

The Bulletin



Electric Railroaders' Association, Incorporated

Vol. 64, No. 11

November, 2021

The Bulletin

Published by the
Electric Railroaders'
Association, Inc.
P. O. Box 3323
Grand Central Station
New York, NY 10163

For general inquiries,
or *Bulletin* submissions,
contact us at
[https://erausa.org/
contact](https://erausa.org/contact)

Editorial Staff:

Jeff Erlitz
*Editor-in-Chief and
International Editor*

Ron Yee
*Tri-State and North
American News Editor*

David Ross
Production Manager

Copyright © 2021 ERA

NEW YORK CITY ADOPTS ZONING RULES TO ADVANCE TRANSIT ACCESSIBILITY



One of the newest additions to NYC Transit's accessible stations, this elevator, serving the Court Square-23rd Street **E G M 7** station, was built into the footprint of a new building (Skyline Tower) on the northeast corner of 44th Drive and 23rd Street in Long Island City.
MTA photograph

This Month's Cover Photo:

LIRR MP54s on an eastbound train just east of the East New York station in Brooklyn on the Atlantic Branch on June 2, 1940.

Unknown photographer, Robert M Emery collection, Stony Brook University Library.

In This Issue:
40 Years of
High-Speed Rail
in France
(Continued)...
Page 3

Mayor Bill de Blasio, the New York City Council and the Metropolitan Transportation Authority (MTA) announced the approval of Elevate Transit: Zoning for Accessibility, a collaboration between the MTA, City Council, the Department of City Planning (DCP) and the Mayor's Office for People with Disabilities (MOPD) to boost New York City's push to make its transit system fully accessible. The initiative will allow the MTA to leverage planned private development to achieve a fully accessible transit system faster, while saving taxpayer dollars as the MTA faces financial challenges caused by the ongoing

pandemic.

Zoning for Accessibility incentivizes private developers to design their buildings to incorporate public station accessibility projects or build the improvements at nearby MTA stations. It creates a new set of tools — and strengthens existing ones — that build off the MTA's commitment of over \$5 billion of funding for 77 accessible subway, Long Island Rail Road, Metro-North Railroad and Staten Island Railway station projects within New York City in the 2020-2024 MTA Capital Plan.

The innovative proposal allows developers

(Continued on page 2)

New York City Adopts Zoning Rules to Advance Transit Accessibility

(Continued from page 1)

to help deliver transit station accessibility throughout the city in two ways:

Easement Certification

This provision requires developers of most mid- or high-density sites adjacent to subway, Staten Island Railway, Long Island Rail Road, and Metro-North Railroad stations within New York City to consult with the MTA first to determine whether the MTA needs an easement (permanent access to a small piece of property) for future accessibility projects at the adjacent station. Easements can play a critical role in helping to reduce expensive, time-consuming barriers to constructing elevators, such as underground utility relocations, and allow for station designs that better serve riders. If an easement is necessary, the developer would receive targeted zoning relief to offset the creation of an easement.

Transit Improvement Bonus

This provision expands the existing “transit improvement bonus” from central business districts to other high-density areas in the city. This program incentivizes private developers to directly fund and build new transit station access improvements, such as elevators or other circulation improvements at already accessible stations, in exchange for a floor area bonus of up to 20%. Accessibility improvements attained through the bonus mechanism are achieved at no cost to the MTA and will be in addition to projects funded through the MTA’s Capital Plan. Each bonus application will still require a public review and approval process.

These provisions will help free up funds for the MTA to make more stations accessible on a faster timeline and provide more accessible routes for its customers. Today, only about 30% of the 493 subway and Staten Island Railway (SIR) stations in New York City are fully ADA-accessible.

To learn more about Zoning for Accessibility, visit <https://new.mta.info/elevatetransit>. (MTA press release, October 7)

RON YEE PASSES AWAY

Editor’s Note: At press time, we were greatly saddened to learn that the Tri-State and North American News Editor for *The Bulletin*, Ron Yee, passed away suddenly after a very brief but severe illness. Ron

(#5169) was a member for 46 years, having joined the ERA on July 19, 1976. We will have a full obituary in the next issue. Our hearts and prayers go out to Ron’s wife Lily and the rest of his family and friends.



THE BOARD OF DIRECTORS EXPRESSES ITS DEEPEST APPRECIATION FOR 5 MEMBER DONATIONS IN SEPTEMBER, 2021

AMOUNT	DONOR(S)
\$250 and up	Carl Jackson
\$100 to \$249	Jack May
\$50 to \$99	Geoffrey Arnold Joseph Diecidue Kenneth Riebold

ERA is a 501(c)(3) tax exempt corporation. Your donations are fully tax deductible and can be made either with your 2022 renewal, or by using our donation form on our website: www.erausa.org/donate. Your donation helps to maintain ERA’s 87-year-long tradition of traction education and entertainment!

40 YEARS OF HIGH-SPEED RAIL IN FRANCE

by Michael Bunn

(Continued from October, 2021 issue)

*On September 27, France celebrated the 40th Anniversary of the opening of its first dedicated high-speed railway and the inauguration of TGV services. The network has been dramatically expanded since, transforming intercity travel in France and proving to the world the value of high-speed rail systems. In the October **Bulletin**, Michael Bunn told the TGV story up through the end of the 20th Century. This month, he concludes with developments so far in the 21st Century, and a brief glimpse of the future.*



Thalys TGV-PBKA set 4343 in a special livery commemorating the Tour De France bicycle race at Gare du Nord in Paris on March 22, 2012.

Michael Bunn photograph

By the dawn of the new millennium, the TGV had become a victim of its own success. As the network grew and passenger demand increased, there was a need for increased capacity. Enhanced signalling offered a solution and though work was underway on such upgrades, implementation progressed slowly. As such, a quicker remedy was gained by the use of bi-level trains. To keep within the required 17-ton axle loading limit, SNCF and Alstom engineers came up with a new construction concept using an extruded aluminium bodyshell. Together with lighter seating and reduced interior equipment, the effort yielded a trainset with a net weight of 380 tons, five tons lighter than the first-generation TGVs.

Known as the TGV Duplex, it is powered by eight 1100 kW synchronous motors and entered service in 1996 on the Paris Sud-Est route to the south of France. Following its introduction, no further single deck TGVs would be built for SNCF.

LGV-Méditerranée

The next Ligne à Grande Vitesse (LGV) to be built, and the most challenging to date, was the new LGV-Méditerranée (LGV-Med). Picking up where the LGV-Rhône-Alpes left off in Valence, the 151-mile-long railway opened for service on June 7, 2001. To avoid the historic towns of the Rhône Valley and perhaps more

importantly, dozens of world-renowned vineyards, the line from Valence to Marseille had to cross the River Rhône, Canal de Donzère, and River Durance multiple times, requiring major civil engineering works to be undertaken.

In total the line features 10.5 miles of viaduct and eight miles in tunnel. Prominent structures include a 1.08-mile-long viaduct near Ventabren, and a five-mile-long tunnel on the approaches to Marseille. To ensure a maximum operating speed of 186 mph over the entire route from Paris to Marseille, the LGV-PSE was upgraded with the installation of the then-new TVM430 signalling system.

Three signature stations were constructed at Valence, Avignon, and Aix-en-Provence. The Gare d'Avignon TGV is particularly striking. Designed by SNCF's in-house architecture department, it features a long, linear headhouse with a departure pavilion covered by a long curved glass skylight.

Just prior to opening LGV-Med, SNCF celebrated by establishing the fastest single long-distance record by running a TGV-Réseau set on May 26, 2001, from Calais-Frethun to Marseille, covering a distance of 663 miles in 3 hours, 29 minutes at an average speed of 190 mph. The run was conducted via LGV-Nord, LGV-Interconnexion, LGV-Sud-Est, LGV-Rhône-Alpes, and LGV-Med.

