C. area, and the TWA Flight Center at Idlewild (now JFK) Airport in New York City.

Karl-Heinz and I proceeded by a rather roundabout route to



(Above and below) Two views of Valmet-built cars along Mannerheimintie, a major arterial that runs from the northwest portion of Helsinki to downtown. These cars were constructed from 1983 to 1987 as two-section articulated units, but had low-floor center sections added between 2009 and 2011.



get to the museum, stopping for photos first at the Sornainen stop, where a number of lines converge (1, 6, 7 and 8). We eventually found our way to our group meeting point (via routes 7 and 2 — No. 7 cars become 2s and vice versa at the Maistraatintori stop) and then had an enjoyable 45 minutes or so looking at the exhibits and taking photos before the fantrip began. The professionally-operated facility is entirely under cover and has a number of interesting streetcars and buses on display, including a Brill-built four-wheeler from 1920. Numbered 165, it was part of an order of 20 such cars and was retired and preserved in 1959. While waiting for our charter to begin we took photos of route 2, 4 and 10 cars along Mannerheimintie. See http://trammuseum.fi/ nayttelyt/tram-museum/ for the museum's website and https://www.raitio.org/vanhasivusto/ratikat/helsinki/hro/ hro151-/hro151.htm for information about the Brills.

Our fantrip equipment consisted of single-truck motor No. 50 from 1909 and open bench trailer 233, which was built 10 years later. Since it was getting to be rush hour, there was little opportunity for photo stops, except where the cars could be sidelined onto track that was not in regular service.



(Above and below) Two views of route 1 Valmet cars circling Kapyla loop, during the period our motor-trailer set laid over on a second track at the terminal. Both were part of an order for 40 six-axle two-section articulated units constructed between 1973 and 1975 by Valmet, a major Finnish manufacturer, whose catalog included military equipment such as weapons and aircraft. The corporation also built diesel locomotives as well as DMUs and EMUs for Finnish Railways. For the electric MUs and also Helsinki's trams and Metro cars, it teamed up with Stromberg, another Finnish company that manufactured electric motors and generators; it was later acquired by ASEA and is now part of ABB. Most of the cars were modernized in the 1990s and early 2000s. Car 122 in the upper photo was one of ten of these units that had a low-floor center section added in 2013-14, probably because of a car shortage due to the lack of reliability of the Bombardier Variotrams. Car 42, below, was one of 30 that was not extended and now is no longer in service, having been withdrawn during the months after our visit, as the delivery of a 44-car order of Škoda trams in the 400-series was being completed from 2016 to 2018.



Our first was at Kapyla loop, used by route 1, where we were also able to photograph regular service cars. The sun conveniently peeked out.

I started out riding in the motor, but switched to the open trailer upon catching up to the tram after Kapyla, but regretted it after a while, as the weather was quite cool (about 60°F — yes, it was August) and was exacerbated by wind whenever we were moving (there's a good reason those open cars are called breezers). When stopped at a traffic light I ran forward to the motor. We finally were able to pause for photos again at Kauppatori on route 2, where there is a second track on a one-way loop. Due to the cloud cover my



Our fantrip equipment rounds the loop. The train is relatively empty because most of the tour members were photographing it. But after the photo we had to run to catch up with the motor-trailer set, which did not stop until the next official station. Motor No 50, built in 1909 by ASEA in Sweden, was converted to a shunter in 1957 and thus was on the roster when it was decided to create an operating heritage car. Trailer 233 was built as a part of an order of 12 such open-bench cars in Helsinki's Hietalahti shipyard, the first to be built in Finland. When retired after the Olympics in 1952, it was removed from the property to become a gazebo (summer pavilion) for the Sandvikens soccer club. It was restored for operation in 2009.

photos did not come out very well, both at the layover spot and when the museum cars made a loop through the tourist-oriented neighborhood. The sun finally came out again as we were heading back to the hotel and some of us were able to get additional photographs when we were let off at our accommodations.



Most of us alighted from the fantrip at the Hietalahti stop on Ruopholahdenranta in front of our hotel instead of riding back to the carhouse, as many did do. This was the same spot that our original route 9 tram from the ferry terminal dropped us some 6 hours earlier.

Julien had left us at Kapyla loop, as he had to get back to the ferry terminal to return to Tallinn, from which he was flying home the next day. We had dinner in the hotel before retiring. Our further adventures in Helsinki on Tuesday will be reported in Part XXVIII.