

**Electric
Railroaders'
Assoc., Inc.**



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issues of can be
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In This Issue

Meeting Notice 2

E.R.A. Business 3

Rail News in
Review 4

Travels with
Jack May 18



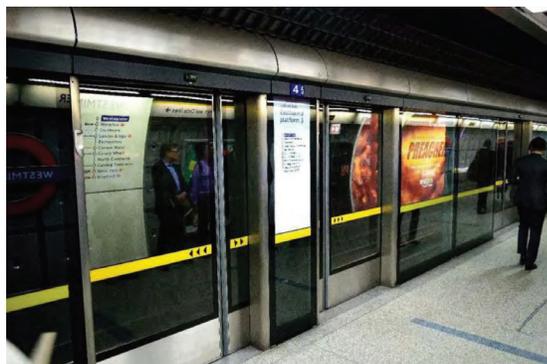
BULLETIN

Volume 65, Number 3 | March 2022

MTA to pilot platform doors at three subway stations

The MTA wants to test platform doors at three subway stations in Manhattan and Queens, the agency's chief Janno Lieber announced on February 23.

The Metropolitan Transportation Authority will pilot the barriers at Times Square **7**, Third Avenue **L**, and Sutphin Boulevard/JFK **E**, Lieber told NY1.



An example of so-called platform screen doors (PSDs) at Westminster station on the London Underground.

STV/MTA photo

Lieber did not provide a timeline for the project, but an agency working group known as the Track Intrusion Task Force presented more details to the MTA's full board on February 24, according to MTA spokesperson Tim Minton.

The Times Square screens won't be where Michelle Go was pushed in front of a train last month, which was on the vast station complex's southbound **R** platform, because an MTA study of every platform found that waiting area to be too narrow.

Lieber convened the task force on December 10 after a "significant increase" of people going onto the tracks, and the panel will also talk about installing sensors and lighting to help stop people from going onto the trackbed.

The MTA is also going to be piloting new technologies to detect track incursions using thermal and laser technology, so they can know quicker when people get on the tracks and hopefully, interdict that kind of behavior.

The Authority is also working with the Psychiatry Department at NYU Langone to find out how to deter people from killing themselves by jumping on the tracks.

In the aftermath of Go's killing, politicians started pushing the MTA to add the edge gates
(continued on page 3)



Meeting Notice

Our next Zoom Meeting is on
Friday, March 18, 2022 at 7:30 p.m.

Presenting This Month: Andrew Ludasi

This month's speaker will be ERA member and accomplished world traveler **Andrew Ludasi**. Andrew has traveled to Europe frequently, as well as having spent three weeks in Australia in May 2012. His show will feature Melbourne, Adelaide, Sydney, museums in Tasmania, as well as more recent photos from a trip west in September 2021 as far as Mason City, Iowa.

Andrew has been a lifelong railfan, at least since age 3, asking his parents to take him to see the lighted choo-choo, and a serious rail photographer since age 16. He is very recently retired as an engineer in Freight Planning from NJDOT. Other than being a railfan, his #1 passion is classical music.

How to Join Our Zoom Meeting

A "Zoom Login" button will be posted on www.erausa.org five days before Andrew's presentation. Sign-in starts at 7:15 p.m., and the show begins at 7:30 p.m. If you have a problem signing in, contact **Paul Grether** at grether@gmail.com or, on the night of the meeting, call or text Paul at **404-434-0453**. Bob Newhouser is out of town and will return for the April 2022 program.

Important Announcements: President Bob Newhouser

ERA Trips Are Back! Our 2022 convention, based in San Diego from July 7-10, will be headquartered at the Best Western Plus Hacienda Hotel Old Town in San Diego's historic Old Town district. We have planned several exciting trips throughout Southern California. Visit **ERA Conventions** at www.erausa.org/conventions/2022/ for complete details, downloading a flyer, and ordering tickets online. The block of rooms at the ERA discount rate is limited, so book ASAP so as not to lose out! **If you're making hotel reservations by phone, call the following number: 619-298-4707.** There was one digit wrong in the phone number on the flyer.

ERA international tours also return in 2022 with an exciting trip to Greece, starting and ending in Athens from September 8-17 (leaving the U.S. on September 7). We will travel on high-speed railways, a narrow-gauge steam train, and a luxury tour coach. Visit **ERA International Tours** at www.erausa.org/international-tours/2022/ for complete details, downloading a flyer, and ordering tickets online. Deadline for registration and full payment is April 30th.

Save the Date! Our next Zoom meeting will be on April 8, at 7:30 p.m. Note this is the second Friday of April (the third Friday of April is both Good Friday and Passover). The program content and speaker will be announced. See www.erausa.org for further details!

If you have not yet renewed your ERA membership for 2022, please do so as soon as possible before your subscription expires! We have mailed each of you a printed form for your renewal. OR, if you prefer, renew quickly on the following pages of the ERA website:

- **2022 Membership Renewal** can be found at www.erausa.org/renew/
- **2022 Membership Cards** can be found at www.erausa.org/card/

ERA greatly appreciates your prompt membership renewals and your donations. It's our primary source of income and makes possible the monthly programming, *Bulletin* issues and the *Headlights* magazine that we all count on and enjoy!

Cover Photo

On the sunny afternoon of June 23, 2005, NYCTA R-77E electric locomotive E09 (General Electric, 12/1983, s/n 44340) is resting between work duties at Coney Island Yard. General Electric refers to these locomotives as their model SL50E but they are also known, more generically, as 50-Tonners. This unit, and all of the others in this class, are currently being rebuilt. Jeff Erlitz photo

In Memorium

We regret to announce the passing of member Joel B. Mintz (ERA #6575) of Sunland, California last October 1. Joel had joined the E.R.A. on January 5, 1995.

Donations

The ERA Board of Directors express their deepest appreciation for 33 member donations in December 2021.

\$500 to \$999

Hardy Hansen, Dino Mandros, Edward McKernan

\$200 to \$499

Gregory Crough, Jürgen Nanders, Barbara and Jürgen Senst

\$100 to \$199

Howard Benn, Bruce Bente, Graeme Birchall, David DiCasa, Fred Eisinger, Henry Posner

\$50 to \$99

Richard Allman, Bradley Clarke, David Cohen, John Fellin, Stephen Ginsberg, Paul Krevy, Peter Stein

Up to \$49

Eric Allen, William Clark, William Davidson, Gary Dobek, Dennis Goren, Weldon Greiger, Gregory Katkowski, William Loane, Guy Martin, Edward Richards, Luis Sanchez, Thomas VanDeGrift, Tony White, Lee Winson

ERA is a 501(c)(3) tax exempt corporation. Your donations are fully tax deductible and can be made either with your membership renewal or using our donation form on our website: www.erausa.org/donate. Your donation helps to maintain ERA's 88-year long tradition of traction education and entertainment!

to its platforms, but Lieber said last month that there were “special complexities” unique to New York’s subway system, like its age, different train car models, pillars in blocking the way, how much extra weight some waiting areas can bear, and conflicts with wheelchair access.

But the transit guru vowed to take another look at it.

An almost 4,000-page report MTA commissioned the engineering firm STV to do in 2017 and finished in 2019 — but which the agency did not release publicly until last month — looked at the feasibility of doors for every platform across its 472 stations.

The review found that only 128 stations, or about 27%, could accommodate the barriers at a cost of about \$7 billion.

The Third Avenue **L** station was actually already recommended as a pilot program in the three-year-old report by STV, and the engineering firm wrote at the time it was producing “preliminary construction documents for the design-build of half-height PSDs” at that stop, according to the report.

The company looked at building so-called Platform Screen Doors (PSD), which are 8-foot tall glazed barriers, or Automatic Platform Gates (APG), which are around 4–6-foot tall to fit stations that have lower ceilings, can’t bear as much weight, or for better airflow.

The report shows examples for both types of gates on other transit systems overseas, such as the London Underground in the UK and the Paris Métro in France.



For the L train's Third Avenue stop, APGs would cost some \$23.4 million while the taller PSDs would be around \$3.8 million more expensive.

The Time Square 7 train platforms could accommodate APGs at \$31.4 million and PSDs for \$38.8 million, with similar price tags for Sutphin Boulevard on the E line of \$31.7 million and \$40.6 million, respectively, according to the STV review.

AM NEW YORK, FEBRUARY 23

(Left) Shorter automatic platform gates (APGs) at the Châtelet station of the Paris Métro. STV/MTA photo

Rail News in Review

New York Metropolitan Area

METROPOLITAN TRANSPORTATION AUTHORITY

Central Business District Tolling Program Early Outreach Comment Period to Remain Open Through April 27, 2022

The Metropolitan Transportation Authority (MTA), New York State Department of Transportation (NYSDOT) and New York City Department of Transportation (NYCDOT) encourage the public to continue to provide comments on the early outreach process and project for the proposed Central Business District Tolling Program (CBDTP) proposal, also known as congestion pricing, prior to April 27, 2022. Information on the CBDTP proposal, including links to presentations and public outreach meetings, may be found at <https://new.mta.info/project/CBDTP>. Based on extensive early public outreach, the proposal has benefited from more than 7,000 comments in the tri-state area to date.

The public is invited to watch any of the series of public meetings that have been held about the program on the MTA's YouTube channel under the CBDTP playlist.

While the conclusion of the early public comment period in April will bring the initial phase of robust public outreach and participation to a close, the proposed CBDTP will soon enter the next phase of public involvement. Beginning in late spring/early summer, the sponsoring agencies will commence a new public comment period and outreach process, including public hearings, on the EA, prepared in accordance with the National Environmental Policy Act. The EA establishes the purpose, need and objectives for the

proposed CBDTP program, identifies any possible effects resulting from implementation, and identifies potential mitigations as appropriate.

