The Bulletin

Electric Railroaders' Association, Incorporated

Vol. 64, No. 8 August, 2021

The Bulletin

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

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This Month's Cover Photo:
SNCB (Belgian National Railways) Class AM86 Sprinter 903 (La Brugeoise et Nivelles, 1986) is seen operating an S5 trip to Geraardsbergen at the Boondael stop in Brussels on April 30, 2019.
Jeff Erlitz photograph

FAA RENDERS DECISION FOR LAGUARDIA AIRTRAIN

A rendering of AirTrain approaching LaGuardia Airport's East station.
Port Authority rendering

The Federal Aviation Administration (FAA) issued its Record of Decision for the LaGuardia Airport (LGA) AirTrain project, clearing the way for the Port Authority of New York and New Jersey (PANYNJ) to pursue future funding under the Passenger Facility Charge program.

The program allows for the collection of fees added to passenger tickets, proceeds of which can be used on certain qualifying airport projects, subject to FAA approval.

The $2 billion project would provide a rail transit connection to the final major U.S. airport on the East Coast without one. PANYNJ plans to connect LGA to the New York City Transit Subway 7 line and the Long Island Rail Road Port Washington Branch at Mets-Willets Point. Additionally, there will also be passenger walkways connecting to the LGA Central Hall, a parking garage connector, public transportation and ground transportation facilities.

The proposed automatic people mover aims to increase reliability of travel times between LaGuardia and New York City, enhance airport access for passengers and employees, reduce nearby off-airport traffic congestion and increase availability of employee parking and expand airport areas for storage of equipment and materials for maintenance activities.

PANYNJ Executive Director Rick Cotton thanked the FAA for conducting "an exhaustive and independent environmental review" and noted the decision is a move that will

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FAA Renders Decision on LaGuardia *AirTrain*

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provide "a reliable, predictable and non-polluting rail link to LaGuardia Airport."

The Final Environmental Impact Statement was released on March 19, 2021, following input from 18 different federal, state and local agencies. The FAA says it collected 4,200 comments on the project and its virtual public hearings on the project were viewed by more than 18,000 people.

A Better Way to LGA Coalition said the move by the FAA is cause for celebration. (***Mass Transit***, July 21)

Rail News in Review

NEW YORK METROPOLITAN AREA

METROPOLITAN TRANSPORTATION AUTHORITY

A planned MTA fare hike expected for later this year has been delayed again through at least 2022, top agency officials confirmed on July 19.

The news follows a monthly committee meeting where Finance Chair Larry Schwartz made the announcement.

MTA Communications Director Tim Minton told News 4 New York the city's buses and subways would not see a hike through the rest of the year.

Subway ridership has crept back up since the height of the New York City lockdown, but it remains 50% lower than pre-pandemic levels. (NBC New York, July 19)

MTA NEW YORK CITY TRANSIT

Throughout the COVID-19 pandemic, essential workers got where they needed to go because of the heroic Metropolitan Transportation Authority (MTA) workers. On Wednesday, July 7, these heroes moving heroes were joined by many of the people they helped get to work, doctors, nurses, grocery store workers, restaurant workers and first responders, for a hero's welcome at New York City's "Hometown Heroes" ticker tape parade in Lower Manhattan.

A group of 70 transit workers participated in the parade announced by New York City Mayor Bill de Blasio on June 14, featured in two MTA floats and on City Hall's essential workers' float. The heroes cruised down the Canyon of Heroes as New Yorkers thanked them for all the work they did to get the city to the other side of the pandemic. The parade followed the traditional ticker tape parade route, beginning in Battery Park, and slowly proceeding through the Canyon of Heroes, up Broadway, towards City Hall.

The floats chosen for this parade should resonate with New Yorkers as they symbolize the past and future of transit. One float featured car 1273 (Jewett, 1903) of the New York Transit Museum's vintage fleet. Car 1273 has been through two world wars, and now two pandemics, and is proof that even at the lowest moments of this city and the country, the transit system is there. The second float points towards the future, a zero-emissions bus that represents where transit is headed coming out of this pandemic — towards a cleaner future and one where mass transit must be at the center. The common theme in past, present and future is that through it all, transit workers will lead the way and keep New York City moving. (MTA press release, July 7)

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THE BOARD OF DIRECTORS EXPRESSES ITS DEEPEST APPRECIATION FOR 4 MEMBER DONATIONS IN JUNE, 2021

AMOUNT	DONOR(S)		
$100 and up	Daniel Fortak	Michael Craven	William Closs
Up to $50	Herbert Lauterwald		

ERA is a 501(c)(3) tax exempt corporation. Your donations are fully tax deductible and can be made either with your 2021 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!

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A wide-angle side view of BU car 1273 (Laconia Car, 1903) in the "Hometown Heroes" Ticker Tape Parade on July 7.
Marc Hermann/MTA photograph

The Avenue H Ⓠ station in the Midwood section of Brooklyn has reopened as a fully accessible station. Passengers can now access the northbound (Manhattan-bound) platform by using a new ramp which leads to a new turnstile area for access to the platform. A new underpass for an accessible path leading to the previously existing ramp to the southbound platform was also created improving passenger flow and station environment. Both ramps were designed in accordance with the American Disabilities Act (ADA).

MTA Construction & Development and contractor, Gramercy Group, Incorporated, worked through the pandemic to prioritize this project. The project, which was part of the 2020-24 Capital Plan, cost $12.2 million, with incentives for substantial completion to be on time and on budget.

Other Avenue H station project components include:

- Sidewalk/street work to connect east to west side of station via underpass
- New landscaping (green street work) on east side next to ramp and next to platform walls on the west side
- New lighting in the new turnstile area, ramp and existing staircases
- Five new cameras in new turnstile area interconnected with existing CCTV system
- Fire alarm upgrade and strobes, smoke/heat detectors and tamper switch incorporated with existing fire alarm system
- Water main replacement on west side ramp and gas main replacement on both east and west side and underpass for new ADA-compliant ramp
- Two new speakers incorporated with the existing PA system

(MTA press release, July 15)

The new ramp to the northbound platform at Avenue H on the BMT Brighton Line on July 15.
Marc Hermann/MTA photograph

At the New York City Transit and Bus Committee Meeting held on July 19, it was requested that the MTA Board approve the award of contract R-32443 to Brookville Equipment Corporation of Brookville, Pennsylvania for the conversion and upgrade of four R-110A cars to two pump and two generator cars at the total price of $23,878,834. This includes an option to exercise an extended warranty at the total price of $1,300,168 at a future date. *(Editor's Note by Jeff Erlitz: R-110A cars 8002-8004 and 8007-8009 were converted into pump train hose-reach cars in 2013-14.)*

An Authorizing Resolution requesting the use of a competitive Request for Proposals procurement process was previously approved by the MTA Board to award a contract for this conversion. This contract calls for upgrading and converting those four cars with gensets (a combination of an engine and an alternator) and pumps to complement three existing hose-and-reach cars. This pump train will be deployed primarily to remove water from the subway tunnels when flooding occurs. The pump train acquisition is part of NYC Transit's storm preparedness effort after Superstorm Sandy.

Rendering of the new passageway from Times Square Ⓢ to Sixth Avenue.
MTA rendering

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Construction contract A-35302/A-37116 is for station reconstruction and ADA accessibility at the Times Square and Grand Central Ⓢ stations. The scope of this contract consists of converting the existing three-track 42nd Street Shuttle operation to a two-track operation and modifying and extending the station platforms to comply with ADA requirements. MTA Construction & Development has requested that the MTA Board ratify Modification Number 30 for the design and construction of the Sixth Avenue Connector and deletion of the Durst Underpass.

The contract calls for the construction of an underpass under Track 4 (the "Durst Underpass"), which provides a required alternate means of egress from the Times Square shuttle platform through the Durst Building to 42nd Street. However, construction of the Durst Underpass presented construction challenges that created risks to shuttle service and to the schedule for completion of the project. For those reasons, MTA C&D sought an easier-to-build solution that would minimize impacts to customer service.