LGV-Est

Next up was the LGV Est Européenne, more commonly referred to as LGV-Est. Unlike previous LGVs, which were directly funded by the French government, the construction costs of LGV-Est were met by a collective of 24 authorities, with about half of the €3.125 billion coming from the French state and the European Union. This arrangement reflected the new railway's significance as a critical component within the overall European high-speed rail network. The balance of the funding came from local and regional authorities along the route who benefitted from the new service, their contributions commensurate with the time savings gained.

The first phase of the LGV-Est is 188 miles in length between Vaires-sur Marne outside Paris and Baudrecourt. This phase and all subsequent LGVs were built to allow a higher operating speed close to 200 mph. The line opened on June 10, 2007, with services between the legacy Paris Gare de l'Est terminal and Reims, the major cities of eastern France, Germany, Luxembourg, and Switzerland, with classic lines utilized for some ultimate destinations. Some of the services to Germany were operated by Deutsche Bahn ICE sets. Three new TGV stations were built at Champagne-Ardenne (near Reims), Meuse, and Lorraine. To operate SNCF ser-

(Continued on page 4)

40 Years of High-Speed Rail in France

(Continued from page 3)

ices on the line, 52 TGV-Réseau units were cascaded from other TGV lines, with French domestic services to be provided by 33 of these sets, which received refurbished interiors.

For SNCF's international services a new hybrid unit was created, the TGV-POS (Paris-Ostfrankreich-Süddeutschland). SNCF ordered 19 new triple-voltage TGV-Duplex trainsets (1.5 kV DC/15 kV AC/25 kV AC), and removed their power cars, which were then attached to 19 of the aforementioned refurbished Réseau coach sets to create the TGV-POS trainsets that could operate under 15 kV AC catenary into Germany and Switzerland. The 19 Réseau power cars were then attached to the new Duplex coach sets to create another hybrid, the TGV-RD (Réseau Duplex) for operating over the LGV-PSE and LGV-Med. More technically advanced versions of the bi-level TGV would appear over the years to come.



TGV-POS set 4403 on a Strasbourg to Paris Gare de l'Est service as it passes Bondy, in the eastern outer suburbs of Paris, on the classic former Chemin de Fer de l'Est mainline on August 9, 2011. When given a clear run, TGVs pass here at up to 100 mph. Ten minutes later 4403 will arrive at the historic Parisian terminus.

Michael Bunn photograph

Prior to the opening of LGV-Est's first phase, it was determined that a new LGV with a generally level profile provided an ideal opportunity to attempt a new world rail speed record. The "V150" project (a speed of 150 meters per second) was thus organized and funded at a cost of €20 million by a consortium of Alstom, SNCF, and Réseau Ferré de France, then the managing authority for French national rail network infrastructure.

Engineering adjustments were made to the track and power supply, including temporarily raising the line voltage to 31 kV AC. A specially adapted trainset, comprised of both power cars from TGV-POS unit 4402 and three Duplex coaches, was outfitted with specialized instrumentation to collect data for the purpose of identifying new possible parameters for operating safely at even higher speeds on future regular services. Extensive trials were conducted between January and April,

2007 before a new world speed record of 357.16 mph was set on April 3, 2007, in the vicinity of the Meuse TGV station. After various publicity events, the unit's modifications were removed, and the train was returned to regular service.



TGV-POS unit 4402 with three Duplex coaches on their world rail speed record run of 357.16 mph, set on April 3, 2007 on the first phase of LGV-Est, which would open in two months' time.

Alain Stoll photograph obtained from Wikipedia

Later Projects

In December, 2010 a 28-mile-long LGV was opened between Perpignan and Figueras in Spain's Catalonia region to connect with the Spanish AVE high-speed rail network, though a key gap remains to be filled on the overall high-speed corridor between France and Spain (more on this later).

Another project, though not a true LGV, was undertaken to reduce the journey time from Paris to Geneva, Evian-les-Bains, and Saint Gervais by 20 minutes with the January, 2011 opening of the 40-mile-long Ligne du Haut Bugey. TGVs use the line from Bourg-en-Bresse to Brion-Montréal-La Cluse where the closed line to Bellegarde was reinstated, with two new stations built at Nurioux and Bellegarde. Only in parts do the TGVs reach a speed of even 75 mph, but passengers do benefit from a highly scenic route, including crossing the magnificent Viaduc de Cize-Bolozon and passing alongside the Lac de Nantua.

The 87-mile-long first phase of the LGV Rhin-Rhône between Dijon and Mulhouse opened in December, 2011. With two new out-of-town stations at Besançon and Belfort-Montbéliard, it is mainly used by TGVs on Paris-Switzerland services. The full line running southwest to northeast was originally intended as part of a three-phase inter-regional project to connect the northeast of France, Germany, Luxembourg and Switzerland with the south of France. However, since its opening the need for the second and third phases has been brought into question, as the construction costs cannot be justified by its business case.

In 2012 construction work commenced on three new major extensions – the LGV Sud Europe Atlantique – also known as the LGV L'Océane – from Tours to Bor-

(Continued on page 5)

40 Years of High-Speed Rail in France

(Continued from page 4)

deaux (188 miles plus 24 miles of connections to the classic lines); the LGV Bretagne-Pays de la Loire from Conneré outside Le Mans to Rennes and Sablé (113 miles plus 20 miles of connections); and the second phase of the LGV Est from Baudrecourt to Vendenheim on the outskirts of Strasbourg.



Displaying in Ouï livery, TGV-POS set 4410 is seen at Somain on a Paris to Valenciennes run on October 26, 2020.

Didier Delattre photograph

The LGV L'Océane and LGV Bretagne-Pays de la Loire are both essentially extensions to the LGV Atlantique and both were built under a private-public funding agreement whereby the main contracting consortia of LISEA and Eiffage financed approximately one third to a half of the construction costs. In return they received a contrat de concession for 50 and 25 years respectively, to operate and maintain the lines for which they would receive the péages (access charges) for all trains operated over the lines.

The financing for LGV-Est's second phase used a similar model to that of the first phase, with over half funded by the French state, the European Union, and SNCF through then network manager Réseau Ferré de France. The balance was paid by the local regions. The line is 66 miles in length and features the 890-foot long Haspelbaechel Viaduct and the 2.5-mile long Saverne Tunnel under the narrowest part of the Vosges mountain range.

To boost revenue and expand its passenger base, SNCF launched the Ouigo low cost high-speed service in 2013, using high capacity TGV-Duplex units running between Marne-la-Vallée (MLV)-Lyon-Marseille and Montpellier (Ouigo literally translates from French to English as "yes go", but it's also a clever English word-play as in "we go").

Extra seating was provided in the declassified first-class coaches and the former buffet car, increasing trainset capacity from 510 to 634. French railway enthusiasts nicknamed the service as "Ryanair sur Rails" (after an Irish ultra-discount airline), when upon

Ouigo's debut advanced purchase tickets were available from as little as €10, though passengers had to pay extra for baggage. The dedicated units, with a sky blue and pink livery, would see a much higher daily average usage than normal TGV services, with two daily round trips between MLV and Marseille.

In 2014 a report published by the Comptes des Cours (France's national audit office) claimed that 30% of TGV services were losing money, primarily because of increased access charges, and only 60% of high-speed services were punctual, while the average daily time in service of a TGV unit was only 4 hours, 28 minutes. The whole concept of the high-speed rail system had been to "open up" the regions and make them more accessible but the report found that it had instead made Paris more accessible to the regions! The report also found that only the Paris-Lyon and Paris-Lille high-speed services were making the desired financial return.



