



Volume 67, Number 12 | December 2024

## Congestion Pricing — It's Baaack!

The MTA's congestion pricing plan just got the green light. The Federal Highway Administration has given its blessing to the Manhattan tolling program, which Governor Kathy Hochul revived earlier this month with a lower \$9 daily toll. The federal government's sign-off was necessary due to Hochul's plan to gradually raise the base fare. Hochul paused congestion pricing over the summer, saying the previous base fare of \$15 was too expensive. Now, drivers won't be hit with that daytime toll until 2031.

The MTA board approved the new tolling structure for drivers traveling south of 60th Street earlier this week. Federal Highway Administration (FHWA) official Richard Marquis wrote that no further analysis was necessary before initiating the tolls, which the MTA plans to activate on January 5.

Marquis wrote in a letter to the MTA that was posted

publicly on Friday, November 22 that the phase-in of the adopted toll structure and impacts associated with it was analyzed and mitigated accordingly. FHWA found that no additional environmental analysis was warranted.

Hochul initiated her earlier pause of congestion pricing by withholding her administration's signature from a document for the obscure federal Value Pricing Pilot Program.

The city, state, and federal government signed the form on November 21.

The MTA is planning eight public webinars with updates on the latest toll structure, running from December 4-19.

One of the leading opponents of congestion pricing, the Trucking Association of New York, said in a statement that it remained committed to a lawsuit arguing the tolls unfairly charge large vehicles a more expensive toll.

GOTHAMIST, November 22

#### **Electric Railroaders Association**

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

#### **Editorial Staff**

#### **Editor-in-Chief**

Jeff Erlitz

#### **Associate Editors**

Subutay Musluoglu, David Ross

#### **Circulation Managers**

Robert Colorafi (Electronic)
David Ross (Print)

#### Contact

erausa.org/contact

#### **Subscriptions**

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

#### **Back Issues**

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

#### In This Issue

Worldwide Electric Railway, Metro and Tramway Openings	3
Rail News in Review	3
ERA Celebrates 90 Years	17
Railroad Electrification Schemes of the 1970s	19
North American Transit Openings in 2024	22
Book Review	23
Travels with Jack May	24

#### **Donations**

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

#### **\$1000** and Above

Lewis Hitch, Richard Muller

#### \$500 to \$999

Clive Foss, Constantine Mandros, Dale Rothenberger

#### \$200 to \$499

Anonymous, Lawrence DeToma, Albert Holtz, Charles Long,

Juergen Nanders, Joseph Pranzo

#### \$100 to \$199

Mark Daitsman, James Dawson, Raymond DeGroote, Fred Eisinger, Paul Grether, David Horwitz, Douglas Jacobs, Arthur Jones, James Koryta, Jack May, Donald Mele, Robert Newhouser, John Pesuit, Vselovod Popov, Henry Posner, S Saltzman, John Spychalski, Peter Straus, John Swindler, John Urbanski, Christopher Zearfoss

#### \$50 to \$99

James Beeler, William Christensen, John Cocco, Richard Cotton, Burton Eisenberg, John Fellin, Dennis Fischer, Robert Fried, Geoffrey Graham, Kurt Kuhl, Joel Lubenau, John Raha, Robert Wright

#### **Up to \$49**

John Anderson, Thomas Appell, Glen Bottoms, Phil Burton, Vincent Cipollo, William Clark, Neal Cohen, P Allen Copeland, Gary Dobek, Ronald Drucker, Dominick Fallucci, Mark Feinman, Rev Charles Fischer, Carlton Gordon, Michael Herr, William Ingolia, Kevin Jones, Richard Kaplan, David Klein, Herbert Lauterwald, Pierre Lehmuller, William Loane, Michael Nadler, Rich Randall, Al Rizzo, Brian Roman, Philip Rosen, Steven Rosenberg, Manuel Sanudo, Tom Scheffer, Anthony Scoca, James Sparkman, Daniel Spencer, Donald Spivack, Herb Statsinger, Mark Walbrun, Michael Wares, Ronald Wasem, Stewart Woodworth

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

#### **Front Cover Photo**

After transferring our "base of operations" from Amsterdam to Brussels on Friday, May 17, day six of scheduled activities on the ERA's 2024 European tour took place in Brussels. After spending some time looking around the Brussels Tramway Museum at their Woluwe Depot, we boarded our chartered tram for our tour. In a timeless scene at the Jansons stop on Rue Moris & Chaussee de Charleroi along tram routes 81 and 97, "Standard" motor 5016 poses for a very quick photo. This double-truck motor, and many others, were built in the company shops of Tramways Bruxellois in 1935 to handle the expected crowds attending the Brussels International Exposition that year Jeff Erlitz photo

#### **Monthly Zoom Meeting**

Friday, December 20, 2024 at 7:30 PM.

#### **Presenting This Month: Andrew Grahl**

Andrew's holiday program is potpourri of current events and heritage photos from all over North America! The program includes:

- A visit to Salt Lake City views of the extensive light-rail network, Streetcar and the Frontrunner commuter rail. Some photos from the Olympic service in 2002 will also be shown
- Construction in Montreal Views of the REM network in service and under construction. Also a look at the famous Montreal Metro and EXO commuter rail network
- · PCCs return to Philly! Scenes of the recently-reactivated

PCC cars on Girard Avenue

- Heritage update photos of heritage units on Metro-North, New Jersey Transit, SEPTA and other systems.
- Kodachrome scans views of trolley, elevated, subway, and commuter rail from yesteryear. The scanner was busy!
- Scenes of local New York, Boston, Washington, and Miami transit will also be featured

#### **How to Join Our Zoom Meeting**

The Zoom registration link for this meeting is: https://us02web.zoom.us/meeting/register/tZUodOmtq-jkrEtO8yvu4uFCJjoFTif\_z2xv-. You can sign in at 7:15 PM. The show begins at 7:30 PM. If you have any problems, email Bob Newhouser at <a href="mailto:bnnyc1955@aol.com">bnnyc1955@aol.com</a>, or on the night of the meeting, text or call Bob at 917-482-4235.

#### Worldwide Suburban Electric Railway, Metro and Tramway Openings in November 2024

Date	Country	City	Segment		Rail/ Metro/ Tram
11/1	China	Guangzhou	Line 3: Panyu Square to Haibang	6.0	М
"	п	Macao	Seac Pai Van Line: Union Hospital to Seac Pai Van	1.0	М
11/3	U.S.A.	Los Angeles	C & K Lines: Aviation/LAX to Aviation/Century	1.2	М
11/7	India	Bengaluru	Green Line: Nagasandra to Madavara	1.9	М
11/10	Spain	Barcelona	T4: Glòries to Verdaguer	1.1	T
11/16	Philippines	Manila	Line 1: Baclaran to Dr. Santos	4.0	М
11/18	Spain	Seville	T1: Eduardo Dato to Luis de Morales	0.3	T
11/22	China	Jinan	Line 3: Tantou to Jinan International Airport South	7.9	М
11/26	TI .	Harbin	Line 3: Sports Park to Beima Road		М
11/30	"	Shanghai	Line 17: Oriental Land to Xicen		М
"	II .	Zhengzhou	Line 6: Changzhuang to Qinghuafuzhong	16.4	М
"	Greece	Thessaloniki	Line 1: New Railway Station to Nea Elvetia	6.0	М

URBAN RAIL NEWS, NOVEMBER 30

# Rail News in Review

## New York Metropolitan Area

# METROPOLITAN TRANSPORTATION AUTHORITY (MTA)

#### **November Financial Plan Presented**

The MTA released its final proposed 2025 operating budget and four-year financial plan and announced the plan has identified \$100 million in cost savings from increased operational efficiencies. Building on \$400 million in cost savings announced in July, this announcement brings to \$500 million the total expected annual recurring cost savings projected for 2025.

This November Financial Plan remains broadly in line with budget details announced in July. The plan had forecast \$50 million less in deficits for Fiscal Year '27 and '28, totaling \$100 million due in part to higher commuter rail recovery and growing vehicular traffic at Bridges and Tunnels crossings. This operating budget funds priority initiatives including the Queens Bus Network redesign, paratransit services, and fare evasion mitigation efforts. The 2025 Operating Budget of \$19.9 billion remains three percent below inflation adjusted spending since 2019.

The operating budget also achieves \$400 million in efficiency savings in 2024 and \$500 million in 2025. The MTA identified specific savings across all its agencies. NYC Transit efficiencies included implementing a new maintenance system cycle for railcars, more efficient scheduling of crews and consolidation of facility leases. LIRR and MNR streamlined equipment maintenance and implemented

various energy efficiency projects. Bridges and Tunnels reviewed staffing requirements and reduced vacancies.

This plan assumes a four-percent fare and toll increase in both 2025 and in 2027. The MTA will rebase ridership projections using the latest ridership numbers to build updated forecasts. MTA PRESS RELEASE, November 18

#### **NEW YORK CITY TRANSIT (NYCT)**

#### **Platform Barrier Installation Update**

Over the weekend of November 16-17, platform edge barriers were installed at Bedford Avenue Station on the BMT Canarsie Line. Northbound trains bypassed the station on Saturday and southbound trains bypassed it on Sunday while the work was being performed.

#### IND Prospect Park [3 G] Line CBTC Work

From Friday night, November 29, and continuing through to Monday morning, December 16, express Tracks B3 and B4 are out of service from north of Bergen Street Station to north of Ditmas Avenue Station. This is to allow Crosstown Partners, the joint venture working on the CBTC contract, S-48012, to install axle counters, signals, train stops, and the cable management system. That last item is the Europeanstyle trays that hold the signal cables along the tunnel walls.

During this period, the [] trains that are scheduled to operate express between Church Avenue and Jay Street-MetroTech will operate local.

#### 

From December 9 to December 31, during the weekday skip-stop period, ① and ② trains are making all stops between Crescent Street and Jamaica Center. This adds a few minutes of running time but it doubles the service at the stops that were formerly skipped. As a result, two extra train crews are needed, but only on the PM tour.

#### **BMT Brighton** (B) (O) Line Update

Back on August 5, express Tracks A3 and A4 were removed from service from south of Parkside Avenue to Kings Highway, along with the southbound platform at Church Avenue Station, to allow for the installation of ADA elevators at Church. (See August 2024 *Bulletin*, page 3 and September 2024 *Bulletin*, page 4.)

Service was briefly restored on the express tracks from Friday evening, November 22, to just before midnight on Sunday, December 1, a little over one week. During that time, however, trains bypassed Church Avenue Station in both directions.