MTA PRESS RELEASE, FEBRUARY 27

New Best Fare Initiatives Begun to Provide Seamless, Affordable Travel Throughout Transit System

The MTA announced the start of new expanded initiatives to promote the best fare options for the most convenient and cost-effective journey for all riders. First, the MTA relaunched and expanded CityTicket, which currently offers a \$5 flat fare for rail travel within New York City on weekends. It will now be extended to all weekday off-peak trains. Additionally, a new 20-trip ticket will offer 20 percent off comparable 20-peak one-way fares when purchased through MTA eTix or at a ticket window. These tickets are valid for 60 days. Monthly tickets, which are currently discounted between 48 and 61 percent off comparable peak tickets, will be discounted by an additional 10 percent.

The CityTicket pilot offers promotional fares designed to encourage railroad ridership within New York City. The reduced rate is a \$2.25 or 31 percent discount from Metro-North Railroad's current weekday fare between the Bronx and Manhattan, which previously cost \$7.25, and a \$2.75 or 35 percent discount from the LIRR's current weekday fare between eastern Queens and Manhattan or Brooklyn, which previously cost \$7.75. CityTickets must be purchased and activated before boarding the train. Fares purchased onboard for intracity travel will remain \$14 for Long Island Rail Road (LIRR) and \$13 for Metro-North.

CityTicket is valid at the following LIRR stations: Atlantic Terminal, Auburndale, Bayside, Douglaston, East New York,

Flushing–Main Street, Forest Hills, Hollis, Jamaica, Kew Gardens, Laurelton, Little Neck, Locust Manor, Mets–Willets Point, Murray Hill, Nostrand Avenue, Penn Station, Queens Village, Rosedale, St. Albans and Woodside. Eligible Metro–North stations include: Botanical Garden, Fordham, Grand Central Terminal, Harlem – 125th Street, Marble Hill, Melrose, Morris Heights, Riverdale, Sputyen Duyvil, Tremont, University Heights, Wakefield, Williamsbridge, Woodlawn and Yankees – E. 153rd Street.

The discounted fare packages took effect on Tuesday, March 1, when peak fares returned to the LIRR and Metro–North.

To make it as easy as possible for LIRR and Metro–North passengers to figure out which ticket is best for them, the MTA has launched a new fare calculator (<https://fares.mta.info/>) to help riders find the best monthly deal. Passengers must enter their origin and destination stations in the calculator and how many rides they’ll need, and the calculator will display the best option for them.

As announced on February 7, the MTA also launched a fare capping pilot on Monday, February 28 to encourage New Yorkers to get back on subways and buses by reducing the cost of everyday travel. A key element of the promotion is the “Lucky 13” feature: every additional ride on subways and buses after the 13th trip will be free for the rest of that week.

The best weekly fare will be available to all riders who tap with OMNY, without the burden of pre-paying for the week or having to track their progress. OMNY’s technology provides enhanced flexibility to subway, local bus, and Staten Island Railway passengers, so they can start accumulating benefits weekly. Any passenger with a device or contactless card can begin tapping their way to free rides, so long as they use the same device or card each time. Customers who tap and go with OMNY will be charged the standard \$2.75 pay-per-ride fare for their first 12 trips, starting every Monday. Any additional trips through the following Sunday would be free.

No OMNY customer would pay more than \$33.00 per week, which is the current price of a seven-day unlimited-ride MetroCard. This way, customers receive the benefits of a seven-day unlimited-ride card without having to decide to pay in advance. Free transfers between subways and buses will continue to be offered to all passengers under this pilot. Two-part trips that are linked by a free transfer between subway and bus are considered one trip toward the 12 needed to reach the free-fare threshold each week.

To assist passengers that will be using OMNY for the first time, the Authority launched an OMNY help desk on the first day of the pilot. The help desk was stationed at the Grand Central 4 5 6 subway entrance and was open from 10:00 AM to 11:30 AM. MTA Chief Customer Officer Sarah Meyer and customer service representatives were available to answer any OMNY or fare-capping questions. To celebrate the launch, the New York Transit Museum has pre-loaded OMNY cards available for a limited time at their Grand Central Terminal location. The cards are good for four trips.

The MTA will evaluate the new fares’ impact on operations, the passenger experience and farebox revenue. The pilot program is expected to last for at least four months. If the pilot proves successful, the new fare structures could be extended or become permanent.

MTA PRESS RELEASE, FEBRUARY 25

NEW YORK CITY TRANSIT

R-32s Sent Out for Scrap

On the morning of Monday, February 28, four of the R-32 cars that were recently in service, 3928-3929+3878-3879, were transferred to NYNJ Rail at the South Brooklyn Marine Terminal for shipment to Frontier Industrial Corporation in Ohio for scrapping.

Located just north of 39th Street between First and Second Avenues, this is where NYNJ Rail (formerly New York Cross Harbor Railroad, originally the Bush Terminal RR) interchanges with the remnant of the South Brooklyn Railway. A TA diesel brought the cars to the interchange area from Coney Island and two NYNJ locomotives, SE10Bs 5101+5103 (both rebuilt 2015 by Knoxville Locomotive Works), then dragged the cars down First Avenue and into the former Bush Terminal yard at 43rd Street.



View north up First Avenue at 41st Street of the R-32s being shipped out for scrapping shortly after sunrise on the morning of February 28.

Marc Hermann/MTA photo

Once there, the cars were disassembled over approximately four days by separating the car bodies from the trucks. They were then placed and secured onto Frontier Industrial Corporation’s flat cars. The following week, the cars were floated across the bay on a barge to Greenville Yard in Jersey City where they were placed onto CSX freight trains for shipment to Ohio.

MTA PRESS RELEASE, FEBRUARY 28

IND Queens Line CBTC

Over the Presidents’ Day weekend, the next section of the

BULLETIN

March 2022

IND Queens Line **E F M R** was placed into service for full Communications-Based Train Control (CBTC) operation. This segment was from Roosevelt Avenue-Jackson Heights to Forest Hills-71st Avenue on express Tracks D3 and D4.

All of the intermediate automatic signals, 18 on southbound Track D3 and 21 on northbound Track D4, were removed from service. These signals dated from the line's opening on December 31, 1936. Two new automatic signals were placed into service, one on each track, located in the middle of the Woodhaven Boulevard station, which is basically the midpoint on this segment.

As was done on the IRT Flushing **7** line, these new wayside automatic signals enable a non-CBTC-equipped train to follow another train (equipped for CBTC or not) at a distance less than that to the next interlocking.

Subway Ridership Tops 3 Million Mark For Three Consecutive Days For First Time Since December 17

The subway system carried 3,015,755 passengers on February 8, 3,087,731 passengers on February 9, and 3,108,216 passengers on February 10. This marks the first time that the subways have carried over 3 million riders for three days in a row since the Omicron wave hit New York City on December 17, 2021. Weekly subway ridership has now reached 55 percent of pre pandemic levels. The latest ridership figure is a 54 percent increase since it hit a weekday Omicron low of 2,011,675 on December 27, 2021. Since then, mask compliance has improved to 95 percent on subways and ridership has trended back up. MTA PRESS RELEASE, FEBRUARY 12

Recent Capital Program Project Awards

The following subway construction projects were awarded in the fourth quarter of last year:

Project	Description	Contractor	Date	Amount
A-37208	Street Stairs Repairs S4/M4AB, S8/M*AB at 34 St-Herald Sq B D F M N Q R W	Easthill Construction Corp.	9/2	\$1,598,000
A-37358	Street Stairs Repairs S1/P1 at 23 St R W	Peri Contracting, Inc.	9/7	\$474,300
A-37359	Street Stairs Repairs S8/P6B at 8 St-NYU R W	Antanas Construction Services LLC	9/10	\$465,000
A-37355	A37355: Street Stairs Repairs S1/M1AB, S2/M2AB at 65 St M R	I.N.N. Construction Corp.	9/14	\$659,814
R-50465	Replacement of HVAC Units at Rooftop of Murphy Tower, 38th Street Yard	National Veteran Contractors LLC	9/17	\$585,000
A-37348	Elevated Street Stair Repairs S5/M4, S6/M5 at Ocean Pkwy Q	S&P Construction Mgmt., Inc.	9/21	\$1,320,000
C-34922	Livonia Maintenance Shop Components Rehabilitation	Forte Construction Corp.	10/5	\$12,222,000
E-30436	Replacement of 12 Escalators at Various Locations, IND & IRT Divisions in the Boroughs of Manhattan, Brooklyn and The Bronx	Forte Construction Corp.	11/4	\$51,866,000
C-52158	Passenger Identification (PID) CCTV at 90 St-Elmhurst Av 7	Logan Stone	11/18	\$411,257
C-52157	Passenger Identification (PID) CCTV at 103 St-Corona Plaza 7	Valentine Construction Management	12/1	\$455,617

MTA CONSTRUCTION & DEVELOPMENT WEBSITE, FEBRUARY 28

Recent Capital Program Project Bid Openings

The following subway projects had bid openings since last October:

Project	Description	Date
C-48704	Line Structure Component Repair, Ventilator Repair and Antenna Cable Replacement at certain locations on the IND Concourse Line	10/18/2021
E-40201	Fan Plant SCADA Head Upgrade	11/5/2021
S-32156	Sandy Repair, 200th Street to 207th Street Interlockings, IND 8th Avenue Line	11/22/2021
C-30539	WellPoint Rehabilitation, IRT Lenox Avenue Line	12/1/2021
M-44146	Mainline Track Replacement on IND 63rd Street Line, BMT Jamaica and Myrtle Avenue Lines	12/2/2021
S-48010	Installation for the Queens Boulevard East Communications Based Train Control System	12/7/2021
P-36491	Replace Negative Cables 36th Street Station to Atlantic Avenue/Barclays Center Station on the 4th Avenue Line	2/11/2022

MTA CONSTRUCTION & DEVELOPMENT WEBSITE, FEBRUARY 28

LONG ISLAND RAIL ROAD

Catherine Rinaldi to Serve as Interim President

MTA Chair and CEO Janno Lieber announced on February 10 that he has appointed Catherine Rinaldi to serve as Interim President of the railroad. Rinaldi will continue to serve as President of Metro-North Railroad, a role she has held since 2018. Rinaldi will succeed Phillip Eng, who is retiring after nearly four years as LIRR President.

