The Bulletin



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The Bulletin

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For general inquiries, or *Bulletin* submissions, contact us at <u>bulletin@erausa.org</u> or on our website at <u>erausa.org/contact</u>

Editorial Staff

Jeffrey Erlitz Editor-in-Chief

Ronald Yee Tri-State News and Commuter Rail Editor

Alexander Ivanoff North American and World News Editor

David RossProduction Manager

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This Month's Cover Photo:

Second Avenue Elevated, looking north from 34th Street in about 1937, photographer unknown.

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R-42S MAKE THEIR FINAL, FINAL RUN



The R-42s are seen at Hammels Wye on the last trip northbound from Far Rockaway-Mott Av to Inwood-207 St. Marc A. Hermann photograph

MTA New York City Transit retired the last remaining R-42 subway cars from service today, ending a 51-year run. The cars have been used on two dozen lines, each traveling more than seven million miles. They had a memorable role in an iconic car-vs.-train chase in the classic 1971 film French Connection.

The final run followed a send-off ceremony at the New York Transit Museum, and was scheduled to proceed through a final trip on the A line from Euclid Av to Far Rockaway to 207 St, before returning to Euclid Av to close its doors for the last time. Subway en-

thusiasts joined MTA Chairman and CEO Patrick J. Foye and NYC Transit President Andy Byford riding the last R-42 in passenger service.

"These cars have served the MTA well as a reliable fleet over the last 50 years," said Sally Librera, Senior Vice President, Department of Subways for New York City Transit. "As technology advances, we're looking to modernize our fleet of subway cars to best serve New Yorkers."

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R-42s Make Their Final, Final Run

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ERA member Bill Wall, of Rapid Transit Operations, speaking at the Farewell ceremony in the Transit Museum before the last runs in revenue service.

Jessie Mislavsky photograph

"Two of the R-42 cars will continue to live here at the Transit Museum, where they will be used to educate the public about the city's mass transportation history, and visitors will get the chance to come aboard and travel back in time," said Transit Museum Director Concetta Bencivenga.

R-42s were built by the St. Louis Car Company and were the first cars received by the newly branded MTA in 1969, eventually totaling 400 cars in the NYC Transit fleet. The first cars were used on the BMT Broadway Line in service. Along with the R-32, the R-42 is the only post-war car to reach the 50-year service mark. The R-32 still runs on the and G.



The R-42s at 181 St.
Patrick Cashin photograph

These were the first cars in the New York City subway to arrive in service completely air-conditioned. The R-42 was the last car type to be designed as "married pairs," which means every two cars are semi-permanently linked together in order to reduce the number of compo-

nents that are required to operate a train. The cars that were retired today traveled an average of 400 miles a day. They were kept in good repair by senior mechanics with longtime experience maintaining R-42s.



At 59 St-Columbus Circle. Patrick Cashin photograph

The R-160 fleet is replacing most of the R-42s. A majority of the R-42 fleet was retired between 2006 and 2009, and most of those cars were submerged in the Atlantic Ocean to form artificial reefs. After the reefing program ended in April 2010, retired R-42s were sent to Sims Metal Management to be scrapped.

The remaining R-42s will be replaced by the newest NYCT subway cars, including R-179s that were recently placed into service, and R-211s (when those cars are delivered). (MTA Press Release, February 12, 2020)



Railfan mayhem ensues at Euclid Av, beginning and end of the last runs.

Marc A. Hermann photograph

LIRR MAIN LINE THIRD-TRACK PROJECT UPDATE by Jeff Erlitz

(Photographs by the author)

On Monday, February 3, the Long Island Rail Road permanently closed the New Hyde Park Road grade crossing in the village of the same name. Along with the road closure, the station's platforms were relocated about 1,000 feet west of their former location to the west side of the S. 12th Street grade crossing.

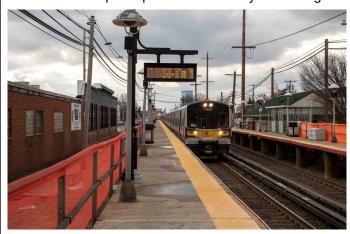
This makes the third grade crossing that has been closed as part of the Main Line Third Track project. The previous two were at Urban Avenue in New Cassel and Covert Avenue, also in New Hyde Park.

Earlier plans called for a temporary grade crossing to be constructed, as New Hyde Park Road was the busiest of all of the existing grade crossings. Apparently, it was determined that the established road detours (including the n23 bus route) would not be an excessive burden on the community so it was deleted from the task list. This will, however, make the construction of the new road underpass quite a bit easier by not having the

temporary roadway "in the way."

As construction progresses, and the new bridge is rolled into place later this year, the right-of-way will get raised roughly four feet at the point where it crosses the road, just as has been done at the two closed crossings already mentioned. Along with excavating out from underneath, this will provide for the 14-foot roadway clearance, standard for all of the new underpasses on this project. This is why the station platforms needed to be temporarily relocated.

The new underpass will be the longest one yet constructed, providing five traffic lanes and two pedestrian sidewalks. That fifth lane will be for a dedicated southbound left-turn lane. Both Urban Avenue and Covert Avenue have two traffic lanes and one sidewalk. The new underpass at New Hyde Park Road should be open for traffic this summer.



On the last day of service at the "old" New Hyde Park station, 2/2/2020, M-7 7490 (Bombardier Transportation, 9/2005) leads #7706 from Penn Station to Huntington.



M-7 7191 (Bombardier Transportation, 11/2003) is leading #7707 from Huntington to Penn Station at the "old" New Hyde Park station facilities.



M-7 7228 (Bombardier Transportation, 1/2004), in charge of #7708 from Penn Station to Huntington, leaves the New Hyde Park station and crosses New Hyde Park Road for the last time for this particular train. The street was closed at 3 AM the following morning.



The temporary station platforms at New Hyde Park, on the first day of service, 2/3/2020. In the distance, about 1,000 feet to the east, are the now-abandoned original platforms.

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LIRR Main Line Third-Track Project Update

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M-7 7018 (Bombardier Transportation, 12/2002) is on the front of #2050 from Penn Station to Ronkonkoma, 2/3/2020.



C-3 5001 (Kawasaki Rail Car, 12/1998) leads (with DE-30AC 404 (EMD, 8/1998, s/n 936423-5) pushing from behind) #651 from Port Jefferson to Jamaica, 2/3/2020.

Around New York's Transit System

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gram that is making 70 subway stations accessible in accordance with the Americans with Disabilities Act, including Nostrand Avenue.

The Nostrand Av **A ©** station is the 79th busiest station in the subway system, with turnstiles recording approximately 17,500 customers entering each weekday. Average weekday ridership at this station has grown about 15% over the past decade.

Other recently opened long-closed subway entrances include:

- Two entrances at the southern end of Metropolitan Av G, at Union Avenue and Hope Street/Powers Street, reopened in February, 2019
- The Seventh Avenue entrance to 8 Av w was reopened in February, 2019 as part of a station renovation
- The two entrances at the eastern end of Hewes St
 1/2 10, at Broadway and Hewes Street/Montrose Avenue, reopened in November, 2018
- The two entrances at the eastern end of Flushing Av J/2M, at Broadway and Fayette Street, reopened in July, 2017

The Bedford Avenue entrance was closed more than 30 years ago during a period of concerns about crime. The project is expected to cost \$2 million. Of that total, \$1.25 million will come from MTA New York City Transit; \$500,000 is being provided by Assembly Member Tremaine Wright; and \$250,000 is being provided by Senator Velmanette Montgomery. All work will be performed

by in-house forces.

OMNY Coming to the **26** and **6** Lines in the Bronx

On February 2, the next group of stations set to receive the OMNY contactless fare payment system during the month of February were announced. All seventeen stations on the IRT Pelham Line and nineteen stations on the IRT White Plains Road Line are included in this batch. This brings the total number of stations that have OMNY to more than 180. The entire subway system and all MTA buses remain on pace to receive OMNY by the end of the year.

The OMNY system has recorded more than 7 million taps since its pilot phase debuted at a small number of stations along the Lexington Avenue Line in late May of 2019. Customers from 129 countries and every single continent other than Antarctica have already used the system.

Elevators Being Replaced at 191 St 1

On February 1, all four elevators at the 191 St 1 station were removed from service to allow their complete replacement. This is part of the larger project to replace all of the elevators at the "deep" stations in Washington Heights. The work will replace the existing elevators and upgrade communications, security, and fire alarm systems. The projects mark the first time that the elevators and component systems at the stations have been replaced in their entirety.