Just after midnight on Monday, December 2, the express tracks were again removed from service (from south of Parkside Avenue to north of Kings Highway) and this will continue to the end of the year.

The southbound platform at Church Avenue was returned to service on Saturday, November 23. On Monday, December

2, the northbound platform was removed from service and this, too, will continue to at least the end of the year and probably well into next year.

#### New Elevators at 14 Street 1 2 3 Station

Two new elevators providing access to the street level and uptown platform at the 14 Street 123 Station were opened, marking another milestone in the 14 Street Station project. An elevator connecting the mezzanine to the downtown platform is expected to open later this year.

In addition to the accessibility work, crews created an enlarged mezzanine and new concession stand, installed new lighting and tiles, repaired concrete, steel and paint defects, and refinished platforms featuring ADA boarding areas.

The complex also features new artwork by Fred Tomaselli entitled Wild Things, a suite of six mosaics commissioned by MTA Arts & Design, which can be found at the passageway to Sixth Avenue and the stairs to both the uptown and downtown platforms. The Brooklyn-based artist drew from his own bird watching experiences and presents these scenes in his signature style. With a focus on species that live year-round in New York City, temporal reality enters Tomaselli's imagined world as he depicts a woodpecker, a cardinal, and orioles mobbing a falcon, composed in a collage-like manner. The compositions are comprised of vibrant traditional smalti (a type of glass mosaic tile), custom-made buttons and printed glass. The glass mosaics employ a variety of fabrication techniques to capture the artist's original collaged and painted images. The new artwork, with additional sections at 14 Street-6 Avenue 🔁 🔟 🕕 Station, adds more than 680 square feet of mosaic throughout the complex.



One of Fred Tomaselli's art installations at 14 Street Station. MTA photo

Earlier this year, three new elevators opened providing access from the street to the 6 Avenue platform and the uptown platform.

Approximately 29,000 passengers use the 14 Street Complex on a given weekday.



The new elevator, on the southwest corner of Seventh Avenue and West 14th Street. MTA photo

The \$300 million project to make ADA upgrades to this complex includes \$247 million in federal funds. Approximately 23.5 percent of the project budget has been awarded to DBE firms, which exceeds the project's original 22.5 percent DBE goal.

Once completed, there will be nine new elevators making the complex fully accessible, while also featuring 25 new staircases and 39 renovated staircases, as well as five platform upgrades, which include new tactile warning strips and ADA boarding areas.

MTA PRESS RELEASE, November 3

#### IND Rockaway (A) S) Line Shutdown

The MTA announced a wide-ranging substitute service plan to support transit riders in the Rockaways, as the lines undergo resiliency and rehabilitation work this winter. Riders will have a variety of service alternatives during this period including free shuttle buses, steep discounts on fares at the LIRR's Far Rockaway Station, and a free shuttle train extended to serve all stations on the peninsula between Far Rockaway and Rockaway Park. Rockaway residents can ride the LIRR from Far Rockaway for \$2.75 each way. Round trip tickets can be purchased at the Far Rockaway station.

The project involves completely reconstructing and rebuilding the Hammels Wye Viaduct and also making repairs to the Beach Channel Bridge. (Editor's note: Many sources, including the press release this news item is based on, incorrectly refer to this drawbridge as the South Channel Bridge.) Together, Hammels Wye and the Beach Channel Bridge link the Rockaway Peninsula with the rest of Queens and are part of a \$393 million investment to ensure reliable service on the Rockaway Line for the next 50 years.

During the shutdown, from January 17 until May 2025, A trains will short-turn at Howard Beach-JFK Airport and S shuttles will not operate between Rockaway Park and Broad Channel. Free shuttle bus service will be available to riders along two routes. The Q97 will run between Howard Beach and Far Rockaway via the Nassau Expressway. The Q109 will run from Howard Beach to Beach 67 Street via Broad Channel and Beach 90 Street.

Starting Monday, January 20, a fare-free shuttle will operate, serving all stations on the peninsula between Far Rockaway and Rockaway Park for the duration of the outage.

For additional direct service to Manhattan, riders can take the QM16 and the QM17 for express bus service. NYC Ferry also connects the Rockaways with Pier 11 at Wall Street. MTA PRESS RELEASE, November 14

#### **Holiday Train Rolls Again**

It's that time of the year so, once again, the New York Transit Museum is operating their Holiday Train every Sunday in December. Instead of operating from Houston Street-2 Avenue to 145 Street, the route is returning to 96 Street-2 Avenue. As has been the custom, the museum's collection of R-1/9 cars are being used.



R-1 No. 381 (American Car and Foundry, 1930) leads the 1400 F 2AV/96S (otherwise known as The Holiday Train) at 23 Street Station on December 3, 2017. This was one of the years these trains operated to 96 Street instead of the more traditional 145 Street. Jeff Erlitz photo

The train is operating on its usual schedule. It leaves 2 Avenue at 10:00 AM, 12:00 PM, 2:00 PM. and 4:00 PM and returns from 96 Street at 11:00 AM, 1:00 PM, 3:00 PM, and 5:00 PM. Scheduled running time is 19½ minutes

northbound and 21 minutes southbound. December 29 will be the last day of operation for this year.

#### **LONG ISLAND RAIL ROAD (LIRR)**

#### **LIRR Helps Battle Brush Fires**

LIRR President Rob Free was joined by Suffolk County Executive Ed Romaine to inspect a tank car that is helping control brush fires in the county.



A pair of MP15ACs bracket the LIRR's tank car at Speonk on November 20. Hector Garcia/MTA photo

The LIRR's tank car hold approximately 10,000 gallons of water and is staged in Ronkonkoma and Speonk during brush fire season. In normal conditions, the railroad uses the tank car to spray down rights of way, keeping brush moist and creating less of a fire hazard. They had already been shut down and stored for the season when a request from the Town of Southampton was received due to the threat of brush fires resulting from New York's severe drought. The LIRR deployed the tank car Tuesday night to spray water along the rights of way between Southampton and Speonk as a deterrent.

The tank car is available to local fire departments and can fill their pumper trucks when fighting fires near LIRR tracks. MTA PRESS RELEASE, November 20

#### **METRO-NORTH RAILROAD (MNR)**

#### **Transit-Oriented Development at Beacon**

the MTA issued a Request for Proposals (RFP) to transform a surface parking lot adjacent to the Beacon Station into a residential development with about 300-units of mixed-income housing and replacement parking for commuters, the latest effort to repurpose State-owned sites for new housing. The project aims to address the City of Beacon's efforts to foster greater connectivity between the waterfront, the Beacon

Station and its Main Street. The RFP is available on the MTA website. Proposals are due by Wednesday, December 18.

The RFP will facilitate the construction of as-of-right waterfront housing units, within walking distance to all the dining, entertainment, and amenities that Beacon's Main Street has to offer. Working with the State, the City of Beacon, and the development community, the MTA is leveraging an existing asset to generate new housing units, increase ridership, and support the City's economic development and land use goals.

MNR's first TOD project, Avalon Harrison, at the Harrison Station, opened last summer.

MTA PRESS RELEASE, November 1

#### **New Locomotives Delivered**

MNR unveiled new state-of-the-art 4,200-horsepower locomotives that will upgrade and replace the railroad's existing fleet of locomotives used for trains serving Poughkeepsie, Southeast, Danbury, and Waterbury. Known by the model number SC42-DM, the new locomotives will provide more reliable service and will be friendlier to the environment.

The new locomotives will travel much farther under electric power that the current fleet of locomotives they will replace, the P32s. Those operate under electric power only in the four miles in the Park Avenue tunnel leading to Grand Central Terminal, but the new locomotives are expected to operate in electric mode within the entire third rail-electrified territory, which extends to Croton-Harmon, Southeast, and Pelham. The new locomotives are rated Tier IV compliant, slashing airborne pollutants by more than 85 percent while they are operating in diesel mode.



**SC42-DM No. 301 is unveiled at the Harmon Shops on November 1.** Emily Moser/MTA photo

Enhanced reliability is made possible by new state-ofthe-art monitoring and diagnostic systems that allow crews to spot any possible problems quickly.

The first two locomotives unveiled are part of an eventual fleet of 33. Commensurate with levels of service in the diesel segments of the railroad, 27 of the locomotives are funded by the MTA and six are funded by the Connecticut Department

of Transportation. All will undergo testing and the first two are expected to be placed into passenger service in early 2025.

The locomotives are being built by Siemens Mobility, Inc., in Sacramento, Calif., under a \$414 million contract awarded in March 2021. The procurement of the locomotives, design reviews, test coverage, and vehicle inspection services were supported by STV.

The arrival of these first two locomotives, Nos. 301 and 302, is a significant milestone in the new locomotives program, marking the second phase of the locomotive qualification testing. Phase 1 takes place in Pueblo, Colorado, where the overall dynamic performance of the locomotive is validated. In Phase 2, the locomotives' performances will be tested in MNR's operating environment.

MTA PRESS RELEASE, November 1

#### **Holiday Train**

MNR announced that their first ever Holiday Lights Train will light up the rails on all three main lines starting Friday, November 29, and operating through New Year's.



MNR's Holiday Train is seen on the loop track at New Haven on November 26. Emily Moser/MTA photo

The Holiday Lights Train will be festooned with colorful exterior lights and special holiday-themed safety messages will play at selected stations. The lights have been applied to a set of M8s and will operate on the Hudson Line between Grand Central Terminal (GCT) and Croton-Harmon, on the Harlem Line between GCT and Southeast, and on the New Haven Line between GCT and New Haven. The Holiday Lights Train will operate on a random rotation of regularly scheduled trains on all three lines at all times of day and night.

### **NEW JERSEY TRANSIT (NJT)**

MTA PRESS RELEASE, November 24

#### **New Operator for Hudson-Bergen Light Rail**

The NJT Board of Directors has approved a contract for a new operator of the Hudson-Bergen Light Rail (HBLR)

system. The contract was awarded to ACI-Herzog JV, which will become only the second operator since the HBLR began operating in 2000. The contract includes operation of the light rail system and the maintenance of the light rail vehicles, infrastructure, and the right-of-way.

The approved contract includes a 15-year base period with two five-year options for extension. The cost is not to exceed \$1,517,057,398.99, subject to the availability of funds.

Since its inception, HBLR has been run under a design-build-operate-maintain (DBOM) contract. The construction component of the DBOM contract was completed and service began in 2000. That contract is approaching expiration in 2025. The current contractor will transition the operation and maintenance of the system to ACI-Herzog by September 15, 2025.