Away from its home territory on the other side of the English Channel, TGV-La Poste set 951 is seen on the Singlewell Loop on the United Kingdom's High-Speed 1 Railway as it is passed by a Class 395 "Javelin" train on March 21, 2012. The Javelins first entered service in 2009, providing services between London Saint Pancras and Canterbury and the Kent Coastal Towns in the Southeast region of England. They are bi-voltage units capable of drawing from both 25 kV AC overhead catenary and 750 V DC third rail, a vestige of the extensive installation first put in by the legacy Southern Railway in the 1920s. TGV-La Poste 951 has since been scrapped.

Michael Bunn photograph

Back in 2012 a TGV-La Poste unit was brought through the Channel Tunnel to London's Saint Pancras terminal for a press event to promote a proposed new high-speed parcel service between Paris Charles de Gaulle Airport and Barking Ripple Lane, east of London. However, due to a considerable downturn in postal usage in France all the TGV-La Poste units were withdrawn from service in 2015.

In 2015 Eurostar put into service a fleet of Class 374 Velaro units, built by Siemens, to operate from London Saint Pancras to Brussels and Paris. The units have met with a mixed reaction from passengers and drivers alike; the sets are formed of 16 conventionally bogied coaches, all powered, rather than the "locomotives" at each end of an articulated coaching set of the class

(Continued on page 6)

40 Years of High-Speed Rail in France

(Continued from page 5)

373s, making them internally noisier and less smooth running.

Since first entering public service, the TGV has had a safety record that is second to none and SNCF can boast that there has not been a single fare paying passenger fatality at high-speed. There have been a number of high-speed derailments caused by technical failure or trackbed subsidence but the only fatalities, principally train drivers, have occurred off the high-speed lines, generally from collisions at grade crossings. In every derailment the articulated architecture of the TGV units kept the trainset intact and upright.

However, on November 14, 2015 a TGV Duplex test unit on a high-speed test run derailed on a curve at Eckwersheim, near the east end of the Phase 2 segment of the LGV-Est, killing 11 persons on board. In keeping with normal procedure for test runs, the safety systems had been switched off for manual testing purposes. The official investigation established found that the train had entered the curve well in excess of the permitted line speed. Furthermore, there were 53 persons onboard, including four children, not all of whom were required in an official capacity. Seven persons were present in the cab.

The line opened three months later than originally scheduled on July 3, 2016, bringing the non-stop journey time from Paris to Strasbourg down to only 1 hour 46 minutes.



TGV-Eurostar set 3226 in SNCF livery at Lille Flandres, waiting to depart for Paris Gare du Nord, on November 21, 2004. The set has since been retired and scrapped.

Michael Bunn photograph

A year later, on July 2, 2017, the two extensions to LGV-Atlantique — the LGV-Bretagne and LGV-Océane — were opened, bringing the high-speed network directly to Rennes and Bordeaux. Neither line has any out-of-town stations; instead, connecting spurs to the classic lines were provided. The short Contournement de Nimes et de Montpellier (bypass line) was also opened in 2017. This new line has two out-of-town stations at Nimes-Pont-du-Gard and Montpellier-Sud-de-

France and is also used by freight trains.

Another SNCF marketing exercise occurred on May 27, 2017, when SNCF announced that henceforth TGV services would be branded under the name inOui (meant to sound like the French word for exceptional or literally, "unheard of").

The COVID-19 crisis of 2020-2021 has had an immense effect on the French national rail system. Ridership dropped dramatically, as it did for most railways around the world. The merger of Eurostar and Thalys high-speed services, already in its preliminary stages prior to the start of the pandemic, was put on hold, though as of this writing the plans are advancing again. Expansion of Ouigo services has also been delayed. During 2020, select TGV trainsets were modified as ambulance trains to transport Covid patients from badly affected areas to hospitals in other parts of France.



The 1,558-foot-long combination of two TGV-Atlantique sets heads north with a Bordeaux to Paris Montparnasse service on the LGV-Sud Europe Atlantique, at Saint André de Cubzac, on September 14, 2017.

Michael Bunn photograph

The maintenance of the TGV fleet is allocated to four dedicated SNCF Technicentres in Paris at Chatillon (Atlantique), Sud-Est Européan (PSE, south of Paris Gare de Lyon), Le Landy (LGV-N), and Ourcq (LGV-Est). The Technicentre Lyon Gerland carries out running repairs and light overhauls. Heavy maintenance work is carried out at Bischeim (Strasbourg) and Hellemmes (Lille), while major repairs and overhauls are undertaken at Alstom's Belfort works.

The past few years has seen the gradual withdrawal of the first-generation TGV sets, including all of the PSEs, some with 7.5 to 8 million miles on their odometers. In July, 2021 the SNCF TGV fleet stood at 398 (270 Duplex), including 28 Atlantiques. The future will continue to be all bi-level trains and SNCF has on order 100 new generation TGV-Modular units to be delivered by Alstom starting next year through 2030. A mockup of the new train was in the background when French President Emmanuel Macron spoke at a 40th Anniversary celebratory event on September 17 at Paris Gare de Lyon. (*Note: the TGV-M units are designated by Alstom as*

(Continued on page 7)

40 Years of High-Speed Rail in France

(Continued from page 6)

"Avelia Horizon" trains, the common family of trains which includes the soon to be introduced "Avelia Liberty" sets for Amtrak Acela services on the Northeast Corridor.)



TGV lineup at Lille Flandres on May 5, 2019. Closest to the camera is TGV-Duplex set 225, behind that is TGV-DASYE set 778, and in the rear is a TGV-Sud Est set.

Michael Bunn photograph

With the exception of Eurostar, Ouigo, Thalys, and occasional promotional liveries, TGV trainsets have only worn three color schemes during their 40 years in service – orange, silver/grey/blue, and more recently white/dark grey/carmillion.

On its key routes the TGV has been a genuine competitor to the airlines on city center to city center journeys of one to two hours, and it may well further benefit from current French government proposals to reduce domestic air flights post-pandemic, which will also help France meet its national carbon-reduction goals.

As of June, 2021, France has 1,740 miles of high-speed railway, making it the third largest such system in the world after China (23,550 miles) and Spain (2,100 miles), and just ahead of Japan (1,718 miles).

Future Developments

The TGV has brought a high degree of reliability and passenger satisfaction, but this has come at the expense of a lack of investment in the "classic" network. The majority of future rail funding is likely to be directed to upgrading the classic lines and any proposed new LGVs would have to meet a more demanding business case.

To that very point, President Macron and SNCF announced at the 40th Anniversary event the restart of planning work on three new LGV routes which had been suspended by the French president soon after he assumed office in 2017. Proposed to be built sequentially, they are LGV Bordeaux-Toulouse, followed by LGV Provence-Alpes-Côte d'Azur between Marseille and Nice, and then the line between Montpellier-Perpignan, which will fill in a key gap on the route to Spain, and itself will

be phased with priority going to the Montpellier-Béziers section.

Work is currently underway on the Lyon-Torino trans-alpine project, a 168-mile route mostly on new alignment, 117 miles of which lie in France. The line will feature multiple long tunnels, including a 36-mile-long base tunnel under Mont Cenis, of which 28 miles will be on the French side. The tunnel will be engineered for passenger trains speeds up to 137 mph, and travel time between Lyon and Torino will be reduced to a remarkable 105 minutes.

There is potential for developing the Paris-Normandie corridor and a Roissy-Picardie route. The Paris-Normandie project, desired for over 30 years, is comprised of new line sections from Paris to Mantes-la-Jolie, Mantes-la-Jolie to Evreux, Rouen to Barentin, Barentin to Yvetot, plus a new station at Rouen Saint-Sever. The Roissy-Picardie route, intended at one time to be part of a more ambitious project, now appears to be reduced to a four-mile double-track spur from Vémars at the northern end of LGV Interconnexion to Marly-la-Ville on the Paris-Creil main line, plus upgrading of the line from Creil to Amiens.