In this case, a big difference is that the station is remaining open during construction. While there will be no access to St. Nicholas Avenue, access through the pe-

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NEW YORK CITY SUBWAY CAR UPDATE

Subdivision "A" News

Linked R-62As 1901-5 were restored to the 6 as of September 16, 2019, after toiling through the warm months while they were assigned to summer refuse trains. A belated IRT fleet modification resulted after the long-term closure of 42 St Shuttle S Track 1 on August 16, 2019 where single R-62A cars 1908 and 1910 were permanently shifted back to Livonia when they were removed from work service at Corona. This is said to be a temporary status given that another assemblage of single R-62As will be transferred to Westchester 6 sometime in 2020, including 1908 and 1910 as middle cars in some form. Nevertheless, 1908 was already used on the Shuttle S for a few days in later October, being part of this four-car consist on Track 3: 1921-1922-1908-1925. Of particular note in this instance was the edit of cab car 1925 from the usual three-car lashup to allow the addition of 1908, while the other "middle" single car (1922) continued to exhibit its "Cuomo" modified interior as has now been in operation for two years. Meanwhile, single car 1910 remains in limbo at Livonia as of mid-December, 2019, wherein its interior has been perceptibly soiled given that it was used in work service in Queens over the last year and a half.

While up to 30 cars long-assigned to the 1 have been ensconced on 6 service for 5½ years, one 10-car set (2466-75) was finally able to be sent "back home" on December 29, 2019. The lower of those five were already being re-marked with the red number plate stickers of its 240th Street facility within a couple of weeks. By contrast, 2471-5 had managed to retain the green number stickers that it had acquired during its time at Westchester (since 2017) through early February of 2020. As the New Year came to order on January 3, this small move enabled that the single long-"loner" Kawasaki R-62 train being farmed out to the 1 (most recently consisted as 1411-5 with 1591-5) could be returned to its own territory of the 3 based at Livonia. This obvious quirk within the IRT assignment had first been observed during the earliest stages of R-188 arrivals to the **7** in August, 2013, as part of the various secondary transfers which were required to support the gradual withdrawal of then-R-142As from the 6.

Subdivision "B" News

As of December 15, 2019, there were 308 out of a total of 318 R-179s delivered to NYCT. Five-car R-179 units 3283-7 were delivered at the end of July. Following afterward were 3288-97 in August; 3298-3307 in September; and then 3308-27 in October to complete that part of the order's numeric grouping. The balance of the contract then reverted to match the numbers of the first 40 five-car sets as were started with pilot train 3010-9, which had originally been delivered by Bombardier Transportation in September, 2016. As such cars 3020-9 were then delivered during November, being succeeded by 3030-9 through the middle of December. The arrival of the last ten R-179s were expected to

be delivered to 207th Street Shops by December 27, with the total contract then (at last) to be completed and on NYCT property by the end of 2019.

The fifth, 10-car R-179 train on the (3268-72 and 3278-82) was slightly jumbled after being delayed by the time it entered passenger service on August 22, 2019. As it turned out there was also just one more secondary transfer of R-46s (5870-7) from Pitkin (4) to Jamaica (5) on August 24. The remainder of that tangled R-179 set became the sixth (4) consist (3273-7 and 3283-7) starting on September 12. After that point the next four R-179 trains were again set up in consecutive numbers: the seventh was 3288-97 on October 18; the eighth being 3298-3307 on November 2; the ninth as 3308-17 on November 18; and most recently 3318-27 as the tenth on December 13. When acceptance of the remaining 5-car sets is completed in early 2020, there will be thirteen final 10-car R-179 trains in service on the (4).

A long-awaited fleet swap was begun on December 3, 2019 when the first of 24 R-46s (5582-5, 5654-7, 5678-81, 5686-9, 5746-9, and 5814-7) were transferred from Jamaica **FR** to Coney Island, where they immediately began service on the GNOW through that week. As more of the R-46s are soon relocated to Coney Island they will likely be commonly found on the G and N just about any time, as well as on the **w** during weekdays. As additional R-46 trains then turn up at Coney Island during the coming weeks and months through the winter of 2020, they will likely be employed also on the B and **(a)** in peak hour times. Whereas 396 of the R-46s that were assigned to Jamaica will be dislodged and sent to Coney Island through the next few months, all of the 750 surviving R-46s will have been completely reassigned for the first time since they were delivered between 1975 and 1978, and many have been running constantly on the Queens IND lines (B, EE, G, GG, **G**, **N**, and **R**) for just short of 45 years!

Specified to balance out the other side of this "swap" were 20 R-160A-2s (9248-57, 9268-72, and 9458-62) that were concurrently transferred (back) to Jamaica for use on the **E** and sometimes **R**, after they had been assigned to Coney Island since the fall of 2017. At that time 70 "standard" R-160A-2s were employed on the NOW to counterbalance the so-called "Cuomo" R-160s that were quickly sequestered at Jamaica but had initially been assigned at both Jamaica and Coney Island. As a result, all 95 various cars of this scattershot, modified group were gathered to be completed as quickly as possible. The two trains returned to Jamaica on December 3, 2019 were not expected to be left intact very long, whereas all 745 of the R-160s that have been assigned in Queens are deployed as a universal fleet that can be made to as many as 741/2 intermixed 10-car trains. The general exception in the operational

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New York City Subway Car Update

scheme for the R-160s at Jamaica is a preferable requirement that all of the "Cuomo" cars be assigned to the (a) (with a few wandering to the (b) as well).

Over the past three years, cab and electronic data equipment has continued to be installed on 1,566 R-160s to support the long-running Queens Boulevard CBTC project. Ultimately included are 745 R-160s modified at Jamaica, as well as 276 East New York-based R-160As (8377-8652 and 9943-74) to be used on the **M** in the future but will not able to operate on the **D** unless in by-pass mode. Pre-existing CBTC equipment for the Canarsie Line, which has its own variant, is being retained on the 212 R-143s and R-160As 8312-76. Those 276 have been generally assigned to the since at least 2007, but neither are they expected to be used on the **M** when required. Finally, equipment for the Queens Boulevard CBTC is also being installed on all 545 of the Coney Island R-160s assigned to the NOW for almost 13 years. All will eventually be transferred to Jamaica for future use on the **EFR** by the time the Queens Boulevard CBTC project is expected to be completed in 2021 or 2022. Whatever equipment will be so assigned would not afterward be moved elsewhere unless operated on by-pass and controlled only by a historic block-type signal system. Conversely, other (non-modified) equipment would not be able to be reassigned to the Queens Boulevard route unless they are modified with the exact same CBTC system as that soon to be on the Queens Boulevard Line. Otherwise, other equipment would only be able to operate on bypass, while controlled by the (partial) back-up block signals which are retained.

As predicted earlier, the last two 5-car R-179 sets (3040-4 and 3045-9) had arrived at 207th Street Shops on December 27, 2019, completing the entire order at the amended total of 318 units. While the eleventh R-179 10-car train (3020-9) was placed into revenue service on December 23, few onlookers were probably then able to anticipate the "shocking" turn of events that transpired when all accepted 298 cars were removed from revenue service within hours during the early morning of January 8. Details of the resultant "wrinkles" which then frustrated certain portions of the subway system (such as temporary service cuts, with most obvious being the temporary suspension of rush hour 2 service) naturally fed a bit of chaos into Car Equipment's daily rigors. On the other hand, NYCT had been keeping up with programmed maintenance of the R-32 and R-42 fleets and as a result were capably able to fill their back-up role during the R-179s' unsteady delivery phase. This made the system's oldest cars immediately available for full-time passenger service when most needed, just as they had been dependably "moving the millions" for the past half century.

As for the R-179s, NYC Transit had no choice but to review the fleet's entire inventory of ongoing issues after several had developed a questionable history of

technical difficulty. Thereafter, the whole R-179 acceptance protocol was looked at through "new eyes" (at least on paper), focusing on the cars' troublesome door operational systems, among other troubles. A quickly assembled "Go Team" composed of Transit's own managers and its consultants were then able to complete this leviathan task within a two-week period, carrying it out round-the-clock. As necessary reviews, comments, and modifications were incorporated, the next step was to restore the 298 accepted cars to service, in an orderly manner that contravened their inactive state almost as abruptly as it was put in effect on January 8. Ergo, in sequence the 88 R-179s based at 207th Street (3150-3237) were returned to the **©** on January 22; the 110 at Pitkin (3010-29, 3238-3327) on the (A) January 23; and finally the 100 at East New York (3050-3149) on the **1** 2 on January 24. Meanwhile, the final two unaccepted 10-car trains were somewhat set aside, if only for a short while during the cars' unexpected winter vacation. Their delivery processing and testing was resumed by January 14, with the twelfth R-179 (3030-9) train finally entering A revenue service on February 7, 2020.

A rumor had begun to circulate that at least some of the Phase I R-32s (and perhaps all R-42s) were soon to be retired by the summer of 2019. As might be recalled. there were rarely more one than or two R-42 trains being operated on the **1**/**2** since the previous February, where no more than 16 of the surviving 50 cars were accumulating noteworthy mileage. Action to begin wholesale withdrawal of the (semi-active) R-42s was discovered on December 20, as delivery of the last R-179s were timetabled for the end of calendar year 2019. On that date, while the usual one or two R-42 trains were still appearing during rush hours on the **1**/**2**, 20 of the other remaining 34 (4792-3, 4800-3, 4808/9, 4812-3, 4820-3, 4826-9, and 4838/9) were suddenly retired. Further, four of the other R-42 pairs (4788-9, 4814/5, 4832/3, and 4836/7) were then laid up with various ailments and planned repair work on them was halted. By the following Monday (December 23) one of the two remaining revenue trains along with another four spare cars (altogether 4794-7, 4804-7, 4810/1, and 4834/5) were also sidelined, leaving only one active train for **1**/**2** service (N-4824/5-4831/0-4816/7-4799/ 8-S), plus one spare pair (4790/1).