Rinaldi grew up in Huntington, Long Island, and previously served as Vice President and General Counsel at the Long Island Rail Road from 2008 to 2011. She is a summa cum laude graduate of Yale and received her law degree from the University of Virginia School of Law.

In addition to Rinaldi's roles at both the Long Island Rail Road and Metro-North, she has served as MTA Deputy Executive Director and General Counsel, and Chief of Staff and Counsel at MTA Headquarters.

As Interim President of the Long Island Rail Road, Rinaldi will oversee the expansion of Long Island Rail Road service. Most critically, this includes the opening of service to Grand Central Terminal later this year, the culmination of the East Side Access project. This expansion also includes running new service that will be made possible by the addition of a third track between Floral Park and Hicksville on the busy Main Line, increasing capacity to run trains in both directions throughout the day. Paired together, these investments enable more frequent service to more destinations, improving travel options for both Long Islanders and commuters throughout the region.

An engineer with deep background in infrastructure and construction, Eng joined the MTA in 2017 following a distinguished career at New York State Department of Transportation where he rose to the rank of Executive Deputy Commissioner. At MTA, Phil served as Chief Operating Officer and then concurrently as Acting President for New York City Transit, before being named LIRR President in 2018.

Rinaldi's first day as Interim Long Island Rail Road President was Saturday, February 26.
MTA PRESS RELEASE, FEBRUARY 10

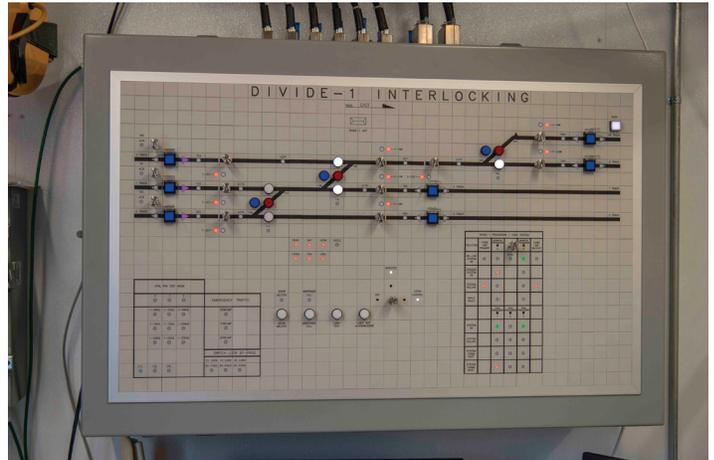
Main Line Third Track Update

Over the Presidents' Day weekend, the Main Line was once again shut down, this time from Mineola to Bethpage and Hicksville to Huntington. The main purpose was testing the new signal system from the new Nassau 3 Interlocking (east of Roslyn Road in Mineola) to Divide 2 Interlocking, west of Hicksville station.

In addition to the new interlocking at Nassau 3, which is being relocated west from its current location in Carle Place, the interlocking at Divide 1 (actually located in New Cassel, west of Hicksville) is being equipped with new signals and switches. This interlocking is not being moved but it is being expanded.

Both of these interlockings, in addition to being controlled

remotely from Jamaica Central Control, have the ability to be controlled locally using control panels in their respective Central Instrument Locations (CILs).



The local control panel at Divide 1, like those at the new Nassau 1 and Nassau 3 interlockings, was made by Entech Controls of Ormond Beach FL. The track on the top-left of the panel is the new third track, currently being constructed. The track on the top-right side is currently the Freight Track. This has been equipped with third rail and will eventually be designated as the new North Siding. This image was taken on January 23. Jeff Erlitz photo



The local control panel inside the CIL at Divide 2 has not been replaced. It was modified with some new controls and indications, on the top-left side of it. Seen here on February 19, it was built by the Mauell Corp. of Dillsburg PA and dates from April 2000. Jeff Erlitz photo

This new signal system, which will include eight new Master Locations (essentially the locations where automatic block signals are located but without actual wayside signals), is scheduled to be placed into service over the weekend of March 12-13.

As we mentioned in the February issue of the *Bulletin*, station operations at Westbury were shifted from the original platforms (with some temporary platform extensions to the east) to the new permanent ones at the west end of the station. Platform capacity remains reduced at six cars.



Looking east from the west end of the new temporary eastbound platform at Westbury on February 19. The canopy over the westbound platform has yet to be installed. As was done at the other rebuilt stations, this temporary platform was built over a section of newly-installed third track. Jeff Erlitz photo



During the Presidents' Day weekend, "Huntington" trains operated only as far as Mineola. From there, they operated without passengers up to East Williston to relay for westbound service. Train #8452, led by M9 9026 (Kawasaki Rail Car, 9/2019), is seen here turning off the Main Line in Mineola (Nassau 2 Interlocking) and heading up the Oyster Bay Branch to East Williston. Jeff Erlitz photo



View east of the new permanent eastbound platform. The temporary platform is built out over the third track, in front of it. Jeff Erlitz photo



The Westbury station building is also being renovated as part of this project. It was originally built in 1914 during the elimination of the Post Avenue grade crossing. Jeff Erlitz photo

Other New Construction

Bids were opened on February 18 for Contract 6394, Northport Station Passenger Platform Replacement. Seven contractors responded with bids ranging from a low of \$11,433,420 to a high of \$21,071,448. This contract will probably be awarded in the next couple of months.

This project is to bring the existing platform to a state of good repair by replacing the platform slabs, platform railings, shelter sheds, replace lighting and upgrade to LED, repairs to the platform substructure, addition of an ADA ramp, ensure ADA-compliant accessibility to the platform and provide passengers with an improved station environment. MTA CONSTRUCTION & DEVELOPMENT WEBSITE, FEBRUARY 28

METRO-NORTH RAILROAD

New train schedules will be taking effect Sunday, March 27, that will restore 66 weekday trains on its three East of Hudson lines. The restoration of more weekday trains brings the railroad's weekday service to 89% of its pre-pandemic levels.

Guided by MNR's Way Ahead – Moving Forward strategic plan, the improvements shorten peak-period travel times. As ridership recovers from an Omicron-caused dip in ridership, MNR is restoring many of its pre-pandemic zoned express-service trains. These service adjustments will provide additional seating capacity for passengers and reduce trip times at several stations by up to 13 minutes.

Also reflected in the March schedule update is the return of the "Yankee Clipper" trains, special game-day trains which provide direct service to Yankees/E 153rd St Station for all New York Yankees home games. Yankee Clipper trains will be restored on all three East of Hudson lines, as well as shuttle

trains between Grand Central Terminal (GCT), Harlem/125th St and Yankees/E 153rd St Station and additional stops on Hudson Line trains on each game day.

The new schedule builds on MNR's last schedule change in August 2021 when service increased to 82% of pre-pandemic levels, with the following additions being made to each line:

Hudson Line

Hudson Line weekday service will increase from 142 trains to 156 trains, with additional trains being added between GCT, Croton-Harmon and Poughkeepsie.

Service to the Breakneck Ridge station will resume in the spring once safety enhancements are completed at the station.

Harlem Line

Harlem Line weekday service will increase from 190 trains to 208 trains with additional trains between GCT, White Plains and Southeast.

New Haven Line

New Haven Line weekday service will increase from 244 trains to 278 trains with additional trains between GCT, Stamford and New Haven.

MTA PRESS RELEASE, FEBRUARY 22

NEW JERSEY TRANSIT

Purchase of Additional Multilevel Rail Cars

The NJ TRANSIT Board of Directors approved the purchase of 25 additional Multilevel III rail cars. The purchase exercises options on the original December 2018 contract with Alstom for the purchase of 113 new Multilevel III rail cars. The additional 25 cars in this action are funded as part of the Portal North Bridge project which will increase peak-hour peak-direction passenger capacity.

The 25 additional cars will include five multilevel cab cars, 17 multilevel trailer cars, and three multilevel trailer cars with restrooms.

Multilevel III cars will offer a range of benefits over the older single level cars they will replace. The vehicle maximum speed will increase to 110 miles per hour. The cars will be compliant with the latest federal regulations, including Positive Train Control. Other passenger amenities will include USB charging ports and new, onboard information displays.

In support of the capacity increases as part of the Portal North Bridge project, the 25 new cars will be added to nine existing multilevel peak hour trains. Ordering these additional multilevel vehicles now minimizes the risk of delays from potential future supply chain issues, allowing for continuity of production. The Portal North Bridge project is funded, in part, by a \$766.5 million Federal Transit Administration (FTA) Core Capacity Grant.

The new cars increase seating capacity from 1,380 seats

on a 12-car Arrow III train to 1,552 seats on a new 12-car Multilevel III train. The new cars will feature roomier two-by-two seating as opposed to the three-person bench seats that are currently on the Arrow III cars.

NJ TRANSIT PRESS RELEASE, FEBRUARY 9

New Head of Rail Operations Selected

NJ Transit's Board of Directors appointed James Sincaglia as Senior Vice President and General Manager of Rail Operations. Sincaglia is a career employee at NJ Transit with more than 26 years of service with the corporation.

Sincaglia began his career with NJ TRANSIT in the bus division in 1996. Shortly thereafter, he embarked on his rail operations career as a train dispatcher after successfully completing the training course. He later advanced into management at the Rail Operations Center (ROC) serving as a Supervisor of Train Operations before being named as Manager of Train Operations, and then Senior Director of System Operations.

In October 2015, Sincaglia was named Deputy General Manager of Transportation where he served until April 2020 when he was elevated to lead the railroad in an acting capacity. Since then, his leadership helped drive the successful implementation of their Positive Train Control project before the December 20th, 2020 deadline. He has also overseen the full restoration of the agency's depleted ranks of locomotive engineers, which has led to improved on-time performance.

NJ TRANSIT PRESS RELEASE, FEBRUARY 9

Other US Systems

BOSTON

Springfield-based CRRC promises faster pace on new MBTA subway cars

The Massachusetts Bay Transportation Authority (MBTA) now has 60 Orange Line subway cars delivered from the CRRC factory in Springfield. A six-car Red Line train built in Springfield was introduced into passenger service at the end of December 2021. Two new Red Line cars were expected in January 2022.

