

The Bulletin



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NEW YORK RAILWAYS STREET CARS QUIT 80 YEARS AGO

by Bernard Linder

(Continued from June, 2016 issue)

CABLE AND ELECTRIC CARS REPLACE HORSE CARS

Broadway horse cars started operating on or about June 22, 1885. To provide food and medical care for its fleet of 3,500 horses, the company built a four-story addition to its stables located on the block bounded by Sixth Avenue, W. 50th Street, Seventh Avenue, and W. 51st Street. Each horse made three round trips between the Battery and Central Park every two days (15 miles per day).

Because electric traction was not perfected in 1886, several companies experimented with battery cars, whose speed was 8 to 10 miles per hour. Battery cars using different materials operated on Broadway, Fourth Avenue, and Second Avenue. The tests revealed that battery cars were more economical than horse cars and their receipts were much greater. Unfortunately, the batteries were very heavy and they had to be removed frequently for charging. After testing the battery cars for 60 days, it was obvious that they could not handle the heavy traffic on busy lines.

Instead the company decided to convert to cable traction on Broadway. During construction, the horse cars were rerouted to Church Street. Power for the cable was supplied by a 2,000-horsepower engine at W. 51st Street and a 4,000-horsepower engine at Houston Street. Signal boxes, 500 to 700 feet apart, were installed in the street near the tracks. If two covers were lifted and a button marked "stop," "start," "fire," or "blockading" was pressed, a signal would be recorded on a dial in the engine room. A gong would ring

and the box number would be recorded on tape.

On May 25, 1893, the cable cars started running on Broadway between W. 59th Street and Bowling Green. At first 65 cable cars were available, but 55 horse cars were still operating due to the shortage of expert gripmen. Until they were able to handle the cars in heavy traffic, the cable south of Houston Street was operated at 6 miles per hour. New drums were installed which increased the speed north of Houston Street from 6 to 8 miles per hour. A year later 145 cable cars were running every 38 seconds on the busy portion of the line. Cable cars operated from 5 AM to 3 AM while horse cars ran on a 20-minute headway from 3 to 5 AM. Cable cars were illuminated by condensed coal gas made from crude petroleum by the Consolidated Gas Company at W. 42nd Street and Eleventh Avenue. Gas was condensed in the power house on Sixth Avenue, transmitted to Seventh Avenue, then charged in cylinders under the cars. Each cylinder contained enough gas to illuminate a car for twelve hours. In the first year, the Broadway cable reported a gain of 25 percent in total traffic and a decrease of 20 percent in operating costs.

The Columbus Avenue cable line was under construction from December 4, 1894 to February 14, 1895. After work was completed, 100 cars were operating on a one-minute headway. Power was supplied from the W. 50th Street power house formerly used for Broadway cars. Lexington Avenue horse

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NEXT TRIP: WEEKEND TRIP TO ROCHESTER/CLEVELAND/BUFFALO — OCTOBER 15-17

FROM RECOGNITION TO DOMINANCE: THE NEW YORK CONNECTING RAILROAD (BRIDGING THE BAY AND CONNECTING THE PIECES)

by George Chiasson
(Continued from July, 2016 issue)

“POCKETING” THE NEW YORK CONNECTING RAILROAD; GETTING BEYOND THE PENN STATION PROJECT

Though its elements were already clear and the associated requirements, estimated costs, and implications known, firm planning for the Pennsylvania's marine-based, freight-hauling main line across New York Bay and through the quickly-expanding city of New York did not immediately come to fruition. The first bits of New Jersey land for it were acquired in expectation soon after the initial portion of the New York Bay Railroad was completed through Waverly Yard in 1890, consisting of wild marshlands in the lightly-populated flood plains of Jersey City, but otherwise the New York Connecting Railroad continued to be little more than an idea and was strictly held as a “breast pocket” corporate entity. Only after it was clear to President Thomson by the latter half of 1897 that there would be no “Lindenthal” bridge across the Hudson River (and then largely at the urging of Vice Presidents Cassatt and Rea) was any further action taken at all. Nevertheless, the railroad was also forced to wait out the geographic and political machinations that came with the Municipal Consolidation of 1898, as well as corporately digesting the repercussions of legislation passed in Albany during this time that was intended to encourage the separation of existing railroad operations from densely-populated urban areas as much as possible. Engineering analysis of the freight main line across New York Bay was ongoing while the Pennsylvania covertly moved forward with its own plans to establish Pennsylvania Station in Manhattan, the resultant arrangement empowered all the more after its chief internal advocate, Alexander Cassatt, was ascended to the company presidency in 1899. It was on his watch that the first actual contract associated with the project, that for installing a bulkhead and dredging the Jersey City marshlands to provide for the future construction of Greenville Yard, was awarded on March 24, 1900. By that time the Pennsylvania was also quite advanced in its quest to officially gain corporate control of the Long Island Rail Road, which would represent the most crucial element of all in formulation of the New York Connecting scheme.

Whereas the evolution of Penn Station outwardly remained the Pennsylvania's prime focus through these years, within the company almost as much energy was dovetailed into the minutiae associated with its freight-hauling counterpart. This colossal venture was certainly not as obvious in the media because it attracted much less governmental oversight and public scrutiny, even though there were even more geographic and jurisdic-

tional barriers involved as well as an almost-equal amount of civil endeavor. Nevertheless, the project's ultimate purpose was generally hidden from plain sight and its anticipated interaction with the public at large was expected to be minimal. It was this prognosis that granted the Pennsy's management comfort in its anticipation of mild encounters with officials of the City of New York, though the reality that actually transpired turned out to be almost the complete opposite. It has been postulated that the long-established institutional barriers to creation of a railway terminal in Manhattan (and with it the vastly upgraded freight main line across the Bay) were in some ways guided by the random hand of circumstance after being thwarted for several decades. Mayor Seth Low (1850-1916), a native of “distant” Brooklyn, was the personification of this pitiable sentiment, being as he was a single-term, “reform” politician of the “Fusion” Party and, as his actions later proved, a true “*vox populi*.” In fact Mayor Low was a unique product of his extraordinary times, an output created by the unrelenting development of the (unelected) “populist press” that was overwhelming the city's public discourse by the turn of the 20th century. Even more than 100 years later, some civic historians maintain that Low's ambitious mayoralty (an administration perhaps unparalleled in its various forms of execution, relative to its brevity, until that of Rudolph W. Giuliani in 1994-2002) wouldn't have happened at all were it not for the murderous “Ice Trust” Scandal that was suffered upon city residents at the hands of Tammany Hall (and its inherently corrupt minions) during the unusually hot summer of 1901. Whatever the case, it seems clear in retrospect that the concrete development of Pennsylvania Station would likely have taken far longer to achieve and been gained at a far greater cost than it did were he not present, willing as he was to address the Pennsylvania Railroad on its own terms and in the context of the project strictly on its own merits (as opposed to his own self-interests). Low and Cassatt were figuratively joined at the hip in a strange sort of way as a result; each had his own set of daily demons to confront and struggle against — the Mayor with oft-nefarious city officials over whom he had very little control set against a city that was fairly exploding outward in all directions; Cassatt with the interminable congestion and demands plaguing his railroad, set against an ever-present drum-beat of erstwhile public (and shareholder) entitlement and the exigencies of his company's vast, highly-skilled work force. Each man's position in the otherwise altruistic undertaking represented by the New York Terminal

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From Recognition to Dominance

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project thus manifested itself in different ways. Cassatt was a master of circumstance only inasmuch as his railroad would be able to pay its own way (and pay highly) while checked by governmental capriciousness, while Low was bound to attain a maximum result as rapidly as possible for benefit of the citizenry, through the select channels over which he held sway. In the end these conditions advanced the completion of a magnificent passenger terminal, but for a time that success may have come at the expense of its freight-handling counterpart.

State and federal permissions for construction of the New York Connecting Railroad, a process which was ongoing through the years following its initial incorporation, were slow in coming, with the War Department (which controlled waterway navigation) and the State of New York finally assenting to the installation of a bridge across the Hell Gate Channel in 1900. As things at last grew serious about the line in the railroading sphere following Cassatt's public announcement of the New York Terminal project in late 1901 (just after Low's election), the Pennsylvania bought a controlling interest in the heretofore-underfunded New York Connecting Railroad Company during April, 1902, and then per agreement split this charge with the New York, New Haven & Hartford. A franchise application was filed with the New York City Board of Rapid Transit Railroad Commissioners on June 11, 1903, but only a tentative approval was granted a year later on June 23, 1904, some months after Seth Low had been succeeded in the Mayor's office by Democrat George B. McClellan, Jr. As time proceeded even farther the shadow influence of Tammany Hall upon such affairs as formation of the New York Connecting Railroad became more pronounced, especially as tangible construction of the Pennsylvania Station project gained momentum. Perhaps predictably, its initial authorization was ultimately denied on April 18, 1905 after a loathsome public debate ensued over the proposal's alleged negative social and economic side-effects on the communities through which it would pass. This result set off a lengthy round of corporate and political wrangling, rooted in part upon public perceptions of railway voracity and off-set by the self-serving, custodial nature of Tammany Hall's common and quite predatory means of endorsing such endeavors. Demands were made affecting both the New York Connecting and Penn

Station projects and accommodations were reached at length, though there is no surviving evidence to support an assertion that the railroad participated in one of officialdom's oft-all-too-common "pay-to-play" schemes to bring about a resolution. Rather, it in fact considered scuttling the New York Connecting project for a time and actively sought to develop alternative routings that circumvented New York City entirely. In the end cooler heads prevailed, and after a revised application was re-submitted on November 17, 1905, followed by a generous amount of negotiation and dialogue, Mayor McClellan's office at last granted the New York Connecting Railroad its full and complete approval on March 14, 1907 and the final institutional barrier to its construction was removed.