So, as this status remained quo through the Christmas holidays, that train then probably became the most sought-out consist on the New York subway system, second to the ongoing NYCT Holiday Special of R-1 to R-9s that was then making its weekly tours on the IND between Thanksgiving and New Year's. As it turned out, this "last R-42 train" was found making a handful of evening rush hour trips between Broad Street and Jamaica Center on December 26 () and 27 (). It then was held back for one last "event" (meaning in terms of media and customer availability) for another tour during the morning rush hour of Monday, December 30, starting its "final" journey by departing from beneath the fi-

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New York City Subway Car Update

nancial world's most famous corner, Broad and Wall Streets, at 10:12 AM. After it finished an otherwise unexciting trip at Jamaica Center, the "last of the R-42s" was then sent light back to a lay-up at East New York and so was to be the series' erstwhile conclusion, apropos perhaps after their 50-year utilitarian career of battling a hard life while carrying (and cooling) billions of passengers around quite literally all corners of the nation's biggest subway from Far Rockaway to Coney Island to Norwood in the Bronx and everywhere between.

It was not long before some of the R-42s were already taken for work service at Coney Island and 207th Street, while most then remained in storage at East New York, plus four cars at Pitkin, until what appeared to be the inevitable end, followed in time by their removal from NYCT property. Lo and behold, during the early morning hours of January 8, 2020 (as described above) the entire R-179 fleet was annulled from service, at which point all available R-42s were summoned again to East New York instantly, with 42 then operational (excepting the eight already not available on December 20) placed in the regular (all-day) rotation of **1**/**2** service—not just rush hours but also middays, evenings, and weekends as days of yore by that Friday, January 10: 4790-4813, 4816/7, 4820-31, 4834/5, and 4838/9. Onward the R-42s rumbled day in and day out (with videos of many a railfan as well being accumulated close at hand). As a bonus the "oldest" pair of R-42s (4788-9), which had borne some electrical damage before their "retirement," was repaired to be returned to revenue service (as it turned out) during the cars' final day of January 23. This was also just in time for the R-179s assigned to the **1**/**2** "completely" reinstated on the morning of Friday, January 24. By the following weekend, once again all 50 of the idled R-42s had been dispersed around the system as listed and were, well, gone:

Stored, East New York: 4792/3, 4804/5, 4808-11, 4814/5, 4822/3, 4828/9, 4832/3, 4836/7

Stored, Fresh Pond: 4800/1, 4812/3, 4820/1, 4834/5 Stored, Pitkin: 4788/9, 4794/5, 4802/3, 4838/9

Work Service, Coney Island: 4798/9, 4816/7, 4824/5, 4830/1

Work Service, 207th Street: 4790/1, 4796/7, 4806/7, 4826/7

On February 9, there was a sudden official-appearing flyer online which announced NYCT's special of its own, an R-42 "Farewell" trip to be made on the (end to end) on Wednesday, February 12. It appears that our description of these festivities will have to wait for other on-the-spot reporters as they happen. Hopefully next time, and if nothing else, remember that the Transit Museum's "TOMM" (Train of Many Metals) includes one pair of Morrison-Knudsen-overhauled R-42s (4572-3) which has since 2011 logged a fair number of miles itself as a "rolling exhibit."

Similar to the R-42s, there was little hint through the second half of 2019 that anything had happened

against the Phase I R-32s fleet of 222, which remained since their last major SMS effort in 2013. As things transpired, just one pair had (3878-9) been held back at 207th Street since March, 2018, effectively being converted to a spare parts supply for the remaining 220 cars used in daily (A) and (G) service. One additional pair (3454-5) was removed in early December due to troubles of its own, leaving 218 R-32s behind until there seemed to be a major decision that the R-32 fleet was to be significantly reduced in quantity, though not in as drastic a way as the R-42s. At that point a commonly recognized quantity of R-32s to be retired was 80. To add more to this debate, NYCT had completely dismissed the limited assignment of "full-length" R-46 trains on the **6** by December 16, 2019. Immediately after the last of the R-179s had been delivered there were suddenly 20 Phase I cars retired on January 3, 2020 (3404/5, 3410/1, 3424/5, 3452-5, 3484/5, 3496/7, 3698/9, 3878/9, and 3900/1), anticipated as part an effort of up to 20 cars across four weeks to be readied for disposition, providing evidence of the expected 80 cars.

As with the R-42s, these plans suddenly went acropper as all 298 of the accepted R-179s were very suddenly removed from passenger service on January 8. This happening (naturally) not only forced all of remaining 202 Phase I R-32s to be retained for revenue use in their usual (A) and (G) assignments, but also required that 10 of those 20 R-32s (3410/1, 3424/5, 3452-5, and 3484/5) which had been sequestered the previous few days at 207th Street Shops to be "processed" (stripped) instead restored to service later that same morning. In truth, unexpected technical difficulties forced four of those ten to be removed from use almost immediately (3424/5 and 3452/3) which then yielded an interim fleet of 208 during the rest of the R-179 fleet outage, during which time the R-32s became the entire rolling stock type used on the **©**, in addition to several (perhaps a half dozen) trains which continued to "fly the flag" on the A.

After the R-179s were put back in A revenue service, an immediate dearth of R-32s was consequently noted after January 24 from zero to two trains surviving on weekdays. Concurrently, the use of Phase I R-32s on the was cut back to its customary half of the with the R-179s again providing the balance of daily equipment requirements. The very next week, the retirement process of Phase I R-32s was accelerated in an aggressive manner, with these 24 cars being eliminated from the fleet on January 27 (3383/3890, 3384/5, 3440/1, 3471/3658, 3472/3, 3522/3, 3578/9, 3618/9, 3624/5, 3682/3, 3806/7, and 3870/1); then 38 more on January 30 (3406/7, 3419/3740, 3426-9, 3436/7, 3518/9, 3548/3593, 3586/7, 3590/1, 3610/1, 3650/3767, 3660/1, 3728-31, 3770/1, 3822/3, 3872/3, 3876/7, and 3896/7); and finally, a "to date" quantity of 16 (3354/5, 3416/7, 3454/5 (again), 3484/5 (also, again), 3688/9, 3732/3, 3774/5, and 3888/9) for an overall quantity of 92. As of February 7, 2020, the active fleet of 130 Phase I R-32s

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New York City Subway Car Update

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was continuing to carry about half of the line, with little more than a "token" exhibition as a train or two on the A.

While the anticipated pace of the great equipment (R-46 and R-160) swap between Coney Island and Jamaica was the subject of great apprehension among some of the New York Subway's "faithful" through the rest of December, 2019, little news was found to satiate their curiosity all the way through the holiday season. Otherwise, the only occurrence of note was the effectively undocumented initiation of CBTC operation on the IND Queens Line's local tracks between Jackson Hts-Roosevelt Av and Forest Hills-71 Av on December 23 (and then only during midnight hours, as advertised). The same date, a "fourth" R-46 train (another eight cars) previous from Jamaica was found on the **N** and trade, but what was noticed over the holiday weeks were a definite uptick in the presence of R-160s on the R, a frequency which could no longer be described as "sometime" by the end of that month.

The main "event" for what could be (if not one of) the largest single rolling stock transfers in the history of the New York rapid transit system was launched on the earliest opportunity on January 2, which has produced the ongoing swap of several trains between facilities virtually every weekday since. In sum, this undertaking has through February 7, 2020, wrought no less than 28 separate moves across 36 days encompassing the relocation of 215 CBTC-equipped, 60-foot R-160s from Coney Island (NOW) to Jamaica (BFR) in exchange for 192 75-foot R-46s from Jamaica (FR) to Coney Island (where they have been used most commonly on the **GNW**, with an occasional venture to the **Q**). Queens CBTC-based fleet exchange summaries are being prepared every Saturday during this process. All basic transfers between Coney Island and Jamaica are exhibited below in consolidated format as shown in the date of each progress report, with side notes added to conserve page space. It should be added that the specifics of each equipment movement were not always specified, as some transfer moves were arranged in advance but not executed for up to 48 hours:

January 9, 2020: Due to the R-179 suspension, R-46s 5596-9 and 5602-5 (8) temporarily transferred **F R** to **A** (Pitkin)

January 24, 2020: To support the fleet loss of R-160s at a potentially faster rate than the equivalent number of R-46s could be traded, R-68s 2768-71 (4) were transferred from **(a)** (Concourse) to **(b) (a) (b)**

January 25, 2020: R-160A-2s 8653-7, 8663-7 (10); R-160Bs 9103-7, 9113-7, 9163-7 (15) 000 to ER. R-46s 5490-3, 5530-3, 5538-41, 5562-5, 5650-3, 5770-3, 5846-9 (28) R to 600, sometimes 0

January 28, 2020: R-46s 5586-9, 5602-5 (8) were reassigned from **(A)** (Pitkin) to **(G)** (N), sometimes **(Q)**

January 30, 2020: To support the fleet loss of R-160s at a potentially faster rate than the equivalent number of R-46s could be traded, R-68s 2772-5 (4) were transferred from (Concourse) to (B) (M)

February 8, 2020: R-160A-2s 8658-62, 8693-7 (10); R-160Bs 8713-27, 8738-42, 8763-7, 8783-92, 8798-8822 (60) **Now** to **B R**. R-46s 5486-9, 5502-5, 5528-61, 5614-7, 5626-9, 5642-5, 5666-9, 5722-5, 5766-9, 5774-7, 5786-9, 5794-7, 5838-41 (56) **R** to **R M M**, sometimes **Q**

Around New York's Transit System

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destrian tunnel to Broadway will remain open.