That's progress, but far from where the Chinese-owned CRRC and the Massachusetts Bay Transportation Authority expected to be by this time.

In 2014, CRRC received a \$566 million contract from the MBTA to build 152 Orange Line cars and 252 Red Line cars in Springfield. In 2016, the state upped the order with another 120 Red Line cars, with production on those set to begin in June 2022 at a cost of \$277 million.

The T had said that it expected the Red Line cars to be completed and delivered by 2024. The Orange Line project was expected to be done in 2022.

Besides the pandemic, CRRC has faced a succession of

other frustrations, from design flaws, difficulty getting and training a workforce, harsh Trump-era trade policies against China that have not abated under President Joe Biden, and Washington's animosity toward having a Chinese government-owned enterprise manufacturing transit and rail equipment for the United States market.

In Boston, a key issue is the continuing fallout from the March 2021 derailment of a new Springfield-built Orange Line car in Boston.

The MBTA said in June that a switch in the tracks where the subway car derailed likely contributed, but the Springfield-built car also had problems with its undercarriage. The more it and cars like it travel, the harder it becomes to turn the assembly that attaches the wheels to the rest of the car, an assembly called the truck.

The MBTA is in the final phase of qualifying a new side bearer pad, a part of that undercarriage identified as the problem. Once the process is completed, all the trains will be outfitted with the new part. The CRRC is working closely with the T.

CRRC is also working through difficulties getting its materials, including those sourced here in the United States. It's a problem made worse by the omicron wave of COVID.

But CRRC is adopting new Lean manufacturing techniques, a worldwide system of waste reduction and efficiency developed from Toyota's principles.

CRRC has 403 employees in Massachusetts. The factory in Springfield employs 332, including 239 union production employees. The company continues to prioritize training and development of its workforce, spokeswoman Lydia Rivera said.

It has hired 24 staff members since November, including two electrical and 12 mechanical assemblers in Springfield. It plans to hire as many as 25 new assemblers in the coming months, bringing the production workforce as high as 263.

Jobs were the priority in 2014 when the administration of Governor Deval Patrick went without federal funding on the Red and Orange Line projects. That allowed the state to require that the cars be at least assembled in Massachusetts.

The goal was also to reestablish a passenger rail car industry in Massachusetts.

Springfield's Wason Manufacturing, which was one of the largest makers of railroad cars and locomotives in the country, operated there from 1845 until the Great Depression. The Shelburne Falls Trolley Museum has a Wason trolley car.

CRRC was one of the bidders that identified Springfield as a site, eventually building a \$95 million factory on a former Westinghouse parcel in East Springfield cleared for a casino development project that never happened.

In June 2021, CRRC moved in to a new, 42,000-square-foot warehouse on the site filled with at least a month's worth of materials for the running projects.

CRRC also signed deals with transit agencies in Philadelphia and Los Angeles to manufacture passenger cars in Springfield.

The Los Angeles Metro ordered 64 subway cars at a cost of

\$230 million.

Rendering of new CRRC cars for Los Angeles. CRRC MA photo



In 2017, the Southeastern Pennsylvania Transportation Authority, SEPTA, ordered 45 double-decker rail cars — 11 cab cars and 34 trailer cars — at a cost of \$137.5 million. Today, the cost is up slightly to \$138 million.

Both projects are in the testing and design stages, CRRC said. Parts for the first of the LA order, which consists of many models, are due to arrive here in the middle of 2022. Other cars for the order are being tested both here and in China.

For the Philadelphia order, the pilot cars are at the final assembly and inspection phase in China. Despite the pandemic and resultant increase in material costs and time for executing the project, CRRC plans deliver the cars in the middle of 2022.

Once the pilot cars are delivered and tested in Philadelphia, the mass production of the cars will last for a year and a half in Springfield.

CRRC is also still dealing with trade disputes. The Trump administration slapped 25% tariffs on rail cars and parts.

Fears the Chinese government is seeking to create a monopoly in the worldwide transit car industry — or that the government might use the cars to spy on Americans or threaten national security — led some lawmakers to call for a ban on the use of federal money to pay for rail and subway cars built by Chinese manufacturers.

In 2019 CRRC received a two-year grace period allowing it to bid for any transit contract other than the Washington Metro. That grace period has expired, and CRRC has signed up no new customers.

Transit ridership fell by about 30% nationwide during the pandemic, hurting demand for new transit vehicles. MASS TRANSIT, FEBRUARY 25

ATLANTA

MARTA study could wipe out proposed light-rail lines due to higher costs

An engineering study conducted by MARTA has revealed

proposed light-rail lines would be more expensive than original estimates.

According to the study, the three-mile project from Ponce City Market to the MARTA Lindbergh station in northeast Atlanta is projected to cost as much as \$448.2 million. Three years ago the price of that segment set by MARTA was \$171.6 million. In addition, a four-mile line of track south of Ponce City Market also will cost more. The engineering study has indicated the price could be as much as \$269.9 million, about \$160 million more than the original estimate.

MARTA said the increase in cost is the result of a more detailed analysis that includes the price of specific bridges, buildings, and other facilities. However, the estimates do not include costs covering right-of-way, support facilities, and transit vehicles.

MARTA could conduct another study over the next two years, and a final decision could cut out some light-rail segments in favor of less expensive transportation options like bus rapid transit.

The move has already happened on Campbellton Road, where MARTA is now recommending busing over light-rail due to lower costs and quicker construction. A half-cent sales tax for transit was approved back in 2016, which allowed MARTA to move forward with \$2.7 billion in expansion money that included a heavy investment in rail. Southwest Atlanta residents are now upset about the move to bus rapid transit along Campbellton Road because they believe they were promised light rail.

RAILWAY TRACK & STRUCTURES, FEBRUARY 24

ST. LOUIS

Bi-State Development to take on operation of Loop Trolley

The St. Louis region's Bi-State Development Board of Commissioners voted on February 18 to approve an agreement that will see Bi-State Development operate the Loop Trolley through June 30, 2025.

The 2.2-mile Loop Trolley, a heritage streetcar project linking St. Louis' Delmar Loop district with Forest Park, opened in November 2018 and suspended operations in December 2019. The line briefly resumed service in July 2020 before halting operations due to the pandemic.

The Loop Trolley's suspended service reached a new level of consequence in December 2021 when the Federal Transit Administration requested service resume by June 1, 2022, or the city of St. Louis could be asked to repay the more than \$37 million in various federal funds used to construct the line.

In a statement following the board of commissioners' approval of the operating agreement, Bi-State Development President and CEO Taulby Roach explained he is obligated to "advance requests from our elected leadership to our board of commissioners." He said he was impressed with

Bi-State Development's partners' efforts to find a solution to a difficult problem.

He explained next steps will include an assessment of the assets of the Loop Trolley.



Loop Trolley car 001 is seen eastbound on Delmar Blvd., just west of Limit Avenue in the Delmar Loop district on December 12, 2018. This section of the Loop Trolley line had opened for service only a little more than two weeks earlier, on November 23. This car is ex-Portland Vintage Trolley car 512, a replica of a 1903 Brill streetcar built in 1991 by Gomaco. Paul Sableman/Loop Trolley photo

There is also the question of how to fund operations of the Loop Trolley.

The agreement recognizes that Loop Trolley Transportation Development District's current tax revenues are not sufficient to cover the cost of operation. The development district is pursuing a grant from the East-West Gateway Council of Governments following its rejection of a similar grant from the entity in October 2021.

MASS TRANSIT, FEBRUARY 21

DENVER

RTD hires HDR to study possible peak service schedule in northwest Denver

The Regional Transportation District of Denver (RTD) has hired HDR Engineering Inc. to study the feasibility of a peak service rail schedule between Denver Union Station and downtown Longmont, which is located northwest of the city.

The two-year Northwest Rail Line Peak Service Study will analyze using the B Line commuter-rail alignment and potentially leasing BNSF Railway right of way and track to extend service during peak commuting hours over a 35-mile stretch, RTD officials said in a press release. The plan will provide updated engineering and cost estimates regarding service to Denver's northwest communities, including Broomfield, Louisville, Boulder and Longmont.

The transit agency also aims to position the project for federal funding and a potential future build-out of the Northwest Rail Line. RTD might also partner with Front

Range Passenger Rail Service and the Colorado Department of Transportation.



RTD Silverliner V EMUs. RTD Photo

Last year, the agency's board released a request for proposals (RFP) for the study. Out of three firms that responded to the RFP, RTD selected HDR.

PROGRESSIVE RAILROADING, FEBRUARY 24

LOS ANGELES

West Santa Ana Branch project advances

The Federal Transit Administration (FTA) has approved the Los Angeles County Metropolitan Transportation Authority's (L.A. Metro) request to move the West Santa Ana Branch Transit Corridor project to the development phase as part of the federal Capital Investment Grants Program.

The announcement means the project is more likely to be eligible for federal funding. The proposed 14.8-mile route from Slauson/A Line to Pioneer, California, was also approved as the Locally Preferred Alternative for the project's initial segment between Artesia and downtown Los Angeles.

The transit agency will now complete the environmental review process and engineering and design activities as required by the FTA. After that, the FTA will extend the pre-award authority to project sponsors to incur costs for engineering and design work in order to develop a cost estimate.

PROGRESSIVE RAILROADING, FEBRUARY 28

SAN FRANCISCO BAY AREA

New BART car deliveries resume

San Francisco's Bay Area Rapid Transit (BART) system has once again begun to accept deliveries of its next generation of rolling stock, after a pause that lasted for just over a year. Known as the "Fleet of the Future" but in keeping with BART practice they are technically designated as the "D" and "E" series. The original order was placed in 2012 with Bombardier for a base contract of 410 new cars, split into a base order of 260 cars and a first option for 150 additional

cars. A year later, an additional option was exercised for 365 cars, bringing the total to 775.