The identified solution is an alternative to the Durst Underpass and provides an alternate means of egress through the Bryant Park station on the IND Sixth Avenue Line. This solution has the advantages of allowing two track service to continue during construction, provides a free transfer to the Sixth Avenue ⒷⒹⒻⓂ Line and lessens the risk of impact to the project schedule. In addition, because the owner of the Durst Building had an obligation to fit out the Durst Underpass, it was willing to pay the MTA $7.56 million to be relieved of its obligations for performing its work.

The changed work in this modification consists principally of the deletion of the Durst Underpass and the design and construction of approximately 300 linear feet of enclosed connector in the Shuttle's abandoned Track 3 right-of-way from the south end of the Times Square Shuttle platform to the Bryant Park station. The work also includes the construction of a ramp down to the connector and two separate stairways constructed from the connector (Shuttle Level) to the Bryant Park station uptown and downtown platforms.

The contractor submitted a net cost proposal of $9,677.515. Negotiations resulted in the agreed net lump sum price of $5,150,000, which is considered to be fair and reasonable and is, in fact, less than the payment received by the MTA for deleting the Durst Underpass.

In order to mitigate any impacts to the substantial completion date or the restoration of full shuttle service, permission to process this modification on a retractive basis was obtained from the Deputy Chief Development Officer and MTA C&D Delivery, and the Contractor (MLJ Contracting Corporation of Great Neck) was directed to proceed with the work on January 22 of this year, up to a not-to-exceed amount of $3,000,000. (New York City Transit and Bus Committee Meeting Agenda, July 19)

The MTA has awarded a contract to Humatics and its partner, Siemens, to develop an interoperable Ultra-Wideband (UWB) solution over the course of 14.5 months.

This work expands on the success of the 2019 pilot project which determined the effectiveness of using UWB in conjunction with Communications-Based Train Control (CBTC) systems. This scope of work will deliver an interoperable UWB specification enabling competition, expanding the UWB ecosystem and building the foundation for UWB to be used in revenue service in New York City.

Humatics notes upgrading the MTA's subway system with UWB and CBTC technology will improve overall system reliability, availability and increase capacity which will significantly improve the passenger experience.

Humatics expects to build upon the 2019 UWB pilot success where 5.5 miles of track and four trains were outfitted with UWB technology that successfully passed train control functional testing and were deemed safety certifiable by independent assessors. The pilot was also robust, having accumulated more than one million hours of operation. Additionally, the pilot showed UWB equipment can replace several pieces of traditional CBTC positioning equipment, and is easier to install and maintain, reducing operating expenses.

In New York City, UWB is the primary positioning sensor used by the Humatics Rail Navigation System (HRNS), a drop-in replacement for traditional railway odometry sensors such as tachometers, transponders and doppler radars. The HRNS is a navigation system based on sensor fusion algorithms that leverage the right sensors to solve challenging navigation problems.

UWB, along with sensors such as Inertial Measurement Units (IMU) and Global Navigation Satellite System (GNSS), are fused together to provide incredibly precise position, speed and acceleration data to train control systems such as CBTC, Positive Train Control (PTC) and the European Rail Traffic Management System (ERTMS). (***Mass Transit***, July 27)

MTA Long Island Rail Road

As mentioned in the July issue of ***The Bulletin***, the new bridge over Willis Avenue on the Oyster Bay Branch in Mineola was pushed into place over the weekend of June 25-26. Two pictures of the completed bridge are on the top of the next page.

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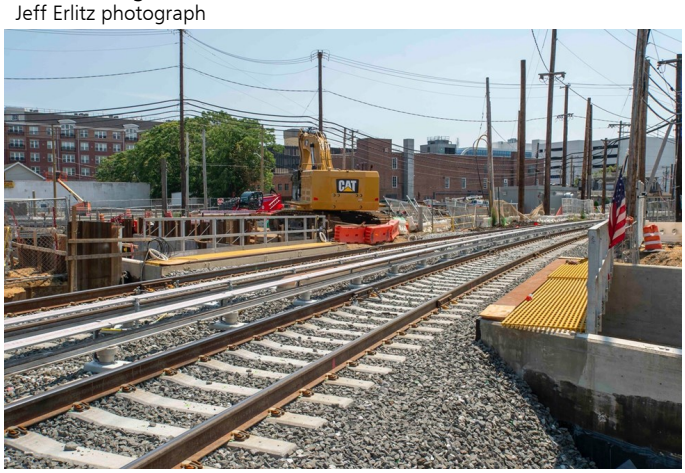
View looking south of the new bridge carrying the Oyster Bay Branch over Willis Avenue, seen here on July 5. In the distance is the new bridge for the Main Line which was pushed into position the following weekend.
Jeff Erlitz photograph



View looking southwest of the new bridge carrying the Oyster Bay Branch over Willis Avenue, also seen here on July 5. In addition to having concrete ties, this short section of new track uses the now-standard aluminum third rail.
Jeff Erlitz photograph

On Wednesday, July 7, the Long Island Rail Road operated a special train using Amtrak's track geometry car, 10002. This car was moved from Sunnyside Yard to Long Island City station the day before, on July 6, and used Amtrak GP15 switcher 578. This may have been the first time in history that an Amtrak locomotive ran into Long Island City.

The train operated from Long Island City to Montauk in the morning and then operated west to Jamaica in the afternoon. 10002 was then handed back over to Amtrak. The Long Island's own track geometry car, the TC-82, is currently out of service after having collided with a standing New York & Atlantic freight train east of the Cold Spring Harbor station on June 17.

The special move with Amtrak's track geometry car is seen here arriving at the Hunterspoint Avenue station on its way to Montauk. It had just left the Long Island City station.
Andrew Grahl photograph

Looking west at the afternoon trip, which had the "observation" end of 10002 uncovered. The location is in the hamlet of West Bay Shore and is between the Babylon and Bay Shore stations.
Jeff Erlitz photograph

Over the weekend of July 10-11, as scheduled, the new three-track bridge over Willis Avenue on the Main Line was pushed into position. With this, there is only one bridge left to be replaced between Floral Park and Hicksville, at Denton Avenue, between the New Hyde Park and Merillon Avenue stations. That bridge is actually located in the village of Garden City (on the south side) and the hamlet of Garden City Park (on the north side). Unfortunately, the village of Garden City is now holding up the permitting process for that bridge to be replaced.

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View looking north of the new bridge that carries the Main Line (and Front Street) over Willis Avenue, as seen here on July 24.
Jeff Erlitz photograph

View looking north of the new bridge carrying the Main Line over Willis Avenue, seen here on July 24. In the distance is the new bridge carrying the Oyster Bay Branch over the same street.
Jeff Erlitz photograph

The LIRR has activated wi-fi in Atlantic Terminal and wireless phone connectivity for Verizon (and Sprint) subscribers in the Atlantic Branch tunnel between Atlantic Terminal and the tunnel portal at Bedford Avenue, just west of the Nostrand Avenue station. The tunnel portion uses a new Distributed Antenna System (DAS).

Members of the public seeking to use free wi-fi in Atlantic Terminal should connect to "MTA Public wi-fi" in their phone's settings. There is no password needed.

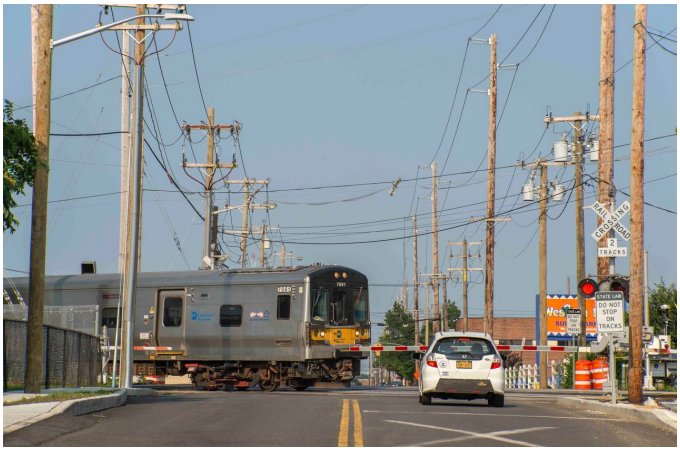
The LIRR expects to add wireless phone connectivity in the Atlantic Avenue Tunnel for subscribers of other carriers, extend the connectivity to the tunnel between East New York and Jamaica, and activate wi-fi in the LIRR's Jamaica Station.