The likelihood of either of these projects becoming reality is uncertain, especially in the case of the line to Normandie, since the current services to and from Paris Saint Lazare are quite good, even more so now that most of the locomotive hauled runs have been replaced with new EMUs.



TGV-DASYE set 767 holding down a Ouigo service arrives at Gare de Bordeaux-Saint Jean on September 14, 2017. DASYE signifies a Duplex model equipped with Asynchronous motors and capable of operating under the European Rail Traffic Management System (ERTMS).

Peter Lovell photograph

In general, the TGV Master Plan, which at one time proposed even more lines than those described here, crisscrossing France, is unlikely to be fully realized. Instead, SNCF will focus on operating its TGVs to main interchange hubs with onward services to provincial towns. The connecting services are provided by the regions which are now responsible for local services following a restructuring of France's administrative structure and recent reforms to SNCF itself. This will evolve

(Continued on page 8)

40 Years of High-Speed Rail in France

(Continued from page 7)

further as SNCF is legally compelled to open its services to competitive tendering.

In whatever manner the future plays out, the TGV and the lines on which they operate are a truly significant engineering achievement, not only for France, but for global rail development.

Editor's note: We offer corrections for a couple of minor errors which appeared in Part 1 of this article in the October Bulletin:

1. *The opening of the second phase of LGV-1 in 1983 between Lieusaint and Saint Florentin reduced Paris-Lyon journey time down to 2 hours, 10 minutes. (Page 16, second column, first paragraph, first sentence)*

2. *LGV-Nord and its connecting spur to the Channel Tunnel both opened for service in 1993, while the tunnel itself opened in May, 1994. Eurostar passenger services began running through the tunnel in November, 1994.*



The three world railway speed record holders lined up at Ville-neuve Saint-Georges depot south of Paris on September 17, 2021, celebrating 40 years of TGV services. From left to right - TGV-Sud Est 16 (236.36 mph on 2/26/1981), TGV-Atlantique 325 (320.19 mph on 5/18/1990), and TGV-POS 4402 (357.16 mph on 4/3/2007).

Christophe Masse photograph from *Railway Gazette International*

Rail News in Review

NEW YORK METROPOLITAN AREA METROPOLITAN TRANSPORTATION AUTHORITY

A new pandemic-era subway ridership record of 3,264,278 customers occurred on Thursday, October 21, surpassing the previous high set on October 14 by over 28,000 riders. Staten Island Railway also set a record, carrying 7,490 customers for a combined total of 3,271,268. Overall, the subway system carried more than 3 million customers eight times in October midway through the month.

Service delivered on the New York City Subway, the percentage of scheduled trains that are provided during peak hours, measured along the busiest part of the line, improved to 92 percent in October with daily delays down by more than 13 percent, leading to another new pandemic-era ridership record on Thursday, October 14.

Bus ridership continues a healthy recovery, carrying more than 1.4 million riders nine times this month. New York City Transit as a whole carried over 4 million riders on nine days in October through the middle of the month.

In addition to the encouraging totals on subways and buses, both commuter railroads continue to show signs of a strong recovery. Metro-North weekday ridership has consistently hovered around 125,000 on weekdays. The Long Island Rail Road has averaged 155,000 customers every weekday in October. The totals of NYCT Buses and Subways combined with the Long Island Rail Road and Metro-North Railroad surpassed 5,000,000 riders on October 14.

The recent ridership records come a few weeks after the Authority formally launched "Welcome Back New

York," a robust public messaging campaign aimed at urging New Yorkers to return to the system.

Prior to the pandemic, average weekday ridership totals routinely exceeded 5.5 million in the subway system. That figure fell by 95 percent to a low of roughly 300,000 daily trips in April, 2020 as the number of COVID-19 cases peaked in the New York City area. (MTA press release, October 22)

MTA NEW YORK CITY TRANSIT



The second set of five R-211 cars were delivered back on July 16. As a result, a full ten-car train is now running around the system in test service. They are seen here on October 12 operating northbound on the IND Rockaway Line south of Howard Beach station. In the distance is the North Channel Bridge, which was permanently closed and locked back in 1998.

Gregory Grice photograph

(Continued on page 9)

Rail News in Review

(Continued from page 8)

Work to replace all three elevators at the Clark Street **2 3** subway station in Brooklyn Heights will begin on Wednesday, November 3. Crews will replace the elevators at the same time, which dramatically minimizes the duration of the project and avoids up to two years of service unpredictability.

Because Clark Street is a deep cavern station accessible only by elevator, subway service will bypass the station in both directions from Wednesday, November 3 until Spring, 2022 in order to replace all three existing elevators.

Passengers are being advised to use nearby stations, including the High Street **A C** station located north three blocks and through a walkway to Cadman Plaza, or the Borough Hall-Court Street **2 3 4 5 R** subway complex, located two to three blocks south and one to two blocks east, on Montague Street between Clinton and Court Streets. From the Clark Street station, these alternative stations can be reached via the B25 bus.

There have been elevators in service here for 102½ years. In 2000, the station was bypassed for five months to replace controllers and cabs, and repair three motors, but this replacement work would constitute the first full replacement of the Clark Street elevator systems in over a century.

NYC Transit originally presented the community with alternatives that would have led to repair work lasting for 22 to 24 months but would have attempted to maintain train service to the station during construction work in Brooklyn Heights. Under these scenarios, technicians would have worked on one elevator at a time, leaving two elevators in service. But because two elevators are needed to safely maintain train service to this deep cavern station that lacks stairway access, crews would have had to suddenly and unpredictably suspend train service whenever one of the two remaining elevators was taken out of service.

The upper level of the station will remain open, preserving public access to businesses. The project's contractor, Forte Construction Corporation, will have a street presence for this project beginning the week of October 25 in order to mobilize for the elevator replacement work. All construction activity will be scheduled from 7 AM through 6 PM on weekdays, and the vast majority of work will be done within the Clark Street station.

The MTA created a map to add a visual representation of the changes and make it easier to adjust their commute if needed. Additionally, print and digital signs will be posted in stations, along with announcements in stations and on trains. Customers can use the MTA's award-winning Live Subway Map which shows the real-time position of trains, planned service changes at any given time, highlights accessible stations, and much more. Customer service notifications are also available on the MTA website, the MYmta app and the Authority's many social media channels. Customers can also sign

up for text and email alerts at www.myMTAalerts.com. (MTA press release, October 1)

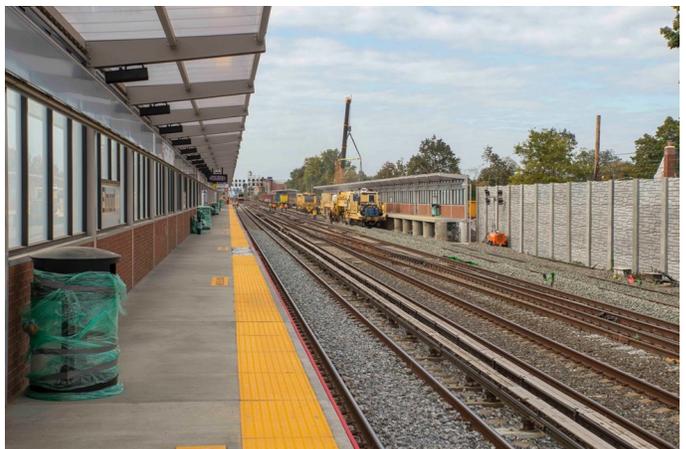
MTA LONG ISLAND RAIL ROAD



M9 9090 (Kawasaki Rail Car, 11/2020) leads Train #6716 from Atlantic Terminal to Hempstead over the Cross Island Parkway in Elmont as crews worked to install new platform girders for the future Elmont station on October 24. This view looks west at the girders for the eastbound platform.