Despite the arrival of the first ten car test train in April 2016, several technical and production issues seriously slowed down deliveries to the extent that the first train did not enter revenue service until January 2018. It had been hoped to have 198 cars in service by July 2018, but in fact by June 2019 only 84 cars were in service. At that point Bombardier announced that production would shift from its Plattsburgh, NY plant to a new facility in the East Bay at Pittsburg, a move to speed up production.

However, in the summer and fall of 2020 new serious issues began to arise, impacting reliability and the ability to keep enough trains in service to maintain the daily timetable. The primary problem lay specifically with the onboard automatic train control software which was inexplicably causing trains to randomly stop while in service. The trains would not start up again unless the train operator rebooted the system, which resulted in a five- to ten-minute delay. BART announced on December 29, 2020 the suspension of deliveries, which took effect on January 8 2021.



Car 3001 of BART's "Fleet of the Future". Mass Transit photo

A few weeks later, the takeover of Bombardier by Alstom was finalized on January 29, 2021, and they immediately focused on getting the issues under control. After a year of modifications and software upgrades, BART and Alstom have together reached a point where they can resume deliveries.

BART's fleet has traditionally been comprised of single units of cab cars and non-cab cars. For the "Fleet of the Future" the D car is the designated cab car, of which there will be 310, while there will be 465 non-cab E cars. The cars feature several technical innovations in propulsion and reduced energy usage, seating layout, and digital information displays. The most visible change is the provision of three pairs of doors per side, versus the traditional two pairs that have been a feature of all prior BART cars. This should dramatically assist with quicker passenger loading and reduce station dwell times.

As of February 16, BART has already received 308 of the 775 cars ordered; of which 293 have been certified for service and 219 of them are actually in revenue service. It is still BART's desire to replace the entire remaining fleet of A and B cars, the oldest of which opened the system in 1972; as well as the C cars, delivered in two batches in the late 1980s and mid-1990s.

BART had been hoping that eventually up to 1200 Fleet of the Future cars would be purchased to accommodate ridership growth that had been projected before the pandemic. However, BART has been hit particularly hard by a decrease in ridership of over 50%. The future remains to be seen, as it should be noted that as the Bay Area is one of the most technology dependent regions of the country, remote working has taken firm hold. However, the BART system is also expanding with work underway on a major extension south to San Jose, anticipated to be in service by the end of this decade. Looking further into the future there are plans for other extensions and there is an even talk of a second Transbay tube. We shall see!

BART PRESS RELEASE, FEBRUARY 16

RAILWAY AGE WEBSITE, FEBRUARY 17

WIKIPEDIA ENTRY FOR BART AND BAY AREA RAPID

TRANSIT ROLLING STOCK

International News

BERLIN

S-Bahn expansion plans move forward

The German states of Berlin and Brandenburg have agreed to a financing agreement with the German national railway Deutsche Bahn (DB) towards the preliminary planning of a 1.8-mile extension of Berlin S-Bahn routes S25/S26 from the current southern terminal at Teltow Stadt to a new terminal at Stahnsdorf. Intermediate stations are planned at Iserstraße and Sputendorfer Straße.

Additionally, closer in on S25 there are plans to double track a 4.78-mile section of line between Südende and Lichterfelde, which should allow for a stable service with 10-minute headways to and from Stahnsdorf, as announced by VBB, the Berlin-Brandenburg transport authority. Plans are also proceeding to extend S3/S9 services in the northwest from Spandau to Falkenseer Chaussee with an intermediate station at Seegefelder Straße. This will be enabled through an agreement between the state of Berlin and the Havelland Railway Company, operator of the 11 mile-long freight-only Bötzw Railway, whose right-of-way would be partially required for the extension.

INTERNATIONAL RAILWAY JOURNAL, JANUARY 25



A string of S-Bahn Berlin 481 Class cars, led by 481 396 (Bombardier Transportation, 2002), is seen heading southbound, north of the Bornholmer Straße stop on an S25 trip to Teltow Stadt on May 6, 2019.

Jeff Ertlitz photo

BUDAPEST

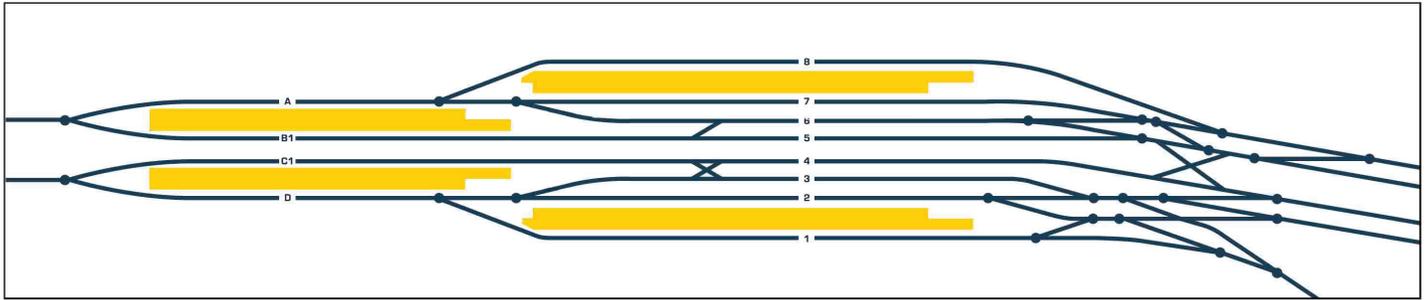
Plans for cross-city tunnel being developed

The city of Budapest is divided by the Danube River and has three passenger rail terminals: Déli Pályaudvar (South Station) is located in the western half of the city ("Buda"), while the other two - Nyugati Pályaudvar (West Station) and Keleti Pályaudvar (East Station) - are located in the eastern half ("Pest"). There are no direct physical links between the three terminals, though passenger connections are possible using the Budapest Metro - Line 1 serves both Déli and Keleti, and Nyugati can be reached via a transfer to Line 3.

Because of Budapest's geography, indirect connections, and the manner in which the terminals are sited, regional and long-distance services are hindered by operational challenges and limited terminal capacity. To address this, authorities in Budapest have started planning for a new double track underground railway linking the Nyugati network with the Deli network via a tunnel under the Danube River.

A dedicated agency has been created for the express purpose of building this link, which features a new set of underground platforms beneath Nyugati, while on the Buda side a four-track, two island platform station is planned under Széll Kálmán Tér, a major hub served by Metro Line 2, and several tram and bus lines. From there the line heads south, passing below Deli and emerging south of the terminal to pick up the lines to and from the south.

The physical configuration of the Nyugati low-level station will be very unique, featuring a staggered plan of 8 tracks and four platforms, with the eight platform faces having varying lengths. The shorter platform faces will serve local and regional trains, while the outermost longer platform faces will be used by intercity and long-distance trains, which require longer dwell times. This arrangement,



The proposed track and platform arrangement at Budapest's Nyugati station. Railway Gazette International drawing

facilitated by universal interlockings on both approaches, will ensure smooth unhindered operations.

At this time the planning for this new line is still preliminary and the budget has yet to be identified. The earliest opening is foreseen to be around 2035.

RAILWAY GAZETTE INTERNATIONAL, DECEMBER 2021 ISSUE
TODAY'S RAILWAYS EUROPE, FEBRUARY 2022 ISSUE

LONDON

Transport for London's senior leadership is restructured

The executive management team of Transport for London (TfL) has been restructured and reduced in size as of February 1. The board changes are the most visible aspect of a move which will yield an overall leaner organizational structure across all of TfL. As announced by London's Transport Commissioner Andy Byford (previously NYC Transit president) the move will "ensure that TfL is in the best possible shape to become an even more efficient organization focused on financial sustainability and on supporting London's recovery, with a single unified organization with a centrally set strategic framework that further embeds TfL's vision and values."

RAILWAY GAZETTE INTERNATIONAL, JANUARY 23

Agreement reached to continue funding for TfL

The restructuring of TfL management is all the more critically important as the agency struggles to recover from the pandemic and build back its ridership. As announced on February 25, the UK Department for Transport and TfL have agreed to a new funding package, the fourth since the start of the pandemic and the resulting necessary lockdowns. The severely reduced ridership has had a dramatic effect on TfL's finances, not unlike those that have disrupted urban transit systems around the world, including here in New York.

The agreement provides over £1.6 billion covering the period from February 25 to June 24. In addition, there will be an extraordinary support grant of £200 million, to be paid out in three installments, the first of which will be on April 29. The terms of the deal stipulate that by March 31 TfL must identify up to £400 million in new revenue sources or

achieve cost savings in the same amount over the 2022-23 financial year, coming on top of reduced spending that had been previously agreed to for the 2021-22 financial year. With this latest funding package, TfL will have received close to £5 billion in direct aid from the UK treasury.

The Department for Transport has also expressed a willingness to provide TfL with funds for capital projects in the short and medium term, and will work with TfL on an agreement for a longer-term deal, with an aim to also achieve this by March 31. TfL suspended work last year on most of its capital program, except for the most critically important projects, such as track renewals, critical systems upgrades, rolling stock procurement, and the completion of the Elizabeth Line. Funding for these initiatives had already been in place for the most part prior to the pandemic.

RAILWAY GAZETTE INTERNATIONAL, FEBRUARY 21 AND 25
INTERNATIONAL RAILWAY JOURNAL, FEBRUARY 25

New Piccadilly Line trains' cost increase

The cost of the next generation of trains for London Underground (LU) has risen by £34 million due to design changes. Siemens Mobility is under contract to deliver 94 nine-car trains to replace the entire Piccadilly Line fleet starting in 2025. The change in design centers around an



Rendering of Siemens' Inspiro train set for London's Piccadilly Line.

Siemens Mobility photo

enlargement of the train operator's cab in order to meet LU's requirement to provide adequate space for instructor operators. This modification has in turn slightly reduced

the size of the passenger compartment. At this time, the design change is not anticipated to have a negative effect on the delivery schedule, but the cost increase raises the overall contract value to £1.48 Billion.