NJ TRANSIT PRESS RELEASE, November 13

#### **Portal North Bridge Progress**

Following a 30-hour journey down the Hudson River, the first of three arches to support the new Portal North Bridge arrived at the construction site, bringing the project a step closer to completion. The new bridge will replace the current 114-year-old swing bridge, which opens for maritime traffic and often has mechanical issues, resulting in service delays. The new bridge is a fixed span that eliminates the need to open and close, improving the reliability along the busiest stretch of passenger rail in the country.

Three tugboats, a heavy transport barge and a spacer barge towed the 5 million-pound, 400-foot-long, 50-foot-wide arch down the Hudson River beginning at the Port of Coeymans near Albany, N.Y. Traveling an average of five knots (about 5.75 miles per hour) down the Hudson River, it arrived near the bridge site in Kearny 30 hours later.

The new Portal North Bridge will rise 50 feet over the Hackensack River, more than doubling the height clearance and will allow marine traffic to pass underneath without interrupting rail traffic.



The first of three bridge arches has been put into place atop its piers over the Hackensack River last month. NJ Transit photo

The project is being funded by the U.S. Department of Transportation, New Jersey, New York, and Amtrak. In

January 2021, Governor Murphy announced the signing of a Full Funding Grant Agreement which secured \$766.5 million in Federal Transit Administration funding to support the project's construction.

In October 2021, NJT announced the approval of a \$1,559,993,000 construction contract awarded to Skanska/ Traylor Bros. PNB Joint Venture (STJV) for the construction of the new bridge. The contract represents the single largest construction award in NJT's history.

The Portal North Bridge project spans 2.44 miles of the Northeast Corridor line and includes construction of retaining walls, deep foundations, concrete piers, structural steel bridge spans, rail systems, demolition of the existing bridge, and related incidental works.

NJ TRANSIT PRESS RELEASE, November 26

#### PORT AUTHORITY TRANS-HUDSON (PATH)

#### AirTrain Newark

The Port Authority announced it has selected the joint-venture firm of Tutor Perini/O&G to design and build a new 2.5-mile elevated rail structure and three new stations to replace its existing AirTrain Newark on-airport transit system. The agency has now completed 80 percent of the procurement process needed to deliver a new modern, reliable automated people mover train system with this latest contract award in the agency's multi-phase procurement process to replace the current outmoded AirTrain system at Newark Liberty International Airport (EWR).



Rendering of the Terminal A station of the rebuilt AirTrain Newark. Tutor Perini/0&G

The agency's Board of commissioners voted to award the \$1.184 billion design-build contract to Tutor Perini/O&G for the design and construction of the new 2.5-mile elevated rail structure, known as the guideway, and three new stations for the new AirTrain system that will align with the ongoing redevelopment of Newark Liberty. The existing AirTrain Newark opened for service in 1996 and has become outdated and unable to accommodate growing air travel demand at

the airport, where the Port Authority opened a new and much larger Terminal A in 2023 to replace the previous 50-year-old terminal.

The agency is delivering the new AirTrain Newark system through a multi-phase procurement process, separated into procurement phases for the building, manufacturing, delivery, and installation of the system technology; early works; guideway and stations; a maintenance and control facility for the system equipment; pedestrian connections between new stations and existing airport facilities; and for the demolition of the existing AirTrain. In December 2023, after a rigorous review process, the Port Authority selected Doppelmayr, a market leader in cable-propelled transport systems, for the design, construction, operation and maintenance of the automated people mover system and its vehicles. In summer 2024, engineering firm Stantec was selected to design the new maintenance and control facility and the pedestrian connectors, and to decommission the existing AirTrain.

Tutor Perini/O&G consists of Tutor Perini Corporation (TPC) and O&G Industries Inc. (O&G), which together will be the lead contractor for the project and will work as a joint venture with joint and several liabilities.

Of the remaining procurement phases that have yet to be completed, the agency expects to award smaller packages related to the construction of the new AirTrain's maintenance and control facility and the pedestrian connectors, and to decommission the current system. Construction is expected to begin on the new AirTrain Newark system in 2025, with passenger service expected in 2030.

PORT AUTHORITY PRESS RELEASE, November 14

## Other U.S. Systems

#### **BOSTON, MASS.**

#### **Red Line Track Work Completed**

The MBTA announced the successful completion of track work on the Red Line while service was suspended between Harvard and Broadway the evening of November 17 through November 23 and between Harvard and JFK/UMass on November 24. The Red Line is now completely free of all slow zones for the first time in at least 20 years, joining both the Blue and Orange lines as speed restriction-free. The Green Line will be free of its final speed restrictions following upcoming track work in December, making the entire subway system free of speed restrictions.

Crews accomplished work to lift two speed restrictions along over 2,000 feet of track as part of the Track Improvement Program. Workers also maximized the outage by performing signal upgrades, security enhancements, station amenity upgrades, and more.

With unencumbered access to Red Line stations, crews accomplished the following work:

· Replaced 2,230 feet of rail



Looking east through Kendall/MIT Station on November 20 at the ongoing track work. MBTA photo

- Performed approximately 970 feet of full depth track replacement
- Replaced 177 ties and 3,350 plates
- Resurfaced and tamped 13,800 feet of track A variety of other work also took place along the Red Line to further enhance the rider experience, including:
- Stairway repairs at Kendall/MIT, Park Street, and Downtown Crossing
- Repairs to a tunnel construction joint in four locations at Kendall/MIT
- · Electrical room repairs at Kendall/MIT
- Signal modernization work, including the installation of wires and cable at Central's signal room, the removal and replacement of 15 WeeZee bonds, repairs and upgrades to additional bonds, switch and track circuit upgrades, and the installation of new switches at the complicated area of crossover track at Park Street
- Electrical work on the outbound Kendall/MIT headhouse
- · Security enhancements at Charles/MGH and Park Street
- The completion of door surveys and inspections at stations throughout the shutdown area
- Removed over 1,200 Pandrol Panguard plates with the installation of over 1,200 new resilient fastener plates between Park Street and Charles/MGH, which will improve noise/vibration mitigation and provide better maintainability
- Power modernization work, including replacing third rail at South Station as well as power and cable replacement at Kendall/MIT
- Plumbing and drainage improvements, concrete repairs, painting, bench repairs, brick replacement, and power washing within stations throughout the shutdown area MBTA PRESS RELEASE, November 25

#### CHICAGO, ILL.

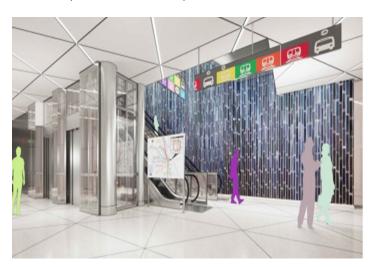
Major Changes at the Clark/Lake Loop Elevated Station

The Chicago Transit Board approved an amendment to an agreement with JRTC Holdings, the firm tasked with redeveloping the former James R. Thompson Center, which will result in major changes for the Clark/Lake Loop Elevated station.

As part of the amended agreement, CTA and JRTC have agreed to a change of easement for the property that will relocate the main station entrance from Lake Street, under the elevated tracks, to the northeast corner on Clark Street. Included in the project plan will be improvements to the station's mezzanine finishes to align with the design plans JRTC is spearheading for the overall facility.

All work and costs associated with the relocation of the station entrance and upgrading the mezzanine finishes are part of JRTC's overall facility renovation. Complementing these efforts, CTA will be planning \$10 million in improvements for the elevated platform. The overall project will be executed in the following three phases between late 2025 and late 2026:

- · Phase 1 (Station Entrance) November 2025
- Phase 2 (Remaining Scope) June 2026
- · Phase 3 (CTA Platform Work) Late 2026



Rendering looking east from street level at station entrance. CTA photo

With more than 9,100 average weekday entries, the Clark/ Lake station is one of the busiest stations across the CTA, with the elevated platform serving five of the agency's eight rail lines — the Brown, Green, Orange, Pink, and Purple lines, while the subway platform serves the Blue Line.

As with all major project work, every effort will be made to minimize impacts to CTA riders and services. Additional details regarding timing and service changes, including accessing the facility, will be announced at a future date. CTA PRESS RELEASE, November 13

#### PHILADELPHIA, PENN.

#### **December Fare Increase**

SEPTA is implementing a 7½-percent fare increase effective

Sunday, December 1.

Travel Wallet, SEPTA Key Tix, and contactless fare on buses, subways, and trolleys increases from \$2.00 to \$2.50 which is the same as the cash fare. Two free transfers on buses, subways, and trolleys remains but restrictions on direction of travel for transfers have been eliminated — introducing new flexibility that allows for more round trips on a single fare.

Single-trip fares on Regional Rail have increased to align Travel Wallet with Quick Trip pricing by Zone.

Onboard Regional Rail fares are the same no matter what time of day or day (weekday and weekend fares are the same). The Evening Weekday Off Peak Fare Discount has been discontinued. All daily, weekly, and monthly passes remain the same price.

Three Zone 2 stations (Overbrook, Wissahickon, and Tulpehocken) have been moved into Zone 1, bringing the total number of Zone 1 stations to 18. Passengers with a weekly or monthly TransPass+ (formerly called TransPass) can access all Zone 1 stations at no additional cost. This change supports the vision of SEPTA's Reimagining Regional Rail plan to integrate Regional Rail with SEPTA Metro and Bus. However, TransPass+ holders no longer enjoy free weekday off peak travel to/from all Philadelphia Regional Rail stations. Also eliminated was the free weekday off peak travel to/from Zone 2 or higher stations for TransPass+, and Zone 1, and Zone 3 TrailPass holders.

Seniors 65+ and kids under 12 continue to ride free. For more information on the fare plan, including a full breakdown on all increases and related modifications, go to https://www.septa.org/news/fall-2024-proposed-fare-adjustments/.

SEPTA's last fare increase was in 2017. Planned fare increases in 2020 were deferred due to the pandemic. SEPTA held public hearings on October 16, 2024 regarding this fare increase. SEPTA PRESS RELEASE, November 26

#### PORTLAND, ORE.

#### **December Fare Increase**

TriMet will be rolling out a more convenient way to purchase and reload Hop fare cards beginning in early December with the introduction of new touchscreen vending machines at five locations. They will allow riders to buy and reload plastic Hop cards at MAX stations and transit centers rather than the single-day-use Hop tickets dispensed by ticket vending machines today.

With the introduction of the transit fare card machines, riders will have a more convenient way to buy a Hop card or reload their card using cash or a credit or debit card.

Following an initial pilot of the new Hop card machines, running through early 2025, TriMet plans to start replacing all ticket machines across the MAX system in February 2025 as the machines are phased out to help improve reliability.