In the meanwhile, and in anticipation of its first attempt at municipal endorsement, the Pennsylvania had underwritten a broad-based series of profound, publicly-inspired infrastructure improvements along the projected length of the New York Connecting Railroad, both directly through its Long Island Rail Road subsidiary and (apparently) indirectly in partnership with the New Haven Railroad. As alluded above, the New York State Assembly passed a series of statutes simply known in surviving records as "The Railroad Act" through the 1890s, designed to encourage the separation of existing roads from close (at-grade) interaction with densely-populated communities through which they passed, an objective to be accomplished largely through the elevation or lowering of trackage that had originally been laid at ground level and included an increasing quantity of grade crossings as said communities had developed. This was indeed a statewide but financially unsponsored initiative and one into which the Pennsylvania and New Haven both were drawn, precisely coincidental with the timeframe of development for the New York Connecting Railroad. On the Long Island Rail Road's Manhattan Beach Division this undertaking was planned, designed, and enforced through a municipal body known as the Brooklyn Grade Crossing Commission (formed May 29, 1903), with the associated costs divided between LIRR and the City of New York. In the new Borough of the Bronx, the entire project affecting the Harlem River Branch was designed, executed and funded through the New York, New Haven & Hartford Railroad Company in (wayward) anticipation of an increased transportation role that in reality it was never able to attain.

(Continued next issue)

CORRECTION

In the July, 2016 issue of the *Bulletin*, the article about the Rockaways (page 1) has an error about the local fare charged. To ride locally, the passenger paid three fares, two into the turnstile and a third to the agent. When the passenger exited the system, the transfer entitled him or her to a refund of one fare, thus paying

two fares for the local ride. This might have been to protect the revenue of the bus line. See this scan: <http://www.thejoekorner.com/transfers/rockline.gif>.

Thanks to member Joseph Korman for the correction.

New York Railways Street Cars Quit 80 Years Ago

(Continued from page 1)



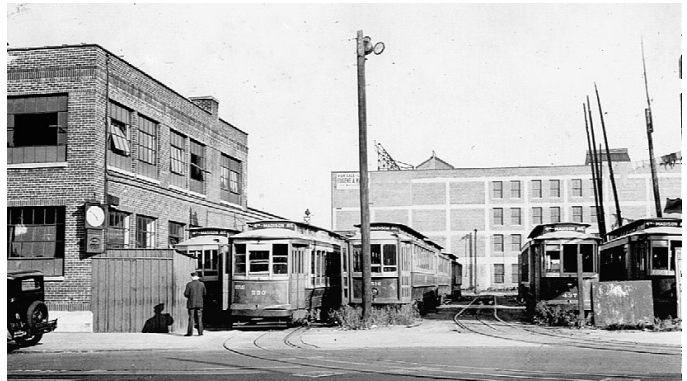
New York Railways cars.
Bernard Linder collection



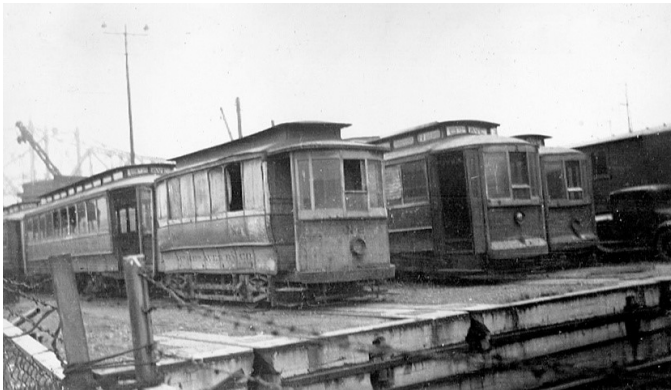
23rd Street Yard, April 4, 1936.
Bernard Linder collection



Madison Avenue Yard, March, 1934.
Bernard Linder collection



Madison Avenue Yard, September 19, 1934.
Bernard Linder collection



Eighth and Ninth Avenue Railway 155th Street Yard.
Bernard Linder collection



W. 155th Street-Eighth Avenue Yard.
Bernard Linder collection

cars, which started operating in April, 1895, were replaced by cable cars operating from E. 22nd Street to E. 105th Street on October 13, 1895. In service were 175 cable cars. The power house was located 130 feet east of Lexington Avenue between E. 25th and E. 26th Streets. On E. 23rd Street cables and conduit for future

electrification were built between October 12, 1895 and June 19, 1896.

Although cable railways were faster and cheaper than horse cars, it was obvious that electrification was even better. But before attempting large-scale electrification,

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New York Railways Street Cars Quit 80 Years Ago

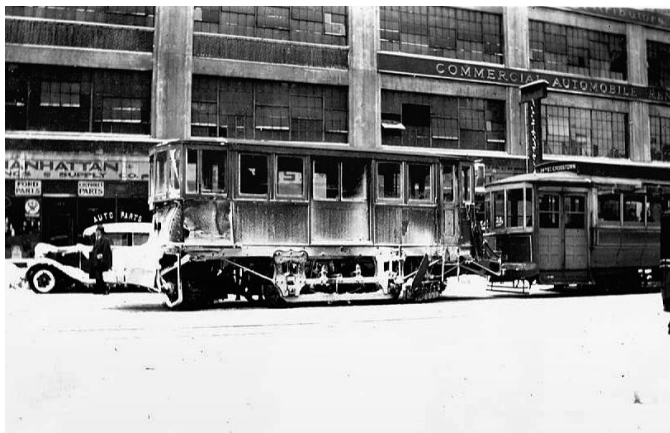
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Car 578, Mail Street and Broadway, December 30, 1935.
Bernard Linder collection



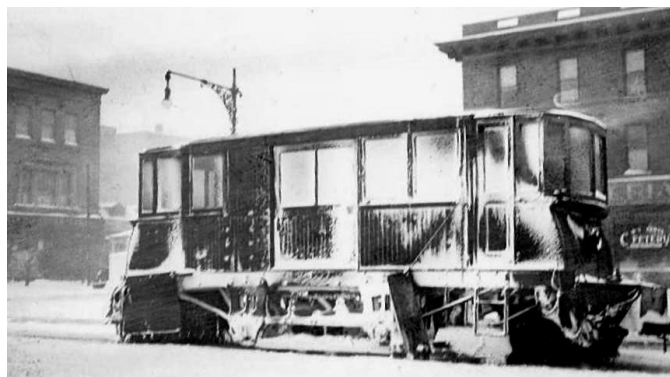
34th Street.
Bernard Linder collection



Car 57, Tenth Avenue at W. 39th Street.
Bernard Linder collection



Car 12, W. 145th Street and Lenox Avenue, December 30, 1935.
Bernard Linder collection



Car 89, W. 145th Street and Lenox Avenue, December 30, 1935.
Bernard Linder collection



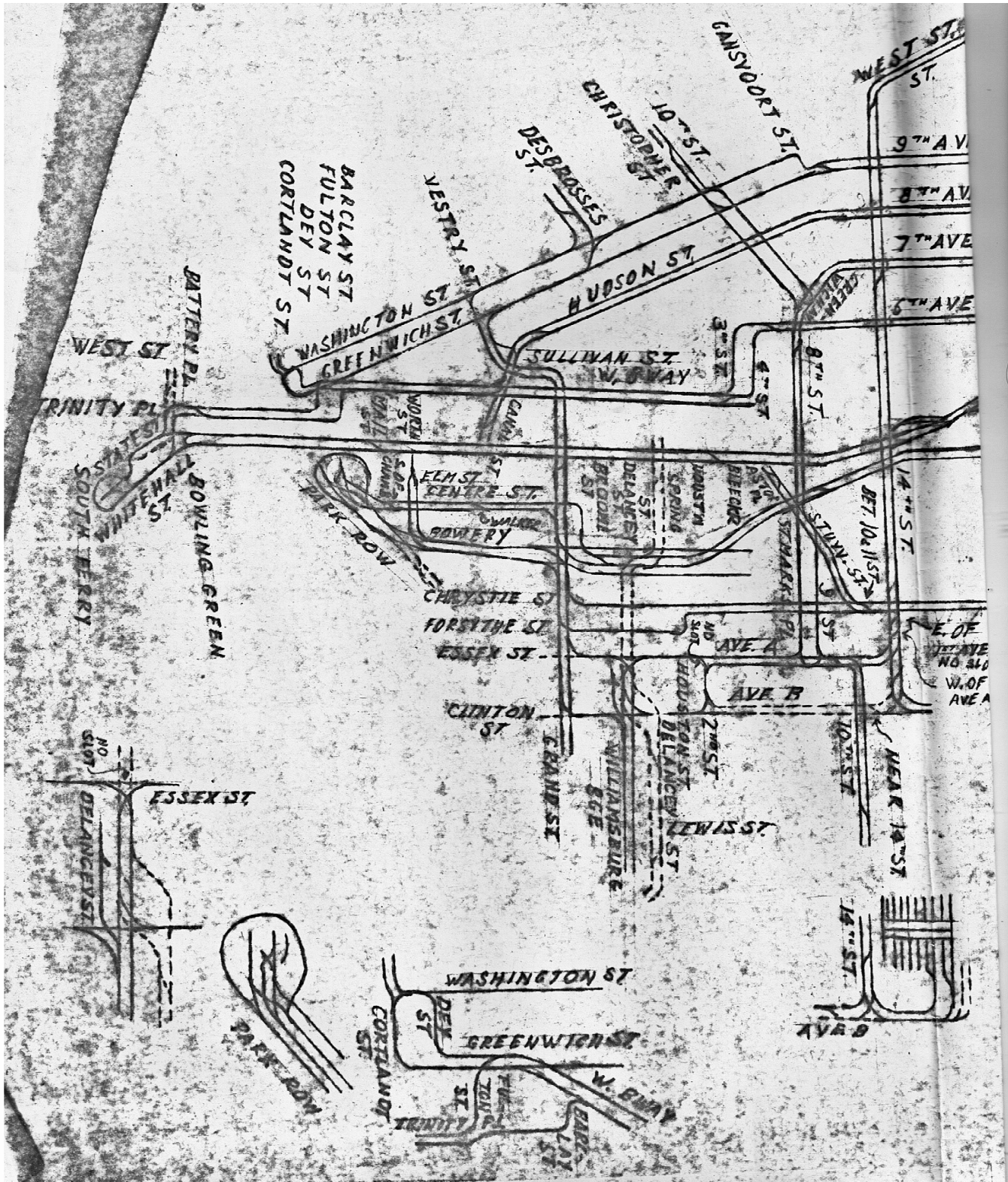
W. 146th Street and Lenox Avenue, December 26, 1933.
Bernard Linder collection