Jeff Erlitz photograph

Over the weekend of October 23-24, construction crews placed new bridge girders over the Cross Island Parkway between Queens Village and Bellerose on the Main Line that will support the platforms of the new Elmont station. This station, located at about milepost 13.89, will serve Belmont Park and the new UBS Arena, home of the New York Islanders hockey team.



View west from the east end of the eastbound platform of the new Elmont station. The railroad forms the border between the hamlets of Elmont (on the left) and Bellerose Terrace (on the right). The track equipment in view here was surfacing and lining westbound local Track 3 after one end of a crossover switch had been permanently removed. As you can see, the Elmont platforms are slightly staggered.

Jeff Erlitz photograph

For most of that weekend, the Cross Island Parkway was closed to all vehicular traffic between the Southern and Northern Parkways to enable construction crews unfettered access to the site. In total, four long girders, each one spanning the separated southbound and

(Continued on page 10)

Rail News in Review

(Continued from page 9)

northbound lanes of the parkway on both north and south sides of the railroad's right-of-way, were installed using two huge cranes.

Phase 1 of the Elmont station project, which will provide eastbound service to Belmont Park and the UBS Arena, will open on November 20, in time for the first Islanders home game. The full station opening with service in both directions will follow in the fourth quarter of 2022.

The May issue of *The Bulletin* contained a chart showing the delivery dates of M9 cars during the first quarter of this year. It appears now that those were probably the acceptance dates for those cars. Shown below are the actual M9 delivery dates for all of this year up to mid-August.

CARS	DATE DELIVERED
9081-9082	4/23/2021
9097-9098	1/15/2021
9099-9100	1/29/2021
9101-9102	1/8/2021
9103-9104	1/22/2021
9105-9106	2/19/2021
9107-9108	2/19/2021
9109-9110	6/30/2021
9111-9112	4/9/2021
9113-9114	3/21/2021
9115-9116	2/25/2021
9117-9118	3/5/2021
9123-9124	3/12/2021
9129-9130	4/30/2021
9131-9132	4/30/2021
9133-9134	5/7/2021
9135-9136	5/14/2021
9137-9138	6/8/2021
9139-9140	6/23/2021
9141-9142	7/8/2021
9143-9144	8/1/2021
9145-9146	8/1/2021
9147-9148	8/11/2021

MTA METRO-NORTH RAILROAD

October 4 saw the completion of a project that has transformed the Port Jervis station, making it fully accessible and giving it a more modern feel, as customers continue their return to the railroad. The top-to-bottom transformation at the West-of-Hudson terminus station included the construction of a one-car length high-level platform, a concrete ramp leading from the parking lot to the platform, and a new sidewalk.

Improvements were also made to the existing parking lot to allow easier access onto the platform. The platform canopy was remodeled with a modern wooden ceiling and with sleek station signage. Other upgrades include new benches with USB ports, new LCD kiosk

and security cameras to enhance safety at the station.

Additionally, a brand-new glass-enclosed passenger shelter was built on the platform, and includes artwork commissioned by MTA Arts & Design, and inspired by Port Jervis' rich history. The artwork titled *Boat House Buggy* was carefully curated by illustrator and graphic artist, Armando Veve and fabricated by Tom Patti Design. Veve's artwork is the culmination of in-depth research about Port Jervis and showcases prominent symbols, objects, architectural forms, and industries of the city's history. The glass menagerie of natural and mechanical scenes serve as a vibrant entrance to the station and point of inspiration for visitors and the Port Jervis community.

The project's completion now makes the station ADA-compliant and gives Port Jervis customers a modernized station. The new ramp is complemented by a newly constructed one-car length high-level platform, allowing seamless access from the station parking lot, onto the platform and onto the train.

Prior to the pandemic, the Port Jervis station served approximately 200 passengers on an average weekday, 150 on an average Saturday and 230 on an average Sunday. Recently, ridership has climbed back up from the depths of the pandemic to approximately 35 to 40 percent of pre-pandemic levels. (MTA press release, October 4)



The ribbon-cutting ceremony at the rebuilt Port Jervis station. ERA and MTA Board member Randolph Glucksman is in the center.

Marc Hermann/MTA photograph

NJ TRANSIT

The NJ Transit Board of Directors approved a contract with Skanska/Traylor Bros. Joint Venture for the construction of the new Portal North Bridge. This is the largest award in NJ Transit's history.

The project, a critical part of the Gateway Program, will eliminate the critical issues caused by operation and maintenance of the existing swing bridge that have long plagued the most heavily transited portion of the Northeast Corridor.

The \$1,559,993,000 construction contract for the project spans 2.44 miles of the Northeast Corridor Line and

(Continued on page 11)

Rail News in Review

(Continued from page 10)

includes construction of retaining walls, deep foundations, concrete piers, structural steel bridge spans, rail systems, demolition of the existing bridge and related incidental works. Once construction begins, the construction contract is anticipated to take approximately five and a half years.



View of the existing Portal Bridge over the Hackensack River.
njtransit.com photograph

The project is being funded by the U.S. Department of Transportation, NJ Transit and Amtrak. In January, 2021, Governor Phil Murphy announced the signing of a Full Funding Grant Agreement, which secured \$766.5 million in Federal Transit Administration funding to support the project's construction.

Also in January, 2021, NJ Transit advertised the Invitation for Bid (IFB) for the construction contract. The procurement was a two-step process, the initial step being the Special Pre-Qualification of Bidders. In May, NJ Transit pre-qualified four bidders and conducted a pre-bid conference and Disadvantaged Business Enterprise outreach. Two of the pre-qualified bidders submitted proposals on September 2. Skanska/Traylor Bros. Joint Venture of Queens, New York, was deemed the lowest responsible and responsive bidder.



Rendering of the new Portal Bridge over the Hackensack River.
NJ Transit rendering

The Portal North Bridge project is an important initial element of the broader Gateway Program, which will eventually double rail capacity between Newark and

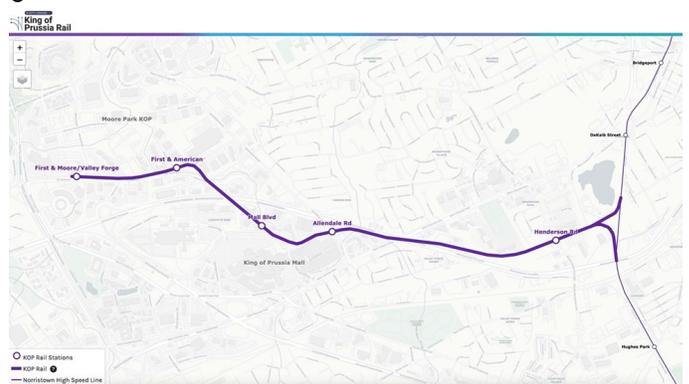
New York. The project will eliminate the existing 110-year-old swing bridge which has been the enduring source of major service disruptions for NJ Transit and Amtrak customers traveling on the Northeast Corridor.

The new bridge is a modern two track, high-level, fixed-span bridge that will improve service and capacity along this section of the Northeast Corridor. The new bridge will rise 50 feet over the Hackensack River and will allow marine traffic to pass underneath without interrupting rail traffic. (*Mass Transit*, October 15)

OTHER SYSTEMS

PHILADELPHIA, PENNSYLVANIA

SEPTA's King of Prussia Rail Project has taken an important step forward. The project has received entry into the Project Development Phase under the Federal Transit Administration's Capital Investment Grant program.



Map of the Norristown High Speed Line's extension to King of Prussia.

King of Prussia Rail Project map

Construction will include extending the existing Norristown high-speed line four miles into King of Prussia, Pennsylvania, and SEPTA General Manager and CEO Leslie Richards said the project is necessary to support the evolving needs and develop a 21st century transportation solution for the region.