The first of the new machines will be installed at five locations: Willow Creek Transit Center, Beaverton Transit Center, Rose Quarter Transit Center, Gateway Transit Center and Portland International Airport. While installation of the

machines began on Wednesday, November 20, they will not be ready for riders to use until early December.

The machines will offer Adult as well as Honored Citizen cards (people 65 and older or who receive Medicare cards) and Youth fare. All new cards purchased cost \$3, but once you have the card in hand, there are no additional service fees. Simply reload at one of the machines or online at <a href="https://myhopcard.com/home/">https://myhopcard.com/home/</a>. Card holders also have the option of setting up auto reload.



Pallets with the newly-delivered vending machines. Tri-Met photo

TriMet will have personnel on hand at the stations and transit centers during the initial launch to help guide riders through the process if they have questions.

The first five machines are part of a pilot. Any needed adjustments will be made before additional Hop card machines are installed at more MAX stations and transit centers in February as ticket vending machines are phased out.

Buying Hop cards directly at MAX stations or transit centers will be a more convenient option. Currently, reloadable Hop cards are available at hundreds of supermarkets, pharmacies, and convenience stores throughout the metro area. But with Hop card machines at stations, riders will have access to the cards when and where they need them most with an easy reload option, especially for those using cash or a payment card. In all, 169 of the machines will be added to locations across the MAX system.

Hop gives riders control over how they ride with peace of mind, knowing they're never overpaying. You never have to pay more than the cost of a day pass for a single day or a month pass for a calendar month.

For people with a disability or who qualify for Honored Citizen Fare based on income or military status, you must apply in advance to receive an Honored Citizen photo ID Hop card.

The introduction of Hop card vending machines will mean the retirement of the paper Hop tickets sold at platforms. While these machines have been serving riders well for decades, the machines are obsolete, with parts no longer made. The new transit fare card machines will be more reliable and give riders more options. Using the machines, they will be able to quickly buy or reload a card using credit/debit cards or cash.

The old machines only issue tickets that cannot be reused

after a day, leading to extra waste. They also lack the monthly fare-capping benefits of Hop cards, where riders never pay more than \$100 for standard Adult Fare or \$28 for reduced Honored Citizen/Youth fare in a calendar month. Paper Hop tickets will still be available at the Customer Support Center and on TriMet buses for riders who pay with cash.

Riders without Hop cards will still be able to purchase adult fare, \$2.80 for  $2\frac{1}{2}$  hours or \$5.60 for all day, by tapping a contactless payment card or their mobile wallet on a green Hop reader. If you use the same fare payment device throughout the day and month to pay adult fare, you will receive the same fare-capping benefits as a Hop card user and never pay more than \$5.60 per day or \$100 in a month. If you ride often, a Hop card provides lost card protection and an auto-reload option.

TRIMET PRESS RELEASE, November 20

#### SACRAMENTO, CALIF.

#### **New Fare Payment System**

The Sacramento Regional Transit District (SacRT) announced a new initiative aimed at giving back to those who have served in the military. Starting in early 2025, SacRT will introduce its first-ever discount fare program for veterans as part of a new "Tap2Ride" Digital Identity service in partnership with the California Department of Technology (CDT) and the California Integrated Travel Project (Cal-ITP).

SacRT's six-month pilot program will provide discount fares for up to 60,000 eligible military veterans residing in the Sacramento region. The discount aims to recognize and support those who have served our country.

While the program will officially launch early next year when all the new tap devices are installed onboard buses and at light rail stations, military veterans can begin the pre-registration process now at the state website benefits. calitp.org, which is connected to the federal Department of Veterans Affairs database for easy eligibility verification.

Starting next year when SacRT has the "Tap2Ride" system in place, seniors aged 65 and older will also benefit from the inclusion of a digital identification framework when they register their credit or debit card. Although seniors aged 62 and older are eligible to receive discount fare under SacRT's approved fare structure, the age qualification for senior citizenship in the State of California is 65. That system taps into the federal Social Security Administration database to confirm eligibility and provides greater security while protecting the personal information of those using the system.

The new "Tap2Ride" program aims to make fare payment easier, faster, and more accessible for all riders, allowing them to pay for bus and light rail fares with just a tap of their credit or debit cards that are pre-registered through the Digital ID Framework. SacRT riders who prefer to continue using their existing fare payment methods such as Connect Card or ZipPass will have that option as well.

SacRT's partnership with CDT and Cal-ITP represents a

step forward in making transit more convenient for riders. As part of this initiative, SacRT is also planning to integrate all fare payment methods into a single unified system over the next year, providing a streamlined experience for all passengers. This will allow passengers to benefit from features like "fare capping," which automatically calculates the lowest fare based on the number of rides taken in a day. SACRT PRESS RELEASE, November 7

#### **SEATTLE, WASH.**

#### **Light Rail Connection Installed**

In order to perform work connecting East Link to the existing 1 Line, Link light rail was temporarily suspended between Capitol Hill and SODO stations from 10 PM Friday, November 8 through the end of service Sunday, November 10. Normal operations resumed at the start of service Monday, November 11.

During that time, crews commissioned a new signal house and communications system that will enable the connection of the 1 and 2 lines. Sound Transit provided a Link Shuttle bus bridge to transport passengers. The buses ran approximately every 10–15 minutes and stopped at all stations between Capitol Hill and SODO.

Link trains ran approximately every 15 minutes between SODO and Angle Lake and between Lynnwood and Capitol Hill. SOUND TRANSIT PRESS RELEASE, November 6

### **International**

#### **BARCELONA, SPAIN**

#### **Three Rail Projects Make Progress**

Spain's Ministry of Transport and Sustainable Mobility has awarded the first contract, worth €153.3 million, for a €410 million scheme to increase capacity for high-speed rail passengers at Barcelona Sants station.



Rendering of the expanded passenger circulation area at Barcelona Sants station.

Spanish Ministry of Transport and Sustainable Mobility

The first phase involves expanding the station on the Plaça dels Països Catalans side to provide a new high-speed train boarding hall, thereby separating arrivals from departures, and providing a new access from there to the commuter rail hall. The work will increase the station's floor area by 30 percent to the benefit of all passengers.

Two new entrances to the station will be built and connections to the metro and bus services will be improved.

The number of high-speed passengers using Barcelona Sants is expected to grow by 55percent to reach 74.7 million by 2030 compared with 2019.

#### LRT Extension

On November 11, Barcelona Metropolitan Transport Authority (ATM) opened a two-kilometer extension to the city's light rail network designed to transport an additional 24,000 passengers per day.



Citadis LRV operating on new APS section in Barcelona. Alstom photo

According to Alstom, the extension is the first light rail line in Spain to be equipped with its dynamic ground power traction system (APS), which eliminates the need for overhead catenary. Alstom has adapted 18 Citadis LRVs to use APS.

The extension marks the first phase of a project to connect Barcelona's two separate light rail networks, Trambaix and Trambesos, by building a 3.9-kilometer connection with six new stops.

#### **New Airport Trains**

Alstom has unveiled the design of the 10 new five-car Coradia Stream EMUs which it is building under a €177 million contract for FGC-Catalonia Government Railways. The trains will be introduced in 2026 on a new rail link to Barcelona Airport serving both terminals. The service will run to the airport from Sant Andreu, via Sagrera, El Clot, Passeig de Gràcia, Barcelona Sants, and Bellvitge.

The trains will have ample luggage space, wide gangways, 10 doors per side, 202 fixed and seven folding seats and will accommodate a total of 656 passengers. The EMUs will have level boarding, two reserved spaces and toilets designed for people with reduced mobility, and two multi-functional spaces for bicycles.



Rendering of a Coradia Stream EMU for FGC Barcelona Airport service.

INTERNATIONAL RAILWAY JOURNAL, November 12

#### **BERLIN, GERMANY**

#### **Berlin Government Cuts-Public Transport Suffers**

The state government for the Berlin region has announced major spending cuts for its 2025 budget. Facing a reduction of €660 million, public transport is the biggest loser in the plan, which aims to shave €3 billion from the €40 billion budget.

The most prominent cutback is the removal of the monthly subsidized €29 Berlin Ticket, a regional version of the popular national €49 Deutschland Ticket, which was introduced in July, and used by 210,000 people in October.



Class 481 345 (Bombardier Transportation-Henningsdorf, 2001) is leading an S9 trip to Spandau in this view looking east, just east of Berlin Hauptbahnhof on September 22, 2022. Jeff Erlitz photo

Removal of the Berlin Ticket is likely to take place in January and is expected to save a direct subsidy of €300 million paid to Berlin Transport Authority (BVG). Other savings have been found by increasing the cost of highly subsidized social tickets from €9 to €19. Free travel for school children has also been removed.

Capital projects are also suffering, with funding withdrawn for two projects to extend Berlin's light rail network. Other capital improvement projects will be delayed while plans to buy new electric buses have been shelved completely.

The funding shortfall has been prompted by the federal government's failure to agree on a 2025 budget and the subsequent collapse of the three-party coalition led by the chancellor. Less funding is now available for all 16 of Germany's federal state governments, meaning the proposed cuts for Berlin may be the first of several.

INTERNATIONAL RAILWAY JOURNAL, November 28

#### **DUBLIN, IRELAND**

#### **Light Rail Projects Progress**

The project to develop the Finglas northern extension of the Dublin Luas light rail network has secured approval from the Irish cabinet to proceed to the planning stage. A Railway Order for the project will be submitted to Ireland's national planning body, An Bord Pleanála, by December.

The approximately four-kilometer addition to the Green Line will primarily run in a segregated alignment and will extend the Luas network from Broombridge to the Finglas area of the city. Four new stops are proposed at St Helena's, Finglas Village, St Margaret's Road, and Charlestown near the M50 highway. Broombridge is on the planned DART+ West extension of the Dublin Area Rapid Transit electrified commuter network.



Citadis 401 No. 3016 (Alstom, 2004) is heading east on Benburb Street and is approaching the Museum stop on June 25, 2024.

David Šteiner photo via Urban Electric Transit

The extension is expected to offer journey times of 30 minutes from Finglas to Dublin city center and will serve planned housing developments in the area. A 350-space park and ride facility is planned near the St Margaret's stop.

The project is one of four Luas extensions included in the National Transport Authority's (NTA) Transport Strategy for the Greater Dublin Area 2022–2042. The extension could be operational by 2031, subject to planning and funding.

#### Galway

As part of updates to the Galway Transport Strategy, NTA has issued the results of a Light Rail Feasibility Study for the Galway Metropolitan Area.