This cell connectivity and wi-fi is being built out by Boingo, which found ways to work safely with the LIRR throughout the pandemic.

The MTA first awarded Boingo Wireless the exclusive rights to build and operate this network all the way back in November, 2018, and the project was first supposed to be completed over two years ago (in the first half of 2019), but the completion date has slipped again and again. (MTA press release and The LIRR Today blog, both July 13)

Over the weekend of July 24-25, crews began installing the first crossover switch for the future Park Interlocking on the Hempstead Branch, east of the Floral Park station. This interlocking, part of the Main Line Third Track project, will consist of a pair of single crossovers between Hempstead Branch Tracks 1 and 2. Those two crossovers will be designated Park 2. A single switch, immediately east of Floral Park and designated Park 1, will branch off from today's Hempstead Branch Track 1 and lead to the new Main Line Third Track.

Over this weekend there will, of necessity, be no service on the Hempstead Branch. Instead, hourly MU service will operate from Atlantic Terminal, Brooklyn to Mineola, making all local stops to Floral Park and then operating express to Mineola. From there, trains will operate light to East Williston and relay for service west.



M7 7091 (Bombardier Transportation, 8/2003) leads train #7561 (East Williston to Atlantic Terminal) off of the Oyster Bay Branch and across the Second Street grade crossing in Mineola in this view east on July 25 during the Hempstead Branch shutdown. Trains operated lite between East Williston and Mineola. Many years ago, before the Huntington electrification in 1970, there was 90-minute off-peak service between Flatbush Avenue, Brooklyn and East Williston during weekday middays.
Jeff Erlitz photograph

MTA Metro-North Railroad

Metro-North Capital Program highlights from June include:

Contract Awards

- Contract M8030211 in the amount of $8,725,000 for construction of repairs to the Park Avenue Viaduct from E. 115th Street to E. 123rd Street and E. 128th Street to E. 131st Street
- Contract M7020102 ($3,403,127) for a fire life safety study/assessment to study, assess and develop recommendations with regards to fire-life safety considerations in Grand Central Terminal, the Trainshed, and the Park Avenue Tunnel, including evalu-

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ating existing non-hazard egress as well as emergency egress, ventilation conditions and conducting pedestrian flow simulations

Project Completions

- Contract M7030303 repaired, rehabilitated or replaced existing undergrade bridges located along the Port Jervis Line that were not in a state of good repair

All the above items are from the Joint Metro-North and Long Island Committees Meeting Agenda for July 19.

OTHER SYSTEMS

PHILADELPHIA, PENNSYLVANIA

The Southeastern Pennsylvania Transportation Authority (SEPTA) began its 2021 Trolley Tunnel Blitz.

SEPTA crews worked around-the-clock for 17 days, tackling critical track and power maintenance, station upgrades, and intensive cleaning as part of the initiative.

SEPTA Trolley Routes 10, 11, 13, 34 and 36 did not operate in the Center City tunnel from 10 PM on July 9 through 5 AM on July 26.

Trolley service began and ended at 40th and Market Streets. Passengers were able to board SEPTA's Market-Frankford Line at the 40th Street station for travel to and from Center City.

Work that was to be completed during the tunnel closure includes:

- Demolish and rebuild the full length of the eastbound 22nd Street platform, rebuild entire track bed, and pour new concrete decking
- Replace worn track curved rail at 37th Street eastbound and 15th Street westbound
- Complete column plate repairs
- Replace four miles of overhead contact wire
- Complete maintenance on Ludlow Switch
- Perform work on entire tunnel signal system
- Conduct heavy cleaning and maintenance at all stations including painting, lighting, graffiti removal and drain and pipe cleaning

This was the ninth consecutive year SEPTA held the Trolley Tunnel Blitz, which is scheduled during the summer when ridership is traditionally lower to impact the fewest number of regular customers.

Initiative expanded to three more stations

Following several successful station cleaning and maintenance blitzes in recent months, SEPTA continued the initiative July 9-11 for a cleaning blitz at the Huntingdon station on the Market-Frankford Line.

The Huntingdon station closed each night at 8 PM beginning July 9 and reopened for service the following day at 5 AM. Efforts focused on maintenance, including work on elevators, as well as painting, power washing and installing enhanced lighting and new signage.

Following the Huntingdon station cleaning were the Lombard station (Broad Street Line) on July 23, 24, 25 and 11th Street station (Market-Frankford Line) July 30, 31 and August 1.

During the closures, passengers were able to find alternate service at neighboring stations on the Market-Frankford and Broad Street Lines, or on nearby bus routes.

SEPTA has been doing these station blitzes on the Market-Frankford and Broad Street Lines over the last several months. In addition to the Huntington station that weekend, crews have been dispatched to Somerset, Allegheny, 13th Street, 46th Street, Tioga and 8th Street on the Market-Frankford Line. Work has also been performed at the North Philadelphia and Snyder stations on the Broad Street Line.

During the work, trolleys continued operating along their routes outside of the tunnel in West and Southwest Philadelphia, and travel to and from Center City was available on the Market-Frankford Line with free transfers at 40th Street.

This year, tents were available as a temporary shelter for customers transferring from trolleys and the Market Frankford Line. For late night travel, customers can transfer to Market-Frankford Line Night Owl bus service. (***Mass Transit***, July 9)

WASHINGTON, D.C. AREA

The Potomac Yard Metrorail station opening will be delayed at least five months after WMATA determined the ATC system required a redesign to ensure it met safety requirements.
WMATA photograph

The Potomac Yard Metrorail Station in Alexandria, Virginia will be delayed a minimum of five months due to a needed redesign of the Automatic Train Control (ATC) systems.

The $370 million project is expected to provide walkable access to regional transportation systems for residents of Alexandria when it opens, which will now be Fall, 2022 rather than April, 2022.

Engineers from the Washington Metropolitan Area Transit Authority (WMATA) determined the original design of the ATC system does not meet all the safety requirements to ensure the safe operations of the trains. The specifications for the ATC system were written by WMATA and the transit agency recognizes it is accountable for the delay due to its project management decisions.

WMATA says it is working with the contractor to reduce delays and ensure system safety. Construction will

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continue on the station, but there are track-related construction elements that are dependent on the completion of the ATC design.

Prior to a public announcement of the delay, WMATA notified the city of Alexandria, which initiated the project.

The Potomac Yard station will be located in the southern end of National Landing on WMATA's Yellow and Blue Lines between the existing Braddock Road and Washington National Airport stations. (***Mass Transit***, July 27)

Milwaukee, Wisconsin

The Hop streetcar system in Milwaukee will return to regular service schedules and frequency beginning August 1. To mark the return, the streetcar is launching a new "Hop Summer Nights" promotion featuring free live music and free "hopsicles."

The Hop's schedule will run from 5 AM to midnight Monday through Friday, 7 AM to midnight on Saturday and 7 AM to 10 PM on Sunday, with service every 15 minutes during peak hours and every 20 minutes during off peak hours and on weekends.

Beginning August 1 and continuing each Sunday through August 29, riders will be treated to free "hopsicles" from Pete's Pops along with jazz from the Don Linke Trio.

The Hop returns to regular service after reducing it in response to the COVID-19 pandemic. (***Progressive Railroading***, July 26)

Little Rock, Arkansas

The Metro Streetcar returned to service in Little Rock on July 13. 411 was built by Gomaco in 2006.
Rock Region Metro photograph

Rock Region Metro resumed Metro Streetcar service to most Little Rock stops Tuesday, July 13, nearly one month after North Little Rock stops resumed service. Streetcar service was suspended March 17, 2020, as part of Metro's COVID-19 transit service modifications.

During the year without streetcar service, Rock Region Metro says it used the year without streetcar service to implement operational changes to better match streetcar service with demand and offer more convenience to riders. As a result, Monday-Thursday operating hours now start at 10:45 AM, with Friday and Saturday operating hours remaining in place until midnight. The Sunday service span is largely unchanged. The Green Line, which had served the Little Rock stops only, was suspended so the Blue Line, which serves both Little Rock and North Little Rock, could receive a schedule overhaul that speeds up streetcar stop arrivals to every 20 minutes.