191 St is listed on the U.S. Register of Historic Places and is the deepest subway station in New York City at 173 feet below ground.

Ultra-Wideband Technology Pilot on IRT Flushing and BMT Canarsie Lines Successfully Demonstrated

The nine-month pilot of ultra-wideband (UWB) technology on the Flushing and Canarsie lines to modernize the signal system has been deemed a success.

Thales and Piper conducted the work along the **7** line. They completed the nine-month pilot program with

strong results and demonstrated the potential for UWB positioning technologies to integrate seamlessly with Communications-Based Train Control (CBTC) to improve system reliability and the speed of delivery for upgraded signaling systems. The initiative and partnership are the result of the MTA's Genius Transit Challenge first launched in 2017.

In March, 2019, NYC Transit awarded Thales, in partnership with Piper Networks, a contract for a UWB-based Train Control System Pilot Program on the pline. At the same time, NYC Transit awarded Siemens, in partnership with Humatics, a contract for a UWB-based Train Control System Pilot Program on the Line. The scope of the pilot was to prepare the new

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Commuter and Transit Notes

by Jeffrey Erlitz

METROPOLITAN TRANSPORTATION AUTHORITY

The Metropolitan Transportation Authority (MTA) announced that it has awarded a contract to an engineering firm to begin studying the feasibility of initiating passenger service to a freight-only rail line running from Bay Ridge/Sunset Park, Brooklyn, through to Astoria, Queens. The southern part of the line is owned by MTA Long Island Rail Road and used exclusively for freight trains operated by the New York & Atlantic Railway. The northern part is owned by CSX Transportation, a freight railroad.

The study will evaluate the potential for subway, commuter rail, light rail, or bus service that would operate in conjunction with existing and planned freight rail service to help residents travel within Brooklyn and Queens and create a potential for reverse commutation to suburban destinations.

New transit service could offer potential connections or transfers to intersecting subway lines and the LIRR. The line is nearly 16 miles long and runs from the New York Harbor waterfront to Astoria via Midwood, East New York, Brownsville, Bushwick, Glendale, Middle Village, and Elmhurst. It crosses or nears 19 subway lines and the Long Island Rail Road.

Tom Wright, President and CEO said: "Regional Plan Association is thrilled that the MTA is moving forward on this study, which is the crucial first step to realize our Triboro vision. Transit service on the Bay Ridge Line would not only provide better transit service between the outer boroughs but also cut construction and acquisition costs since the rail tracks are already there. This study will build on our initial concept, and evaluate cost, feasibility, among other issues, to help push the project forward. We are excited to keep working with the MTA and all other partners on this."

The MTA has awarded the contract, valued at \$1.3 million, to engineering firm AECOM, who will work with subcontractor WSP. (MTA press release, January 22)

MTA LONG ISLAND RAIL ROAD

MTA Long Island Rail Road President Phil Eng officially opened the newly rebuilt Nostrand Avenue station on January 31. The two-track elevated station features two new ADA-accessible elevators, platform canopies, new tactile warning strips on both platforms, and a new art glass installation created by a local artist. Construction on the project began in 2017 and cost \$28.1 million.

The station, which is located at Nostrand and Atlantic Avenues in the Bedford-Stuyvesant section of Brooklyn, was originally built in 1903 and then rebuilt in 1977 and serves approximately 1,217 weekday riders. It is on the Atlantic Branch with direct access to Jamaica Station going east and Atlantic Terminal going west.

Out of the Railroad's 124 stations, 85%, or 106, stations are accessible, including, Nostrand Avenue. There will soon be two more accessible stations as elevators

are currently being installed at the Murray Hill and Floral Park stations.

The new elevators are located each on the eastbound and westbound platforms, which also have new, yellow tactile warning strips. There are also four new staircases, two at each platform. Both platforms are Fiber-Reinforced Polymer (FRP) which is lighter than concrete and more resistant to salt, making it less susceptible to the effects of weathering and degradation in severe environments.

Technological advances at the station include digital information displays which enable the LIRR to target messages concerning the Nostrand Avenue station and to communicate with passengers about train departures and connections for travel. MTA Help Points will be installed this spring, putting customers in touch with LIRR personnel via an interactive communications device.

MTA Arts & Design commissioned multidisciplinary artist Derrick Adams, who has a studio just blocks from the station, to create *Around the Way*. The laminated glass artwork consists of 85 panels that span the length of the newly rehabilitated platforms and extend on to the four new pedestrian bridges.

"As a longtime resident, I was inspired to create this work as a response to the vibrant cultural surroundings and diverse population which I see in motion on a daily basis. The figures fuse with architecture and nature as a representation of the progressive impact left by generations of growth. These hybrid structures represent the many important components which reside together to form a thriving community," said Derrick Adams. (MTA press release, January 31)

MTA METRO-NORTH RAILROAD

The list of construction firms deemed qualified to submit proposals to design and build Metro-North's Penn Access Project was announced on February 11. The project will bring Metro-North Railroad service into Penn Station by 2023 and create four new stations (Hunts Point, Parkchester/Van Nest, Morris Park, and Co-op City), fully accessible under the Americans with Disabilities Act, in the east Bronx.

Penn Station Access is expected to draw new riders to public transit and generate major time savings for existing Metro-North customers. The MTA anticipates up to 50,000 customer trips will be made per day on the new route, including up to 20,000 who start or end at the four new stations in the Bronx.

Customers who travel between the east Bronx and Penn Station can save up to 45 minutes of travel time over current alternatives. Customers who travel between the east Bronx and New Haven Line stations can save up to 80 minutes of travel time over current alternatives. Metro-North customers who travel between existing New Haven Line stations and Penn Station

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Commuter and Transit Notes

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(who now connect to subways to complete this trip) are projected to save 16 minutes each way.

The project is using the innovative "design-build" process in which a single firm or consortium is responsible for both the design and construction of a project. This process puts competitive pressure on bidders to harness innovation to identify faster ways to complete projects, and mitigate the impacts of construction, with the final contract imposing financial penalties for failure to adhere to a strict project timetable. This process incentivizes faster construction, places the risk for cost overruns on the contractor, and rewards contractors for reducing impacts on local communities and commuters. Design-build has been used successfully in projects such as the new Mario M. Cuomo Bridge and the LIRR Expansion Project.

The qualified design-build entities will be invited to enter a competitive solicitation process in which a request-for-proposals will highlight the project's emphasis on meeting project milestone dates and minimizing local community impacts of construction, among other priorities. No contract will be awarded until after the environmental review process is concluded, a formal "Finding of No Significant Impact" is issued by the Federal Transit Administration (FTA), and the contract is approved by the MTA Board. Contractors will be expected to include in their bids specific efforts to reduce the impacts of construction:

The qualified consortia announced today include:

- Halmar International, LLC/Railworks, JV (Ove Arup & Partners P.C., Lead Designer)
- Skanska ECCO III Penn Station Connectors, JV (AECOM USA, Incorporated, Lead Designer)
- Tutor Perini/O&G, JV (Parsons Transportation Group of New York, Incorporated, Lead Designer)

An informational open house was held in October, 2019 for potential applicants, including minority and women-owned businesses, to educate them about the project. The bidders above were evaluated and selected by a team of expert reviewers consisting of personnel from the Metropolitan Transportation Authority, LIRR, Metro-North and Amtrak. Experts in procurement, engineering, construction, environmental analysis, law, finance and community outreach analyzed each bidder's statements of qualifications according to criteria including:

- Experience in projects of this scale
- Past performance with a record of quality and completion of projects on time and within budget
- Qualified personnel who have successfully managed all aspects of similar projects
- Commitment and ability to minimize construction impacts
- Financial strength and capability
- Diversity practices

Metro-North Penn Station Access is fully funded under the MTA's 2015-9 and 2020-4 Capital Programs. (MTA press release, February 11)

NJ TRANSIT

The Federal Transit Administration (FTA) has raised the rating on New Jersey Transit's proposed Portal North Bridge replacement project to "medium-high" priority, effectively making it eligible for federal funding.

In September, 2019, NJ Transit submitted to the FTA a revised financial plan based on federal recommendations to allocate more local money to the project and keep costs in check, NJ Transit officials said in a press release.

Since then, NJ Transit and state officials doubled the share of local funding that would be contributed toward the project, increasing the state's contribution from \$300 million to \$600 million.

With higher rating, the project inches closer to a full funding grant agreement.

NJ Transit's 109-year-old swing span bridge over the Hackensack River is a frequent source of train delays on the Northeast Corridor between Newark, New Jersey, and New York Penn Station.