The report is only intended to explore key issues and the technical feasibility of light rail in Galway, but has identified corridors with the greatest potential. Specifically, an east-west corridor through the city was found to have the strongest potential, with demand for around 7.5 million passengers by 2043. Further policies to support the Climate Action Plan could stimulate around 13 million public transport journeys, the study says. The study adds that there may be potential to justify a light rail line sooner if a Compact Development or Transit Oriented Development approach is taken to promote land use development.

INTERNATIONAL RAILWAY JOURNAL, November 11

#### **LEEDS, ENGLAND**

#### West Yorkshire Light Rail Project

The West Yorkshire Combined Authority (WYCA) has appointed a consortium of Jacobs and Mott MacDonald as the design development partner for the proposed West Yorkshire Mass Transit Program. The consortium will support WYCA to develop the first phase of the project, which will include new light rail infrastructure.



The project will include the construction of two new light rail lines. West Yorkshire Combined Authority

West Yorkshire has a population of 2.3 million, encompassing major cities and towns such as Leeds, Bradford, and Huddersfield, and is currently one of the largest urban areas in Europe without an urban transit system.

WYCA is targeting the start of construction on Phase 1 in 2028, which will include two new light rail lines: one running between Leeds and Bradford city centers; and a second that will connect St. James's University Hospital in the east of Leeds with the south of the city. Both lines will integrate with rail, bus, cycling, and walking options.

The consortium will support WYCA by taking the existing concept design through to completion, providing professional

services, and technical support necessary to deliver the first phase of the network by the end of this decade.

The British government, which reaffirmed its commitment to the project in its budget announcement on October 30, has already allocated £200 million to develop the new transit network. This funding covers design, consultation, environmental appraisal, obtaining planning consent, and some initial enabling works up to 2027. Consultation on the initial preferred routes for the two lines is expected to take place in late 2025.

INTERNATIONAL RAILWAY JOURNAL, November 13

#### **OSTRAVA, CZECH REPUBLIC**

#### **Christmas Tram**

The Ostrava Transport Company (DPO) decorated the most modern tram from its fleet for Christmas, the Škoda 39T.

Children playing on a snowy clearing, in the background the Ostrava city, forest animals, a comet with a 65-meterlong glowing light tail, 16 shining snowflakes. Everyone can enjoy the decorated Christmas tram of DPO this year.

A decorated interior, playing carols, a lighted Christmas tree and, during Advent, a program including, for example, musical performances, await passengers who ride with her. The Ostrava "Vánočka" runs across the city, on different lines, according to a special timetable.



Ostrava's decorated tram, 39T No. 1768 (Škoda, 5/2022). DPO photo

DOPRAVÁČEK, December 2

#### PRAGUE, CZECH REPUBLIC

#### Tram Extension to Open

Tram line number 19 will be extended to the Arkády shopping center in Pankrác on Saturday, December 14.

Traditionally, the track geometry car ČKD Tatra T3 No.

5521 (nicknamed "Pomeranč") was the first to set out on the new tram line. The line will be officially opened on Friday, December 13, and regular tram service will begin the following day.

The construction of a new section of track, approximately 250 meters long, in Na Pankráci Street started this year. The track ends at the intersection with Na Strži street. Both new Pankrác stops are located opposite Arkády shopping center.



Track geometry car No. 5521 (ĈKD Tatra, 1963), is on the single-track relay position beyond the new Pankrác terminal stop. This car was rebuilt from T3 No. 6258 in 1990. DPP photo

After the opening, next year the plan is to close the Pankrác Metro Station on Line C for about a year, due to the construction of Metro Line D.

DOPRAVÁČEK, November 27

#### **More Christmas Trams**

On Saturday, November 30, at 4:30 PM, Prague Transport Company (DPP) Christmas-decorated trams lit up Prague. The lighting of the vehicles took place in the Královka tram loop.

In cooperation with the company DECOLED from Dobrovíz near Prague, the Secondary School of Transport (SPŠD) decorated the following nine cars for Christmas:

- · Škoda 15T ForCity No. 9401 (Motol depot)
- · Škoda 14T No. 9170 (Kobylisa depot)
- · 2 ČKD Tatra T3R.P Nos. 8304 and 8305 (both Žižkov depot)
- · 1 ČKD Tatra T3M "Mazačka" No. 5572 (Pankrác depot)
- 1 historic two-axle motor Ringhoffer No. 2210 and trailer No. 1419 (both Střešovice depot)

All Christmas vehicles will run in Prague public transport from Sunday, December 1 until Tří král, that is, until Monday, January 6, 2025. The 15T will run on Sunday, December 1 on line no. 9, tram 14T on line 17, both T3s on line 11, Ringhoffer double-axle tram on historic line 42. For information on Christmas car timetables, visit the DPP website at https://www.dpp.cz/vanoce.

Last season, for example, the Christmas tram 15T traveled



One of Prague's decorated trams, 39T No. 9401 (Škoda, 2016).
DPP photo

8,736 kilometers during the Advent, Christmas, and New Year periods. She spent a total of 605 hours and 35 minutes on the streets of Prague and carried over 200,000 passengers. All vehicles combined are decorated with almost 32,000 Christmas lights this year.

DOPRAVÁČEK, December 2

#### THESSALONIKI, GREECE

#### **New Metro Opens**

In Greece's second largest city, the opening of the first line of the new, largely automated metro was celebrated on November 30.

The line is 9.6 kilometers long, runs exclusively underground and is driverless. For this reason, all stops are equipped with platform doors that remain closed until a train arrives and stops. Even if this is occasionally dispensed with in new systems at other locations, even with automatic operation, the Greeks are nevertheless following the prevailing trend for safety reasons.

The residents are visibly proud of their new means of transport. After all, they had to wait long enough to finally be able



Thessaloniki's new metro cars, supplied by Hitachi Rail, at the Pylaia Depot. Transport Ministry photo

to travel on it: Since the closure of the electric tram 67 years ago, local public transport here in the north of Greece has only been available in the form of buses on often congested roads. The steady increase in the number of city residents has seen the population grow from around 290,000 in 1950 to 825,000 today (1.03 million including the surrounding area).

First conceived over a century ago, concrete plans to build an underground railway were being considered in the 1960s. But it wasn't until around 30 years later that the project really moved forward. In 1999, a consortium including Bombardier was to begin construction of the first automatic lines, but after lengthy discussions, this contract was canceled four years later without any real work having begun. Following the renewed decision to build the system in its current form, the construction contracts were awarded to a Greek-Italian consortium in 2006, while Helleniko Metro S.A. also commissioned AnsaldoBreda to supply automatic metro trains. AnsaldoBreda's successor, Hitachi Rail Italy, supplied 24 four-car, 50-meter-long trains. A further 15 have been contractually agreed for future extensions.

(Below) Map of the Thessaloniki Metro, with the initial phase shown in red. Ministry of Infrastructure and Transport



Construction progress seemed to be endless, with repeated interruptions, whether due to geological or archaeological restrictions underground or the precarious financial situation of the state, the regional administration and the municipality for many years. The approval process up to the commissioning of the system also took time. Around 250,000 passengers per day are expected in the mid-term. Trains operate every two to five minutes during the day via a total of 13 stations. A branch line with five more stops to Kalamaria (Micra) is under construction. Further extensions envisage a circular line from the center with three branches in the future.

The approved total project budget amounts to €1.534 billion (excluding VAT), of which 40 percent is financed by the E.U. and 48 percent by the European Investment Bank. A consortium consisting of Egis and ATM Milan is responsible for operation and maintenance.

Thessaloniki's metro is only the second in the country, following Athens.

**URBAN TRANSPORT MAGAZINE, November 30** 

#### **TORONTO, CANADA**

#### **Queen Streetcar Resumes Through Service**

501/301 Queen streetcars began using new streetcar tracks on Adelaide, Richmond, and York Streets on November 10, as part of a route change that ended the need for 501B/301B Queen replacement buses. The new tracks also create additional streetcar diversion options in the downtown core for unplanned service changes, events such as the Toronto International Film Festival, and planned streetcar infrastructure work.

501/301 Queen streetcars will continue to divert around the Ontario Line construction between Queen and Victoria streets, but will now travel:

**Westbound**: via Queen Street East, south on Church Street, west on Richmond Street East and West, north on York Street, to Queen. (See the route map on the right).

**Eastbound**: via Queen Street West, south on York Street, east on Adelaide Street East and West, north on Church Street, to Queen.

This diversion provides riders with an uninterrupted streetcar connection to both sides of Line 1 at Osgoode and Queen Stations, as well as King Station and across the downtown core. TTC SERVICE ADVISORY, November 10

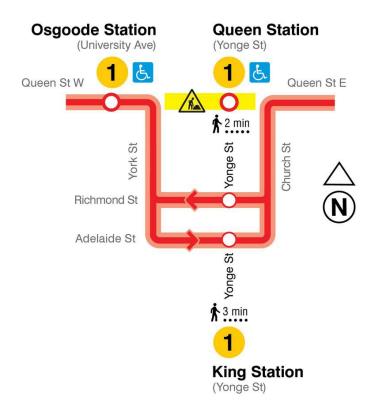
#### **WARSAW, POLAND**

#### **Tramway Extension Opens**

A 6.5-kilometer extension of the Warsaw tram network from Spacerowa to Miasteczko Wilanów opened on October 29. This apparently was Warsaw's longest new section of tramway added since the 1950s.

The extension is served by routes 14 and 16, with services every two to three minutes at peak times. Residents of Wilanów would now be able to reach the city center by tram

# 501 Queen



Map of the new Queen streetcar diversion. TTC

in a convenient way and twice as fast as by bus.

Budimex was the main contractor for the project, which was 40 percent funded by the EU. Some works are still to be completed, and will further reduce the journey time to the city center from 28 to under 25 minutes.

METRO REPORT INTERNATIONAL, November 6



View of the new tramway extension in Warsaw. City of Warsaw photo

## **ERA Celebrates 90 Years**

Subutay Musluoglu (ERA #6474)

Over the weekend of November 22–24, the ERA marked its 90th year as an organization. The occasion was celebrated in appropriate style with a series of events, starting with a tour of MTA New York City Transit's Coney Island Complex on the morning of Friday, November 22. Coney Island is the NYC Subway's primary rolling stock overhaul facility, comprised of multiple shops staffed with personnel representing a wide range of industrial trades, all collectively laboring to ensure that the subway's fleet of over 6,700 cars are in good working order.

