The Bulletin

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The Bulletin

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THROUGH SERVICE FROM CONEY ISLAND TO THE BRONX BEGAN 60 YEARS AGO

On October 30, 1954, IND D trains provided through service from Coney Island to the Bronx for the first time. To operate this through service, the track layout at Ditmas Avenue was rearranged. After 10 PM October 29, 1954, Culver trains from Coney Island terminated at Ditmas Avenue and buses provided service to the 13th Avenue and Fort Hamilton Parkway stations. Buses continued running until Culver service to Ditmas Avenue was resumed early in the morning on November 1, 1954. After the track work was completed several hours behind schedule, the first northbound D arrived at Ditmas Avenue at noon October 30. It was followed by the last Culver train about a minute later. The last southbound Culver train, which departed from Ditmas Avenue at 11:45 AM, was followed by two light Culver trains and the first D at 11:57 AM.

The following schedule was in effect before the tracks were rearranged at Ditmas Avenue: Culver subway trains operated via Nassau Street at all hours. Non-rush hour locals were routed via tunnel and Nassau Street from Chambers Street to Coney Island. Weekday rush hour trains operated between Kings Highway and Chambers Street via bridge and Nassau Loop, returning to Brooklyn via tunnel. Trains operated on the Fourth Avenue express tracks, bypassing DeKalb Avenue (in both directions) and Myrtle Avenue. They also operated on the express track between Kings Highway and Ninth Avenue in the direction of light traffic. Three-car C-type weekday rush hour shuttles provided service on an 8– and 10-minute headway between Kings Highway and Coney Island.

Effective November 1, 1954, Culver trains terminated at Ditmas Avenue. From 6 AM to 8 PM, trains operated via Nassau Street to Chambers Street in non-rush hours and via Nassau Loop in rush hours. Locals were turned at 36th Street at other times, including weekends. Rush hour trains operated over the same route as previously, but service was reduced from an 8– to a 12-minute headway. Rush hour Kings Highway to Coney Island shuttles were discontinued. The track layout at Ditmas Avenue made it difficult to add or cut cars there. After the AM rush, all 6-car trains from Manhattan terminated at Ninth Avenue and were replaced by 3-car trains operating to Ditmas Avenue. The reverse procedure took place before the evening rush.

Effective October 30, 1954, D trains provided service between the Concourse and Coney Island at all times. Alternate weekday rush hour trains were turned at Church Avenue.

Service was extended and rerouted several times after trains started operating on Gravesend (McDonald) Avenue more than a century ago.

June 19, 1875: Steam locomotive-hauled trains whose running time was 15 minutes started running from Gravesend Neck Road and Gravesend (McDonald) Avenue to Ninth Avenue (Prospect Park West) between 19th and 20th Streets

June 27, 1875: Extended to Coney Island

June 7, 1890: Rerouted to Union Depot (now the site of Jackie Gleason Bus Depot), 36th Street and Fifth Avenue

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NEXT TRIP: METRO-NORTH/NJ TRANSIT PORT JERVIS RIDE, SATURDAY, NOVEMBER 8

TOWARD UNDERGROUND (AND UNDERWATER) ROLLING STOCK: THE ALL-STEEL REVOLUTION
by George Chiasson
(Continued from September, 2014 issue)

FROM DUBIOUS TO UBIQUITOUS, PART FOUR: JUICE JACK PROTOTYPES, THE GARDEN CITY CATENARY TEST OF 1908, AND THE PENNSYLVANIA'S DD-1 LOCOMOTIVE

Between October and December of 1908, five miles of the former (and largely idle) main line of the Central Railroad of Long Island were acceded to an engineering group consisting of staff and outside consultants under the employ of the Pennsylvania Railroad, to establish and operate a virtual and experimental railroad. This represented the "end of the beginning," so to speak, in PRR's operational planning ahead of the long-awaited opening of its New York Terminal, an event of such supreme importance in the annals of both the company and national railway system that it engendered a level of technological innovation unto itself. Through the years surrounding the construction of Penn Station, the Pennsylvania maintained a corporate eye ahead by observing outside advancements in the field of electric traction. It also undertook the development of prototype passenger cars and locomotives, as well as the means to operate and maintain them, that the nascent New York terminal would require. As incidental fortune dictated, the railroad was able to expedite and judiciously finance this important background work by engaging in the urgent, external needs of two outside parties (specifically the Interborough Rapid Transit Company and the Long Island Rail Road) that provided an excellent framework for attaining the necessary experience from which it also would ultimately benefit.