the company tried operating electric cars on the short Lenox Avenue Line. At W. 146th Street and Lenox Avenue, a temporary power house was built in a wooden building covered with corrugated sheet iron. Twenty cars were stored in a four-track temporary barn. On July 9, 1895, cars started running from W. 108th Street and Columbus Avenue to W. 146th Street and Lenox Ave-

nue. The initial voltage was 300, and it was increased to 500 volts in February, 1897. The underground was arranged to take cable if the power failed. Because electrification was proceeding rapidly, the company built a car house, whose capacity was 350 cars, at W. 146th Street and Lenox Avenue.

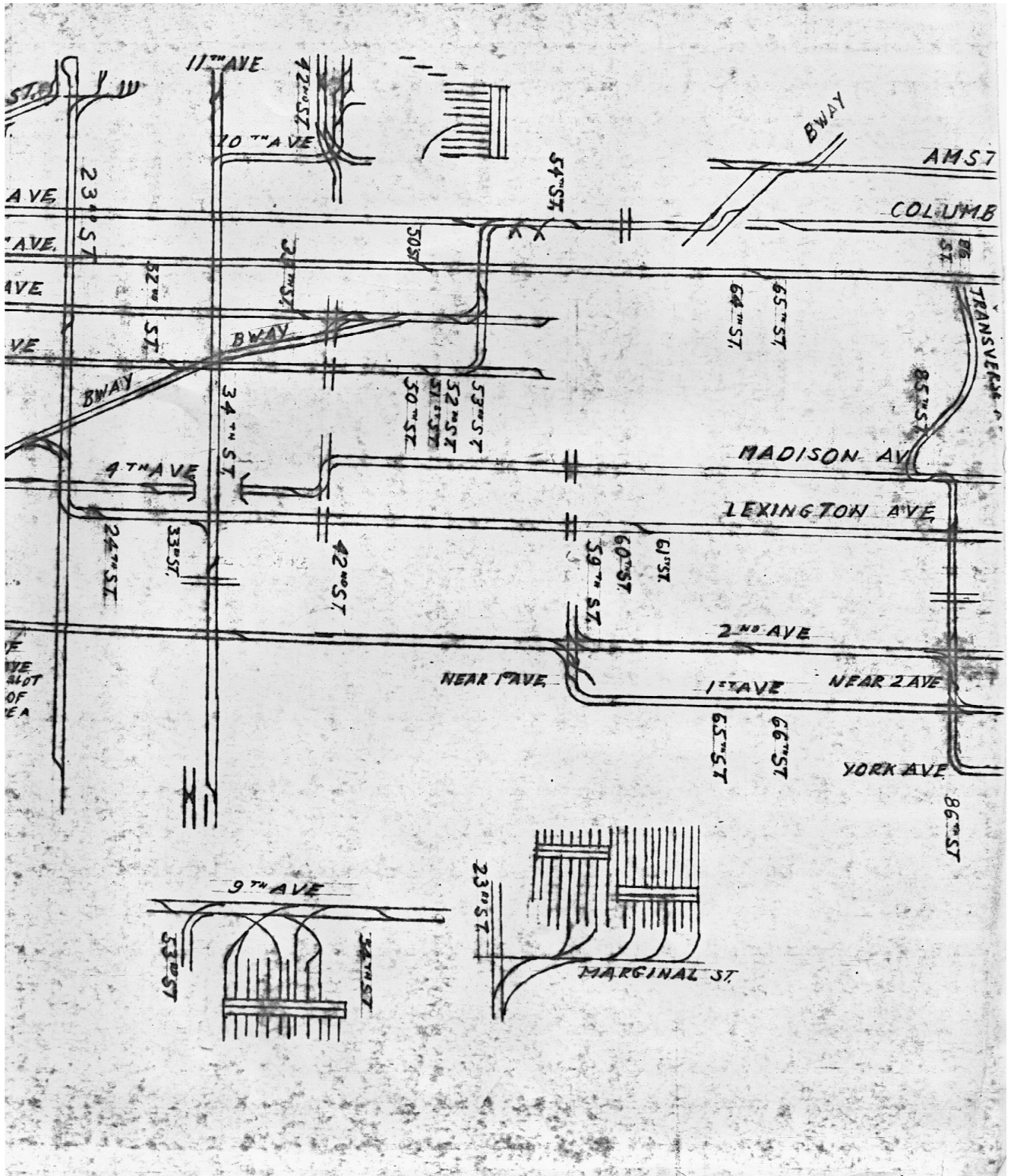
NEW YORK RAILWAYS, INCLUDING THIRD AVENUE RAILWAY LINES ABANDONED IN 1932

by Bernard Linder



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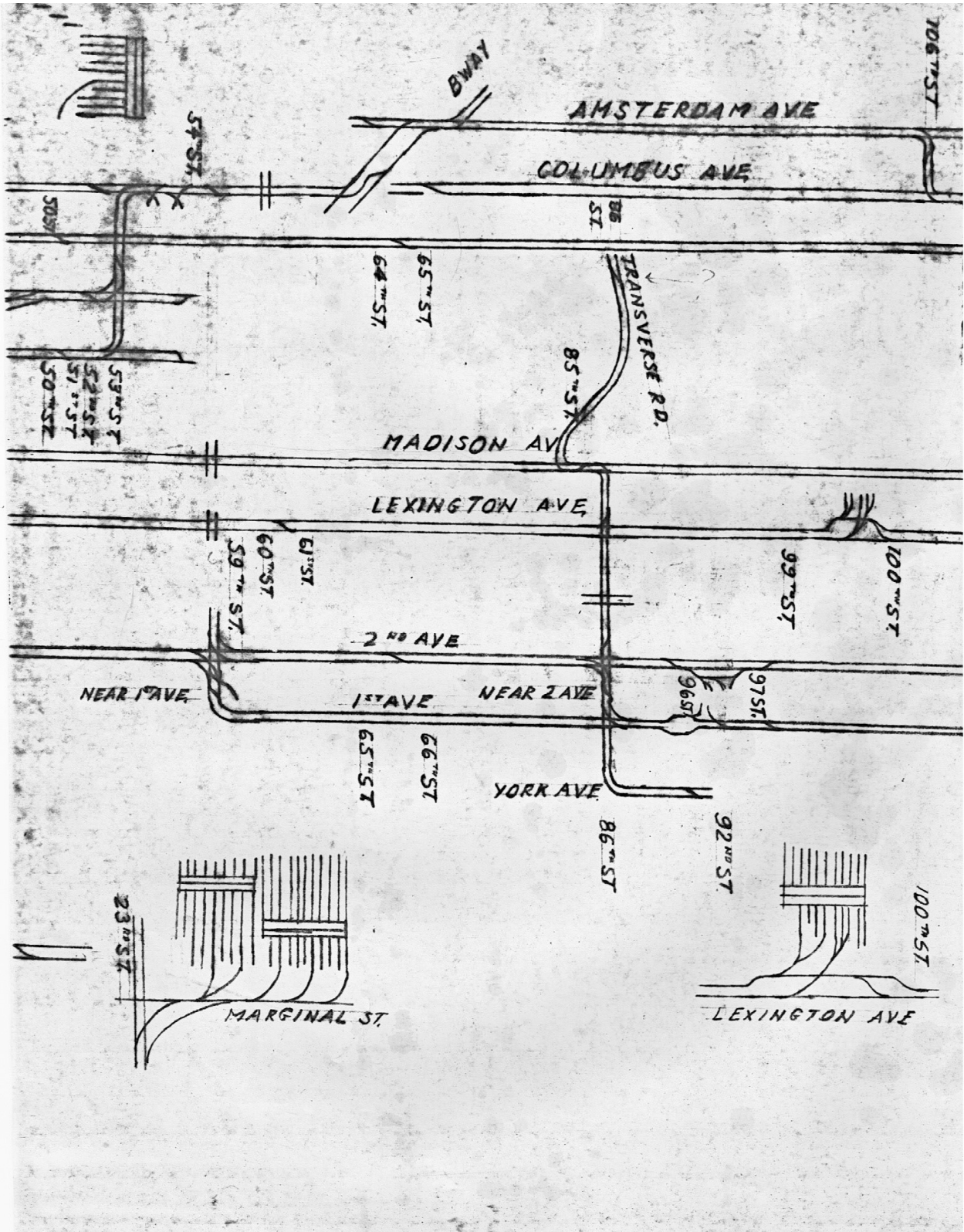
New York Railways
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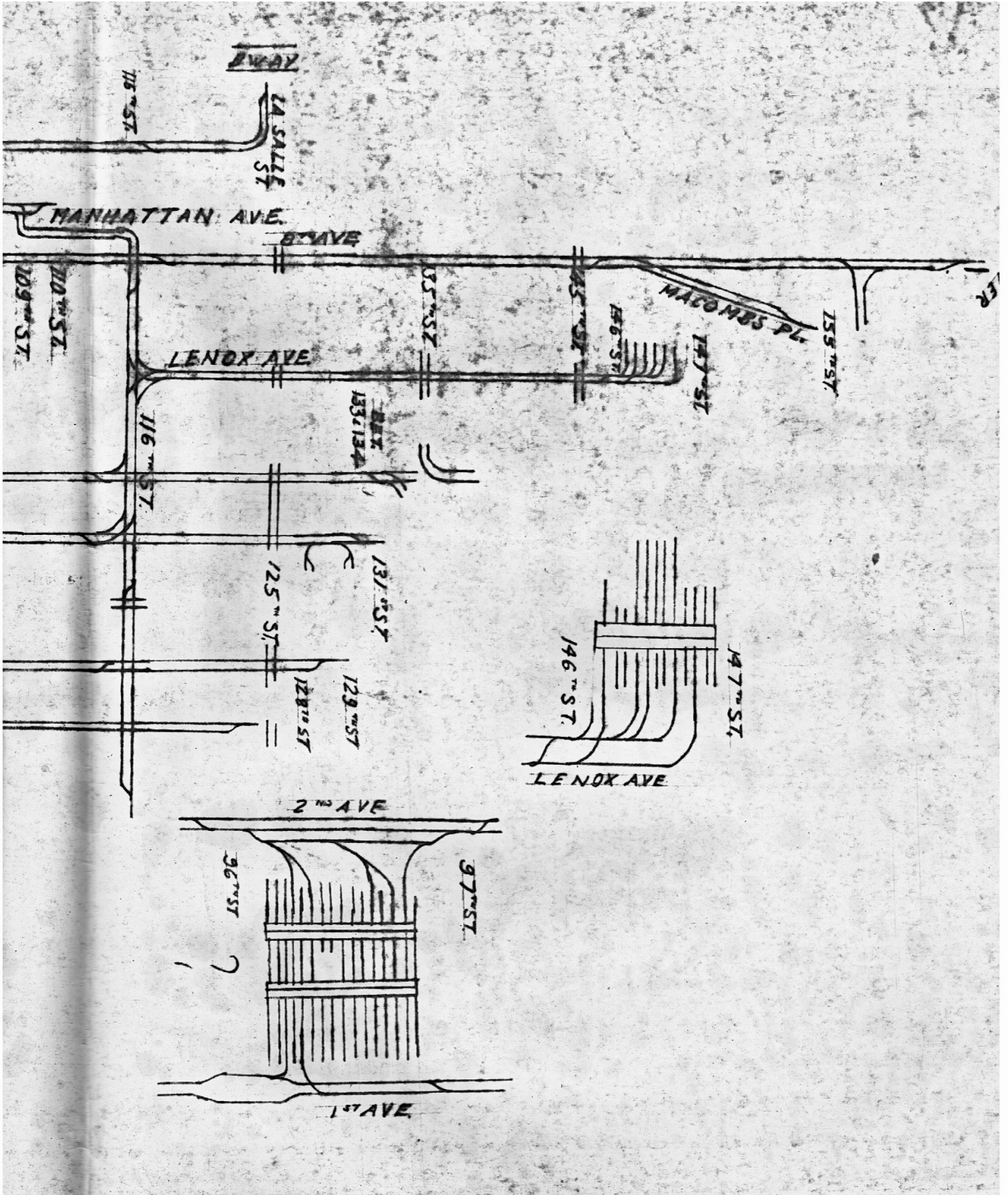
New York Railways