The bridge regularly opens to allow for marine traffic to pass, with each opening causing delays for NJ Transit and Amtrak trains. When the bridge fails to properly close, the delays affect tens of thousands of riders, NJ Transit officials said.

The Portal North Bridge replacement is designed as a high-level, fixed span bridge that will allow marine traffic to pass underneath without interrupting rail traffic.

Once full construction begins, the bridge replacement is expected to be completed in five years. (*Progressive Railroading*, February 12)

OTHER TRANSIT SYSTEMS

PHILADELPHIA, PENNSYLVANIA

Soon, some SEPTA riders will be able to see in real time when trains are arriving, on time or otherwise. SEPTA is in the process of implementing real-time countdown clocks at every subway and trolley stop. The project is part of a larger modernization project that began under the regime of former General Manager Jeff Knueppel.

SEPTA spent about \$6 million adding cellular modems to its buses and trolleys, to provide location data that could be used in real time on the SEPTA app. The new data could be refreshed every 30 seconds, an improvement from updates every three to seven minutes.

Subway trains require a different approach since they run underground, which leads to signal interference. The information would have to come from the train tracking system that feeds back to the centralized traffic control system at SEPTA headquarters.

But each line — Broad Street, Market-Frankford, and trolley — relies on a different system to track vehicles. So, SEPTA contracted Alstom SA, a company whose system is used on the Market-Frankford Line, to unify the three trackers. Once the new system is in place, real-time information can be sent out to the stations via the signs.

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SEPTA expects to have countdown clocks in all Broad Street Line stations by November. Signs on the Market-Frankford and trolley lines will go up in 2022. (PlanPhilly via WHYY-FM, February 18, 2020)

SEPTA will introduce a new schedule for the Market-Frankford Line beginning February 24, designed to add more train service in the early evenings.

MFL trains will arrive every six minutes on weekdays from 6-7 PM — an improvement from the current schedule, which has the subway arriving every 10 minutes.

From 7-8 PM, service will change to a train every eight minutes, down from every 10 minutes.

SEPTA spokesperson Andrew Busch said that the ridership numbers are increasing in the evening, a trend that could reflect altering work habits as well as other cultural and economic factors.

The schedule change will begin at the same time as another big service change to the line — the end of the long-running A and B skip-stop system at rush hour. During peak hours, from 7-9 AM and 4-6 PM, MFL trains will now stop at every station every four minutes.

Busch said both changes were designed to address congestion issues on the growing line. He said that population growth in parts of West Philly and Fishtown has generally led to more crowded trains and platforms — often at stations tagged for skip-stop service years ago. Average weekday ridership at the four busiest A-B stops increased by 26% between 1996 and 2016. (PlanPhilly via WHYY-FM, February 4)

The iconic trolley cars that have crisscrossed most of Girard Avenue for nearly 15 years are going away for upwards of 18 months.

SEPTA officials said that buses replace the trolleys along the entirety of Route 15 as of Sunday, January 24. The route, which runs from Port Richmond to Haddington, is the transit agency's sole remaining surface-only trolley line.

Scott Sauer, SEPTA's assistant general manager of operations, blamed multiple PennDOT highway construction projects for the interruption, which have already led to bus substitution along the eastern portion of the trolley line, near Interstate 95.

However, maintenance issues also play a role in the agency's decision. Sauer said that just four out of 18 of the route's 1940s-era PCC-II cars are in a state of repair needed to pass internal mechanical inspections. While he offered no single explanation for the poor condition of the fleet, he noted problems with rusted chassis and other issues with the 73-year-old car bodies.

Sauer described the 12- to 18-month service interruption as a chance to bring the PCC II cars back to a state of good repair.

Sauer said SEPTA had notified operators of the change but acknowledged the agency had not notified the general public. More than 8,200 riders on average use the route each day, according to a June ,2019 SEP-TA report.

Trolley service on Girard Avenue was first suspended in 1992, as part of a series of controversial SEPTA budget cuts, and the line has faced a rocky journey ever since.

More than 100 cars were taken out of regular service on Route 15 and two other legacy surface routes — Erie Avenue's Route 56 and the lengthy Route 23-Germantown, which cut a 13-mile course across the city — following the 1990s-era budget cuts. Buses replaced these trolley routes, although SEPTA officials asserted at the time that they planned to restore service on all three lines using modern "light rail vehicles" by 1996.

Ultimately, regular trolley service returned only to the 8.2-mile-long Route 15, the shortest of the trio, following years of political pressure from figures like former Governor Ed Rendell.

However, rather than acquiring modern light rail vehicles, SEPTA eventually opted to rebuild 18 historic cars similar to those that had long plied the route, at a cost of some \$88 million. The current green-and-tan cars returned to Girard in 2005, nearly a decade later than first promised.

Joe Coccio, Secretary-Treasurer with the Transit Workers Union Local 234, which represents most of SEPTA's drivers and other blue-collar workers, blamed the current suspension on both deferred maintenance and the broader delay of SEPTA's trolley modernization plans.

Officially, SEPTA maintains that it is still planning to spend at least \$1.3 billion on a modernization project that would bring 21st century light rail vehicles to five subway-surface trolley lines in West Philadelphia and Route 15. This plan would see the installation of more raised platforms along routes and swap older cars in favor of larger, ADA-accessible vehicles featuring multidoor boarding and deployable ramps.

While light rail service is costlier to operate than bus service, a June, 2019 study of Route 15 from the Delaware Valley Regional Planning Commission found that "modern trolleys can offer significant travel time savings within the study area, and even greater travel time savings when prioritized in a dedicated right-of-way."

Still, some riders fear the failure to restore other surface lines cut in the 1990s and the repeated disruptions to Route 15, including the impending suspension, could spell the end of trolley service along Girard Avenue.

While SEPTA officials assured riders the trolleys will return, the transit advocacy group 5th Square launched a petition preemptively demanding their restoration. Ben She, a 5th Square transit advocate, also worried that "since the buses are smaller than the trolleys, there might be risk of overcrowding if service gets too unreliable with the buses."

With ridership in the city on a downward trend, She also said running buses on the line created a "precarious situation" for the authority. "Causing more disruption doesn't help" falling ridership, She said. "SEPTA needs to find stability and continue improvements for the line."

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Further, in 2018, the authority commissioned transit consultant Jarrett Walker to author a bus optimization report that recommended abandoning Route 15 trolley service in favor of a high-frequency bus line, among other findings. The report cited the streetcars' inability to bypass double-parked cars and other obstacles in narrower portions of the route.

Sauer insisted these fears were overblown and pointed out that the agency was in the process of restoring a trolley loop and tracks on the eastern portion of Route 15 that had been disrupted by I-95 construction.

"They'll be back. I get it, I'm a trolley guy, too. I know how people feel about them," Sauer said. "This is Philadelphia and we love our trolleys."

Yet fans of the refurbished World War II-era trolley cars, unique among SEPTA's fleet of vehicles, weren't taking any chances. Some users on the Philadelphia Metropolitan Area Transit Scene Facebook group posted videos depicting themselves taking "last rides" on the Route 15 cars. "Hopefully a few go to trolley museums," wrote Douglas Diehl, a group administrator. (PlanPhilly via WHYY-FM, January 26)



PCC-II 2332 on Girard Avenue. PlanPhilly photograph

CHICAGO, ILLINOIS

The hope that Chicago Transit Authority's (CTA) Red Line may run a little deeper in the future has not faded one bit. The CTA Board has decided to look into extending the Red Line from 95th Street to 130th Street and approved \$38 million for an environmental impact statement.

The last time the famous "L" line was stretched was back in 1993 with the Orange Line. Total cost for the Red Line extension could be as much as \$2.3 billion. T.Y. Lin International Great Lakes will handle the \$38 million job, which also includes planning and preliminary engineering for the project.

This is the third investment CTA has made for a Red

Line extension in three years. In 2018, a \$20.9 million contract was issued to HNTB Corporation for final environmental review and preliminary engineering work. Last year \$310 million was approved to match federal funding.

"CTA is committed to ensuring that every community has access to public transit, and we are focused on following the federally required process to make that a reality," CTA President Dorval Carter said in a statement. (*Railway Track & Structures*, February 11)



A southbound Red Line train is seen approaching the 95th/Dan Ryan terminal in the median of the Dan Ryan Expressway.

Railway Track & Structures photograph

St. Louis, Missouri

A plan to restart the scuttled Loop Trolley ran into big trouble when Bi-State Development Agency commissioners failed to endorse taking over the line. No vote was taken on a motion to advance a plan by the agency's President and CEO, Taulby Roach, to have Bi-State manage the 2.2-mile streetcar line for four years as part of its Metro transit system.

Following the commissioners' move, Roach said, "I have no further way to move it forward," adding that he has no plans to retool his proposal to try to win their support. "We've worked...to come up with the best plan that we could at this point," he told reporters. "But right now, it's just not good enough to reach approval of my Commissioners." It was not clear if there is any other path forward to revive the trolley, which shut down in December, 2019 after running for only about a year amid a string of financial and operating problems.