The King of Prussia project is part of the core of SEPTA Forward, which is the agency's strategic plan that focuses on increased connectivity, access and equity.

SEPTA is now working on evaluating program delivery options for the King of Prussia project as well as completing 30% of the design.

SEPTA General Manager of Planning Jody Holton said technical planning, environmental analysis, public outreach and initial technical work has been going on over the last few years.

The CIG program provides over \$2 billion in federal funding to transit projects in the U.S. (*Railway Track & Structures*, October 13)

PITTSBURGH, PENNSYLVANIA

After a one-month trial with double cars, Port Authority Transit has not received an expected boost in light rail ridership and has returned to operating trains with one car on the system that runs between Downtown Pitts-

(Continued on page 12)

Rail News in Review*(Continued from page 11)*

burgh and the South Hills.

The agency announced last month that it would return to using two-car trains during rush hours on September 7, the day after Labor Day, because ridership usually increases in September. When that did not occur, it returned to one-car trains October 4.

Ridership on public transit — locally and nationally — took a huge hit when the COVID-19 pandemic began in March, 2020 and has been slow to recover. Port Authority's bus ridership has come back somewhat, but light rail traffic has not recovered nearly as much and remains 73% below pre-pandemic levels.

Light rail cars can seat 64 passengers. Sampling done by the agency in August and September showed there were never more than 60 passengers on a trip and Operators never had to pass passengers because the car was too full.

The highest ridership occurred during morning rush hours.

The agency does not want to run two-car trains if it does not have to because that doubles the operating cost. It also adds a few minutes to each trip because the Operator has to switch from one end of the train to the other when the train reaches its destination and begins a return trip so the Operator is facing forward.

Additionally, 53 of the agency's 81 light rail cars date back to the 1980s and should be replaced, so the less they are used, the better. The agency is in the process of devising a plan to replace them, but that could cost \$400 million to \$500 million and it takes five to eight years for manufacturers to deliver new vehicles after they are ordered. (*Mass Transit*, October 15)

WASHINGTON, D.C. AREA

A flaw with the wheels that has been linked to the derailment of a Washington, D.C., area subway train was found on dozens of other cars, and investigators urged transit systems with similar equipment across the U.S. to conduct urgent inspections.

The October 12 incident in Virginia on the Washington Metropolitan Area Transit Authority system could have been “catastrophic,” National Transportation Safety Board Chairwoman Jennifer Homendy said at a briefing in Washington on Monday.

A total of 39 similar flaws — in which the wheels move apart from each other along the axle — have been found this year on WMATA rail cars, including 21 on Friday in inspections after the accident, she said.

The NTSB has not yet issued a formal call for inspections at other rail systems, but Homendy said the agency was considering issuing an urgent recommendation. The so-called 7000-series cars were made by Kawasaki Rail Car, Incorporated, according to the NTSB.

It is unclear whether the issue could create a safety issue at other transit systems. The 7000-series cars were made specifically for WMATA by Kawasaki to replace older cars, according to the company's website.

The company makes other rail car models for New

York City Metropolitan Transportation Authority, PATH in New Jersey and Southeastern Pennsylvania Transportation Authority in greater Philadelphia, among other systems.

Spokespersons for the Metropolitan Transportation Authority, SEPTA and PATH did not immediately comment.

Kawasaki did not respond to requests for comment on whether the wheels on its other cars may have a similar design. The Federal Transit Administration, which has authority over such rail systems, also did not respond to a request for comment.

WMATA on Sunday, October 17 took all 7000-series cars out of service, representing almost 60% of the fleet, in the wake of the derailment in a tunnel near Arlington National Cemetery. The system was operating on a drastically reduced schedule Monday the 18th.

Investigators found evidence that the train involved in the accident had had at least two other minor derailments earlier on the same day. Wheels on the trains were apparently moving outward so that they became wider than the tracks, according to the NTSB.

WMATA had discovered similar issues with wheels on its trains going back to 2017, Homendy said. After discovering a handful of such cases in the years since, the numbers jumped to 18 this year prior to the accident.

It is extremely unusual for railroad wheels to have such a flaw, said Russell Quimby, a consultant who formerly worked as an NTSB rail investigator. Typically, the large steel wheels are pressed onto an axle and should stay in place for thousands of miles of use, Quimby said.

The NTSB will want to determine whether there was a flaw in how the wheels were built or if some kind of maintenance on them afterward played a role, he said. (*Mass Transit*, October 19)

MINNEAPOLIS, MINNESOTA

The final corridor plan for the METRO B Line was approved by the Metropolitan Council (Met Council), including all 33 stations and routing.

The project now moves into the detailed design phase, which will occur into 2022, with construction in 2023 and service anticipated to begin in 2024.

The B Line is a \$65 million bus rapid transit line that will substantially replace local bus route 21. The B Line will connect Uptown in Minneapolis with Union Depot in Saint Paul, operating primarily along Lake Street in Minneapolis and Marshall and Selby avenues in Saint Paul.

The approved plan built upon over 2,500 community comments and coordination with cities and counties.

Potential bus lanes on Lake Street still being evaluated.

The final plan does not include any changes to station locations included in the July, 2021 recommended corridor plan, but does include updates based on feedback from project partners and community members:

Responses to comments about specific station locations, including issues to address throughout the detailed engineering phase.

(Continued on page 13)

Rail News in Review

(Continued from page 13)

construction notice.



The project calls for construction of a 9.2-mile light rail system extending from the Van Nuys Metro G Line (Orange) station to the Sylmar/San Fernando Metrolink station.

L.A. Metro rendering

The project calls for construction of a 9.2-mile light rail system extending from the Van Nuys Metro G Line (Orange) Station to the Sylmar/San Fernando Metrolink Station. The initial operating segment, which extends 6.7 miles from Van Nuys Boulevard at the Metro G Line (Orange) to San Fernando Road, is entirely at-grade and includes 11 new stations.

Additional studies are underway to determine the remaining operating segment from San Fernando Road continuing to Hubbard Road, according to L.A. Metro. (*Progressive Railroading*, October 11)

EDMONTON, ALBERTA, CANADA

Delays have become a part of the Valley Line Southeast LRT project in Edmonton over the years, so it is only natural there is another one.

Contractor TransEd announced on October 12 that the project, which was reset to be complete in 2021, would now not be finished until March, 2022. A “longer than expected” testing project for the trains on the new line and the COVID-19 pandemic are the two biggest reasons for the most recent delay. TransEd spokesperson Dallas Lindskoog said 95% of the project is complete, but the contractor is still seeing positive COVID cases in its workforce and that “impacts our ability to move forward efficiently.” The original deadline for project completion was 2020.

TransEd also is making sure the system operates exactly as it was designed to operate, which has caused longer testing runs.

Testing for the project has now moved north of the North Saskatchewan River. The Quarters Tunnel and tracks in the downtown area will be included in the next phase.

The biggest dent in construction progress came in the spring of 2018 when a concrete slab was discovered below the surface of the river during the erection of the Tawatina Bridge.

Line-wide testing and the power to overhead wires are

expected to take place soon. (*Railway Track & Structures*, October 13)

PARIS, FRANCE

Île-de-France Mobility (IDFM) and the Paris Transport Authority (RATP) have placed an order for 37 Alstom Citadis X05 LRVs for an initial €130 million. The contract includes an option for a further 83 LRVs which would increase the value of the contract to €310 million.

The new fleet will replace the existing Line T1 fleet from 1992 and will increase capacity by 15% per LRV while consuming 30% less energy than the current vehicles. The additional 83 LRVs would be used to meet the demand from a planned line extension.

The 108-foot-long LRVs will be 7.9-foot-wide and equipped with six double doors of 4.3 feet per side, including doors at the end of the LRVs to improve access for passengers. They will be fully accessible. Air-conditioning and 18 passenger information screens will be fitted to each LRV as well as 40 USB sockets.