As has been widely recognized over time, the field of electric traction evolved radically through the latter decades of the 19th century, prompted by several noted industrial pioneers. Of this group, perhaps the most recognizable inventors remain American Thomas Edison and German Ernst Werner von Siemens, but neither was directly involved with its ultimate manifestations in the United States. Rather, it was U.S. Navy Ensign Frank J. Sprague, a young protégé of Edison, who implemented the first successful mass transit electrification on the system of surface cars in Richmond, Virginia beginning in 1887, where it was employed to completely replace horse power (quite literally) in 1888. Identical or similar applications (though not strictly subscribing to Sprague's) then rapidly followed across the North American street railway empire in the next several years, and the technology of traction developed at an astounding pace, soon to be applied in an ever more expansive means. As cited above the Metropolitan West Side Elevated Railroad of Chicago provided the first practical rapid transit application of electric propulsion in 1895, with the last steam-operated trains on that city's entire "L" system being supplanted in 1898. The Brooklyn Elevated Railroad then began the concurrent transformation of its existing system of lines, plus its expansion via former excursion railroads, which was completed in 1906. Meanwhile, the senior Manhattan Railway Company shrewdly waited to benefit from experience elsewhere and finally undertook its own electrification between 1901 and 1903, well after construction of the first subway had started. In its final incarnation, the concept of electric traction made the mode of rapid transit feasible in both Boston (1901) and Philadelphia (1907), where it was previously restrained, either by statute or a lack of investment owing to the detrimental necessity of using steam power for propulsion.

When charged with marshaling the (still) largely conceptual endeavor of Penn Station into a viable, operating reality in 1902, the Terminal's "Board of Engineers," which actually ascended to the level of a separate, voting "board" under PRR corporate governance by 1905, was guided by the renowned expertise of George Gibbs, who was regarded as one of the few individuals qualified to see through the maelstrom of ongoing technological developments and cull those which would provide optimum results for the railroad. In turn, Gibbs up to that time had only the handful of U.S. rapid transit utilizations to peruse for potential suitability, along with (to that point) the first, sole application of electric traction to the field of Class I railroading, that of the Baltimore & Ohio's Howard Street Tunnel. There an overhead third rail system had been initiated in 1895 to improve the operation of trains through a two-mile underground passage connecting its Camden and Mt. Royal stations. By 1905, construction of the New York Terminal and its associated tunnels had already advanced to the point where a further, prolonged period of technological development was virtually out of the question, so it should be no surprise that Gibbs (and by extension the Pennsylvania) embraced much the same regime of electrification solutions as were already in existence elsewhere. Being reactive to the advancing state of construction at Penn Station was what basically drove the earliest round of electrifications for the Long Island Rail Road in 1905 and 1906, while by 1903 the other two railroads already operating into New York were forced into a similar position, having to implement some

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Toward Underground (and Underwater) Rolling Stock

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form of electrification to comply with the statutory prohibition of steam-operated railways into Manhattan.

First to transform idea into a preliminary reality (and it should come as no surprise), was the New York Central, which was up against a firm requisite that its operations be electrified within five years of passage of the legislation noted above. A variety of authorities in the electrical and engineering fields (William Wilgus, Frank Sprague, Bion J. Arnold, and George Gibbs, among others) were consulted and/or contracted to collectively advance the infant technology then available to develop a new generation of electric motive power, this know-how having solely been applied prior to that time on the Baltimore & Ohio within the Howard Street Tunnel. From those early and quite general guidelines, a prototype "T" motor emerged in October, 1904 mainly due to the efforts of General Electric's Asa Batchelder. It was constructed by the American Locomotive Company in upstate Schenectady, where the Sprague and General Electric (joint) works were also located, and they logically were granted the task of supplying its mechanical and electrical equipment. Perhaps best described as a "steel pod on wheels," the lone, all-steel unit (originally numbered 6000) measured 39 feet long overall, with a roomy, rectangular crew cab of 18 feet 4 inches in length, centered between end compartments containing the electrical and heating apparatus which were 10 feet 4 inches apiece. One 550-hp GE 84 motor was gearlessly connected to each of the four axles of its eight 44-inch driving wheels for a total rating of 2,200 hp, all contained within the single, oversized power truck upon which the unit rested. 660 volts of direct current (d.c.) were collected for propulsion from underrunning third rail via contact shoes hung on the sides of the main truck frame, supplemented by small pantographs on the top side of each end of the body, which were used to navigate overhead third rail at intricate interlocking points. The main driving wheels were in turn stabilized against excessive lateral oscillation at speed (maximum of 60 mph) by single-axle, unpowered "guiding trucks" at either end to create a "1-D-1" configuration, both of which were protected by steel pilots attached to the car body ends above. For a thorough analysis of its capabilities, the 6000 was exhaustively tested on a specially electrified track that adjoined the New York Central main line near Schenectady until April of 1906, by which time its operational parameters had been reliably established and the construction of new facilities advanced enough to support its transfer to New York for a whole new round of evaluations. Its proven specification engendered a production order for 34 additional such units classed T-2 and T-2a, also built by Alco and equipped by General Electric, which arrived in 1906. The series was collectively numbered 3400-34, including the original prototype, and bore almost a complete resemblance to the 6000 itself. They were placed in regular service that December and while otherwise reliable, the unfortunate, fatal derailment of a train near Botanical Garden station in February, 1907 did force a major truck modification to a "2-D-2" arrangement in the immediate aftermath, which included relocation of its current collectors to the extreme ends of the vehicle at the "pony" trucks. Another dozen such units (3235-46) arrived in 1908-9 under the classification "T-3," at which time the older ones became 3200-34. All were basically the same except for ever-increasing tractive force, though they became more universally-known as "S" motors following even more expansion of the fleet that started in 1913 for the new Grand Central Terminal. The very last of these pioneering units was not retired from revenue service until 1981.