Although service was initially suspended in response to the coronavirus pandemic, construction for I-30 has also affected the timing of resuming service, as the streetcar is powered by an electric overhead catenary and construction has at times required the relocation of some of the catenary poles and wiring. As a result, service to most Little Rock stops is following the North Little Rock service launch now that Metro has engaged in required safety check tasks related to re-establishing service on the main Little Rock streetcar loop.

Three Little Rock stops that follow the streetcar system's 2007 expansion to serve the Clinton Presidential Center will remain closed through December, 2024 to accommodate the highway construction. Those are Stops 20008 at River Market Avenue & Third Street (in front of Dizzy's Grill), Stop 12519 at World Avenue & Third Street (between the Clinton Presidential Center and the Heifer International world headquarters) and Stop 20010 at Third Street & River Market Avenue (along the side of the Marriott Residence Inn).

As 30 Crossing construction continues, it is likely that Metro Streetcar service will be suspended from time to time, making it critical for streetcar riders to check for service alerts before every trip. Service alerts can be found at the top of rrmetro.org and under the Service Alerts menu of the free METROtrack mobile app. (Rock Region Metro news release via ***Mass Transit***, July 13)

Houston and Dallas/Fort Worth, Texas

Renfe (Spanish National Railways) has signed a contract with Texas Central as operator of the proposed high-speed rail project between Houston and Dallas.

After signing this agreement, Renfe will work together with Texas Central on the design and development of the operational and commercial aspects of the high-speed project. This agreement represents a new phase of the project that incorporates experts in the railway industry from around the world and comes after Texas Central has announced the incorporation of the multinational Webuild to lead the consortium that will build the infrastructure.

In addition to the future operation guaranteed by this second contract, Renfe has provided advisory and consulting services to Texas Central since the end of 2018 in the supply, final design, execution, construction, testing and commissioning of the future high-speed line.

The system that Texas Central Railroad proposes to build in Texas will replicate Japan's Tokaido Shinkansen high-speed rail system, operated by the Central Japan Railway Company. Texas Central chose a system with 55 years of experience that is one of the safest and most advanced in the world and carries more than 400,000 passengers every day.

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The Texas Central project foresees the creation of 17,000 direct jobs during the six years of construction, more than 20,000 jobs in the supply chain and more than 1,400 permanent direct jobs when the service is fully operational. In addition, the project will use $ 7.3 billion in materials from U.S. companies in 37 states. And, over the next 25 years, it will have a direct cumulative economic impact of $36 billion.

First high-speed train in the U.S.

The high-speed train between Houston and Dallas/Fort Worth, the first in the United States, will connect these two cities, 240 miles apart, in less than 90 minutes.

In addition to the Dallas/Fort Worth and Houston stations, it will have an intermediate station in Brazos Valley. All stations will be connected to the motorway network and public transport systems and will have large parking areas. (***Mass Transit***, July 16)

San Francisco, California

The San Francisco Municipal Transportation Agency (SFMTA) has completed the first of two segments of the L/Taraval Improvement Project.

Construction of Segment A started in September, 2019 and was completed this month. The project was funded in part by sales tax dollars provided by the San Francisco County Transportation Authority.

Work on the first phase improved transit and other infrastructure between Sunset Boulevard and the San Francisco Zoo, with close collaboration between the SFMTA, the San Francisco Public Utilities Commission and San Francisco Public Works.

Upgrades included track and overhead line replacements, surface repaving, curb ramp upgrades and concrete boarding islands.

Once completed, the nearly five-mile corridor from West Portal to the zoo will have new transit priority traffic signals, bulbouts to make pedestrian crossing safer, high visibility crosswalks, safety boarding islands and increased accessibility, SFMTA officials said in a news release. (***Progressive Railroading***, July 14)

Bay Area Rapid Transit (BART) will return to near-regular service levels beginning August 2.

The schedule change includes increased frequencies and extends closing times to midnight Mondays through Saturdays, along with a dramatic increase in direct trips to SFO on weekdays.

The new schedule is very similar to the one before the pandemic, but with some targeted service expansions. Some areas will not return to pre-pandemic levels, such as the extra commuter trains on the Antioch-SFO (Yellow) line during peak hours. Sunday service will continue to run at 30-minute frequencies with a 9 PM closure to accommodate BART's critical cable replacement project and other infrastructure rebuilding work.

Schedule change details

Weekday service will be 5 AM-midnight, (previously ending at 9 PM) with five-line service and 15-minute frequencies on all lines from 5 AM-8 PM and three-line service with 30-minute frequencies from 8 PM-midnight.

Saturday service will be 6 AM-midnight (previously 8 AM-9 PM) with five-line service from 6 AM-8 PM and then three-line service from 8 PM-midnight. Saturday service has been designed to better meet the needs of most riders.

BART is starting five-line service right when it opens, giving morning riders more options. Trains will be more evenly distributed to cut down on wait times and improve transfers. While a few sections such as Castro Valley to Dublin/Pleasanton and Pittsburg Center to Antioch are still at 30-minute frequencies, the rest of the system will have four or more trains per hour. For the first time ever, BART doubled the service on the Yellow line, providing 15-minute frequencies as far as Pittsburg-Bay Point until about 8 PM.

Sunday service will remain 8 AM-9 PM with three-line service and 30-minute frequencies. However, the first trains of the morning begin earlier than before, offering trips beginning around 7 AM.

The Yellow and Blue Line trains will continue to run close together, instead of spaced apart, throughout San Francisco on Sundays to accommodate single-tracking that will take place on select Sundays. During single tracking, the end of the Dublin-Daly City (Blue) Line will now be 24th Street Mission. This is an improvement for downtown San Francisco riders during single tracking because the forced transfer is moving from Montgomery to 24th Street Mission. BART will improve Sunday service in February, 2022.

BART is also rolling out an increase in direct service to SFO going from four trips per hour during peak hours to eight trips per hour, all serving downtown San Francisco and Oakland. BART's system map has also been updated to eliminate the purple line shuttle between SFO and Millbrae. In March, 2021, BART improved service to SFO and Millbrae by eliminating the need to transfer to the shuttle train. The Richmond-Millbrae + SFO (Red) Line offers direct service to SFO via Millbrae during five-line service, and the Yellow Line offers direct service to Millbrae via SFO during three-line service.

Long trains will continue to run during all hours for the time being, but at some yet-to-be determined point, BART will begin to make trains shorter during hours of lower ridership to right-size the maintenance requirements driven by car operating hours.

The schedule change will result in BART trains being in service a combined 875 hours each weekday compared with only 498 in-service hours in mid-July. That is an increase of 76 percent. On Saturdays, the change results in 514 combined in-service train hours compared with only 258 the previous month, a 99 percent increase.

The BART Trip Planner has been updated with the new schedule and riders can start planning their trips starting August 2, and beyond. PDF timetables specific to each line have also been posted online.

BART was able to advance the major schedule

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change four weeks early by working collaboratively with labor partners to accelerate the hiring, training and shift sign-up process.

The service increase is part of BART's Welcome Back Plan outlining its efforts to better serve the Bay Area and help people get to work, school, appointments and fun destinations across the region. (***Mass Transit***, July 27)

San Jose, California

The Santa Clara Valley Transportation Authority (VTA) Board of Directors received a detailed update regarding plans to restore light-rail service, which has been shut down following a shooting at Guadalupe Yard on May 26.

Santa Clara VTA stressed it is working "diligently and compassionately" to return service, but those efforts may stretch beyond the end of July, which was the agency's initial goal, and into September.

In a tweet following the Board meeting, Santa Clara VTA said, "We know you are frustrated, but we are working hard to bring back light rail service. The plan is taking a little longer than we anticipated."

The six-phase plan is currently in Phase 2. The first phase concluded on June 30 and is described by Santa Clara VTA as a "triage" to determine workspace needs, as well as readiness of employees.

Phase 1 involved identifying interim work locations because the main buildings at Guadalupe Yard, home of the Operations Control Center and the Way Power and Signal Department, are not structurally ready for use. A decision has not been made on whether to remodel or demolish and rebuild the Guadalupe buildings.

Phase 2 will focus on the complete setup of immediate workspaces, which means moving and setting up equipment and technology where employees are, as well as continuing services, continued wellness and safety programs for employees.