The tour was led by Deputy Chief Mechanical Officer Thomas Tavolario, his Chief of Staff Vickie Rusnak, and other members of Coney Island's senior leadership. They walked the group throughout the entire complex, detailing the workflow as subway cars go through various stages of maintenance, explaining the functions of each of the support shops and how they maintain the vast array of motors, wheels, trucks, air-conditioning units, and assorted mechanical and electronic components vital to the function of each subway car. The group was also fortunate to observe a few examples of unique work equipment, including Track Inspection Cars TGC2 and TGC4, the Rail Grinder Train, a jet blower used for snow clearance, and several A-Division and B-Division cars retired from revenue service and now serving as work motors.



The ERA group at the NYCT Coney Island Complex on November 22. On the far right, one of our gracious hosts that day, Deputy Chief Mechanical Officer Thomas Tavolario. Directly behind the group is R-160A-1 No. 8484 (Alstom, 3/2008), and in the right background is R-160B No. 9177 (Kawasaki Rail Car, 3/2009). Subutay Musluoglu photo

Coney Island was hit hard by Superstorm Sandy in October 2012, with the storm surge causing nearby Coney Island Creek to overflow and flood the complex under several feet of water, causing much damage and disrupting operation for several

weeks. In the years since, significant investments have been made to avoid a future recurrence, including a perimeter flood wall and massive steel flood gates at several locations along the complex's perimeter. Also, a series of elevated bridges containing electrical power cables, and communications and signal lines now span the multiple yards over and above all the trackage, safely high enough to avoid inundation during a possible future extreme weather event.



R-63 Track Inspection Car No. TGC2 (Plasser American, 1988) at Coney Island on November 22. Subutay Musluoglu photo



Also seen at Coney Island Yard was the Loram rail grinder set. In the background is one of the elevated bridges built as part of the post-Superstorm Sandy resiliency work, conveying electrical power, communications, and signal cables over and above the yard trackage, safely high enough to avoid inundation during a possible future extreme weather event. Subutay Musluoglu photo

Our hosts were extremely gracious and generous with their time, patiently answering all the questions posed by attendees. All in all, it was a very informative tour, greatly appreciated by the group.

That evening, 43 attendees gathered at Manducatis Restaurant in Long Island City to enjoy a fine Italian dinner and a special presentation prepared and narrated by member Eric Oszustowicz (ERA #5985). Eric took the audience on a trip through time with select photographs of ERA members past and present, starting with the organization's founder, E.J. Quimby. Seeing both departed and present members together over the years on various fan trips and social gatherings brought back memories and emotions for everyone in the room. Time constraints and some technical difficulties postponed a second planned presentation by member Nick DiBari (ERA #6261), which is now planned for Summer 2025.



NYCTA R-17 No. 6688 (St. Louis Car, 1955) is seen at the end of the line at Short Beach on Saturday, November 23. Jeff Erlitz photo

On Saturday, a group of 32 visited the Shore Line Trolley Museum in East Haven, Conn. Operated by the Branford Electric Railway Association, the museum has one of the most historically significant collections of electric railway equipment in North America, including several units which once operated in New York City. The following six units were brought out of the barn and operated on the railway's 1.67-mile-long main track:

- Brooklyn Rapid Transit (BRT) No. 1792 Built in 1899 by the Laclede Car Company of St. Louis, Mo.
- Third Avenue Railway System (TARS) No. 629 Built in 1939 in the company's shops, operated in Manhattan and the Bronx until 1948. Shipped to Vienna, Austria and operated there until 1967, when it returned to the United States
- Interborough Rapid Transit (IRT) No. 5466 A
   Low-Voltage Motor built in 1924 by The Pullman Company
- Hudson & Manhattan (H&M) No. 503 A Class J car built in 1928 by American Car and Foundry
- New York City Board of Transportation (IND) No. 1689 An R-9 built in 1940 by American Car and Foundry for operation on the subway's Independent lines



IND R-9 No. 1689 (American Car and Foundry, 1940) is pulling IRT Lo-V No. 5466 (Pullman, 1924) and is about to cross the Farm River, a little more than one third of a mile north of the end of the line at Short Beach. Jeff Erlitz photo



In this view northeast across the East Haven Marsh Area, BRT double-truck motor No. 1792 (Laclede Car, 1899) is crossing the Farm River on its return trip to main shop area. This car arrived at Branford on November 8, 1952. At some point in its career, it had been renumbered from 1792 to 9730. Jeff Erlitz photo

 NYCTA No. 6688 – An R-17 built in 1955 by the St. Louis Car Company, with General Electric propulsion, for operation on the legacy IRT lines

Multiple trips were taken by all the units, with IRT No. 5466 and IND No. 1689 coupled for the day, one pulling the other, depending on the direction. The museum's dedicated volunteers, led by Lou Levinson, Shore Line's Board Chair and Superintendent of Railway Operations (ERA #7152) and museum staffer Jeff Hakner (ERA #6221), were extremely helpful throughout the day, which was quite cold. Though it started out under overcast skies, the sun finally broke through for the final hours of daylight, making for a fulfilling event enjoyed by all.

The weekend's festivities culminated on the morning of Sunday, November 24, with a small group of 13 visiting the



TARS lightweight double-truck motor No. 629 (TARS, 1939) glides through the woods on the edge of the salt marshes on its way to Short Beach. This car was one of the eight cars of this class transferred to Vienna, Austria in 1949. In Vienna, they were classified as Type Z and this car was renumbered to 4239. It came back to the US and arrived at Branford on December 15, 1966. It was renumbered back to its original number, 629, in 1970. Jeff Erlitz photo

New York Transit Museum. The ERA is not the only one celebrating a big anniversary in 2024, as it also marks 120 years since the opening of New York City's first subway, the Interborough Rapid Transit line (IRT) from City Hall to 145th Street in Harlem. Opening on October 27, 1904, the line was the first of many built over the following decades, creating one of the world's largest rapid transit systems that has forever transformed NYC's physical landscape, economy, culture, and identity.

To commemorate this important event in the city's history, the Transit Museum has installed a new exhibit — "The



H&M Class J No. 503 (American Car and Foundry, 1928) basks in the late afternoon sunshine on the loop track on the north side of the shops. Still in revenue service in September 1962 when PATH took over the operation from the H&M, she was transferred to work service in 1965, after the PA-1 cars from St. Louis Car Company arrived, beginning in 1964. She came to Branford in 1979. Jeff Erlitz photo

Subway Is..." ERA attendees were allowed to enter the museum earlier than the usual public opening time to see this exhibit and the group benefitted from the presence of its curator, Jodi Shapiro, who was on hand to highlight key aspects of the exhibit and answer questions. Everyone greatly appreciated this opportunity, and it served as a fitting close to a very enjoyable weekend for all who participated.

How the ERA will top this in 10 years for the organization's centennial in 2034 is not yet known, but it's never too early to start planning for it!

# What Could Have Been - Railroad Electrification Schemes of the 1970s Oil Crisis

Paul Grether (ERA #6933)

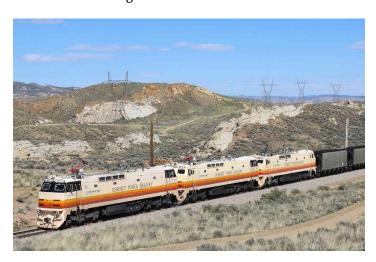
In the 1970s there were two instances of what came to be incorrectly known as the "Energy Crisis" but were specifically oil price spikes. There were two major increases of petroleum prices as a result of artificial shortages due to geopolitical issues in the Middle East. Domestic oil production was in decline, and the western world was importing more foreign oil. As a result of the Yom Kippur War in 1973 the Organization of Arab Petroleum Exporting Countries (a subset of OPEC) agreed to restrict oil exports to the west causing a 300-percent price spike. Later in 1979 production problems in Iran and Iraq resulting from the Iraqi invasion of Iran resulted in an additional 400-percent oil price spike.

With the wholesale elimination of steam in favor of diesel propulsion several decades earlier, the increased costs and shortages of critical diesel fuel alarmed American railroad management. Little could be done in the short term, so several railroads began to study the long-term feasibility and cost/benefit of capital investments in electrification of certain high-traffic trunk freight corridors.

The electric railway supply industry wanted the business of any implementation. General Electric had examples of various modern rectifier type high-voltage A.C. locomotives that it was suppling to various power utility coal mining railroad operations. One of the more visible examples is the demonstrator locomotives developed by the Electro-Motive Division (EMD) of General Motors and tested on the former Pennsylvania Railroad. These two locomotives represent what might have been. Painted bright white, to show off the lack of diesel exhaust carbon dirt and symbolize their efficiency, the units in and of themselves were certainly a

success. But for the investment needed in catenary, traction power substations, updated signaling and power generation they were a no-brainer when compared to an SD40-2 diesel counterpart. The United States railroad market was so committed to diesel that it is telling that EMD partnered with ASEA from Sweden to bring modern electric propulsion technology back to the United States. Not too many years earlier the United States was exporting electric locomotive technology to Europe as part of the Marshal Plan.

The state of electric mainline railroading in the United States was small. While never a major means of propulsion, many of the systems that were developed had been de-energized or abandoned, notably the Norfolk & Western and Virginian. The crisis prolonged the life of the two remaining electrifications. The Milwaukee Road, already financially marginal, actually made small investments in track repair but mismanagement could not prevent the power from being turned off in 1974. One wonders what could have been if the Milwaukee Road electrification had joined the two divisions and the railroad could have taken advantage of the savings during the oil crisis. The crisis certainly prolonged the life of the Penn Central's (former Pennsylvania and New Haven Railroads) freight electric operations. Later, under Conrail, serious consideration was given to extension of the wire from Harrisburg to Pittsburgh, but the end of the crisis in the early 1980s caused Enola Yard to be de-energized and the complete abandonment of the Port Road electric freight by-pass line when Conrail became diesel only. A lone E-44 locomotive at the Pennsylvania Railroad Museum in Strasburg is what remains.



The General Electric state-of-the-art electric freight locomotive of the 1970s was the E60, which was produced for several customers. Deseret Power Railway E60C #1 leads the afternoon coal loads to the Bonanza Power Plant just west of the Deserado Mine on May 2, 2024. Jerry Huddleston photo from Hampton, Minn. via Wikimedia Commons

There were several electrification investment considerations that the railroads examined, often with the assistance of consulting firms. Electric locomotives have far superior performance characteristics than their diesel counterparts. They are higher horsepower, have better starting tractive

effort and can "regenerate" power back into the traction power distribution system during dynamic braking to further offset energy costs. Electric locomotives also have a longer lifespan. A smaller fleet would be required to be maintained since modern electrics could replace diesels at a one to one-and-a-half or one to two ratio. Train acceleration and speeds would increase, which in turn squeezes more capacity out of existing mainline tracks and improves operational efficiency. Depending on the location in the country the purchase of electricity could be cheaper than the diesel fuel equivalent. The establishment of railroad-owned and -operated power generation was considered undesirable since loads could not be balanced between the railroad and other power customers like a utility, however the lack of available commercially generated power supply in certain rural parts of the railroads' territories was a significant concern.