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New York Railways
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Commuter and Transit Notes

No. 333

by Ronald Yee and Alexander Ivanoff

METROPOLITAN TRANSPORTATION AUTHORITY

New York State Governor Andrew Cuomo announced an accelerated roll-out of MTA e-Tix, a free app for Apple iPhone and Android phone users that will allow Long Island Railroad (LIRR) and Metro-North Railroad (MNR) customers to purchase tickets anytime, anywhere with their mobile devices. MTA e-Tix was rolled out June 30 on LIRR's Port Washington Branch and MNR's Hudson Line to enable any glitches to be worked out of the system. Thus far, the rollout has gone so smoothly that a full roll-out on both railroads will now occur by the week of August 22 instead the end of the year. With this app, customers will not only be able to purchase tickets but also store them on their accounts, update credit/debit card billing information and be able to get refunds on unused e-tickets. E-Tix can be accessed as a stand-alone app or accessed thru the current MTA Train Time apps. A simple three-step process starts with the purchase of a ticket by origin and destination, store it in the electronic "wallet" in the account; prior to boarding the train, pull up the ticket from the "wallet" and tap the activate button; show the smartphone screen to the Conductor, who then then validates it. Conductors, Assistant Conductors, and Ticket Collectors (LIRR only) will be issued handheld devices that will scan a square barcode on the e-Tix displayed on a mobile device. In 2017, it is expected that e-Tix will be expanded to allow transfers between commuter rail and NYC subways and buses using a single app and transit account. (*Editor's Note by Ron Yee: This Editor worked on the initial stages of this project with the Masabi Corporation (this system had already been implemented similar systems on the commuter rail systems in Boston and Los Angeles and was being readied for use on the suburban NYC Nassau County NICE Bus) prior to retiring from MNR in 2013. We had evaluated several different methods of ticket validation and narrowed the choices down to the color-coded visual and bar-code scannable system that is in effect today. The e-Tix displays the origin, destination, ticket type, and a randomized three-color code that matches what the crewmember is given as the valid color code combination for that particular train that day. As the combination is randomly selected by the system, it is unlikely that a customer will be able to predict which combination is in effect for any particular train. The system will have a means by which customers will be prevented from activating an e-Tix until they see a crewmember approaching them or entering their car, a ploy that could be used by those seeking to avoid paying a fare altogether by hoping to not be seen by the crew before reaching their destination.*) (MTA press release, July 5)

MTA METRO-NORTH RAILROAD

Due to a need to accommodate ongoing construction projects on the Hudson Line, the schedule dated April 3-July 10 was extended through Sunday, July 31. A new schedule was to take effect on Monday, August 1. (MTA Metro-North Railroad website, July 5)

Connecticut Governor Dannel Malloy announced that the Hartford commuter rail project, now called the CTrail Hartford Line, is expected to open as scheduled in January, 2018. The line is currently undergoing a \$640 million upgrade to double-track and to modernize the signals with new and/or improved stations and facilities linking New Haven with Hartford. The 2018 service plan calls for 17 round trips with 12 trains extended to Springfield, Massachusetts — a vast improvement over the six round trips currently operated by Amtrak. This is expected to double the number of commuters on the line from 300,000 to 750,000 per year. CDOT plans to hire a contractor to operate CTrail Hartford, most likely Amtrak or a private company. No mention was made of Metro-North Railroad being considered as an operator. (*Hartford Courant*, July 7)

To accommodate track work, rail service on the New Canaan Branch is being replaced by buses on weekends between July 22 and August 21. (MTA Metro-North Railroad service alerts, July 16)

NJ TRANSIT

To accommodate necessary track work, buses replace trains on the Gladstone Branch on midday weekdays August 1-September 1 between the hours of 9:30 AM and 3:30 PM. Normal train service will continue to operate between Hoboken and Summit. Inbound trains #418, 420, 422, 424, 426, and 428 will be replaced by buses between Summit and Gladstone while outbound trains #411, 413, 415, 417, 419, and 421 will be bused. After the Labor Day weekend, the Gladstone Branch will operate with normal scheduled train service on weekdays but will be bused on weekends, with the exception of Saturday, October 15. (NJ Transit, June 22)

The last two labor unions representing the train crews, the Brotherhood of Locomotive Engineers (BLE), representing the Engineers, and the United Transportation Union (UTU), representing the Conductors and Assistant Conductors, settled on respective contracts, avoiding a strike against the carrier that could have started around June 30. (nj1015.com, June 25)

The first of ten light rail vehicles (LRVs) on the Newark Light Rail system with two added sections spliced into existing cars, forming 5-segment vehicles, was rolled out in late June following prototype testing. Ten of the 21 LRVs assigned to Newark Light Rail will receive the added segments, which will lengthen the LRVs by 37 feet, expand seating capacity from 68 seats to 102 seats, and provide additional standing room. In July, 2014, the NJT Board of Directors had approved funding to lengthen 10 of the 21 LRVs on Newark Light Rail and 25 of the 52 LRVs on Hudson-Bergen Light Rail. At a cost of \$1.55 million per car for the upgrade, it is far less than the \$4.6 million cost of acquiring new LRVs. (Al Holtz, June 28)

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Commuter and Transit Notes*(Continued from page 10)*

NJ Transit has decided against continuing an unpopular security feature recently installed aboard light rail vehicles on the *RiverLine*. Rail rider groups and civil liberties advocates had been questioning the need or even the effectiveness of such an intrusive system being used in the name of fighting criminal activity and improving security aboard the trains. The presence of the audio recording surveillance systems became public knowledge in April and immediately became highly controversial. Two months later, NJT discontinued the audio recording policy and will begin removing the hardware as well. (NorthJersey.com, June 29)