Rendering of the interior of the new Inspiro stock. Siemens Mobility photo

The new cars, which have yet to be officially designated, will replace all the remaining cars of the class known as 1973 Tube Stock, which serve exclusively on the Piccadilly. The initial order is the first part of a much larger order of

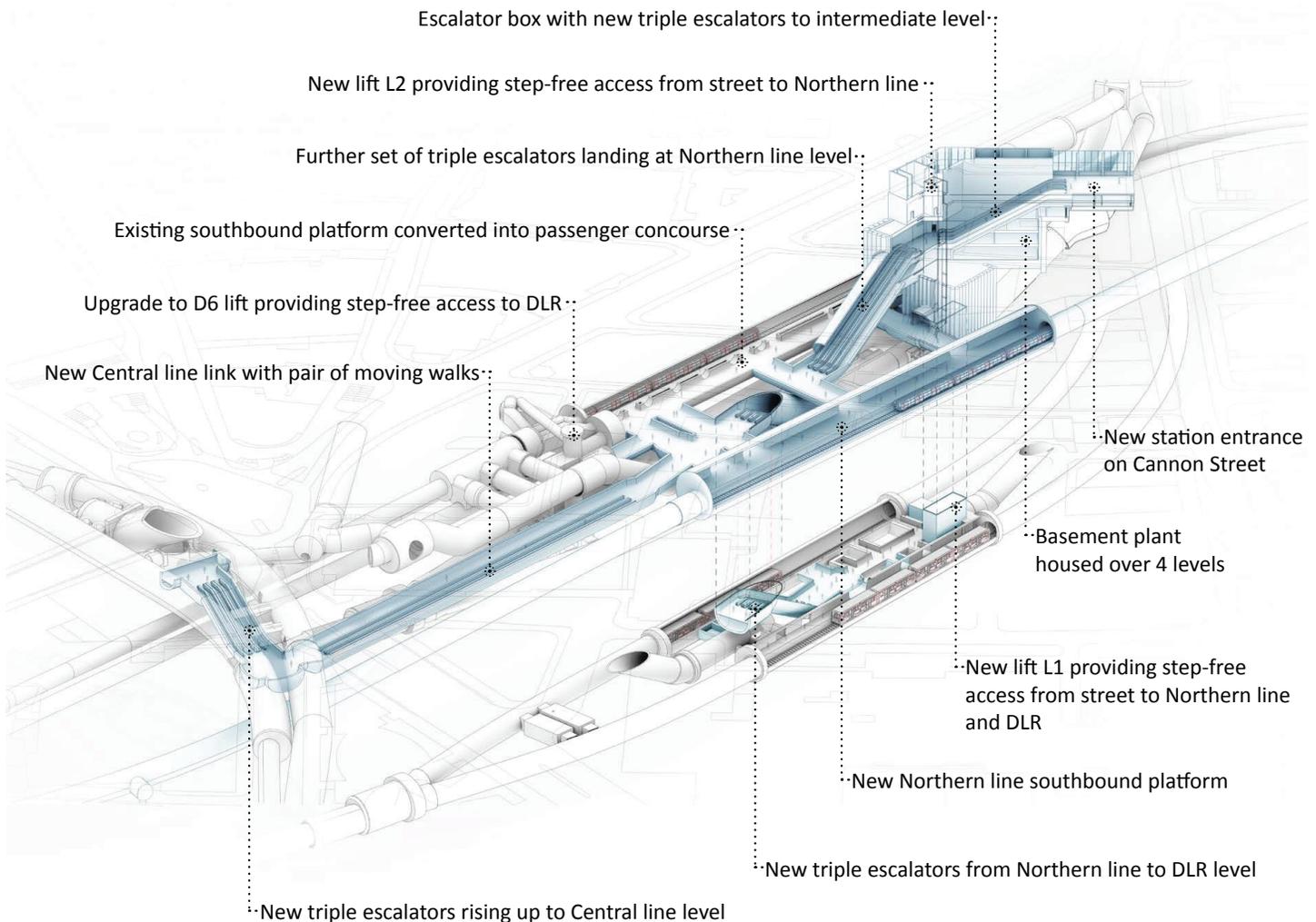
potentially up to 250 trains to eventually replace the fleets of the Bakerloo, Central, Piccadilly, and Waterloo & City Lines. Developed under the “New Tube for London” Program, the new cars will introduce several features previously unknown to the deep tube lines of London, including air-conditioning, full width gangways, LED lighting, and digital information screens with real time station and network status information. The trains will be fitted with advanced traction and braking technology, and will be lighter than previous generations of tube trains, yielding an energy savings of up to 20%, which will be all the more vital to offset the heat output generated by air-conditioning which will present a challenge in the narrow profile deep level tube lines.

Half of the order will be manufactured at the Siemens plant in Vienna, and the other half will be manufactured at a new plant to be built in Goole in East Yorkshire. Deliveries of the new cars is anticipated in 2025.

METRO REPORT INTERNATIONAL, JANUARY 25

Work to expand Bank Station nears completion

One project that has not suffered a reduction in funding, and the utmost current priority for TfL, is the Bank Station Capacity Upgrade. Located in the heart of London’s financial district, the Bank-Monument Station Complex is where the



Central, Northern, and Waterloo & City deep-level tube lines meet with the Docklands Light Railway (DLR), with a further connection to the Monument Station, which serves the Circle and District sub-surface lines. The complex is the third busiest on the London Underground, with a pre-pandemic usage of 120 million passengers a year.

During the peak periods, many of the complex's concourses and narrow connecting passageways are overburdened, creating conflicting flows of pedestrian traffic, leading to crowding and long queues to all the various escalator shafts. The conditions are most severe down on the narrow Northern Line platforms, first opened in 1900. Located at the center of the complex, this area also serves as the waypoint between the north and south ends of the complex, with all transfer movements passing through here. The aforementioned conditions are having a cascade effect of backups on these platforms, as throngs of passengers struggle to disembark from trains, similarly sized crowds are simultaneously trying to board.

To address these conditions, the centerpiece of the project is the construction of a new southbound platform for the Northern Line. Work began in 2016, starting with the sinking of a large shaft from which a pilot tunnel was driven to eventually create a new southbound running tunnel over 1000 feet in length, with a platform tunnel at its center. Cross passages from the new platform tunnel were dug to meet the current southbound platform, which will be transformed into a new central concourse, and from which new connecting passages are being built to link to the concourses and platforms of the other adjacent lines in the complex. From the new concourse, a long tunnel containing a new moving walkway (the second such one at the complex) will lead to a new bank of escalators up to the Central Line, which will vastly speed up transfer times. New elevators will be added from street level to the Northern Line, and another set from there down to the DLR.

The original construction shaft contains a new bank of escalators down to the new Northern Line concourse, and from there another new escalator bank descends to the DLR. The site will be topped off with a new station entrance building and fare control area, which can eventually accommodate a future commercial overbuild.

To complete the final phase of work, service on the Bank Branch of the Northern Line was suspended on January 15. Final connections are now being made from both ends of the new running tunnel to the main southbound tunnel, and the old southbound platform is being converted to the new concourse. All other passageway connections are being finalized, and following the resumption of Northern Line trains in mid-May, work will continue until final completion in the autumn.

BANK STATION CAPACITY UPGRADE PROJECT WEBSITE

MADRID

Madrid Metro expansion

Two expansions to the Madrid Metro were advanced in recent months. In December 2021, the first construction contract was awarded for the 1.6-mile-long extension of Line 3 from its current southern terminal at Villaverde Alto to El Casar, where it will meet Line 12 MetroSur and RENFE's Cercanías Line C-3 (suburban rail). Line 12 MetroSur, the orbital metro in the southwest suburbs of Madrid, will see its connectivity to the rest of the metro network improve significantly as its only current connection is via a transfer to Line 10 at Puerta del Sur.

In early February, a call for bids was announced for the 4.3-mile-long northeast extension of Line 11 from Plaza Elíptica - Conde de Casal, with four intermediate stations at Comillas, Madrid Río, Palos de la Frontera and the Atocha mainline railway station. This is the latest phase of expansion for Line 11, which came into being in 1998 and has since been twice extended in 2006 and 2010 to its current length of four miles with seven stations. Ultimately, Line 11 is projected to become a significant southwest to northeast axis, 20.5 miles in length, providing transfers to 11 of the city's 12 metro lines, and relieving congestion on the orbital Line 6. In the northwest it would terminate at the Valdebebas urban redevelopment zone, just west of Barajas International Airport.

Speaking of the airport, work continues on the extension of Line 5 from Alameda de Osuna to Terminals 1/2/3, where it will join Line 8, which first reached the airport in 1999, and then extended to Terminal 4 in 2007.

RAILWAY GAZETTE INTERNATIONAL, DECEMBER 16, 2021 AND FEBRUARY 8

Testing begins in Madrid's new cross-city tunnel

The new main line railway tunnel under Madrid has taken one more step closer to opening, as a pair of S112 Talgo trainsets began trial running through it over the weekend of February 5-6. The 4.3 mile-long double track tunnel between Madrid Chamartín and Madrid Atocha main line stations is the third to be built under the city, and is equipped with standard gauge trackage to exclusively serve the high speed rail lines to the north and south of the city. Madrid's earlier tunnels, opened in 1967 and 2008 respectively, are equipped with Spanish broad gauge - 5 feet, 5 21/32 inches, and are used by a mix of Cercanías suburban services, regional services, and high-speed services, and those require a time consuming gauge changing process.

Besides the most obvious benefit of gained time savings, the new tunnel in theory will allow any standard gauge train operating in Spain to serve central Madrid, including open access competitive high-speed services from elsewhere in Europe. However, that still seems a way off, as work on the tunnel has been quite slow and there is still much to do. It should be noted that construction began in 2008 (the same

year as the opening of the second tunnel) and though boring was completed by 2011, the work then came to a standstill. Complex connections south of the city remained to be built, and track laying continued until 2017, when the overhead 25 kV 50 Hz catenary was also energized.