Phase 3 will see staff begin to return to work and infrastructure inspections and repairs made. Phase 4 will see light-rail trains operating test runs without passengers and onboarding of additional staff. Phase 5 includes the start of revenue service with Phase 6 focused on service increases outlined in the agency's pre-pandemic new transit service plan.

The plan is designed for a phase to be completed before the next phase can begin. (***Mass Transit***, July 14)

Toronto, Ontario, Canada

The Ontario government, in partnership with the government of Canada, has advanced Metrolinx's Yonge North Subway Extension, one of the province's four priority subway projects.

The province is moving ahead with a fourth station at Clark Avenue and pursuing further adjustments to the route.

An updated stations analysis from Metrolinx shows that the Clark station will offer seamless transfers between the Yonge North Subway Extension and the planned branch of York Region Viva Orange bus rapid transit, provincial officials said in a news release.

The Clark station will serve 2,500 riders during the busiest travel times while providing access to rapid transit in such key residential and employment growth areas as Promenade Centre and the Bathurst and Centre corridor, they said.

The province also plans to work collaboratively with the York region and the City of Toronto to explore the possibility of funding additional stations located at Royal Orchard Boulevard and Cummer Avenue.

Metrolinx is actively investigating refinements to the extension's route to minimize impacts to the communities it will serve. The results of those investigations are expected later this year. (***Progressive Railroading***, July 19)

Ontario, Canada

Excavators make progress on the Hurontario LRT project construction at Port Credit GO.
Metrolinx photograph

Metrolinx is continuing work on the Hurontario light-rail transit (LRT) project at the Port Credit GO station and in Brampton.

Construction crews are prepping the Port Credit site for a structure that will help form a tunnel underneath the Lakeshore West GO tracks. When it's done, the brand-new rapid transit line will run along Hurontario Street from Steeles Avenue to the Port Credit GO station.

Once the Hurontario LRT project is done, there will be an LRT stop right at Port Credit GO. That connection will help make it easier for people in Mississauga, Brampton and beyond to transfer from one form of transit to the other.

What is going on at Port Credit GO?

This summer, crews have been digging up part of the south and east parking lot for the construction of the push box — a large rectangular structure that is pushed into the ground to help form a tunnel underneath the Lakeshore West GO train tracks. This allows construction to happen underground without disturbing things above ground.

Piles will then be installed to support the ground for the construction of the station box. Excavation work includes having to dig deep enough for both the push box

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and station box structures and to install the retaining wall to support it.

The hollow, concrete push box structure will utilize hydraulic jacks that will slowly be pushed into place underneath the GO train tracks. Watch for this big push to happen later this year.

What is going on in Brampton?

Major construction for the Hurontario LRT is set to start along the city's portion of Hurontario Street later this fall.

Over the past year, crews have worked diligently to shatter and haul away medians built along the Hurontario LRT route. The medians, used to separate opposing traffic lanes along Hurontario Street, will eventually be replaced by tracks, stations and equipment needed to run the new transit system. Traffic flow will be easier due to the hard work crews have completed so far.

Before the tracks are put into place, the area will act as a drivable roadway to allow traffic to shift easily around the utility relocation work slated for later this fall.

Upon completion of the median removal work, crews embarked on borehole investigations along the route. This work is the first part of site assessment work, and as part of the Hurontario LRT project, Metrolinx is required to evaluate the physical properties of the area where the LRT will be built. Boreholes are being drilled at various points along the Hurontario corridor to collect soil and rock samples for further laboratory testing.

Borehole investigations require a small drill rig to dig a deep hole into the ground. Once the sample point has been reached and the required sample is collected, it is sent for testing.

By understanding the soil, groundwater and bedrock characteristics along the rail alignment, Hurontario LRT constructor, Mobilinx, can optimize and complete the design work for the LRT foundation. The information gathered is used to create detailed engineering plans for construction activities.

The community can expect to see utility relocations, including watermain and telecommunication infrastructure relocation, followed by works to remove the boulevard and widen Hurontario Street in order to accommodate the future traffic configuration.

Utility relocations work, including the installation of new temporary traffic signals, will continue from Highway 407 all the way to Bartley Bull Parkway. This will ensure the safe delivery of utility service, as well as the smooth transition of traffic beyond the Hurontario LRTs terminus stop just south of Steeles Avenue. (***Mass Transit***, July 12)

Calgary, Alberta, Canada

Stage 1 of the Calgary Green Line Light-Rail Transit (LRT) project will begin construction this Fall and the province of Alberta has approved the full project's business case. Both pieces of news were discussed during a press conference held at the Calgary Transit Oliver Bowen Maintenance Facility on July 7.

Canada Prime Minister Justin Trudeau visited the city to reiterate the government of Canada's commitment to providing C$1.53 billion (US$1.22 billion) toward the project and stating the federal government's intention to continue to work with the city on the second phase of the project.

He noted the project's estimated creating of 28,000 jobs during construction and another 400 positions once the line is in operation but recognized the project as an investment in the community, as well.

Shortly before the Prime Minister and Calgary Mayor Naheed Nenshi started their press conference, the province issued a release stating it had approved the revised business case for the Calgary Green Line LRT. The revised business case now moves to the federal government for approval.

The 12.4-mile project will be constructed in two phases with the first connecting 11.18 miles between Shepard to Eau Clare. The second phase will construct the final 1.24 miles from Eau Clare to 16th Avenue North.

In addition to the federal government's financial commitment, the province committed to matching the federal investment in the project and the city of Calgary has committed C$1.59 billion (US$1.27 billion) for the project. (***Mass Transit***, July 8)

Calgary Mayor Naheed Nenshi, left, and Canada Prime Minister Justin Trudeau visit at the Calgary Transit Oliver Bowen Maintenance Facility on July 7. Calgary Transit's latest LRVs, the S200s (Siemens, 2016-18), are seen on the right.
Prime Minister Justin Trudeau Twitter photograph

Vancouver, British Columbia, Canada

Prime Minister Justin Trudeau has confirmed that the federal government would provide up to C$1.3 billion to meet 40% of the cost of the proposed Surrey Langley Extension of Vancouver's SkyTrain automated light metro network, subject to due diligence and the approvals process.

The Province of British Columbia and other partners would provide C$2.54 billion to cover the remaining costs. The project would be managed by the province, with the line to be operated by TransLink. Following the project development phase, procurement is expected to take 15 months and construction a further four years.

The 9.9-mile elevated route will run along Fraser Highway from the King George station to 203rd Street in

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Langley city center, serving eight stations. There would be three bus interchanges, park-and-ride sites and an operations and maintenance center.

Alstom would supply 30 SkyTrain automated light metro trainsets, using options within the fleet renewal and expansion contract which TransLink and Bombardier Transportation announced in December, 2020.

The line is intended to improve public transport accessibility in an area with a fast-growing population south of the Fraser River, providing residents with an average commute time of 22 minutes, more than 25 minutes faster than the current bus service. Ridership on the extension is estimated at 62,000 passengers/day in 2035, growing to 71,200 per day in 2050. Between 24,000 and 30,000 people expected to switch from other modes.

Trudeau also announced on July 9 a government commitment to fund up to 40% of the cost of planning and business case development for a proposed extension of the Millennium Line from Arbutus station on the Broadway Subway Extension to the University of British Columbia. (***Metro Report International***, July 12)

England

Eversholt Rail's first freight multiple unit, 321334, stands at Wabtec's Doncaster Works.
Richard Clinnick/***International Railway Journal*** photograph

British leasing company Eversholt Rail has the first of what could be a fleet of freight electric multiple units ready to go on lease with an operator this month.

A four-car former passenger class 321 has been converted by Wabtec Rail at Doncaster by removing its seats and adding new flooring.

Branded Swift Express Freight train, the four-car EMU is the first of what could be a fleet of 20 trains, should trials with an unnamed operator prove successful. The leasing company would not confirm who the operator would be, but admitted it was one of the existing freight companies operating in Britain.

Eversholt Rail client services director Paul Sutherland confirmed that a further four class 321s currently in store are likely to be converted for freight use by the end of the year, with the aim of possibly having them ready for the anticipated busy Christmas period when more goods are carried by rail.