If the trolley remains closed, the Regional Administrator for the Federal Transit Administration, Mokhtee Ahmad, confirmed at Friday's meeting that his agency likely would file suit to try to recover about \$25 million in federal money that helped build the line. The suit would be filed, he said, against the special sales tax district set up to fund the line and the East-West Gateway Council of Governments.

Asked by a Board member whether his agency had ever tried to claw back grant money previously, Ahmad said "we came close" once in another part of the country. "A letter was sent, and the parties involved...did

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come around and complete the project," he said. Roach, when asked by reporters what would happen next with the trolley, said that is a question for the special sales tax district set up to help fund the line. Roach is on the Board of the tax district with St. Louis Mayor Lyda Krewson, St. Louis County Executive Sam Page, University City Mayor Terry Crow, and Joe Edwards, the businessman who for decades has been the prime mover behind the \$51.5 million trolley project.

Krewson's spokesman, Jacob Long, in a text said only that "we will continue to work to explore solutions that are least detrimental to the region and try to minimize any potential negative ramifications of today's decision." That is an apparent reference to Roach's warning that defaulting on the federal trolley grant could harm the region's chances of winning future federal discretionary aid for transportation projects. Asked by Bi-State Commissioner Derrick Cox about that at a meeting, Ahmad, the federal official, said a default "certainly would be a factor that would be there."

"What do you think you (the federal agency) would do given the fact that you have this litigation going on and an application comes in from St. Louis for a discretionary grant?" Ahmad asked. "I'll leave that up to you to answer." Page declined to comment on the Bi-State rejection. His spokesman, Doug Moore, referred a reporter to a statement Page released on Tuesday saying he was reassured that no additional county funds would be spent on the trolley. Crow said that "while it is too early to know what will come next for the Loop Trolley," University City is open to being part of any conversations with the sales tax district and regional partners "as we move forward."

Edwards said he was surprised at the move. "I hope this isn't the end; I hope this is a pause and that they will reconsider," he said. He said he remained optimistic that something could be worked out. But John Meyer, president of the nonprofit Loop Trolley Company, said the Bi-State Board's decision to reject the plan marked "a dark, sad day for the St. Louis region." Meyer applauded Krewson for supporting Roach's plan, which would have used \$1.9 million in unspent Bi-State federal grant money to cover shortfalls. But Meyer said he was "extremely disappointed in the rest of our leadership" regionally. The company had operated the trolley, which ran from the western end of the Delmar Loop commercial area in University City to the Missouri History Museum in Forest Park.

Although Friday's meeting was technically of two committees of the Bi-State Board, nine of the 10 board members took part — sending a clear signal of the Board's view of the proposal. The unsuccessful motion, made by Board member Rose Windmiller, an associate Vice Chancellor at Washington University, would have sent the issue on to the full Board for final action next month. It failed to get a second.

Roach's plan, disclosed earlier this week, would have

used unspent balances from previous federal grants to get the moribund trolley back in service and able to sustain itself. He said by 2025 to 2027, depending on the rate of growth, projected increases in sales tax district collections would result in the trolley sustaining itself without more outside aid. Roach, at the request of Krewson, Page, and others, said he had worked closely with Ahmad to come up with a plan. But Bi-State Board members, particularly those from Illinois, raised various concerns Friday.

Cox and Justin Zimmerman, both from Madison County, complained that the trolley route duplicates existing service offered by MetroLink and a Metro bus line. "Many in the public, including me, don't believe it's transit," said Cox, who took part by telephone. "That's why it doesn't have the ridership."

The two also said the unspent Bi-State grant money would be better going to Bi-State's own capital needs. Herb Simmons, a St. Clair County member, asked why there has not been written support for a Bi-State takeover from St. Louis, St. Louis County and University City officials. Zimmerman added that there also had not been any votes of endorsement from elected Boards in those areas. In response, Roach said Krewson would issue such a letter if asked but that "I've fallen short of getting a letter of support" from Page. Board Chairman Michael Buehlhorn of Swansea called the idea "a bad business plan" and said that he worried what would happen if sales tax projections are not reached at the end of the four-year period.

Windmiller, a St. Louis County member, expressed concern about agreeing to a plan for four years instead of setting yearly ridership and financial benchmarks that could be reviewed annually by the Bi-State Board. County Council chairwoman Lisa Clancy, D-5th District, said later in a text that she supported the Board's decision and that "it sounds like the commissioners are clear on the priorities for Bi-State and for the community served." Two council Republicans, Ernie Trakas of the 6th District and Mark Harder of the 7th, also hailed Friday's action. Trakas said there is no community support for spending any more general tax money on the trolley, local or federal. He suggested that trolley boosters instead seek money from the regional Convention and Visitors Commission as a tourist attraction.

Harder thought that the trolley still had a chance and suggested it could be taken over by a private enterprise. "If someone else has other ideas on how to save this thing, let's hear it, but the taxpayers shouldn't be on the hook for this amusement." (*St. Louis Post-Dispatch*, January 27)

SAN FRANCISCO, CALIFORNIA

California Assemblyman David Chiu has put forward a bill which would require all 27 transit agencies throughout the San Francisco Bay Area's nine counties to create a "seamlessly integrated public transport system."

The Bay Area Seamless Transit Act, filled on February 4, proposes that agencies standardize their bus fares and use the same regional transit map, smartphone

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apps, and Clipper card payment technology.

Currently, local agencies have separate end-user systems with very little overlap.

The legislation would "implement immediate, achievable steps to move toward a more seamless rider experience" to require agencies to classify "youth", "senior", and "low-income riders" in the same way and apply the same discounts for passengers transferring from one line to another.

The Democrat's bill is an effort to increase ridership levels in the San Francisco Bay Area, where ridership dropped 5.2% between 2016 and 2018. Currently, only 3% of all trips in the Bay Area are made on public transport.

"Agencies build transportation infrastructure separately, which can make transferring from one operator to the next difficult," Chiu said. "Navigating our disjointed transit system can be an intimidating and frustrating experience for riders, which leads to less transit ridership overall. We need to put riders first and take steps to make our transportation system reliable, convenient, and intuitive."

The proposal coincides with the Faster Bay Area Transportation Tax ballot measure currently proposing investments of \$100 billion in transport projects over the next 40 years. (*Metro Report International*, February 7)

LOS ANGELES, CALIFORNIA

Los Angeles County Metropolitan Transportation Authority (LA Metro) officials yesterday announced the agency has moved closer to receiving a \$1.3 billion federal grant to help fund the third and final phase of its Purple Line subway extension.

The U.S. Department of Transportation (USDOT) has sent the full-funding grant agreement to Capitol Hill for a 30-day review period, the last step before the Federal Transit Administration (FTA) and LA Metro sign the agreement, LA Metro officials said in a press release.

The agreement will be delivered under the FTA's Capital Investment Grant Program, also known as New Starts. The grant is a stand-alone agreement, with no required loans for LA Metro to pay back as in previous funding agreements for Sections 1 and 2 of the Purple Line extension, LA Metro officials said.

The overall cost for the project's final section is \$3.6 billion, with remaining funds coming from LA Metro's voter-approved transportation sales tax measures.

The segment is considered one of Los Angeles County's most critically needed public transit projects: a subway under Wilshire Boulevard that will connect downtown Los Angeles and Westwood with service en route to the Miracle Mile, Beverly Hills, and Century City, LA Metro officials said.

LA Metro is building the subway's first two sections and has begun some initial preparatory construction activities for Section 3 between Century City and Westwood. Major construction is expected to start later this

year. The three sections of the seven-mile Purple Line extension are expected to open in 2023, 2025, and 2027, respectively.

"This new transit line, when fully constructed, will revolutionize the ability to connect the Westside with the rest of Los Angeles County's growing rail and bus networks," said LA Metro Chief Executive Officer Phillip Washington. (*Progressive Railroading*, February 12)

Montreal, Québec, Canada

Beginning March 30, continuing Réseau express métropolitain (REM) construction will lead to the closing of the Mont-Royal Tunnel used by commuter trains from the Deux-Montagnes and Mascouche Lines. The Québec government, Autorité régionale de transport métropolitain (ARTM), Mobilité Montréal and the transit authorities have announced the transitional network that will be implemented during the work:

- The Deux-Montagnes Line will terminate at the Bois -Franc station
- The Mascouche Line will terminate at the Ahuntsic station
- Fare pricing measures: free rail shuttle and bus shuttle between Bois-Franc and Côte-Vertu. In addition, users of the Deux-Montagnes line will have four months of free metro to test the measures

The Réseau express métropolitain (REM) is a new automated light rail network. It will include 26 stations and span the greater Montréal area with 67 kilometers of tracks—by comparison, the current metro network is 71 kilometers long. The service will be much more frequent than the current commuter rail service, as frequent as $2\frac{1}{2}$ minutes on the downtown segment. The first trains are expected to start running in 2021 from the South Shore to Bonaventure-Central Station. Then, the other branches of the network will be gradually put into service in 2022-2023.



The Réseau express métropolitain completed network. Heavy gray lines are current Metro routes and thin gray lines are remaining commuter rail routes.