OTHER TRANSIT SYSTEMS**BOSTON, MASSACHUSETTS**

The Massachusetts Department of Transportation Board approved a \$14.8 billion capital investment plan that includes \$9 million in funding to maintain the current PCC fleet on the Mattapan-Ashmont Line. \$3.7 million will be allocated to keep the 70-year-old PCCs operational. Nine local officials signed a letter written by State Representative Dan Cullinane, who has gone on record as opposing any radical changes for the line such as replacement of the PCCs and the rails they operate over with buses (diesel or electric) operating on a busway. There is \$5 million in funding for this line over the next five years, during which a study will be conducted to determine the best form of vehicles that could ultimately replace the venerable PCCs. The capital investment plan also provides \$1.6 billion for new rail cars on the Red, Orange, and Green Lines as well as new buses and \$4 billion for the repair and rehabilitation of the MBTA infrastructure, putting a significant dent into the estimated \$7.3 billion in identified backlogged repairs. (*Dorchester Reporter*, July 6)

Philadelphia, Pennsylvania

The most significant story to happen in the last month has been the grounding of SEPTA's Silverliner V fleet. On July 1, fatigue cracks were found in a part of the Silverliner V called the equalizer beam. The 9-foot, 350-pound piece of steel is where the car connects via springs to the truck that holds the wheels, brakes, and axles. There are four of these beams per car, so there are eight places where cracks can occur, at each end of the beam. SEPTA engineers noticed Silverliner V car 812 was leaning slightly to one side. The tilt was very slight, and was only noticeable because it was hooked up in tandem with another, properly seated car. Normal tactics did not fix the problem, so the car was moved to SEPTA's Overbrook shop, where workers realized the issue was with the equalizer beam — it had a crack running through its length. That had caused the car to sink, but instead of listing dangerously, it simply got stuck — and was wedged in so tight that SEPTA workers had to cut it out. As other Silverliner V cars came into the shop, engineers began inspecting them, and found cracks in all but five of the cars they inspected. Around noon on July 2, SEPTA senior management instituted a speed

restriction on any Silverliner V trains remaining, and began pulling them offline. As of now, all 120 cars are out of service, equating to one-third of the fleet.

Help has come in the form of several coaches and locomotives leased from Amtrak, MARC, and NJ Transit, with MARC's single-level coaches, ACS-64s, and a trainset made of Comet IIs and IVs and an ALP-46. As of July 15, the NJT equipment are Comets 5015, 5414, 5243, 5438, 5456, 5412, 5407, and cab car 6040 (information supplied by ERA friend Bob Vogel). Due to issues, SEPTA is continuing to scour the country for additional rail cars, according to a quote from SEPTA General Manager Jeff Knueppel. It also is evaluating express busing options within the city. That will help provide about 1,440 additional seats on trains running between Glenside and 30th Street Station, the Regional Rail stretch that experienced the most "pass-ups" during the week. When trains reached capacity, they would bypass stations until reaching Center City, leaving passengers on the platforms. Only two areas of relief exist right now for SEPTA with the fleet: the Media/Elwyn Line is currently being "bustituted" for the summer due to a long-term bridge replacement and the Cynwyd Line has alternate service during the weekend along with a somewhat parallel bus route, being a weekday-only line. Other changes made have included adding service to the Norristown High-Speed Line and the Broad Street and Market-Frankford (rapid transit) Lines, and the "trolley tunnel blitz" for the Subway-Surface lines has been canceled.

With the addition of leased equipment, SEPTA implemented a revision to its interim weekday schedule, which became effective July 11. Even with the addition of leased equipment, SEPTA has still stressed the necessity of using alternate means. Early estimates by SEPTA show daily regional rail ridership was down the week of July 4 by 30,000 — a drop of nearly 50 percent.

NBC/10 Philadelphia (WCAU) in a Facebook post made it sound like the cars themselves could not be repaired. It is the trucks themselves that are looking unlikely to be repaired, and, since they carry the traction motors and are not simply trailer trucks, the situation becomes compounded.

(Editor's Note by Sasha Ivanoff: This story is currently developing and sadly looks to be a long term feature. For Hyundai-Rotem, this is a significant setback, especially with the company seeking to bid on future SEPTA contracts. I reached out to Denver's RTD via Twitter, which operates the same equipment, and a spokesperson said that the agency was monitoring the situation. If RTD runs into the same issue, it will be worse as RTD has no other commuter rail equipment. One of the interim steps to get the cars back up and running was to weld the cracks, but that has proven both unsafe and impractical. This is not a structural issue with the car bodies like with NYCT's fleet of R-44s, but an issue more reminiscent of the R-46: a cracked truck issue. In any case, service is being disrupted through at least Labor Day, if not longer. Fellow Bulletin editor Ron Yee

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Commuter and Transit Notes*(Continued from page 11)*

has speculated that NJT's mothballed ALP-44s will be pressed into service by SEPTA once repairs can be made to get them back into operating condition, something I see very likely. The long-standing habit among commuter rail and transit operators to scrap surplus equipment and/or to let surplus equipment to decay will probably come to an end, as in recent years ridership has skyrocketed on many commuter rail and transit operations across the country, to the point where agencies are often buying used locomotives from one another. (NBC/10 Philadelphia, July 8; Billy Penn blog, July 3; DVARP email, July 3; Philly Voice, June 26 and July 3; various emails).

BALTIMORE, MARYLAND

CAF was awarded a contract to construct 26 five-section LRVs for the Purple Line project in the Maryland suburbs of Washington, D.C. The line, which is slated for a debut in early 2022, will span around 10 miles from Bethesda in Montgomery County to New Carrollton in Prince George's County. Among its 21 planned stops will be interchanges with WMATA Metrorail's Red, Orange, and Green Lines as well as Amtrak and MARC commuter rail services. (*Railway Gazette*, June 28)

WASHINGTON, D.C. AREA

Washington Metro appointed Joseph Leader as Chief Operating Officer effective August 1. He had been working as a consultant to WMATA earlier this year since leaving his position as Senior Vice President for the Department of Subways at MTA New York City Transit on November 18, 2015. He will oversee WMATA's Metrorail as well as its other transit operations and apply his safety culture to the beleaguered agency, which has been beset by numerous accidents, including crashes, derailments, and fires, shaking public confidence in the rail system. (*Washington Post*, June 22)

In an effort to reduce the incidence of smoky fires stemming from arcing short circuits from its third rail, the Washington Metro has ordered the replacement of all porcelain third rail insulators located at its underground stations. They are being replaced with ones made of fiberglass as they have greater heat resistance and do not shatter, which would result in stray current flowing into the roadbed or wood ties, generating a lot of smoke. However, WMATA's new safety officer has raised some quality assurance questions regarding these fiberglass replacements. (WUSA/9 News, July 7)

This summer, Washington metropolitan area residents will deal with transit headaches as work crews at WMATA are about to begin the next phase of around-the-clock maintenance work. The planned outage is part of the agency's SafeTrack maintenance plan, an accelerated track work schedules that addresses critical safety recommendations.

A shutdown from July 13-18 resulted in a shutdown of the Blue and Yellow Lines between Reagan National Airport and Pentagon City. The agency shut down all Metrorail service between the stations, including Crystal

City, during the track work, a news release said.

The track outage for that week was the fourth of 15 scheduled track maintenance outages for the Metrorail system. And in Maryland, the Maryland Transit Administration was to reconstruct three interlockings and a series of other rail replacements on Baltimore's Metro Subway system later that month. The project resulted in a 24-day partial shutdown of the system.

The agency said the subway system would be completely closed from the Reisterstown Plaza, Rogers Avenue, and West Cold Spring stations beginning July 22 and running until Aug. 14. During the shutdown, work crews are reconstructing three rail interlockings, replacing rail and conducting other track-related maintenance, and making improvements to station facilities. While commuters have to use other modes of transportation, alternate service is available for those commuters. (*Trains Magazine* via Al Holtz, July 13)

CAF has been awarded a contract to supply 26 five-section light rail vehicles for the Purple Line project in the Maryland suburbs of Washington D.C.

The contract announced by CAF on June 28 is to be managed by its CAF USA subsidiary, which will manufacture the LRVs at its plant in Elmira, New York. The contract is worth more than \$200 million and includes spare parts, tools, and test equipment.

CAF USA also has a 20% stake in a joint venture with Fluor and Alternate Concepts that will operate and maintain the Purple Line for 30 years from opening, which is planned for early 2022.

The Purple Line will run 10 miles from Bethesda in Montgomery County to New Carrollton in Prince George's County with 21 stops. There will be interchanges with MARC commuter and Amtrak inter-city services, the Washington Metro's Red, Orange and Green Lines, and bus routes.

ST. LOUIS, MISSOURI

St Louis County announced on June 23 that feasibility studies will be commissioned into three potential extensions of the MetroLink light rail network, which have been identified as part of the region's long-range transportation plan.

The three projects under consideration include:

- Daniel Boone Corridor: a three-station branch running northwest from Clayton to a park-and-ride terminus at Westport near Interstate Highway 270
- MetroNorth Corridor - a one-station branch off the Lambert Airport line from North Hanley to a park-and-ride station adjacent to Interstate 270 in Hazelwood
- MetroSouth Corridor - a six-station southern extension from Shrewsbury I-44 station to Butler Hill Road

Funding for the three studies will come from a voter-approved local sales tax. (*Railway Age*, June 24)

Dallas, Texas

Trinity Railway Express (TRE) is planning to increase the number of trains it operates on the Dallas-Fort Worth commuter rail line by October 24, pending ap-

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Commuter and Transit Notes

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proval by the TRE and DART Boards of Directors. Customers have long expressed a desire for more late-night service, which would allow them to stay in Dallas later in the evening without being forced to drive out of concern of missing the last train of the night. Added midday service to eliminate two-hour gaps in service, starting the service earlier, and ending it later on Fridays and Saturdays are planned. Sunday service is still not in any plans. (*Star-Telegram*, June 7)

Brookville Equipment Corporation shipped the first of two “Liberty” class streetcars to Dallas Area Rapid Transit that were ordered in July, 2015. It will join two identical streetcars already in use on the Dallas Streetcar and support a two-station-long extension of the line into the Bishop Art District in August, 2016. These streetcars are unique in that they are equipped with energy storage systems (batteries) that enable the cars to briefly operate off-wire at locations where the installation of catenary is not feasible or permitted due to landmarks preservation rulings for iconic structures such as the Houston Street Viaduct. A fourth streetcar is currently under construction at Brookville’s Pennsylvania plant. (*Metro Magazine*, June 29)

DENVER, COLORADO

Denver, operating almost identical electric multiple unit (EMU) railcars on its newly opened commuter rail lines, will be watching the developments regarding SEPTA’s Rotem-built EMUs that were suddenly withdrawn from service over the July 4 weekend due to cracks in their trucks.