The following chart captures information on railroad studies of electrification. Other railroads also studied electrification during this time including the Chessie System, Rio Grande and Missouri Pacific, among others, but details of these schemes are not available.

Extensions of Existing Electrifications			
Railroad	Line		
Penn Central	Kearny, N.J. to Albany, N.Y. (Selkirk Yard) - former New York Central Railroad		
Conrail (Consolidated Rail Corp.)	Harrisburg (Enola Yard) to Pittsburgh, Penn former Pennsylvania Railroad		

New Electrification				
Railroad	Line			
Southern Railway	Cincinnati Southern Railroad (Cincinnati, New Orleans & Texas Pacific) from Cincinnati, Ohio to Chattanooga, Tenn., with a potential extension to Atlanta, Ga.			
Illinois Central Gulf Railroad	Main line from Chicago, III. to New Orleans, La., with branches to yards in East St. Louis, III, Paducah, Ky., and Jackson, Tenn.			
Burlington Northern Railroad	Laurel, Mont. to Lincoln, Neb., plus a loop serving the Powder River coal basin via Gillette, Wyo., to Orin, then east to Northport, Neb., and Alliance			
Union Pacific Railroad	Main line from North Platte, Neb. to Salt Lake City Utah and Pocatello, Idaho			
Atchison, Topeka & Santa Fe Railway	Main line from Chicago, III. to Los Angeles, Calif.			
Southern Pacific	Main line from El Paso, Texas to Colton, Calif.			
Canadian Pacific Railway	Main line from Calgary, AB to Vancouver, BC with a mining branch at Golden, BC			

The Union Pacific Railroad erected two sections of test catenary on its system, one with domestic and another

with European components. One test section was intended to study the effects of extreme winter cold and summer heat on various catenary suspension designs, and was not energized. The other was energized to study the impacts on signal and communications systems. The first section went up in Farmington, Utah using European components and the second section was at Emkay, Wyoming and used domestic components. Each was about a half-mile long and only the Farmington section was energized. The Union Pacific actually solicited bids on 25 6,000hp electric locomotives but never awarded a contract due to economic slowdown in 1975.

The Canadian Pacific Railroad also erected test catenary comprised of components sourced from British suppliers at Ross Peak, B.C. in late 1972.

Several obstacles eventually kept any of the 1970s electrification schemes from being implemented. The largest was the massive cost of the investment and the rates of return being contemplated. As long as the cost of petroleum remained high then marginal cases could be made to investors to move forward, since a benefit of electrification could include market shifts of freight from diesel trucks to cost-effective electrified rail. Since it was prohibitive to electrify entire railroads, inefficiencies would exist at the switchover points similar to the Pennsylvania and Milwaukee Road electric operations where diesels would have to be swapped for electric locomotives. This is a time-consuming and inefficient process, furthermore diesels would have to operate under the wire to serve branch lines and local unelectrified customers along the mainline. Finally, the state of the supply industry and the time it would take to design and construct any project at such massive scales created time delay costs as well as expensive disruption to existing railroad operations. By the time decisions to invest were being contemplated, the "oil glut" period of the early 1980s started and the bottom fell out of the oil market with prices crashing. All serious electrification discussions by the private railroads stopped.

It is interesting to contemplate the decisions around electrification investment by the railroads during this period. What would a "modern" private electric freight railroad in the United States have looked like? Small examples existed in the Deseret & Western and the Black Mesa and Lake Powell railroads, but these were primarily single purpose coal mine to power station railroads. The decisions by the class one railroads were completely guided by cost/benefit for investors, not environmental or other concerns. From this perspective, knowing in hindsight how the oil market cratered in the 1980s, any railroad that had electrified would have made a huge mistake. Electric railroads from the public perspective, given environmental, geopolitical energy independence, passenger service and other concerns, may have different investment considerations...

#### Sources

1. Classic Trains Staff. (January 23, 2001) Railroad Electrification Proposals Classic Trains Magazine web site article, https://www.trains.com/ctr/railroads/railroad-operations/railroad-electrification-proposals/

- 2. Middleton, William D. (Spring 2001) *Electrics in the Diesel Age.* Classic Trains Magazine, https://www.trains.com/ctr/magazine/archive-access/classic-trains-spring-2001/
- 3. W. W. Withuhn. (Autumn, 1999) Railroads & Catenary: Risk and the Real Cost of Electrification. Journal of the Railway & Locomotive Historical Association.
- 4. W. W. Abbey. (Autumn, 1999) Why the Santa Fe Isn't Under Wires. Journal of the Railway & Locomotive Historical Association.
- 5. Editor (February 1973) News: Canadian Pacific Catenary. Trains Magazine.
  - 6. Editor (March 1975) News: UP Electrification. CTC News.
- 7. U.S. Department of Transportation, Federal Railroad Administration. (November, 1980) Railroad Electrification Activity in North America a Status Report: 1976-1978.
- 8. U.S. Department of Transportation, Federal Railroad Administration. (August, 1984) *The Energy and Environmental Impact of Railroad Electrification*.



Electro-Motive Division of General Motors teamed up with ASEA of Sweden to produce two electric locomotive demonstrators, the model GM6C (above) and GM10B (below), which were 6,000 and 10,000 hp respectively. They operated on Conrail electrified territory until the end of electric freight service in 1981.

Electro-Motive Division photos via Wikimedia Commons



# North American Transit Project Openings in 2024

By Randy Glucksman (ERA #3213)

Nine projects were proposed for completion this year, including two holdovers from previous years. Two were added, four projects were moved to 2025, and for three projects, there are no proposed opening dates. See the table below.

Date	Agency	City	Туре	Line	Details	Notes
January 27	Valley Metro Rail	Phoenix, Ariz.	LR	Northwest Extension Phase II	19th Ave & Dunlop to Metrocenter 1.6 miles 3 stations	
April 27	Sound Transit	Seattle, Wash	LR	Line 2-East Link LRT Phase I	South Bellevue to Redmond Technology 6.5 miles 8 stations	
August 30	Sound Transit	Seattle, Wash.	LR	Line 1-Lynnwood Extension	Northgate to Lynwood Transit Center 8.5 miles 4 stations	Added
September 21	CalTrain	San Francisco, Calif.	CR	Peninsula Corridor Electrification Project	4th & King St. to Tamien (San Jose) 27 stations 51.6 miles	Limited electric service began on August 11
November 3	Los Angeles County MTA	Los Angeles, Calif.	LR	C and K Link	LAX/Metro Center Station Opens	Added
	Toronto Transportation Commission	Toronto, Ont.	LR	Line 6-Finch West	Humber College to Finch West 6.83 miles 18 stations	From 2023, June 1, 2025?
	Réseau Express Métropolitain (REM)	Montreal, Que.	LR	REM - Light Rail (2nd Phase)	Central Station to Deux Montagnes & Anse-a-L'Orme 31.7 miles 14 or 18 stations	Moved to 2025
	Valley Metro Rail	Phoenix, Ariz.	LR	South Central Extension	Central Avenue to Baseline Road 5.5 miles 8 stations	n
	PATCO	Philadelphia, Penn.	HR	High Speed	Franklin Sq. re-opening	п
	Sound Transit	Seattle, Wash.	LR	Line 2-East Link LRT	Redmond Technology to Downtown Redmond 3.4 miles 2 stations	n
	Metrolinx	Brampton/ Mississauga, Ont.	LR	Hazel McCallion (Hurontario) LRT	Mississauga to Brampton 11.18 miles 19 stations	Opening to be announced
	Edmonton	Edmonton	LR	Capital	NAIT to Blatchford Gate	Completed, but not open
	Toronto Transportation Commission	Toronto, Ont.	LR	Line 5-Eglinton Crosstown Phase I	Kennedy - Mt. Dennis 11.8 miles 25 stations	From 2022 June 1, 2025?

Legend						
CR	Commuter Rail	LR	Light Rail			
HR	Heavy Rail					

## **Book Review**

Paul Grether (ERA #6933)

**The Development of the Modern Tram** Brian Patton, published by Adam Gordon, Brora, Sutherland, U.K. in 2006, hardcover, 208 pages, with extensive color and some black-and-white pictures. Large-format A4 hardback. ISBN 978-1874422648.

In the early 1970s prolific traction author Fritz van der Gragt published Moderne Trams (www.libib.com/u/grether?solo=63788871) in Dutch, which became an early standard reference for the evolution of modern tramway vehicles. As older systems were being replaced or abandoned, new "Stadtbahn" systems were opening in Europe. This would later be called "Light Rail" in North America. Van der Gragt captured the beginning in the evolution of modern vehicles, now with articulations rather than trailers, lower floors, automated fare collection and faster operating speeds.

THE DEVELOPMENT OF THE MODERN TRAM

by Brian Patton

Published by Adam Gordon

In the late 1970s and early 1980s investment now began in both existing surviving tram systems and expansion with the construction of new systems. While it is not possible to make a precise delineation between a tram versus a stadtbahn (streetcar versus light rail in North America), Nantes (1985) and later Grenoble (1987), France are widely attributed with starting the modern tram/streetcar revolution world-wide. This re-invention of the tram had impacts on vehicle design which is where Patton's book is focused. Patton builds on the early layout of Van der Gragt's early work and brings it into the modern tram era.

Broken up into eleven chapters arranged chronologically, Patton describes in great detail the evolution of the electric tram from the beginning of single truck cars, to double truck, various interior arrangements with a lot of detail on the development of the Peter Witt type, to PCCs and then the various developments in Europe, Asia, and Australia after World War Two. This is a vehicle focused book, other aspects of modern tramway development are covered only incidentally, inasmuch as they impacted vehicle designs.

Despite being written almost twenty years ago, Patton's work still provides an excellent overview of the complete evolution of tramway vehicle design from the beginning of electric cars up through present day completely low-floor designs. While most of the book is geographically organized, the globalization of the market into fewer and larger carbuilders means that the last couple of chapters are organized by manufacturer. Fritz van der Gragt, along with co-authors, updated his Moderne Trams into massive two-volume tomes in 2015, but it is only published in Dutch (www.libib.com/u/grether?solo=63788568). As such, Patton's monograph remains the most comprehensive English-language reference on the global history of tramway vehicle design.