Réseau express métropolitain photograph

HELSINKI, FINLAND

Helsinki transport operator HKL has awarded CAF a

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The refurb

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€39.9 million contract to supply a further five four-car M300 metro trainsets and provide spare parts over their expected 40-year life.

The additional M300 sets are scheduled for delivery from CAF's Zaragoza plant in 2022, providing an increase in capacity to handle the forecast increase in ridership when the Matinkylä-Kivenlahti second phase of the Länsimetro extension opens in the early 2020s.

CAF has previously supplied 20 M300 trainsets in 2016-7. They are 90 meters long, with wide gangways and a capacity of approximately 575 passengers.

The latest order, finalized in late January, will take the metro fleet to a total of 50 trainsets, including six M200 and 19 M100 sets.

HKL and CAF have also agreed to modify the existing M300 units to improve the ergonomics of the cabs. The cabs were designed for temporary use pending a planned switch to unattended operation; however, the automation project was subsequently put on hold in the face of mounting technical difficulties.

The layout of the controls will now be modified, and the driver's seat will be replaced with a design offering a greater range of adjustments as well as the option to operate the trains while standing. (*Metro Report International*, February 6)

BERLIN, GERMANY

German Rail (DB) presented the first of 17 refurbished former Westbahn Stadler Kiss double-deck EMUs at

Berlin Hauptbahnhof (Main Station) on February 6 ahead of the introduction of nine trains on the Rostock-Berlin-Dresden inter-city route on March 8.

DB confirmed the purchase of the seven class 4010 six-car Kiss 1 and 10 class 4110 four-car Kiss 2 vehicles in July. The trains will support a two-hour interval service on the Rostock-Berlin-Dresden route, which was due to be served by 69 IC2 inter-city push-pull trains on order from Bombardier. However, DB suspended delivery of the remaining 25 trains last week after a series of reliability issues reportedly caused by software-related problems.

Expansion of the Rostock-Berlin-Dresden service is part of DB's "Strong Rail" strategy to double long-distance passenger rail journeys to 260 million customers per year. The purchase of the Kiss Fleet is part of an €8.5 billion investment in DB's long-distance fleet, which as well as the IC2, also includes orders for additional ICE 4 trains and intermediate vehicles from Siemens, a contract with Talgo for 100 long-distance trains, and new tenders for 30 high-speed trains and 90 high-speed EMUs.

Westbahn CEO Dr. Erich Forster told IRJ that the company decided to sell the trains because the economic conditions for the purchase of the Kiss 1 trains in 2009 at the height of the economic crisis were no longer favorable for the open-access operator. Westbahn subsequently ordered further Kiss EMUs from Stadler, the first of which will be delivered in 2021.

The 200-kilometer-per-hour refurbished four-car (Continued on page 19)

Around New York's Transit System

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platform for safety certifiability, and it consisted of nine months of testing and collecting 2,500 hours of operational data. An automated data upload facility at Corona Yard has allowed for cloud-based processing of all collected sensor data from the line, which could then be compared with data from the Communications-Based Train Control (CBTC) system and a LIDAR-based "ground truth" digital map.

As part of the pilot program, four trains on the hine, which is one of two lines in the system already equipped with CBTC, have been outfitted with the Thales CBTC system that integrates Piper's UWB technology. Four trains on the Canarsie Line were outfitted with Siemens' CBTC system that integrates Humatics' UWB technology.

The demonstration, which took place on the express track of the place in between the 61 St-Woodside and 40 St stations, showed the potential of an even more precise positioning system, UWB, to improve system performance and recovery. The pilot proved it could also help accelerate the implementation of CBTC. Additionally, because UWB technology is installed off the tracks rather than on the tracks, it could be considerably easier for NYCT personnel to maintain in the long term and cut

down on delays stemming from malfunctioning equipment on the tracks.

Key advantages of the UWB pilot include:

- Rapid implementation, achieved through a reduction of train-borne equipment by removal of undercarriage installation, which would enable the modernization of aging subway infrastructure on an accelerated timeline
- Increased train positioning accuracy, achieved through utilization of modern onboard sensors including UWB radios, which could contribute to fewer and shorter service delays for passengers
- Accelerated start-up position initialization, enabling a train to initialize and switch to Automatic Train Operation (ATO) faster than current-generation CBTC systems

To help accelerate the modernization of the signaling system, NYC Transit has announced a third vendor, Mitsubishi Electrical Power Products, to qualify as a CBTC supplier. Mitsubishi successfully completed, within budget, a development and safety certification program awarded in September, 2015.

It remains to be seen whether or not UWB technology will be used in any of the upcoming CBTC contracts, like Queens Boulevard East (Kew Gardens-Union Tpke to Jamaica-179 St and Jamaica Center-Parsons/Archer).

SOUTHWEST UNITED STATES by Jack May (Continued from February, 2020 issue)

(Photographs by the author)

FRIDAY, APRIL 14

This was the first day after the completion of the track work on the Gold Line, and I hoped service would be back to normal, which meant base headways of every 12 minutes, increased to 7 for rush hours — and it turned out operations were indeed trouble-free on this beautiful day. After adding a new day ticket to my TAP card I followed the same itinerary that I tried two days earlier, and found myself at Union Station before 10:00. I boarded a two-car train of new Kinkisharyo cars and rode it all the way to the terminal just beyond Azusa (49 minutes), which gave me the opportunity to plan my photography of the extension from Sierra Madre. The ride was speedy and smooth, and gave me a full appreciation of the line's ambience.

This side of the Gold Line continues to be my favorite Metro light rail route for a number of reasons, but mostly because of its varied and attractive rights-of-way, which are now augmented by this extension. When I joined the hobby in the late 1950s and widened my horizons, I quickly learned that the electric streetcar (and its evolutionary followers) was the most flexible mode of transit, able to take advantage of all sorts of infrastructure, including streets, reservations in the center and side of roads, cross-country through fields and woods, elevated, underground, and so on, and able to share rights-of-way with motor traffic as well as full-sized railways, both alongside and even on the same tracks.

Here is my attempt at describing this most interesting line. With its platform elevated at Union Station, the line climbs further on high concrete pillars to the Chinatown station, whose architecture and decorations are styled accordingly, and which affords a panoramic view of the city. It then sinks to ground level, crosses the Los Angeles River and joins the former right-of-way of the Atchison, Topeka & Santa Fe Railroad in a general northeastern direction. It is a curving right-of-way, which includes a section of Marmion Way, where the line runs for about half a mile in the center of a residential street with parking and sidewalks. Here the line's roadbed is paved and slightly raised above the street, with a fence separating the two tracks, so it is ostensibly on reservation. Motor traffic is allowed to briefly encroach, especially when backing out of driveways. On this section light rail cars are limited to speeds of 20 mph. I suspect that the previous AT&SF rails were on prw with narrow paved alleys on both sides. The Highland Park station is at the end of this short section, and then the line begins to run over a more traditional rail right-of-way, which takes it through beautiful Arroyo Seco Canyon, where it crosses the original Pasadena Freeway via an ex-AT&SF high trestle. It then continues to follow the route of the former Super Chief toward Pasadena, stopping in

the heart of South Pasadena's attractive retail center. This is an upscale city that is the home of the line's original NIMBYs; both it and the Highland Park stop were once Santa Fe Railroad stations, although almost all of the road's varnish made their first stop outside Los Angeles at Pasadena; this station has been preserved as a restaurant, La Grande Orange Cafe, just north of the Gold Line's Del Mar stop. The line between South Pasadena and Pasadena is quite verdant and crosses under a number of bridges from which I took photos on previous trips.

Pasadena is a diverse city with about 140,000 residents, most famous for the Rose Bowl football game and Tournament of Roses parade, as well as the Norton Simon art museum and plenty of Victorian architecture. Notably, as the line cuts through this city, it runs through a building, as well as traversing a half-mile long subway (which includes the Memorial Park station) to end up in the center of the east-west I-210 Foothill Freeway; there are three stations here, the last being the original terminal, Sierra Madre Villa. The line up to this point is just under 14 miles long (from Union Station) and opened on July 26, 2003.

Now onto the new line, the Foothill extension, which added 11.5 miles and 6 more stations when it opened on March 5, 2016. It runs in a predominantly east-west direction through the San Gabriel Valley on traditional railroad right-of-way just south of the mountain range, and for now ends in Azusa (although groundbreaking recently occurred for an extension of 12½ miles more along the same Santa Fe line to Montclair). After Sierra Madre, the Gold Line leaves the Foothill Freeway via a bridge, and runs through Arcadia, Monrovia, and Duarte, with a single station in each town. Its maintenance and storage yard is between the Monrovia and Duarte stations. After Duarte, and just short of the next stop, Irwindale, the right-of-way widens significantly as it is joined by a third track and ancillary facilities used for freight service. The freight trackage extends eastward beyond the end of the current electric line and even its future extension to Montclair, as far as San Bernardino, where the BNSF mainline is reached. That line is now owned by the Southern California Regional Rail Authority (operator of Metrolink), and I am not sure if trackage rights for freight service are held by Union Pacific or BNSF — or both. At Irwindale the freight trackage from San Bernardino turns south to Baldwin Park over what appears to have been Southern Pacific track and may still be owned by the Union Pacific (thereby providing a connection to the national railroad system at both ends). The light rail line has two further stations, Downtown Azusa and its terminal, APU/Citrus College. After

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Southwest United States

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Arcadia it operates parallel, but just south of the former Pacific Electric Glendora Line, which was abandoned in 1951. Beyond the terminal APU/Citrus, the former Santa Fe becomes single track, but just before it reaches Claremont it widens to host the current Metrolink San Bernardino commuter line. Thus it appears that the forthcoming light rail extension to Montclair, the existing Metrolink line to San Bernardino, and freight service will share the same right-of-way, which should be rather interesting. I should also point out that the Pacific Electric's San Bernardino interurban, abandoned in 1941, shared a short portion of its route with the Santa Fe for a few miles east of Claremont. Thus I consider it somewhat ironic that both parts of the entire 24-mile-long Foothill extension will operate parallel to the abandoned PE lines to Glendora and San Bernardino. It is not the same as the Blue Line to Long Beach mostly using the exact same Pacific Electric right-of-way, but pretty much similar to me.