SAN FRANCISCO, CALIFORNIA

Caltrain awarded two contracts valued at \$1.25 billion that will lead toward electrification of the Peninsula Corridor between San Francisco and San Jose. Balfour Beatty Infrastructure will install the electrification infra-

structure such as power distribution systems, substations and catenary. Swiss-based railcar manufacturer Stadler was awarded the contract to manufacture 96 electric multiple unit (EMU) commuter cars, which will replace most, but not all, of the current diesel-propelled fleet of 30 Bombardier Multi-Level and 93 Nippon-Sharyo Gallery-style push-pull coaches powered by 23 F-40PHs (various sub-models) and 6 MP-36-PH-3Cs. The first electric trains are scheduled to go into service in 2020. Service to points south of San Jose such as Gilroy will continue with diesel powered trains. (*Global Rail News*, July 8)

LOS ANGELES, CALIFORNIA

Metrolink’s Board approved \$1.5 million to fund the repairs needed to strengthen the plow-pilot under each of the 57 Rotem-built Bilevel cab control push-pull commuter rail coaches. One of these “safety cab” designed cab cars struck a truck abandoned on the tracks in February, 2015 and the plow-pilot mounts gave way and became stuck under the wheels of the lead truck, causing the train to derail and flip onto its side and killing the Engineer. As each of the cars are retrofitted with strengthened plows, Metrolink will begin removing from service the leased BNSF freight locomotives that had been placed ahead of the cab cars to prevent a repeat of that tragedy. (*Progressive Railroading* July 13)

CANADA

A four-year labor contract, retroactive to January 1, was ratified by over 80% of the members of Unifor, the union representing 1,800 of VIA Rail Canada’s 2,500 employees including station, customer service, maintenance, and administrative personnel. (*Editor’s Note by Ron Yee: A threatened strike had resulted in the abrupt cancellation of the New York City-Toronto Maple Leaf for several days in early June to prevent the possibility of equipment being stranded in Canada.*) (*Progressive Railroading*, July 14)

Around New York’s Transit System

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and Bay Ridge Avenue (R). The work will require six-month-long closures of each station. Ultimately, 31 stations across the five boroughs are to see similar renovations as they undergo their transition to 21st century standards. New station entrance canopies will feature integrated lighting and smart signage and LED lighting fixtures will provide improved energy-efficient lighting throughout the station, which will feature integrated personal electronics charging stations, improved wayfinding and real-time service status signage, countdown clocks, security cameras, and a fare control area made more transparent and open through use of glass or transparent paneling, replacing the current iron bar fencing. 170 other stations will receive some degree of improvements to bring them up to a state of good repair. See the press release images below.

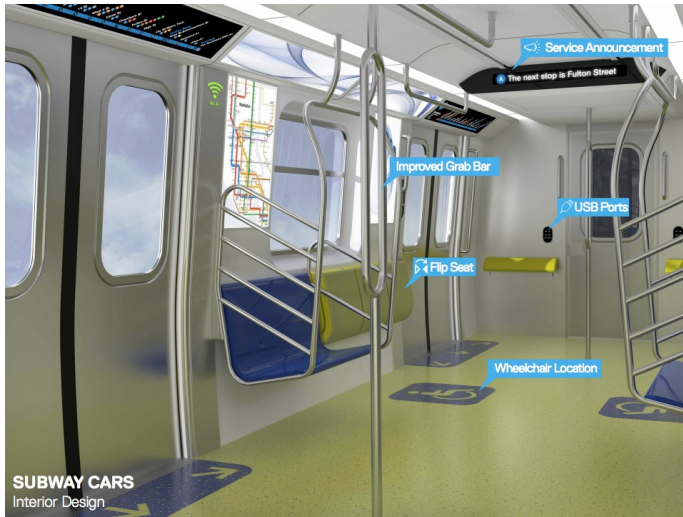


R-211 exterior.
Rendering from New York State Governor’s Office

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Around New York's Transit System

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R-211 ADA and cab end.
 Rendering from New York State Governor's Office



R-211 interior with open gangway.
 Rendering from New York State Governor's Office

Second Avenue Subway Progress Report

The Second Avenue Subway has been under construction for several years and MTA hopes that **C** trains will start operating there in December, 2016. MTA's June, 2016 newsletter includes a construction update. Work proceeds Monday-Friday 7 AM to 10 PM and Saturday from 10 AM to 7 PM. Underground, work is permitted 24/7.

LEXINGTON AVENUE-63RD STREET STATION

Renovation of the existing **F** station is 98 percent complete. The remodeled station will have two new entrances at the intersection of E. 63rd Street and Third Avenue. There will be two new street-level escalators at entrance #1, a new street-level ADA accessible elevator at entrance #2, new stairways at entrance #3, and four new elevators will be installed between the mezzanine and the platforms.

72ND STREET STATION

All substations are energized and track work in the station area is complete. The station will have entrances at E. 69th Street and E. 72nd Street. There are 11 escalators and three street-level ADA accessible elevators located on the southeast corner of E. 72nd Street and Second Avenue. Station construction is 84.6 percent complete.

86TH STREET STATION

Electrical equipment is energized at this station, whose construction is 94.1 percent complete. This station has two new entrances including 13 escalators and one street-level ADA accessible elevator at the southeast corner of E. 86th Street and Second Avenue. Sidewalks are being restored on the east side of Second Avenue between E. 82nd and E. 84th Streets.

96TH STREET STATION

This station has three entrances with 10 escalators and one ADA accessible elevator from street level. Work at this area includes heavy structural work at the station and tail tracks with the connection to the future Phase II work north of 96th Street. Sidewalks are being restored between E. 97th and E. 101st Streets.

Last R-188 Single-Unit Car Delivered

Member George Chiasson reports that the last of 38 R-188 single-unit trailer cars (7936) that were inserted into select 5-car unitized sets to form up the 6-car unitized sets needed to make up 11-car trains on **7** was delivered to NYCT on June 14 and was expected to complete acceptance testing by mid-July. Three sets of R-62As remain assigned to **7** to fill in for the scheduled fleet requirement while three 11-car consists of R-188s are simultaneously in the shop being outfitted with CBTC equipment in preparation for the new signal and control systems being activated in 2017.

Marketing Campaign for LaGuardia Airport Access

As an interim measure to provide a boost to MTA transit accessibility to and from LaGuardia Airport (LGA), a new marketing campaign was announced to coincide with the re-branding of the Q70 connecting bus service linking the airport with subways and LIRR as well as local bus routes. Advertisements are expected to appear at the baggage claim areas at LGA as well as in in-flight magazines and on-board Wi-Fi and video services on airliners as well as on social media and travel planning-related websites aimed at travelers headed for New York City such as Expedia.com. This comes just two weeks after New York State Governor Andrew Cuomo announced that the current Q70 Limited bus route would be transitioned into a Select Bus Service (SBS) by September, 2016 with passengers paying their fares at the ticket issuing machines at each SBS "station," both at the airport terminal bus stops as well as at the two street locations where the buses will stop and connect to the subways, buses, and LIRR. The new buses will have luggage racks and will sport a new aviation-themed exterior décor featuring silhouettes of planes and clouds in reference to its destination. Under

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THE NEW YORK TRANSIT MUSEUM CELEBRATES ITS 40TH ANNIVERSARY by Marc Glucksman (Photographs by the author, except where noted)

When the New York City Transit Exhibit opened on July 4, 1976, it was the culmination of a monumental amount of work to preserve the city's rapid transit history. One of the chief architects was ERA member Don Harold. He and others worked with the New York City Transit Authority over many years to restore equipment and secure funding.

The Court Street station had not seen revenue service since 1946, and was identified as a location that could be used to store and display the subway collection as well as provide for display space for exhibits. On its first day, the TA included not only its oldest car, BU elevated car 1273, but also some of its newest, R-46s 680-1. These cars had been recently completed by the Pullman-Standard Corporation, and were temporarily renumbered 1776-1976 and had their bands changed to a red, white, and blue bicentennial design.

In the anteceding 40 years, the museum has undergone numerous changes. And while those R-46s would still be the newest cars in the museum if they were there today, the collection has expanded and the comprehensive rotating exhibits have become a large attraction. Renamed the "New York Transit Museum," it now incorporates the history of all of the MTA agencies. Its many educational programs appeal to all ages and integrate walking tours and lectures with tours of bus and subway facilities. And after a complete rebuild of the station, including lighting and climate control systems, the museum is a much more comfortable place for visitors.