The class 321s are planned to be used on existing electrified main lines. They will have a payload of 84,988 pounds per four-car train and are expected to operate, eventually, in 8- and 12-car formations.

They retain their toilets and a handful of seats as Eversholt believes there is the possibility that some clients may want staff to travel on the class 321 when it is in service.

Sutherland says of the freight EMU: "One of the things that have piqued our interest back in 2019 was speaking to freight operators about the idea of transporting light goods and parcels, a long distance via rail, and then the ability to do the last 5 or 10 miles that would have been in a sense, in a city center with electric van. (***International Railway Journal***, July 1)

Antwerpen, Belgium

An example of one of De Lijn's new Urbos 100 trams, this one being 6124 (CAF, 1/2021), operating on the Coast tramway between Knokke and De Panne.
Metro Report International photograph

Vlaanderen transport operator De Lijn has placed a firm order for CAF to supply a further 18 Urbos 100 trams for use in Antwerpen.

The order announced by the Spanish manufacturer on June 29 is the fifth to be placed under an October, 2017 framework agreement covering the supply of up to 146 meter-gauge vehicles worth €294 million. It is the first order for bidirectional cars.

The previous orders covered 24, 24, 23 and 17 unidirectional vehicles. The first 48 of these are being delivered to the Knokke-Oostende-De Panne coastal tramway, while the third, fourth and fifth batches are destined for Antwerpen. (***Metro Report International***, June 29)

Darmstadt, Germany

Darmstadt transport operator HEAG Mobilo has ordered a further 11 Stadler ST15 low-floor trams to support a planned increase in services and enable the withdrawal of 30-year-old ST12 high-floor cars.

The order announced on June 30 has been placed as an option on a €62 million contract for an initial 14 trams

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which was agreed in January last year and takes the total value to €100 million. Deliveries are scheduled to start in late 2022, with the trams entering service between mid-2023 and mid-2024.

The five-section unidirectional ST15 trams will be 141 feet long with 103 seats and a total capacity of 284 passengers. They will feature a driver assistance system with traffic sign recognition, a revised truck design to optimize the use of space and improve maintainability, and an air-conditioning system which will use CO2 as the refrigerant to offer better environmental performance than conventional coolants. (***Metro Report International***, July 7)

Rendering of Stadler's ST15 tram for Darmstadt.
Metro Report International photograph

Magdeburg, Germany

Magdeburg Alstom Flexity tram impression.
Alstom DesignandStyling rendering via ***Metro Report International***

Magdeburg transport authority MVB has awarded Alstom a contract to supply Flexity trams featuring a "unique and timeless" design specifically developed for the city.

The order for an initial 35 vehicles is valued at €190 million including the supply of spare parts for 24 years. There are options for up to 28 additional cars.

Due to enter service in 2024, the Flexity trams will replace older Tatra vehicles and the city's first low-floor cars dating from the 1990s. The order will increase the overall fleet by 10 trams to handle increasing passenger numbers and support route extensions related to the second North-South Link project.

The four-section trams will be 125 feet long, a little over 26 feet longer than MVB's current vehicles, with capacity for 241 passengers; each will have two multi-purpose areas with space for pushchairs, bicycles and wheelchairs. There will be wide, barrier-free entrances for fast boarding, and broad window strips running the length of the vehicle to fill the passenger area with natural light. LED light strips will improve the visibility of the trams for other road users. The trams will be air-conditioned, with a noise-optimized design for quiet operation. Free wi-fi will be provided.

The cabs will feature a newly designed operator's console to ensure a large field of vision, while a driver assistance system will assist with detecting obstacles.

A full-scale mockup of part of a tram is due to be produced to obtain user feedback ahead of the start of production.

The Land of Sachsen-Anhalt is contributing €60 million towards the cost. (***Metro Report International***, July 2)

Košica, Slovakia

Košice operator DPMK has selected Pesa Bydgoszcz as preferred bidder for a contract to supply up to 30 trams.

The operator specified low-floor trams with doors on each side, and the Polish manufacturer offered a three-section design from its Twist family which would be 105 feet long with all trucks powered.

Škoda Transportation had also submitted a bid. Price was given a 60% weighting in evaluation of the bids, maintenance costs over 15 years were given a 15% weighting and the remaining 25% was based on technical criteria including capacity, weight and axle load.

The order is to be financed from EU sources, and delivery is required within 22 months of the date of the signing of the contract, which is subject to the expiry of the appeal period. (***Metro Report International***, July 19)

Lisboa (Lisbon), Portugal

The municipalities of Lisboa, Oeiras and Loures have finalized a co-operation agreement to proceed with development of 15 miles of new light rail lines around the capital.

The so-called LIOS network would be developed to create what the councils are calling a "Sustainable Intermodal Line." Two corridors would be built, one to the west and another east of the city center. They would be connected by the existing tram route 15 operated by Carris.

At the western end, the LIOS network would extend Route 15 to serve Linda-a-Velha and Cruz Quebrada/Dafundo. In the east, it would connect Santa Apolónia and Oriente main line stations with Moscavide, Portela

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and Sacavém, creating a key corridor through the Parque das Nações area.

The proposals are intended to capitalize on extensions to Route 15 between Terreiro do Paço and Santa Apolónia station and between Algés and Jamor, which the city has already approved.

Designed to provide high quality light rail services along the length of Lisboa's riverfront districts, LIOS would gain a further interchange with the metro network at Alcântara once the Line B extension from Rato has been completed.

LIOS would have an estimated cost of €490 million, which covers both infrastructure and depot construction, as well as procurement of more trams as required. (***Metro Report International***, July 20)

Gold Coast (Brisbane), Australia

Gold Coast light rail concessionaire GoldLinQ has ordered a further five Flexity 2 low-floor light rail vehicles from Alstom to operate the Stage 3 extension now in development.

The 142-foot-long seven-section vehicles will be the same as the original 14 ordered in 2010 for the first section of the route and the additional four for Stage 2 which were ordered in 2015. The air-conditioned cars are to be manufactured at the former Bombardier Transportation plant in Wien.

Running for 4.2 miles from Broadbeach South to Nobby Beach and Burleigh Heads, the A$1 billion Stage 3 extension will add eight more stops to the G:link light rail line, taking the route to a total length of 16.8 miles with 27 stops.

Early site and utility investigations are due to begin in September, and contractor John Holland is expected to start the main construction before the end of 2021 for completion in three years.

The Queensland government is currently consulting on a proposed route for the planned Stage 4 extension from Burleigh Heads to Coolangatta.

On July 12 the concessionaire reported that the line had now carried more than 56 million paying passengers since the first section was opened for revenue service in July, 2014. (***Metro Report International***, July 15)

G:link Flexity 2 07 (Bombardier Transportation, 2013) is seen here northbound on Surfers Paradise Boulevard & Markwell Avenue in the seaside resort of Surfers Paradise.
Metro Report International photograph

BIG CHANGES COMING TO PARIS MÉTRO LINE 11
by Subutay Musluoglu

Despite some temporary delays due to the pandemic, work continues at a steady pace to expand the Paris Métro and the Île-de-France regional rail network. Following the opening of the northern extension of Line 14 back in December (see the January, 2021 and March, 2021 ***Bulletin***s), work continues on an additional short extension north to Saint-Denis Pleyel to open in 2022, and a southern extension to Orly Airport, to be opened in two phases in 2023 and 2024.

Sooner than that, there will be other openings to be celebrated. Before the end of this year, service on Line 4 will be extended south by a little over a mile with two new stations. A northern extension of Line 12, also with two new stations and 1.2 miles in length, could open by the end of 2022.

Sometime in 2023, an eastward extension of Line 11 should also be ready to open, as work on the 3.7-mile extension is well advanced, along with concurrent work to upgrade the existing 3.9-mile line. Beyond the current terminal at Mairie des Lilas, six new stations are being constructed at Serge Gainsbourg, Place Carnot, Montreuil-Hôpital, La Dhuys, Coteaux-Beauclair and at Rosny-Bois-Perrier, the new terminal, where a new rolling stock maintenance shop and depot is also being built.

Costed at €1.3 billion, the extension is being jointly funded by the greater Paris regional transportation authority Île-de-France Mobilités and the Paris Métro operator Régie Autonome des Transport Parisiens (RATP). Significant milestones were achieved on this project in recent weeks.