In related news, a separate €207 million project to upgrade Chamartín Station has started to prepare the station for the arrival of new high-speed services. Work had already been underway to convert two existing tracks to standard gauge to increase high-speed rail capacity at the station and now this new project will add four additional platforms for high-speed services on the station's east side.

Furthermore, the station concourse will be completely rearranged and enlarged, creating three distinct areas for passengers - a boarding area for high-speed trains, one for Cercanías services, and another for long-distance main line passengers. An underground connection between the Cercanías platforms and the Madrid Metro will also be built. Chamartín Station is also planned to be the terminal for high-speed services serving Madrid Barajas International Airport. The overall project is expected to be complete within five years. Interestingly, the platforms at Atocha have yet to be built!

INTERNATIONAL RAILWAY JOURNAL, JANUARY 7

RAILWAY GAZETTE INTERNATIONAL, FEBRUARY 7

SÃO PAULO

ViaMobilidade takes over São Paulo suburban lines 8 and 9

State-owned suburban operator Companhia Paulista de Trens Metropolitanos has handed over management, operation and maintenance of Line 8 (Diamante) and Line 9 (Esmeralda) to private-sector concessionaire ViaMobilidade, a consortium owned 83% by CCR and 17% by RuasInvest. The two lines are the busiest of CPTM's seven routes.

The handover took effect on January 27 following approval by the Metropolitan Transport Secretariat on January 22, ViaMobilidade having won the concession at auction on April 20, 2021.

Special purpose vehicle ViaMobilidade Lines 8 and 9 now has responsibility for operations and maintenance of the two lines for a term of 30 years. During that period, the company has committed to invest around R\$3.8 billion in modernisation and improvement works and in the acquisition of 36 Series 8900 Metropolis trainsets ordered from Alstom in July 2021.

The first of the new trains is due to be delivered 18 months after contract signing. Designed to carry up to 2600 passengers, each eight-car set will feature wide doorways and inter-car gangways.

In the immediate future ViaMobilidade will start renovating stations at Grajaú, Santo Amaro, Santa Terezinha, Sagrado Coração, Commander Sampaio, Imperatriz Leopoldina and Lapa with a view to completing the work by

February 2023.

Reconstruction of the station at Ambuíta, near the western end of Line 8 between Amador Bueno and Santa Rita, is also planned, as well as a new operations control center and modernization of the Presidente Altino depot. In addition, further work will be needed to finish the extension of Line 9 from Grajaú to Varginha, construction of which began in 2013.

Line 8 runs for 25.85 miles from Júlio Prestes to Amador Bueno, with 22 stations serving the municipalities of São Paulo, Osasco, Carapicuíba, Barueri, Jandira and Itapevi; it handles about 500,000 passengers a day. The 19.88 mile Line 9 connects Osasco with Grajaú, with 18 stations in São Paulo and Osasco, carrying around 600,000 passengers a day.

ViaMobilidade has previously won concessions to operate São Paulo metro Line 5 and more recently the Line 17 monorail under construction.

RAILWAY GAZETTE INTERNATIONAL, FEBRUARY 1

SCHÖNEICHER-RÜDERSDORF

Schöneicher-Rüdersdorf Strassenbahn orders low-floor trams

This suburban operation has awarded Modertrans a contract to supply three low-floor trams for use on Route 87, which connects Berlin-Rahnsdorf S-Bahn station with Woltersdorf, just outside Berlin to the east. The 3.48-mile standard gauge line is currently operated using 60-year old Gotha vehicles. Route 87 was formerly operated by Woltersdorfer Strassenbahn until January 1, 2020.



Rendering of the new Moderus Gamma LF 10 AC BD tram. Modertrans photo

The new low-floor trams will meet current accessibility standards, removing the need to provide alternative travel arrangements for wheelchair users.

The Moderus Gamma LF 10 AC BD low-floor trams will

a development of the Gamma LF 05 AC cars in service in Poznań, Poland.

The 49 foot, 2 ½ inch long, 7 foot, 10 ½ inch wide single-section bidirectional trams will have a capacity of 76 passengers, including 22 seated, with a dynamic passenger information system and LED lighting. They will have 2 foot, 1 ½ inch wide doors at each end and a 4 foot, 3 inch central door.

They will have four 50 kW motors and a maximum speed of 43.5 mph. Battery packs charged using regenerating braking energy will enable the trams to operate for short distances in the event of a power cut.



This is the equipment that is being replaced. Type T57 single-truck motor 31 (Gotha/LEW, 1959) and Type B57 trailer 90 (Gotha, 1960) are heading west to the connection with the Berlin S-Bahn system at Rahnsdorf on July 20, 1990. This location is just east of the Eichendamm stop in Woltersdorf on Berliner Straße at Robert-Koch-Straße. Jeff Erlitz photo

A financing agreement for the order was announced by on February 17, with the Oder-Spree district authority providing SRS with a €3.7 million grant and the municipality of Woltersdorf contributing a further €300,000.

The trams are due to be delivered in the second half of 2023, and there is an option for SRS to order a fourth vehicle.

METRO REPORT INTERNATIONAL, FEBRUARY 21

VANCOUVER

Vancouver Broadway Subway

The Tunnel Boring Machines (TBM) for the next phase of expansion of the Vancouver SkyTrain system have completed factory testing and are on the way. Built by German TBM manufacturer Herrenknecht, the two machines will bore the 3.54-mile long Broadway Subway, which is essentially a western extension of the existing Millennium Line.

The C\$2.83 billion project will begin with a viaduct from the existing VCC-Clark Station, descending to an at-grade section, and entering into tunnel just east of the future Great Northern Way-Emily Carr Station, where work has already been underway for close to two years with utility relocations and excavation of the tunnel launch pit, which will eventually form the future station. Additional stations are to be built at Mount Pleasant, Broadway-City Hall (providing transfer to the Canada Line), Oak-VGH, South Granville, and Arbutus. Tunnel boring is anticipated to begin this summer and take about a year, with the line scheduled to open in 2025.

DAILY HIVE, JANUARY 24

Travels with Jack May

Britain and the Baltics-Part I

by Jack May (Photographs by the author)

Thanks to those who inquired about Clare's recovery after they read about her accident in the final episode of my previous report.

With a great group of friends and relatives supporting her and keeping her busy, Clare was improving rapidly by the middle of 2017, and while she did not feel she was up for the second trip of the year we had planned, she urged me to find another roommate and go without her to the Baltic States. I ended up doing just that, traveling and rooming with Karl-Heinz Roeber, who Clare and I met on the Intra-Express tour of North Africa some years ago, and again saw in Ukraine on our previous shortened trip. Norwegian Air Shuttle, an ultra low-cost carrier who is no longer in business, was introducing non-stop service to Edinburgh from Stewart Airport, which is located on the

west side of the Hudson River about 60 miles north of both New York City and our home in Montclair, New Jersey. The fare was \$109 one way. With Ryanair charging a measly \$25 to continue to Riga from East Midland Airport in northern England (near the light rail cities of Nottingham, Birmingham and Sheffield), I decided to spend a week in Great Britain before reaching Latvia, traveling through that area by rail to visit the tramways in the region, and I even added the Isle of Man to my itinerary. Then Karl-Heinz indicated that the cheapest way for him to return home was to fly from Stockholm to Dusseldorf, and since Norwegian had a very low air fare from the capital of Sweden to JFK, we both decided to add Stockholm to our itineraries after the formal part of the VDVA traction tour ended in Helsinki. Thus the trip would stretch to almost three weeks. I soon distributed my itinerary to various friends in Great Britain with invitations to meet me, and found that as many as three electric traction enthusiasts would accompany me for six

of the days I would spend in the British Isles, and so there would be no chance for me to become lonely!

Sunday, August 13

On getaway day Clare drove me up to Stewart and dropped me at the door of the rather austere terminal at 7:55 PM, where I joined a long line of travelers who had just arrived by express bus from New York City. Nevertheless, the check-in line moved reasonably quickly, as did the makeshift security screening, and I was at the gate by 8:40 PM. The arrivals board had indicated that the aircraft had landed at 8:13 PM, and boarding for the 9:25 flight began at 8:55. I was placed in window seat 23A in the typical 3-and-3 arrangement of a Boeing 737 (selecting your seat ahead of time was an added expense on Norwegian). The flight was about ¾ full and the leg room was quite adequate. The aircraft pushed away from the gate at 9:32 PM and left the ground at 9:42 PM.

Meals and drinks were served in an efficient manner to those who had pre-ordered them, the lights were turned off and the flight was uneventful. I woke up at around 2:00 AM and saw a beautiful sunrise.



Dawn from my window seat on Norwegian's Boeing 737. This was the last time I saw the sun for 24 hours.

Monday, August 14

On our descent we passed through thick clouds and it was pouring rain when we hit the tarmac at 8:52 AM. We rolled to a stop at 9:00 AM in an area that seemed miles away from the terminal and were then taken by bus to immigration, which I negotiated easily. The tramway station is a bit of a walk from the international terminal, but fortunately the way was all covered, protecting me and other travelers from the rain. Oddly enough (but maybe not so odd), the express bus to downtown Edinburgh was loading from a much more convenient location.

John Hayward from Burgess Hill, a town about 40 miles south of London, was coming up to join me for a day's outing on Edinburgh's trams, and he arrived at the platform at 9:45 AM, almost exactly when I did. We first walked over to the tramway's information center and waiting room, which is

inside the original mock-up of the light rail vehicle. It had been displayed in various locations in the city during the project's early stages, mostly to provide information to the public and garner support. Being inside also kept us and our baggage out of the downpour and I was able to buy a day-ticket for £9 from a fare vending machine using my credit card. The machines take only credit/debit cards and coins (no bills), and do not provide change. (£, or British pounds, cost approximately \$1.34 each — or in another terminology, sell at a premium of 34 percent.)



At the Edinburgh Airport terminal of the tramway, this is the mock-up built to educate the public prior to the line's construction, which has since been repurposed (only slightly) as a lounge.



A CAF tram on the scissors crossover leading into the stub-ended center platform station. Note the "no pedestrians beyond this point" signs and that the line operates left-handed.