A celebration of these accomplishments was held on the weekend of June 25-26, 2016. Shuttle trains (using

the equipment listed in the table) were operated between Brighton Beach and Kings Highway or Ocean Parkway. For their regular fare, riders had from noon-4 PM on Saturday and Sunday to take as many trips as they could squeeze in, and still take the train home. At the end of the day on Saturday, a lineup was arranged with all four trains between Brighton Beach and Kings Highway for the benefit of photographers. And as the event wound down on Sunday, the BU elevated cars made their only trips of the weekend north to Kings Highway. Car 401 served as a pop-up store, selling various books and toys to attendees.

Continuing the tradition of the ERA membership's commitment to electric traction preservation and operation, several members who also work for MTA New York City Subway operated cars or worked on other capacities to make the weekend a success, including William Wall, Edward McKernan, and Eric Oszustowicz.

The first event of this scale was held in 2004, for the centennial of the New York City subway. And in 2015, the centennial of the BMT lines was celebrated in similar fashion. Given the benefits of public relations for MTA as well as the enjoyment of the event by participants, one looks forward to the possibility of seeing similar operations in the future.

South-North

- 1404-1273-1407 (BU elevated)
- 381 (R-1)-1300-1000 (R-6)-1802 (R-9)
- 6112 (D-Type Triplex)-2392-2391-2390 (AB Standard)
- 4280-1 (R-40S)-4572-3 (R-42)-4029-8 (R-38)
- 401 (R-4) – Pop-up store



Approaching Ocean Parkway, BU elevated cars 1404-1273-1407 were the oldest cars to participate in the event. They were crowded with patrons all weekend.



Although the event was supposed to finish at 4 PM on Sunday, overwhelming crowds and a generous staff enabled a few extra trips for those that had an opportunity to ride the BU cars. The cars proved mechanically reliable enough to make the trip up to Kings Highway, and are seen here approaching Brighton Beach on the return trip on June 26.
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The New York Transit Museum Celebrates its 40th Anniversary

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The unusual, but all BMT lashup of 6112 (D-Type Triplex) to 2392-2391-0 (AB Standard) is pictured here approaching Brighton Beach on its final run of the weekend on June 26.



A few early morning runs for practice gave us an even better sun angle to capture the "City Car" train of R-1 to R-9s at Neck Road on Saturday, June 25. Car 381 is leading on the south end, and was chosen for this position because it was leading on the south end of the first train of R-1s tested on BMT's Sea Beach Line before the construction of the IND subway had been completed.



The New York Transit Museum chose R-4 401 to house its pop-up store at Brighton Beach, pictured here on June 26. The various toys, books, and other memorabilia offered for sale made great souvenirs from the weekend.



After the event finished on June 25, a lineup of the cars was brought together just north of the Ocean Parkway station. Pictured (left to right) were R-40 4280, BU 1404, R-1 381, and D-Type Triplex 6112.

Ron Yee photograph

Commuter and Transit Notes

(Continued from page 14)

ideal conditions, the travel time between midtown Manhattan and LaGuardia Airport can be as short as 35 minutes and the fare would most likely be NYCT/MTA Bus Company's base fare for buses and subways, utilizing the free transfer at either 74th Street-Roosevelt Avenue (7 E F M R) or at 61st Street-Woodside (7, LIRR). *(Editor's Note by Ron Yee: With all the talk of a major rebirth of LaGuardia Airport and the plans for construct-*

ing a Port Authority AirTrain line linking it to 7 at the Mets-Willets Point station with a standalone rapid transit technology system (using new cars that will not even be compatible with the current AirTrain cars operating on the Kennedy Airport AirTrain system), MTA's Q-70 SBS seems like THE answer to mass transit accessibility to LaGuardia with a travel time of as little as 35 minutes. The more expensive AirTrain with a separate \$5 fare would probably offer a travel time that is longer than the Q70 and, for many of its riders, for free as a MetroCard transfer. The LaGuardia AirTrain, if it is built by the Port Authority, is likely to end up as a lightly utilized and very expensive white elephant.)

TOUR OF TURKEY

by Jack May

(Continued from July, 2016 issue)
(Photographs by the author)

Today was going to be a busy day, with two train journeys and a 4-hour visit to a tramway during the interval between them. Little did we know how eventful it would be. We would start by riding the first line of Turkey's prospective High-Speed Rail (HSR) network. Within the next few years, HSR service will operate between Turkey's two largest cities, Ankara and Istanbul, as well as to Konya, Turkey's seventh city. Currently funded projects will cover almost 1,000 miles of brand new High Speed Rail lines. The only operational segment at the time of our visit was the easternmost portion of the Ankara-Istanbul line, but later in 2011 HSR service would be extended to Konya.

The new network is compatible with Turkey's original 1950s electrification, which uses 25kV 50 Hz a.c. catenary over standard-gauge track. At the time I did not know to what degree the HSR project would be integrated with the construction of the new *Marmaray* rail tunnel, which will connect the electrified rail systems on both sides of the Bosphorus (Europe and Asia) and carry high-frequency suburban trains that at the time stub-ended at Sirkeci and Haydarpasa, respectively. The HSR from Ankara to Konya was opened on August 24, 2011, and the extension of the Ankara-to-Eskisehir line (which I rode) to Istanbul opened on July 25, 2014. The *Marmaray* tunnel opened on October 29, 2013. However, the system has not yet been coordinated and therefore has not attained the planned frequencies for its long-term goal.

Currently service through the Marmaray tunnel runs every 10 minutes from Kazlıcesme on the European side to Ayrılık Cesmesi on the Asian side and is very popular. Istanbul's Metro has been extended to connect with the line, so that the M1 and M2 now run to Yenikapı (European side) and new M4 connects at Ayrılık Cesmesi on the Asian side. There are three intermediate underground stations on Marmaray: Yenikapı and Sirkeci on the European side, and Uskudar on the Asian. See <http://www.ulasim.istanbul/media/73220/istanbul-ulasim-ag-haritasi.jpg> and <http://www.urbanrail.net/as/tr/istanbul/istanbul.htm> for maps. All of the long-established suburban commuter services that ran to Sirkeci and Haydarpasa have been suspended, as the TCDD indicates the infrastructure connecting to Marmaray is being upgraded, including the addition of a third track. Thus there is no longer any service to the large railway terminals at Sirkeci and Haydarpasa.

As mentioned above, HSR service was extended beyond Eskisehir in 2014, but only as far as a temporary terminal at Pendik, some 20 miles east of Haydarpasa and the Bosphorus. There is hardly any public transit from the new station, only a local bus, but passengers

can walk to a ferry that will take them to Kadıköy. Meanwhile work is underway to extend Metro line M4 to that point. Six HSR round trips to Ankara are offered, and take from 3¾ hours to 4 for the trip (there are also 2 additional trains between Pendik and Konya). In the long run the HSR line will be extended to Sogutlucemesme, one station east of Ayrılık Cesmesi on the currently suspended suburban line to Pendik. In addition, the one traditional long-distance train from Istanbul to European points now requires a bus transfer from Sirkeci station to Kapıkule at the Turkey-Bulgaria border. (The bus arrives during the midnight hours at 2:52 and the connecting train to Bucharest leaves at 4:05.) On the Asian side there is some traditional rail service from Pendik to Arifiye, some 75 miles east. The full complement of TCDD trains still operates through the remainder of Turkey.

Now back to 2011 (when this tour occurred) and the High-Speed Railway line itself. Before the first segment opened in March, 2009, express passenger services between Istanbul and Ankara used the original 567-kilometer line, taking 7½ hours for the run. A great deal of that line is single track with lots of curves (Clare and I made that trip in a sleeping compartment in 2001, and enjoyed the trip — especially the contents of the stocked refrigerator in our room). Now 1¾ hours have been cut from the schedule, counting the 15-minute wait to change trains at Eskisehir. The new Ankara-Eskisehir HSR portion, which is 249 kilometers long, is carded for 90 minutes, while the portion to and from Istanbul (314 kilometers) takes 4 hours. The 90 minutes includes quite a bit of time needed to reach the beginning of the HSR trackage via the old line. The full route, when opened, will be 533 kilometers long and the running time will be just 3 hours. Actually, the current service, which runs to Pendik, 20 miles east of Istanbul, takes from 3¾ hours to 4 hours to make the run. Until this past February there were still through long-distance trains over the old line, adhering to the old slow overnight and daytime schedules. But they have been discontinued. Instead there are 10 traditional round-trips daily between Haydarpasa and Eskisehir, each making a 15-minute connection with the same number of HSR trains to or from Ankara.

CAF has built 12 6-car trainsets for the line with power distributed among the four center cars. Business Class cars sport 2-and-1 seating, while Economy units have a traditional 2-and-2 arrangement. However, each MU train is capable of only 250 kilometers per hour (156 miles per hour), much less than similar HSR trains like the TGVs, ICs and Spain's AVEs.

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Tour of Turkey*(Continued from page 17)*

TCDD opened a brand new HSR route from Ankara to Konya (305 kilometers — 93 of which are part of the Ankara-Istanbul line) in late 2011. Press releases indicate 300-kilometer-per-hour speeds are attained, but I have not heard that any new cars were built, so I suspect they are using the same 250-kilometer-per-hour CAF units. Four round trips are operated daily, with a running time of 115 minutes each way, including stops at 2 intermediate stations. However, press reports indicate that six 350-kilometer-per-hour (218-mile-per-hour) trains will be ordered, probably from Hyundai-Rotem, which is building a manufacturing facility near Eskisehir.