Please pardon the following sermon, which some may possibly consider subversive opinions and superfluous information. With current light rail fares being significantly less than those charged on Metrolink, and service on the traction line being considerably more fre-

quent, there is already a controversy about the Gold Line snatching passengers away from the commuter line, especially because they are operated by separate and competing agencies. Rightly so, as in my opinion, traditional steam/diesel commuter service is a quick and effective, but cheap and dirty, way to serve potential riders, and may well be too weak in corridors where there will be a high demand. If all-day frequent service is needed, I believe that the interurban solution, now called light rail, is much more desirable. Thus I have always thought that in the days before the advent of massive subsidies for suburban rail service, it was a catastrophe that superior lines with excellent center city distribution, like the Chicago, Aurora & Elgin and the Chicago, North Shore & Milwaukee, fell victim to parallel unelectrified railroads.

Back to the narrative. I arrived at the end of the line in Azusa at about 10:45, some 49 minutes and 18 stops after Union Station, and began to take photographs, working my way westward back toward Los Angeles as the day proceeded. The photos below and their captions describe the remainder of my trip.

My photos at the outer terminal, APU/Citrus College, are not interesting enough to display here, as opposed to those at the next stop, Downtown Azusa.





Two photos from the inbound platform at the Downtown Azusa station. The left view is centered on the former AT&SF Azusa railroad station, which was built in 1887, but totally reconstructed in 1946. The Santa Fe's blue box logo is prominently displayed on the corner of the building. The right photo shows one of the two Spanish colonial-style arches placed above the ramps leading to the platforms. Looking through the archway, we see the rear of an inbound Breda train and the signals for the Azusa Avenue grade crossing.

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Southwest United States

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An inbound train of Breda P2550 cars pauses at Downtown Azusa station. The Target store in the background contains a CVS drugstore and a Starbucks — and is a major traffic generator for the line.



A spanking new train of Kinkisharyo P3010 LRVs approaches the Gold Line's Downtown Azusa station. Note the width of the right-of-way, which includes a track for freight trains at left. The photo was taken when I accidentally on-purpose got caught inside the Azusa Avenue grade crossing when the gates went down. After this happened a few more times I was approached by a local police officer who told me I was acting in an unsafe manner. I promised I would not do it again.



My next stop was the Duarte/City of Hope station, the location of a famous cancer hospital. An outbound train of Breda cars stops at the center platform.





The old Santa Fe depot is located east of the Gold line station. It is stated for restoration to its former glory in the near future and it will house a cafe, at least according to one of the posters posted at the stop. Note that Monrovia is east of Irwindale, and therefore the right-of-way contains only the two Gold line tracks.

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Southwest United States

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Two photos from the parking deck at Arcadia station, featuring the beautiful San Gabriel mountains behind Breda cars.

Upon heading back to Union Station, I broke the journey in South Pasadena for a late lunch — and a photo.



An inbound three-car train of Bredas slows down through a gate-protected intersection as it reaches its stop at South Pasadena.

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SUBDIVISION "B" CAR ASSIGNMENTS

CARS REQUIRED FEBRUARY 7, 2020

The following is different from the assignment that appeared in the January, 2020 issue:

I	LINE	AM RUSH	PM RUSH
Ī	0	72 R-46, 72 R-179	64 R-46, 72 R-179

Commuter and Transit Notes

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EMUs feature Wi-Fi, a reservation system, modern passenger information systems, and storage space for luggage and eight bicycles. Each train has 300 seats and

possess panoramic windows on the upper deck while passengers can purchase drinks and snacks in two onboard cafes. Wheelchair access is possible via a ramp and there are two wheelchair spaces as well as an accessible toilet. (*International Railway Journal*, February 7)

Around New York's Transit System

Second New Entrance at 1 Av Station Opens

On February 10, the second of two new entrances to the 1 Av station opened to the public. This one is on the north/8 Av-bound side at the northwest corner of Avenue A and E. 14th Street. This opening follows the opening of the entrance to the station's Brooklyn/south-bound platform at the southwest corner of Avenue A and E. 14th Street in November, 2019.

The 1 Av station saw a 60% increase in ridership between 2000 and 2018. The expansion and new entrances at the station will significantly benefit the nearly 21,000 weekday customers who currently use the station.

Improvements at 1 Av include:

- Two new platform-to-street ADA elevators, one on either side of E. 14th Street near Avenue A. They continue to be ahead of the original schedule, and are estimated to open summer 2020
- Two new street entrances, each 7½ feet wide
- New fare control area, adding 600 square feet to the station
- Rebuilt infrastructure of the original entrances on First Avenue
- New wall tile, energy-efficient lighting, and new turnstiles
- New substation near Avenue B to power more trains, one of three for the Canarsie Line

The revised construction schedule at 1 Av was designed to open the new entrances to the public as soon as they are ready, with temporary finishes, then close the original entrances for reconstruction in a phased schedule. Two entrances will be open at all times at the 1 Av station. Currently, the First Avenue south entrance is closed for reconstruction and the Avenue A south entrance is opened for Brooklyn-bound travel.

With the opening of the new entrance at Avenue A north, the First Avenue north entrance was to close for reconstruction on February 15, 2020. The phasing schedule for the entrances at the station is as follows:

- February 10, 2020: New permanent Avenue A north entrance opens with temporary finishes
- February 15, 2020: Existing First Avenue north entrance closes for structural reconstruction
- April/May, 2020: First Avenue south entrance completed and reopened; Avenue A south entrance will temporarily close for final finishes. First Avenue north entrance completed and reopened; Avenue A north entrance will temporarily close for final finishes

While both the First Avenue north and south entrances are closed as of Saturday, February 15, 1 Av ① customers are advised to:

Weekdays: For 8 Av-bound travel, use the entrance on the north side of Avenue A and E. 14th Street $\,$

Weekdays: For Brooklyn-bound travel, use the entrance on the south side of Avenue A and E. 14th Street

Weekends and weeknights after approximately 9:45 p.m.: Use the Avenue A north entrance for trains in both directions.

Free Transfer Extended and Permanent Connector To Be Constructed Between Livonia Av and Junius St Stations

It was announced on February 7 that the free *Metro-Card* transfer between the at Livonia Av and the at Junius St in the Brownsville/East New York neighborhoods in Brooklyn will be extended indefinitely. This has been in effect for the past nine months during the ongoing construction on the line. In addition, it was announced that a permanent connector will be constructed linking the two elevated stations, which are less than 1,000 feet apart, under a single facility. Passengers currently have two hours to make the *MetroCard* activation for the free transfer between the two stations.

The MTA allocated \$38.4 million in the 2020-4 Capital Program for the project and has spent \$400,000 as part of the 2015-9 Capital Program for pre-design activities related to implementation of the permanent walkway. The project will be designed and awarded in combination with a companion ADA accessibility project at the Junius St station that will include new ramps and elevators.

The ADA accessibility project at the Livonia Av station was included in the 2015-9 Capital Program and was expected to be awarded in February with construction to begin in the first quarter of 2020.

Bedford Avenue Entrances to Nostrand Avenue AG Station to Reopen

In other station accessibility news, it was announced on February 8 that work to reopen the closed Bedford Avenue entrances to the Nostrand Av (a) station on the IND Fulton Street Line in Brooklyn will start by the end of the year. The entrances will provide the station with a direct connection to the northbound B44 Select Bus Service, reduce crowding as trains depart from the station, provide a free in-station transfer between the northbound and southbound platforms, and better connect the station with destinations west of Arlington Place. The entrances, at the northeast corner and southeast corner of Bedford Avenue and Fulton Street, are more than 1,000 feet to the west of the currently open entrances at the corners of Fulton Street and Nostrand Avenue, or nearly a quarter mile.

Inside the station, workers will scrape and repaint areas of the station that have been closed to the public for more than 30 years, repair and replace tile, rehabilitate stairways, and install lighting and turnstiles. On the sidewalk level, workers will install sidewalk entrances in accordance with New York City Transit design standards. Additionally, the announcement comes as the MTA is undertaking the unprecedented 2020-4 Capital Pro-

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