The first came on July 8, when Île-de-France Mobilités announced it had exercised an option to order an additional 19 five-car MP14CC rubber-tired trainsets from Alstom. This is a follow-on to an order placed in February, 2018 for 20 five-car sets, the first of which recently began overnight test runs on Line 1.

Similar to the MP14CA cars that were introduced for full automated operation on Line 14 late last year, the MP14CC cars are equipped with an operator's cab and Line 11's consists are comprised of a mix of driving trailers (DT) and intermediate non-driving motors (M) and the five car sets are arranged as DT-M-M-M-DT.

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Big Changes Coming to Paris Métro Line 11

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At a cost of €132 million, this is the fourth confirmed order under a €2 billion+ framework that could see up to 217 MP14 trains ultimately delivered, serving on Lines 4, 11 and 14.

Then on July 16 it was announced that all tunneling had been completed for the new extension when a tunnel boring machine named "Sofia" broke through the box of the future Serge Gainsbourg station, following a 15-month long drive to bore the single double-track tunnel. Work on other tunnel sections built with cut-and-cover and mining methods have either been already completed or will be finished soon.

The extension also features an elevated viaduct section 1,968 feet in length, notable for being the first pure viaduct to be built on the Paris Métro since 1980, with an elevated station at Coteaux-Beauclair, the Métro's first elevated station since the early years of the system's construction in the first decade of the 20th Century.

Transfers with other rail services will be provided at Place Carnot to Tram Line 1, and at Rosny-Bois-Perrier to RER Line E and to the future Line 15 of the Grand Paris Express metro system (see below).

Tracklaying has already begun between the Rosny-Bois-Perrier terminal and the new maintenance facility, which should become operational by the end of this year. Once all track has been laid and continuously linked up throughout the extension, the maintenance of the line's rolling stock will shift from the current undersized depot at Les Lilas to Rosny-Bois-Perrier.

As for the upgrades to the existing Line 11, the introduction of five-car trains will be a dramatic change from the current operation of four-car trains of MP59 stock, the oldest class of rolling stock running on the Métro today. The use of four-car trains dates back to the line's conversion to rubber-tired operation in 1956. Line 11's ridership has dramatically increased in recent years, and the use of longer trains will provide relief in this regard.

The MP59 class first entered service in 1963, improving on the lessons learned from the first generation of rubber-tired cars, the MP55 class, which had inaugurated service on the converted Line 11 and spent their entire service life there until they were all retired between 1995 and 1999. The MP55 class were replaced by MP59 and MP73 cars cascaded from Line 4, as the newer MP89 class displaced other MP59 cars from Line 1 to Line 4.

Today all remaining cars of the MP59 class are found on Line 11, and as the MP14 cars arrive all the MP59 cars will be retired, with a few examples retained for preservation.

Line 11 originally opened in two phases in 1935 and 1937 and the extension project and arrival of new rolling stock provides an ideal opportunity to renew the entire line. Ten of the line's 13 existing stations are being modernized with a wide range of improvements, including platform modifications to accommodate the new trains, as well as capacity increasing measures including new street entrances, and new stairs, escalators, and passageways for improving circulation within stations. Other systems such as power, lighting, communications, and fire-life safety are also being upgraded.

Over the course of the past year and continuing throughout 2021, each of the affected stations have been closed one by one in alternating, variable periods to enable this work to proceed safely and quickly without the presence of the traveling public. The impact of the closures has been greatly lessened by the drop-off in ridership due to the ongoing pandemic.

When the Line 11 extension and overall upgrade program were being planned there was some discussion of actually dismantling the rubber-tired infrastructure and reverting the line back to conventional steel-wheel on steel rail operation. This was subsequently ruled out for the service disruption it would cause, and also because Line 11 traverses some of the hilliest terrain in the city, so continued rubber-tired operation is ideal for coping with the steep gradients.

Fully automating the line for driverless operation was also explored, but for now the current Automatic Train Operation (ATO) system will be retained, with trains continuing to be staffed by a driver. ATO mode is utilized during peak periods, and trains are manually driven during other times to ensure the drivers maintain their operating skills.

It should be noted that another little-publicized, but no less important milestone was reached on May 25 when a new operations control center specifically dedicated for Line 11 was placed into service. The new center is located in Bagnolet between the current terminal at Mairie des Lilas and the future station at Serge Gainsbourg and houses all the necessary functions for the line's operations, including train control and station management along with the line's administrative and technical leadership.

Looking a bit further out, over the course of the remainder of this decade will be the phased inauguration of the Grand Paris Express, a massive program to build 120 miles of orbital metro lines in the inner Parisian suburbs to serve as a complimentary network to the existing Métro, comprised of new Lines 15, 16, and 17. From a budgetary and planning standpoint, the extensions to Lines 11 and 14 are also considered to be components of Grand Paris Express. Another significant expansion will be the westward extension of RER Line E, anticipated to be completed by 2024.

Line 11 will thus be dramatically transformed in the coming years as it nears its second century of service.

Sources:
Alstom July 8 press release
Railway Gazette International *July 9 web post*
International Railway Journal *July 20 web post*

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Big Changes Coming to Paris Métro Line 11

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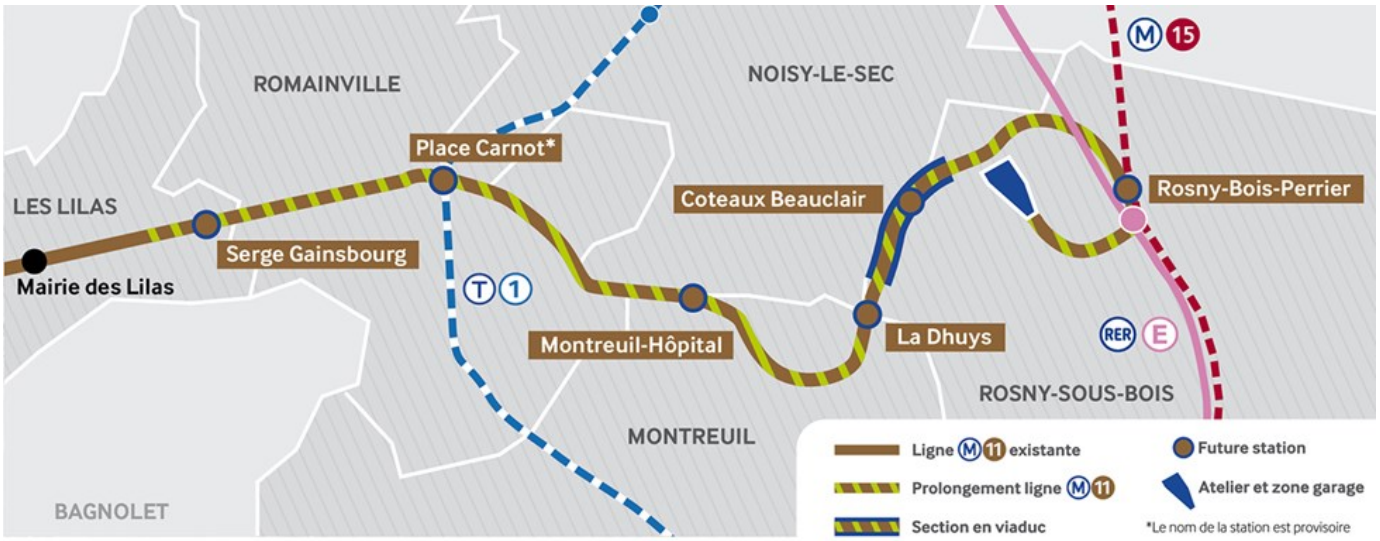

The eastern extension of Paris Métro Line 11.
Source: Line 11 extension project website: http://prolongementligne11est.fr

An MP14CC trainset in the Alstom facility at Valenciennes, France.
Alstom photograph

A view of the MP14CC operator's cab.
Alstom photograph

On March 18, 2017, a view of the Arts et Métiers station on Line 11 as a four-car train of the MP59 class arrives. The rubber-tired MP59s are the oldest rolling stock currently operating on the Paris Métro, having first entered service in 1963. They will all be retired, replaced by the MP14CC.
The Arts et Métiers Station is named for the adjacent Musée des Arts et Métiers (Arts and Crafts Museum), which houses an excellent collection of artifacts that trace the history of French industrial and technological achievements. The station originally opened on April 28, 1935 and was extensively renovated in the mid-1990s, when it was given the copper-like metallic finish seen in the photo, featuring maritime-themed "portholes" through which select displayed examples from the museum's collection can be viewed.
Source: http://transportparis.canalblog.com website

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

Sunday, June 18 (Continued)

As mentioned last month, after transferring to our pair of modernized Tatra KT4s, we headed out to the newest trackage in the network, the 3.3-mile extension of Route 8. But once we arrived at the Akademiya Mistetstv loop, which was the line's former outer terminal, it was discovered that car 1100 was not performing properly. As a result the entire group piled into the other car, 1088, to cover the line. Once we obtained our photos and arrived back at the loop, 1100 had been repaired and was ready for us again, and so the fantrip proceeded again with two cars. I rode the 8 for a second time later in the afternoon. Some of the photos of the line are below and on the next page.