Before describing our day, here are some salient facts about Edinburgh and its new tramway. The origin of the city itself dates to ancient times, but the name that morphed into Edinburgh was applied by King David of Scotland in the 12th century. The "burg" or fortress was first portrayed as Scotland's capital some 200 years later. As Scotland's second largest city, with a population of about 500,000 (similar to Minneapolis), it is surpassed only by Glasgow, with slightly

more than double the number of residents. Scotland itself, occupying the northern portion of Great Britain, consists of but 30,000 square miles (almost as much as South Carolina) and contains a population of just under 5.4 million (in the ballpark of Minnesota). The city is a UNESCO World Heritage Site and is very tourist oriented, much like Washington, D.C., with many governmental buildings, historic structures and museums. It is dominated by Edinburgh Castle, towering above the city on Castle Rock. There are many arts and music festivals in the summer, and often a shortage of hotel rooms for the huge number of visitors. The Edinburgh International Festival, a series of performances from the world of music, theater and dance, was in full swing this past August and that is why I did not stay in Edinburgh overnight, as hotel rooms were incredibly scarce and prices high. I would spend my first night in Blackpool.



A tram approaches the York Place terminal in the center of Edinburgh. Trams turn on a single track, but it is expected that the line will be extended further to Leith and Newhaven. Low curbs protect the right-of-way from motor traffic along York Place and other streets in the city center.

The modern light rail system in Edinburgh dates back to May 31, 2014, some 58 years after the last double-deck car ran on the city's legacy tramway. It is 8½ miles long, and runs from the airport to the city center. A fleet of 27 CAF Urbos 3 low-floor cars operates on 7- to 10-minute headways. The seven-section double-ended cars are 140 feet long and make 16 stops on their 37-minute trip, with three being adjacent to ScotRail stations for easy connections to the national railway system. It is a spit-and-polish operation, with the cars moving quite fast between stops for the most part. The section west of the city center is on reserved track with protected grade crossings, while the slower portion in the built-up city center (five stations) is in pavement, separated from motor traffic by curbing, with the tramway's signals being coordinated with traffic lights. The line operates on new, attractive reserved track from the airport for the first six stations, twisting through fields and open land for the equivalent of five right-angle turns in a general southeasterly direction to the Edinburgh Park stop, where it

begins running eastward parallel to the Glasgow-Edinburgh mainline, but not actually on the railroad's right-of-way (see <http://www.urbanrail.net/eu/uk/edin/edinburgh.htm> for a map). It reaches the city center five stations later at Haymarket, where it begins running in the center of streets, albeit segregated from motor traffic. There are four more stops, with two on Princes Street, Edinburgh's principal shopping artery, where a large number of transit buses also operate. In fact, much of Princes Street is open only to trams, buses and taxis, and the south side of the street borders on a park leading to and affording views of stately Edinburgh Castle and other historic buildings. Then the line makes a sharp turn to the north and again to the east, to finally terminate at York Place.



An inbound tram stays on the mainline instead of heading into the Gogar depot and shop as it takes the curve approaching the Edinburgh Gateway stop. Apparently the word "Gogar" derives from early Scots and means cuckoo. I wonder if that's the appellation hat NIMBYs used to refer to supporters of the tramway when they fought (and lost) their attempt to prevent it from being built?

The line had to contend with a great deal of controversy starting immediately after the inception of its planning, and finally came in both late and way over budget. As a result, certain parts of the original plan had to be scrapped, but now a three-mile, eight-station northeastern extension to Leith and Newhaven (on the Firth of Forth), is under construction, based on the line's great success (ridership was 7.5 million in 2018). It should be opened for service in the Spring of 2023. See <https://www.edinburgh.gov.uk/tramstonewhaven/>.

Fares and their collection are also a bit complicated and have been somewhat controversial. The fare system is integrated with the local bus system, Lothian Buses (£1.70 one way and £4 for a day ticket), but only as far as Ingliston Park-and-Ride, the last station prior to the airport. The cost of traveling to and from the airport is sharply higher, £6 one-way and £9 for a day ticket. This protects the slightly faster airport express bus, which charges only £4.50, and as a result, much traffic has been diverted to the rubber-tired line. Interestingly, one of the things that John and I observed were airport passengers rolling their baggage to the

Ingliston station in order to avoid paying the surcharge (they did not do it during the morning's inclement weather, but later we witnessed it once the precipitation let up a bit).



Edinburgh Gateway, an attractive and modern station shared with Scotrail, did not open until December, 2016. The glass enclosed interchange facility allows passengers from Glasgow and other parts of Scotland to access the international airport.



Grassed track is a feature at the Edinburgh Park Central station and at several other locations. While it may be more expensive to maintain than a ballasted right-of-way, it provides the line with an attractive panache that is typical for French tramways (and in New Orleans).

The trams are operated with both a Driver and a Conductor, the latter checking tickets and answering questions. If a passenger does not have a valid ticket when he is approached, the fare becomes £10. This is not portrayed as a Proof-of-Payment type fine, but officially as the “on-board fare.” At times we observed a third employee on board, also checking tickets. He may have been some sort of auditor to keep the Conductor in line, or just present to help out between high-volume stations — I really do not know. Despite the large number of on-board personnel, it has been stated that the trams actually made money during 2017, with revenues exceeding operating costs.

Now to the narrative. John and I did not worry about the

rain at the start of our journey, as we had planned to travel straight through to the next-to-the-last station, St. Andrew Square, the location of Edinburgh’s bus terminal, where the price of a locker rental to store luggage is much lower than at the left luggage in the railroad station (£12 per item for up to 24 hours — more than \$30 since I also had what the airlines call a “personal item”). I certainly did not want to be burdened by my bags for the day’s activities — I mused that I could rent a car for the amount of the railroad station’s left luggage charge for just the purpose of storing my bags! As it turned out, thanks to John’s advice I ended up paying only £6.50 for enough locker space to stow my two items for less than 12 hours.



Two trams pass on the curve just west of the Edinburgh Haymarket station on the west end of the city center. The line has just left its reserved track and entered a short section of street track shared with motor traffic.

This ride, of course, gave me the opportunity to inspect the line and make some initial judgments, which included a recognition of how fast, smooth and comfortable the ride is. I wondered how long, with this new, excellent mode of transportation, the line’s surroundings will remain “green” before its population substantially shifts from four-legged to two-legged, with the current preponderance of grazing sheep and cows being replaced by the inhabitants of new residential developments.

Housekeeping accomplished (plus a stop to freshen up), we left the protection of the building and found it was still pouring. Nevertheless we walked to the end of the line at York Place (one more stop), which was not too onerous, albeit a bit windy, and grabbed some photos. Looking at the sky, we saw some brightness to the west, and decided to ride all the way back to Ingliston Park and Ride, before resuming our photography.

By the time we reached Ingliston the rain had slowed to a drizzle, for which we were thankful, and were able to take some photos looking toward the curved right-of-way leading to the airport.

We then began to work our way back toward Edinburgh’s

downtown, stopping here and there for photos, and eventually taking a bit of lunch at Morrisons, a large supermarket in a mall adjacent to the Gyle Center stop. I was rapidly using up the supply of British currency I brought with me and upon John's cautioning advice, I was loath to use ATMs to get more, as I would receive Scottish pounds, which could possibly present an annoyance if I were to try spending them on English soil below the border. Meanwhile we were being teased by the possibility of sun filtering through the clouds and perhaps the appearance of light shadows.



A tram heads outbound along Princes Street, at the end of a straight run through Edinburgh's principal shopping district. It is unusual that not a single bus is blocking the view.

After being refreshed we continued toward the city, continuing to hop on and off trams at various stations along the way.



Edinburgh Castle from the south sidewalk of Princes Street.

Finally the rain stopped and we walked along Princes Street, observing both the trams and the facade of Edinburgh Castle. We noted that there is a large amount of congestion along Edinburgh's main shopping street because of all the buses. It would be nice if some of the lines could be rerouted onto a parallel street.

Time was beginning to run short, and we soon returned to the bus terminal to pick up our luggage, and then walked the short distance to Waverley, Edinburgh's main railway station,

located next to a large shopping mall. John's train was earlier than mine, the 4:30 PM from Waverley to Kings Cross, and after seeing him off I had a fast "dinner" at the mall's KFC, as I knew I would not have time for refreshment in Blackpool, and my train was leaving soon at 4:52 PM.

My 150-mile ride to Blackpool, which included a transfer at Preston, was uneventful. Both trains were on time and not crowded, especially the second one. The first was in a comfortable diesel-hauled coach operated by Virgin West Coast, which was en route to Euston station in London (on a slower, longer schedule than John's Kings Cross-bound East Coast express), had an arrival time at Preston at 7:15 PM, and the second, a very austere set of Northern DMUs from Manchester Victoria, left Preston at 7:41 PM for the 25-minute run to Blackpool North. By the time I arrived it had begun raining again so I walked very fast and almost got lost heading for the Hotel Blackpool. Luckily I ran into a group of young adults (pub crawlers?) at an unsigned intersection who directed me. Wet, cold and tired I entered the hotel, which was not really that much more than a traditional Bed and Breakfast, and was heartily welcomed by the proprietors, who directed me to a roomy and comfortable accommodation via a series of stairs and passageways that made me think I was negotiating Fawltly Towers. But where was Manuel? I was out like a light before 9:30 PM after being up for some 32 hours since I had awakened in Montclair on the morning of August 13.



My favorite photo of the day: A scarce ray of sunlight bounces off the front of a tram that has scaled an overpass in front of a dark sky as it approaches the Bankhead station. The line has a mix of grade separations and level road crossings, with the latter protected by traffic signals or stop signs.

Just a note on the rain. I was in the British Isles for seven full days, and it rained in the course of every one of them. Fortunately, unlike my experience in Edinburgh, a great deal of the bad weather occurred at night, with the precipitation clearing away soon afterward, which resulted in reasonably long periods of bright sun during most of my stay.

Next month's installment will cover Blackpool's tram operations.