After an early breakfast Clare and I taxied over to the railroad station to ride the 9:00 train to Eskisehir. We planned to stow our luggage in a locker in that city, and spend about five hours there, prior to riding the 16:45 traditional train to Haydarpasa. (As readers may recall we had purchased rail tickets nine days earlier in Sivas.) We arrived at the crowded Ankara station about 8:30, and as soon as we headed out to the platform for Track 1 we encountered a formal security checkpoint. Since we had not observed similar arrangements on our previous rail trips, we attributed the procedure as one being applied only to HSR. Our tickets and picture IDs (passports) were examined and our luggage was conveyed through an x-ray machine. We walked through a metal detector and then a turnstile. I requested that my camera and film be exempted from scrutiny, and was given that courtesy. It was all quite perfunctory—unlike the rigor at most airports. Waist-high barriers parallel to the track, extending to the front and rear of the train, defined the secure area. After we found our seats I left the train for some photos and discovered that I could walk to the end of the barrier and cross it through the space between the last stanchion and edge of the high-level platform. After a photo I returned to our seats by reentering through the metal detector and turnstile.

We purchased tickets for Business Class and found the forward facing 2-and-1 seats to be quite commodious. The Economy seats also looked comfortable, and one of those cars was equipped with a snack bar. We indulged in the complimentary snacks and soft drinks offered in Business Class. The train pulled out at 9:00, right on the advertised, but first operated over regular trackage, passing several inbound suburban electric MUs at relatively slow speed, until we reached the new line at Sincan, around 9:30. We then accelerated and attained 150 kilometers per hour about 10 minutes later. We never reached 250 kilometers per hour — our highest speed being 240 kilometers per hour (150 miles per hour) and that for only a brief period. I suspect there were quite a few slow orders, as we ended up arriving in Eskisehir at 11:10, forty minutes late. The electronic signs at each end of the cars displayed the speed of the train continually, interrupted only occasionally by announcements of the next station and the like. “If you see something, say something” was not among the messag-

es. Unfortunately the train rode very roughly over switches and was unable to exhibit the smoothness most passengers experience when riding TGVs or the Shinkansen. I cannot say I was impressed — in fact I was truly disappointed.

After some photos at the Eskisehir station platforms, we walked about a half mile to the tramway. We spent about 5 hours in the city, me riding and photographing the Bombardier Flexity Outlook cars and Clare visiting a couple of museums.

Eskisehir is a medium-sized university town (population just over 600,000) with a busy downtown (mainly pedestrianized), some industry, and the usual mosques and government buildings. The heart of the city is bisected by the narrow Porsuk River with parks and promenades alongside. Its claim to fame nowadays is its 9-mile-long streetcar system, opened in 2004. The most unusual aspect of the operation, which is branded Estram (not Esray), is its meter gauge. There are some places where clearances are tight, so to preclude expensive relocation of utilities and the widening of streets, the slim gauge was chosen.* In fact, to avoid gobbling up street space most of the stops are offset, diagonally opposite each other at intersections. According to press reports, the two lines, which wind through most of the city, were built to ameliorate present and future traffic congestion. Rolling stock consists of 18 meter-gauge Bombardier Flexity Outlook (formerly called CityRunner) 100-percent low-floor articulated streetcars. They are single-ended, have 5 sections, and are equipped with 55 seats. The LRVs are painted white with orange trim and have blacked-out window areas. Thus they seem virtually identical to the 900-millimeter-gauge cars previously built by Bombardier for Linz, Austria. It is said that the transit officials in Eskisehir liked everything about the attractive Linz cars, including their color scheme.

*A number of European systems have converted from narrow to standard gauge (or are still in the process), the most prominent being Stuttgart. To me the issue is not the track gauge, but rather clearances for passenger cars, including the width of devil strips (the space between adjacent tracks). This determines how wide rolling stock can be and therefore has a direct effect on service issues like crowding, number of seats, number of cars necessary to meet demand, and so on. Meter-gauge systems, like the ones in Zurich and Basel, efficiently carry large numbers of passengers.

Line 1, which serves the Otogar (bus terminal) at its eastern end and both of the city's universities, has 16 stations, while line 2 has 11. The two routes share the same tracks through the pedestrianized main street, where there is just a single stop. Annunciators on all platforms display how soon the next two cars will arrive, indicating their route numbers and destinations. Manicured turning loops are located at the eastern end of Route 1 (the Otogar) and the northern end of Route 2, while single track circles through various side streets at the other ends of the two lines. The loop at the Otogar is particularly attractive, with a well-kept lawn and flower

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Tour of Turkey

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beds. Route 1 has the heaviest patronage with cars running every 7 or 8 minutes, while the frequency on Route 2 is limited to every 12 minutes, probably because north of downtown it runs on single track, first through a congested neighborhood and then in the center of a wide, busy one-way street. Most trackways are paved, but there are grassed-in stretches on the southern end of Route 1 and through the loops. For the most part traffic is kept off the tracks by yellow lines or slightly raised curbing. On our first trip to Eskisehir in 2006, the magnetically-encoded tickets were validated by machines on the cars, under the eye of a “Conductor.” Now station fare collection has been implemented, using turnstiles. Some of the stations sport elevator-type doors that open only when a streetcar is properly lined up, as in Konya. This keeps fare cheats out of the stations when no cars are present.

While the weather was sunny en route, as soon as we arrived in Eskisehir it began to cloud up. My photos of the HSR trains at the station were in sun, but all of my shots of streetcars were taken after the sky became overcast. That included a few from Eskisehir’s single pedestrian overpass, along Route 1. I also took some photos downtown, where the cars run past a number of attractive statues. After riding the lines and taking just a handful of photos, I headed back to the railroad station and found Clare relaxing on a bench. We then bailed out our bags and waited for the 16:45 train.

The connecting HSR MU from Ankara was due at 16:30 but did not arrive until 17:05 (I suspect because of the same slow orders we experienced that morning). As a result our 16:45 departure was delayed until 17:11. This train had seven cars with an electric locomotive at the point. We quickly found our reserved seats and settled in. After about an hour we went into the diner, where we had excellent meals. In 2006 we rode a simi-

(Continued on page 20)



Two views of the TCDD’s new CAF-built high-speed rail trains, the first at Ankara and the second at Eskisehir. In the left photo, note how the “secure” area, at the edge of the platform is separated to the portion accessible to anyone.

The Eskisehir tramway is meter-gauge, and served by a fleet of single-ended Bombardier Flexity Outlook cars.



The streetcar loop at the intercity bus terminal, at the eastern end of Route 1, is usually surrounded by a carpet of green, but in April the grass is dotted with dandelions.



A view of an inbound Route 1 car from the pedestrian overpass at the Devlet Hastanesi stop.

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Around New York's Transit System

Governor Announces R-211 Design and Station Work

New York state Governor Andrew Cuomo announced key elements of the \$27 billion MTA capital program on July 18. For NYC Transit, it includes radically redesigned subway cars and totally redesigned stations and street entrances. Up to 750 of the 1,025 R-211 subway cars will feature an open gangway design (no doors between cars of five-car unitized consists), on-board Wi-Fi and USB port charging stations for personal electronics, full color digital customer informational displays and digital advertisements, split hand poles, on-board security cameras, flip-up seats where the wheelchair accommodations are located, LED headlights, and four

58-inch-wide doorways per side (eight inches wider than current cars), to expedite the loading and disembarkation process with a goal of reducing station dwell times by up to 32%. The cars will be decorated with blue and gold accents representing the colors of New York State. The open-gangway cars are slated to replace the R-46 fleet on **(A)**, 60 conventional design cars will replace the R-44 fleet of the Staten Island Railway, and the remaining 215 conventional cars are to be assigned to other lines in the subway system. The first three stations that will be totally rebuilt to the new standard will be: Prospect Avenue (**(DNR)**), 53rd Street (**(R)**),

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Tour of Turkey

(Continued from page 17)

lar train, but smoking was allowed in dining cars at that time, which significantly diminished our enjoyment. Like our trip from Kayseri to Adana, the coaches were air-conditioned and had 10 rows of 2-and-1 reclining seats lined up with picture windows. It was a great deal better than Amfleet. Except for short periods, the topography was flat, but there were mountains in the distance. The ride was smooth. We stayed 35 minutes behind schedule for a while, but then began losing a little more time as we entered the Istanbul commuter zone — in rain. We arrived at Haydarpasa at 21:20 (20:42), well over a half-hour late.

Then disaster struck. With less than 18 hours before our return flight, Clare slipped on the platform and broke her right femur. Making a long story short, many Turks were good Samaritans and got us an ambulance, which drove down the platform. We had a hospital bed before midnight, after being transferred from a public institution to a private one, where Clare was operated on the next day. Because of her osteoporosis, her bone shattered

and we stayed in the hospital, located on the Asian side of Istanbul, for another 10 days. Fortunately I was able to stay with her, as an upholstered chair in the private room opened into a comfortable bed. Also fortunately, I had taken out an Internet medical insurance policy for the trip, so I had to bear little of the cost. Insurance companies ended up paying over \$30,000, which included the expense of sending an American nurse to Istanbul to accompany Clare back to the U.S. in First Class on Turkish Airlines (I sat in coach).

It took almost a year before Clare began walking by herself. She finally began to improve significantly at the beginning of April, 2012. During the recovery she graduated from a wheelchair to a walker to a 4-legged cane and now to a regular cane, and has finally has begun to drive again. In September she received a new right hip, which may have resolved the healing problems she had to endure earlier. Fortunately, our son and his family live 2 miles from us and were a great help in her care during the past year, as she stayed in their elevator-equipped house during the periods she was confined to a wheelchair. Now, in 2016 she still walks outside with a cane, but can get pretty much anywhere on her own.



Both lines run through the principal shopping street in Eskişehir. Despite it being open only to streetcars and pedestrians, walkers generally keep to the sidewalks because of tram traffic.



The single-track section of route 2 near the Marmure station. Note that only inbound cars will stop at this platform, as the rolling stock has doors only on the right side.