The LRVs will be equipped with a new swiveling bogie profile designed to minimize the space between the doors and platform for passengers with reduced mobility.

The LRVs are being fitted with sensors to allow real-time diagnostics of components to enable real-time diagnosis of equipment failures, therefore allowing optimization of downtime resulting in improved availability.

Six French Alstom sites will contribute to the contract:

- La Rochelle – design and assembly
- Le Creusot – bogies
- Ornans – motors
- Villeurbanne – on-board electronics and cyber security
- Aix-en-Provence – tachometer units
- Saint-Ouen design

Île-de-France Mobilités is to put forward three exterior and interior styling proposals for public consultation. (*Metro Report International*, October 5 and *International Railway Journal*, October 18)

DRESDEN, GERMANY



The first NGT DX DD Flexity tram for Dresden, 2901 (Alstom, 9/2021).

Metro Report International photograph

(Continued on page 15)

Rail News in Review

(Continued from page 14)

Dresden transport operator DVB and Alstom have unveiled the first NGT DX DD Flexity tram, with 2,500 people visiting the Gorbitz depot over the weekend of October 2-3 to take a look at the vehicle.

Built to Dresden's unusual 4' 8½" (standard) gauge, with a maximum speed of 43 mph, the five-section low-floor cars are 143 feet long. The DX DD trams are the first in the city to be built to the international standard 8 2/3 feet body width, 14 inches wider than the existing Dresden fleet. Their introduction follows an extensive program of track remodeling to accommodate larger vehicles.

The €197 million contract signed in August, 2019 covers the supply of 21 single-ended and nine bidirectional vehicles, with provision for 24 years of maintenance and an option for 10 more trams. Testing of the first car is now underway, and it is expected to enter revenue service on Route 2 in Spring, 2022.

Bodysells are being produced at the Görlitz plant, with final assembly at Bautzen. Subsuppliers include Lakowa, IMA Dresden, Lehmann Metalltechnik and SIMU Fertigungs. ROBUR Prototyping & Materials produced a mock-up to support the design process.

The wider vehicle has a capacity of 290 passengers with two multipurpose areas for wheelchairs, prams and bicycles. There are six double doors for rapid boarding and alighting, with LED strips inside and out which light up green when it is possible to board and red when it is too late. The vehicle has large windows, bright paneling and LED ambient lighting which adapts to the time of day and season. Information screens are visible throughout the tram.

The air-conditioning has been designed to adapt to onboard CO2 levels, helping the new trams to use 15% less energy for heating, air conditioning and lighting than existing designs. (*Metro Report International*, October 6)

WIEN (VIENNA), AUSTRIA



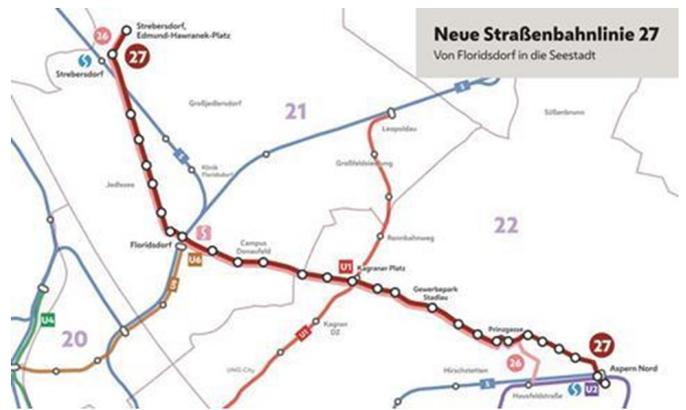
Artist's impression of the future Line U5 station at Frankhplatz. Wiener Linien rendering

The national government and the City of Wien have

agreed a 50/50 split for financing the €6 billion second phase of the U2xU5 metro expansion package, which covers extensions to both lines.

Under the first phase of the U2xU5 Linienkreuz project now under construction, Line U2 will be diverted at Schottentor and run south to Matzleinsdorfer Platz, while the existing tunnels to Karlzplatz will become part of the driverless Line U5, interchanging with U2 at Rathaus. The first section of U5 from Karlsplatz to Frankhplatz is expected to open in 2026 and the U2 extension in 2028.

The second phase of construction will see U5 extended westwards to an interchange with the S-Bahn at Hernalers, adding four more stations. Line U2 will be extended south from Matzleinsdorfer Platz to Gußriegelstraße and Wienerberg, adding three stations. The complete package will add 6.8 route miles and 12 stations to the capital's metro network. (*Metro Report International*, October 1)



Map of the new 27 route. Wiener Linien map



Detail of the new Route 27 extension to Aspern Nord. Wiener Linien map

The Wien city government has approved the construction of a new tram route serving the Aspern district, as a branch off the orbital Strebersdorf-Hausfeldstrasse Route 26 on the northern side of the River Donau.

Due to be completed by Fall, 2025, the 1.5-mile eastern branch will diverge at Zanggasse and run to an interchange with metro Line U2 and the S-Bahn network

(Continued on page 16)

Rail News in Review

(Continued from page 15)

at Aspern Nord, serving six new stops. The branch will be paralleled by a new cycle path to encourage active travel, while park-and-ride facilities will also be expanded.

Route 27 services will run through from Aspern Nord to Strebersdorf, augmenting Route 26 to provide a more intensive service through the Floridsdorf and Donaustadt districts. Metro connections will be available to U1 at Kagraner Platz and U6 at Floridsdorf. More than 300 new trees would be planted and the line laid with grassed tracks. Total cost of the project is put at €96.8 million, to be funded by the City of Wien and operator Wiener Linien. Around €8 million will be spent on the greening measures. (*Metro Report International*, October 4)

PORTO, PORTUGAL

Porto Metro has unveiled the design of its new 18 LRVs ordered from CRRC Tangshan in January, 2020.

The vehicles feature a gray and yellow livery along the side culminating in a “smile” at the front. CRRC beat Skoda and Siemens for the €49.6 million contract, which includes five years’ maintenance.

The vehicles, dubbed CT as an abbreviation of CRRC Tram, will operate alongside the Eurotram (ET) and Tram-train (TT) fleets already operated by Porto Metro. The design was developed following an 11-month study conducted by designers and rolling stock experts.

Porto Metro says the LRV is aerodynamic and accessible, with seven double doors on each side compared with six on the ET and four on the TT.

The trains are due to be delivered in the second quar-

ter of 2022, ahead of the opening of the two-mile double-track light rail extension to the existing Line D (Yellow) and a new 1.9-mile underground Line G (Pink). (*International Railway Journal*, October 14)



Rendering of the LRVs for Porto.
Porto Metro rendering

SWITZERLAND

Stadler has been selected as the winner of the “largest tender in Swiss rail history.” The framework contract covers the supply of up to 510 Flirt electric multiple units to Swiss Federal Railways, Turbo and RegionAlps, with a firm order for an initial 286 units worth SFr2 billion.

The selection of Stadler was announced on October 5, with formal award subject to a 20-day standstill period.