Link to book information: www.libib.com/u/grether?solo=63788491



San Francisco Muni PCC No. 1016 and San Diego Trolley No. 1018 at the Western Railway Museum, May 5, 2019. Paul Grether photo

## Travels with Jack May

#### Modern Streetcars in Three Midwestern Cities — Part 1

By Jack May (ERA #2275)

Editor's note: With the completion last month of the series that Jack devoted to his 2017 European trip to Great Britain, the Baltic countries and part of Scandinavia, we switch our focus from foreign lands to domestic travel. One year earlier Jack visited the modern streetcar lines in Detroit, Cincinnati and Kansas City, which were then brand new. While the following report is now eight years old, and it should be pointed out that just this past summer Jack returned to Detroit and Cincinnati (Jack is awaiting the opening of a major extension to Kansas City's streetcar for a journey further west), the following detailed report should still be of value, as the infrastructure of the streetcar lines in the cities covered has remained virtually the same, despite changes in other aspects of operations like fares, ownership and color schemes. And his comment that he hasn't seen the streetcar lines in Salt Lake City, Milwaukee, Oklahoma City and El Paso, has long been corrected. Plus, "Detroit and Cincinnati Revisited" will be part of Jack's program for E.R.A.'s January 17 Zoom meeting.

Since Jack's visit to Cincinnati, there have been several changes to the system. Operations, while not perfect, are reliable because of improved procedures with parking enforcement and first responders. Additionally, the City of Cincinnati took over operations management of the system directly from SORTA, which is no longer involved with the streetcar. The City eliminated fares and this has resulted in huge ridership increases, with over 125,000 boardings per month and growing. The Cincinnati Streetcar has experienced the largest post-COVID ridership growth percentage of any streetcar system in the United States.

#### Tuesday, September 27 (2016)

An email message from Andy Sisk reminded me that I have a backlog of photos of locations that haven't been the subject of any of my trip reports; so, I finally got around to recording the details and hope they might be of interest.

A number are from visits to cities where "modern streetcar lines" have opened in the past few years. I don't want to get into a discussion about the semantics of that phrase, as I've always believed there is a continuum to what those in the electric traction hobby and the industry call streetcar, interurban, light rail, rapid transit, light metro, heavy metro, heavy rail, etc., and few of these terms are exclusive in the sense that we all can agree on which of these classifications are applicable to particular individual lines or systems. But it does seem that today there is some consensus and consistency within the North American transit industry with regard to the differences between streetcars and light rail — so I will go along with that rather than getting antsy.

Thus for the purpose of this series, I will limit myself to cities that have transit lines that use recently-built rolling stock that the industry considers to be streetcars, as opposed to light rail. While my age and experience draw me to the conclusion that PCC cars are still modern, especially those that have been rebuilt and air-conditioned, and continue to be used in revenue transit service as well as on lines that some classify as "heritage" in nature, these photo essays will be limited to Cincinnati, Kansas City, and Detroit. I have not yet seen Salt Lake City's streetcar line and am awaiting the re-inauguration of rail service in Milwaukee and Oklahoma City, as well as the rebirth of PCC operation in El Paso.

Most of the new streetcar lines, whether they are considered modern or heritage, seem to have been built for more than just transportation purposes, principally as a vehicle (pun intended) for a city or neighborhood's urban redevelopment, investment, and/or strengthening. This raises many

questions, including how one measures their success, but that will fall outside the purview of what I have written.

Cincinnati's modern streetcar line was inaugurated on September 9, 2016. As you will be able to see, I visited the Cincinnati Bell Connector, its official name, a mere  $2\frac{1}{2}$  weeks later, meeting John Wilkins and Dick Aaron in Indianapolis for a three-day journey that also included a tour of the Kansas City streetcar and rides on Amtrak's Hoosier State and Southwest Chief.

Cincinnati's line is 3½ miles long (a distance of two miles if you don't count one-way trackage on parallel streets separately) and was quite politically controversial. Before being sponsored by the local phone company, its five CAF Urbos 3 cars were painted in a different color scheme, but I arrived in the Queen City too late to see testing in the original livery (but I've included a photo for comparison taken by Andrew Grahl below). There are 18 stations, and service runs at a basic headway of 12 to 15 minutes along a route that looks like a stylized figure eight (see https://www.cincinnati-oh.gov/sites/streetcar/assets/Maps/streetcar\_map\_2023.pdf). The line is owned by the City of Cincinnati, but is managed by SORTA, the Southwest Ohio Regional Transit Authority (operator of Cincinnati's bus system), which had contracted its day-to-day operation to Transdev.

(Author's note: Transdev, which provides transit services all over the world, used to operate the streetcars in New Orleans and Detroit, and will run the line in Milwaukee that will soon come on line. The surviving entity after a merger with Veolia in 2011, it also has day-to-day responsibility for bus systems in many cities.)

Cincinnati has a population of about 300,000 and is located on the north bank of the Ohio River, which constitutes the border between the states of Ohio and Kentucky. It is the center of a metropolitan area that numbers over two million residents. Its earlier culture was defined by many German immigrants, and by 1900 some 60 percent of the city's population had German roots. But times change and



(Above and below) These two views are of equipment in the Cincinnati streetcar shop and storage facility, which handles all five CAF units. For the top photo, I had to stick my camera lens into a narrow gap in the fence along Henry Street and use a wide-angle setting. Cars enter the facility from Race Street and leave via Henry. The lower photo was taken by Andrew Grahl during the period the line was undergoing test operation prior to its inauguration — and therefore before it was renamed and had its livery changed. That view is exactly opposite in direction to that of the upper photo.



considering that the Ohio River can be theoretically defined as a western extension of the Mason-Dixon line, a large number of freed slaves began to take root in the Queen City [of the West]. Nowadays, after a large exodus to the suburbs by the descendants of its earliest settlers, the inhabitants of the city are about equally split between black and white.

Cincinnati once had a large streetcar network, and was a center of longer-distance electric traction service from adjacent areas, including cars that crossed the Ohio River from Newport and Covington, Kentucky, as well as interurban lines that came in from the north, such as the famous Cincinnati and Lake Erie Railway that covered the breadth of Ohio. In fact, a subway was planned and partially built to route interurban cars off the streets of the city (with sections



The Philippus United Church of Christ dominates the northern end of Race Street. The upper view shows a car en route to the Findlay Market stop where it will lay over if it completed its northbound trip early. A closer look of the church's steeple indicates it is not the middle finger which is held upward, but rather the index finger pointed to the heavens. Until 1921 services in this kirche were conducted entirely in the German language.

still available for public inspection). Its traction heritage also includes inclines, double overhead for current collection (forcing the use of twin poles, like trolleybuses), and being the home of the Cincinnati Car Company, a major manufacturer of streetcars. The last cars obtained for operation in the city prior to the abandonment of the system in 1951 were PCCs, which eventually totaled 53, both prewar (air-electric) and postwar (all-electric) models. All but one was sold to Toronto in 1950, where they continued in service for many years. The new cars, which were built by CAF, and are numbered 1175–1179, starting right after 1174, the last PCC number (which was a renumbering of car 1000, the Cincinnati Street Railway's only Pullman-built unit; a Brilliner was built at the same time, but all the rest were manufactured by St. Louis Car).

There are several traffic generators on the new line, including the Great American Ballpark (Cincinnati Reds), U. S. Bank Arena, Fountain Square, the Contemporary Arts Center, the Aronoff Performing Arts Center, the main library, Washington Park, and Findlay Market, plus all the downtown skyscrapers. Nevertheless, the line has not yet met its ridership goals and the number of passengers actually declined in 2017. Among its problems are a great deal of interference by motor traffic, badly parked vehicles and uncoordinated traffic lights — which lead to service unreliability. Nevertheless, it was fun to ride and photograph on Tuesday, September 27.

Fares are \$1 for a single ride and \$2 for a day pass, and we purchased the latter from a machine after driving down from Indianapolis (120 miles, two hours) in an Enterprise rented Chrysler Jeep that I obtained at Indianapolis Airport the preceding evening. We parked in the multi-level Central Riverfront Garage at the southern end of the line and spent most of the day riding and walking the line for photos. We observed many passengers aboard the streetcars, but apparently the



The OTR in the name of the grocery store at right stands for Over-The-Rhine. A southbound streetcar on Race Street is about to cross Liberty Street.

ridership has gone down since, probably because of the aforementioned reliability issues and headways that may make it more desirable to walk if the distance to be consumed is small.

The name Over-The-Rhine (Über den Rhein) comes from the large German population that settled the area during the 19th century, and who colloquially substituted the German river's sobriquet for the Miami and Erie Canal, which constituted the district's southern boundary. The waterway along the neighborhood's lower boundary, which was partly used for the ill-fated Cincinnati Subway project, was drained and filled in to become Central Parkway. Residents and workers would cross "over the Rhine" to reach downtown from the area. Liberty Street, which the streetcar shown above is about to cross, marks the southern edge of today's Cincinnati Brewery District, which now houses the Rhinegeist and Moerline breweries. The neighborhood fell into hard times and disrepair by the middle of the twentieth century, and its sturdy building stock is now undergoing extensive reconstruction, partly brought about by the advent of the streetcar line. I saw cement mixers and other construction vehicles on just about every block while walking and riding through the gentrifying neighborhood.

Six-acre Washington Park, in the heart of Over-The-Rhine,





(Above and below) Washington Park is featured again, with the upper view showing a northbound streetcar heading west along West 12th Street as it crosses Race Street, while the photo below shows a southbound car on Race Street approaching West 12th, to the right (east) of Washington Park. The steeple in the background adorns the Prince of Peace Lutheran Church (1871).



is featured in the photo at bottom left and the above two views as well, as streetcar track runs along its western, southern and eastern edges. It was originally a cemetery, but in 1888 was converted into a park for the Ohio Valley Centennial Exposition.

Part 2 will focus on the lower half of the Cincinnati Streetcar line, where it traverses the Queen City's business district.

(A note of interest, the streetcar tracks on Central Parkway are constructed on the roof of the Cincinnati Subway tunnel. Another note, the streetcar rail at the southernmost end of the line below Third Street utilized track slab provisions in the Fort Washington Way freeway bridges built as part of the riverfront redevelopment. In order to fit the rail into the bridge decks, New York City Transit 100-8 low profile subway rail was utilized, which was purchased as an option off of a NYCT annual rail steel mill run procurement.)

(Left) The building behind the streetcar is the Transept, a wedding and event space containing a two-story ballroom. It was originally built as St. John's German Reformed Protestant Church (Deutsche Protistantische St. Johannes Kirche) in Over-The-Rhine in 1867. The northbound car is heading away from the camera and is shown on the south edge of Washington Park, ready to turn along its western side.