Also, as mentioned in the previous portion, once the charter reached Pidvalna Street downtown (a block away from the Rynok, or central marketplace), some of us left and continued riding and photographing in the city center (and along Route 8) before returning to the hotel. On Monday, June 19 the schedule called for our bus to carry the group to Vinnytsia (where we would inspect and ride the tramway on Tuesday) with stops to be made at Ternopil and Chmelnyzkyj to photograph the local trolleybus systems. About eight of us, who knew there was a fast train to Vinnytsia in the afternoon, opted to stay in Lviv for most of the day and then catch up with the group in the evening. We were quite pleased that our Ukrainian guide, Kostj, volunteered to buy us the tickets on the internet, and we paid him 240 Hryvnia (a little under $9) for each reserved seat First Class fare. And we would not have to worry about our luggage, as we were able to place the pieces in the bus's baggage compartment just before the group's 7:30 departure. Thus we had most of the day free to ride and photograph the tram system. Clare would spend the day visiting churches and museums. She would get around using taxis, just as she did on Sunday.

Karl Heinz and I walked down to the tram stop at Holovna Poshta, a covered station which serves as a major transfer point between trams, buses and minibuses. We then took a Route 2 car to the Rynock, where we changed to a 4, which we rode to the end of the line at Tofiana (follow us on the map at http://www.urbanrail.net/eu/ua/lviv/lviv.htm). We worked our way back to Teatr Lialok and then made a quick round trip on the 7 to Pohulianka before returning to the Rynok, where we grabbed some snacks from various kiosks. While enjoying our repast on a bench (I had an ice cream cone), Clare happened to walk by, which was a nice coincidence, and we confirmed our meeting place at the railroad station for later in the afternoon. Soon we were out riding again and took the 5 to Akvapark. On our return we transferred to a Route 1 car at Sakharova, which we rode to Pryvokzalnyi, the closest we could get to the station because of the trackwork reroute.

All in all, we would have to say that operations are relatively slow, as the trams have to compete with automobiles on narrow streets and must pause at traffic lights (although the new extensions have reserved track built to high standards). Service seems to be decent, with headways running in the 12-to-15-minute frequency range, although I did witness occasional bunching.

We met at the station at 14:30 for the 15:26 departure of train 748. It had 5 cars, with our singular first class coach having 2-and-1 seating. One of the other four was outfitted with a snack bar. For those who did not want to walk to the counter, an attendant roamed the coaches pushing a cart, selling drinks, pastries and sandwiches. The train was comfortably air-conditioned (the outside temperature was in the 80s). We left on time, made two stops at way stations, and arrived in Vinnytsia three minutes early at 20:20. We took a few taxis to the hotel and met up with the group in the midst of their dinner. We were served as soon as we sat down, after a fruitful day.

Members of our group abandoning car 1100 after the announcement that only 1088 would continue to the end of Route 8. At left is Heike Fischer, wife of tour organizer Thomas Fischer, and at right are the three Lviv tram operators that were guiding our fantrip. After our round trip to Vernadskogo half the group boarded this car again as its repair had been completed.

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Vienna-Bratislava-Ukraine

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Two scenes adjacent to Dobzhenko Park on the southern extension of Route 8. The Ukrainian Catholic Church of the Nativity of the Theotokos (Eastern Rite) was visited and blessed by Pope John Paul II in 2001 (see the proudly displayed screen at far right of photo). The complex remains under construction (as seen at left). At right, an Electron-built low-floor articulated passes through the center-of-the-road right-of-way directly across from the parish church. For the most part, the rails are embedded in concrete even when surrounded by grass.

There is plenty of room for cars to be laid up at the end of the extension of Route 8. The Vernadskogo loop circumscribes the center tracks, and the stops are located before and after the cars turn. One of our chartered cars, 1088, is a Tatra KT4 PCC from 1988 that was rebuilt by Electron within the last decade.

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Vienna-Bratislava-Ukraine

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These two photos were taken on the previous afternoon. An unmotored replica tram serves as a library and tourist information center in front of the Church of the Holy Communion adjacent to Muzeina (Market) Square in the center of Lviv. The church, originally founded by Dominicans, now serves the Greek Catholic community (Eastern Rite) after being used as the Museum of Religion and Atheism during the Soviet era. Much of its facade dates from the 19th century. "Just Lviv It" is the slogan of the city's tourist bureau. The square hosts a flea market that features used books. The view on the right shows 1137 from 1988 at the Ploshcha Soborna turning loop of Routes 3 and 8. An appendage of the Bernadine church and monastery are in the background.

Holovna Poshta, one of the few tram stops where passengers are entirely protected from the elements, is a major transfer point between tram Routes 1, 2, 9 and 10, and a large number of bus lines and jitneys. (Lviv also has a small trolleybus system, with Route 9 running out to the airport.) KT4 1045 was built by Tatra in 1984.

Some of Lviv's worst track is traversed by Routes 4 and 5 along Zamarstynivska Street in the northern section of the city. This view of 1987-built KT4 1111 just below its Torfiana terminal loop may reveal what could be a secret new United Airlines cockpit simulator. Is pilot.ua dealing with turbulence or just poor track?

1129 is shown operating southward on Route 5 along Volodymyra Vynnychenka Street in the center of Lviv. Like almost all of its compatriots, this KT4 car is wrapped in advertising. The articulated PCC was built by Tatra for Lviv in 1988.

006 is a Tatra-built T3 PCC car from 1977 now operating in work service. Note the billboard with the word, "America" printed in the Cyrillic alphabet, advertising real estate.

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A Route 3 car running southward along Akademika Sakharova Street just after passing through the junction of Routes 1, 3, 5, 7 and 9. Articulated KT4 1155 from 1981 looks like it would be quite at home operating on Boston's Green Line during the Boeing era.

(Continued next issue)

SUBDIVISION "B" CAR ASSIGNMENTS

CARS REQUIRED JULY 25, 2021

LINE	AM RUSH	PM RUSH	LINE	AM RUSH	PM RUSH
A	216 R-46, 110 R-179	224 R-46, 8 R-68A, 110 R-179	L	176 R-143, 16 R-160A	176 R-143, 16 R-160A
B	48 R-68, 152 R-68A	40 R-68, 144 R-68A	M	192 R-160A	184 R-160A
C	72 R-46, 72 R-179	64 R-46, 72 R-179	N/W	160 R-46, 24 R-68, 16 R-68A, 80 R-160B-2	160 R-46, 24 R-68, 16 R-68A, 80 R-160
D	232 R-68	224 R-68	Q	168 R-46	168 R-46, 8 R-68
E	260 R-160A	260 R-160A	R	80 R-160A, 190 R-160B-1, 40 R-160B-2	80 R-160A, 190 R-160B-1, 40 R-160B-2
F	210 R-160A, 140 R-160B-1, 100 R-160B-2	210 R-160A, 140 R-160B-1, 110 R-160B-2	S (Rockaway)	8 R-46, 5 R179	8 R-46, 5 R179
G	52 R-68	52 R-68	S (Franklin)	4 R-68	4 R-68
J/Z	88 R-160A, 72 R-179	80 R-160A, 72 R-179			