The two-stage tendering process was launched in May, 2020 by SBB, its Turbo joint venture with the canton of Thurgau and the RegionAlps joint venture in Valais. The three operators said purchasing a uniform fleet

(Continued on page 20)

VIENNA-BRATISLAVA-UKRAINE
by Jack May
(Continued from September, 2021 issue)
(Photographs by the author)

Tuesday, June 20 in Vinnytsia continued

We covered the entire loop (see <http://www.urbanrail.net/eu/ua/vinnytsia/vinnytsia.htm>) with the four-wheelers, returned to the carhouse, and then took out a pair of ex-Zurich Mirage cars to run across the Pivdennyi Buh River and into the city center, operating to the end of the line at the railway station. The second car of our set was a blind motor, in other words a unit without controls, only usable as the second car of a multiple-unit train. In Zurich these cars were called *blinde kuh* (blind cows), and they did not have headlights (clearly because they were not needed). Vinnytsia began purchasing surplus Zurich cars in 2006, gradually replacing its Tatra fleet with a combination of Swiss Karpfen 4-axle cars and two-section high-floor articulated Mirage units. The name Mirage really has nothing to do with trams, but was the moniker applied to them in

1968 when these cars were fabricated at the same time as the Swiss Army received French-built Mirage fighter jets. I would say it is amazing how well these 50-year old cars have held up, but I suspect it is not a chance phenomenon, but rather a testament to Swiss carbuilding and a scrupulous effort in Vinnytsia to maintain them to high standards.

As we were running a bit late, I decided to bail out from the tour so I could ride some regular service; I was also hopeful I would be able to photograph one or two of the modern VinWay cars. I stationed myself at the Vasyliya Stusa stop of Routes 2, 4 and 5, and took pictures of whatever came by. Our chartered bus was supposed to leave for Zhitomir from the junction of Routes 1, 2, 3, 5 and 6 at Rynok Urozhai/Medychnyi University at 13:45, and I arrived there well in time, also meeting Clare, who spent the day visiting cultural venues.

(Continued on page 17)

Vienna-Bratislava-Ukraine

(Continued from page 16)



Views of two Mirage cars obtained from Zurich. 308 was originally numbered 1653 and was built in 1967. 315, which is shown on a side track at the railroad station loop, had been 1629 and was produced a year earlier. Both came to Vinnytsia in 2010.



A few words about the on-going VinWay program: Very little has been written about the modernization project, but it appears to have been started in 2015 and calls for the creation of a fleet of modern low-floor cars by substantially rebuilding single-unit Tatra T4 PCCs (just using the trucks and frame) and converting 2-section KT4s into modern 3-section units.

The first four photos on the next page illustrate both the 4-axle and 3-section articulated results of the VinWay project. It appears there are now 10 such cars on the roster, 5 of each type, the latest completed in 2018.

Yes, there are some advertising wraps in Vinnytsia, but fortunately, very few. Mirage 339 (former 1676 from 1968) is shown departing the Vasylya Stusa stop, which serves Routes 2, 4 and 5, in the outbound direction.



The blind and door sides of the only two VinWay single-unit cars on the roster at the time of our visit. They were commissioned in December, 2016 and April, 2017 respectively. Since then 136 has joined the ranks, having been released for service in July, 2017. They are classified as type T4UA. The left photo was taken at the Vasylya Stusa stop, while the one at right was captured while the unit reposed at the carhouse.

(Continued on page 18)

Vienna-Bratislava-Ukraine

(Continued from page 17)



The blind and door sides of the three-section low-floor VinWay units created from Tatra KT4 cars, photographed in the same locations as the pair above. Classified as type KT4UA, they appear to be retaining the numbers they carried when coming off the production floor of CKD-Tatra in Prague in 1990. There are three such units on the roster (226 being the other one), but there is also an earlier prototype, 224, which had been built in 1988. They began serving the public in 2015 and 2016.



Former Zurich Karpfen car 1416 was built in 1959, and was among the original group of 14 motors (and 15 trailers) sent to Vinnytsia in 2007. Both the 4-axle Karpfen and two-section Mirage cars began to be removed from service in Switzerland's largest city when the production run of Cobra cars came online in 2005. It was just shortly afterward that the massive transfer of cars from Zurich to Vinnytsia began.



One last view, along the one branch I did not ride on this trip, Routes 1, 3 and 5 to Elektromerezha. The location is Rynok Uroszhai, where the branch joins the loop. Mirage 310 was built for Zurich in 1967 as car 1662 and came to Vinnytsia in 2010.



Coming next year to Vinnytsia: A 6-axle Tram 2000 unit operating on Zurich's Route 8 is shown in this 2014 photo at Romerhof, the transfer point to the Dolderbahn rack railway.

Update from the author: The big news is that Vinnytsia will receive 70 more trams from Zurich. These will be newer Tram 2000 units, built between 1976 and 1983, which are being replaced by Flexity 2s in the Swiss city. It is expected that the first 35 will be delivered in 2022, and if all goes well with their operation, the remaining 35 three years later. Thus in 2025 it is possible the entire system will be operated with Swiss cars and VinWays.

(Continued on page 19)

Vienna-Bratislava-Ukraine

(Continued from page 18)

The bus ride from Vinnytsia to Zhitomir consumed about two hours, and we arrived at the meter-gauge tramway's carhouse/shops/offices around 16:00. It was still bright and sunny, and because it was June 20, it was one of the longest days of the year. We would not need too much time here, as there is only one line in this city of slightly under 300,000 people (see <http://www.urbanrail.net/eu/ua/zhytomyr/zhytomyr.htm> for map). With a route length of a little over 4 miles, it would

be easy to make a full round trip and even have a few photo stops before shadows would become too long. And with an 18:30 departure for the 85-mile-long trip to Kiev, it would still be light even at our 20:30 arrival time.

We spent some time freshening up and visiting the carhouse, inspecting many work cars before our charter with two special trams left.

Our bus dropped us off right in front of the Ibis Hotel before 21:00, and we were soon checked in. Dinner was served in the restaurant and we rushed off to bed, as tomorrow would be another bright and sunny day,



This Gotha T57 four-wheeler, built in East Germany in 1959, was converted for work service in 1978.



Our two chartered trams. The left view shows car 6, a T4 PCC built by Tatra in Prague for Zhitomir in 1978. The four-wheeler in the right photo was rebuilt in Zhitomir's shops from a Gotha T59 car in 1989. The deck roof car with its bow collector is shown near the Peremohy Square loop on the western end of the system.



Our two charter cars pause for photos on the street. Almost all of Zhitomir's tramway operates in pavement. *(Continued on page 20)*

Vienna-Bratislava-Ukraine

(Continued from page 19)



Regular service for the public in Zhitomir is provided by Tatra single-ended KT4 cars, which turn on loops at both ends of the system (and at intermediate points if needed). Although many of these PCCs sport advertising wraps I was able to capture two pristine units near the turnover for the carhouse. 169 was built for Vinnytsia in 1982 and came to Zhitomir in 2010, while 31 was built new for the property in 1987.

(Continued next issue)

Rail News in Review

(Continued from page 16)

would simplify operations and help to increase the competitiveness and attractiveness of public transport. They aimed to shortlist three companies with a proven vehicle concept, prequalifying Alstom, Siemens and Stadler to submit final offers at the end of April, 2021.

Evaluation was based on economic efficiency, quality, and meeting the tender specifications, taking into account lifetime maintenance, cleaning, energy and spare part costs as well as the initial purchase price.

SBB said Stadler had been selected on the basis of quality and cost-effectiveness, offering detailed plans to meet project milestones as well as the lowest overall operating costs.

The firm order was initially planned to cover 194 units, but following agreements between the operators, the federal government and the cantons, this has been increased to 286. That will enable the replacement of more life-expired trainsets.

The Flirt units will be manufactured entirely at Bussnang, with Switzerland accounting for around 75% of the total value added. They are expected to enter service from December, 2025 to 2034.

Compared to the trains currently in service the Flirt EMUs are expected to offer more storage space for bicycles, prams and large luggage, improved mobile phone reception and power sockets. There will be two wheelchair spaces, including in first class, and an accessible toilet per train. The 15 kV 16.7 Hz units will be approved for operation in Switzerland, Germany and Austria. (*Railway Gazette International*, October 5)



Rendering of Stadler EMU in Swiss Federal Railroad's paint scheme.

Stadler rendering



Rendering of Stadler EMU in Thurbo's paint scheme.

Stadler rendering