Meanwhile, the New Haven was in also in the position of having to similarly comply with the looming directive at Grand Central and undertook its own study of how best to do so. In this instance both General Electric and Westinghouse were courted as potential suppliers by participating in a thorough assessment of how this might be accomplished given the capabilities of each company, but for separate reasons (legal liabilities and later system-wide application) it was quickly granted that the New Haven itself would employ its electrification through a system of overhead distribution, more akin to its collection of trolley networks than the more "conventional" use of third rail, as well as conform to the latter system as component to its passage along the New York Central between Woodlawn and Grand Central. Westinghouse was selected as prime contractor for the New Haven's electrification by the middle of 1905 and that company quickly set to work developing a suitable prototype locomotive for this specific purpose, given a long field of previous experimentation that dated back to the mid-1890s and was crowned by the development of its own "engine #9" in 1904. This was a single-phase unit that was powered by 6,600 volts of alternating current, collected through pantographs from an overhead catenary system. In addition, Westinghouse was ready to deploy a 41-mile a.c. catenary electrification on the Indianapolis & Cincinnati interurban, technology which it was hoped could be magnified for use on the New Haven's chaotic 25-mile stretch between Woodlawn and Stamford.

In a manner similar to the emergence of "T" motor 6000 described above, Westinghouse coalesced with the Baldwin Locomotive Works to produce the "01" on behalf of the New Haven. This was a "box cabin on wheels" self-contained prototype that was 37½ feet long and mounted on a pair of stubby, motorized trucks with four 62-inch driving wheels each (thus in "B+B" wheel arrangement). The four traction motors were affixed to

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Through Service from Coney Island to the Bronx Began 60 Years Ago

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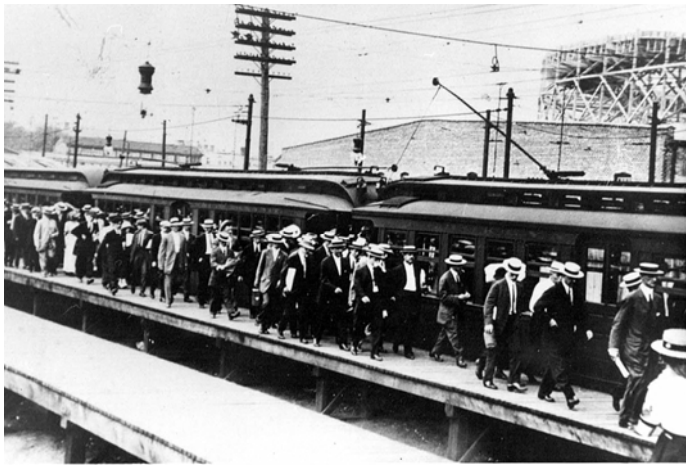
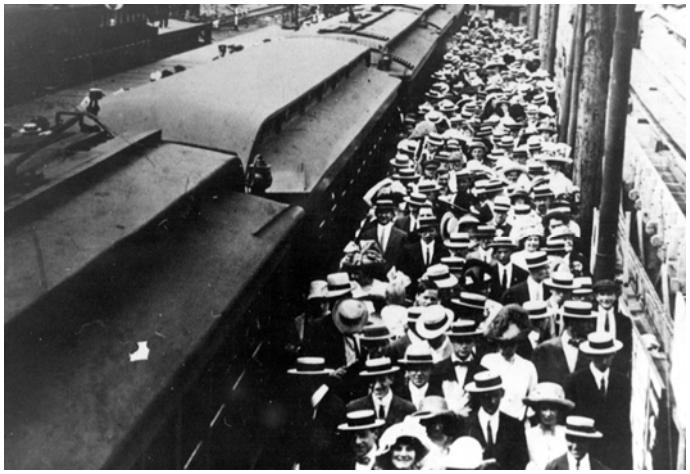
Culver Depot, Coney Island, 1899.
Bernard Linder collection

Culver Terminal, Coney Island, about 1908.
Bernard Linder collection

Culver Terminal, Coney Island, about 1910.
Bernard Linder collection



Culver Terminal, Coney Island, 1913.
Bernard Linder collection



Culver Terminal, Coney Island, 1913.
Bernard Linder collection

Culver Terminal, Coney Island, October 13, 1915.
Bernard Linder collection

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Through Service from Coney Island to the Bronx Began 60 Years Ago

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65th Street station, Fifth Avenue "L," looking south.
Bernard Linder collection

Looking south toward 65th Street station, Fifth Avenue "L."
Bernard Linder collection

38th Street and Third Avenue, Fifth Avenue "L," looking west.
Bernard Linder collection

15th Street station, Fifth Avenue "L.".
Bernard Linder collection

Structure over Flatbush Avenue between Fulton Street and Fifth Avenue.
Bernard Linder collection

Flatbush Avenue and Fulton Street, 1927.
Bernard Linder collection

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Through Service from Coney Island to the Bronx Began 60 Years Ago

(Continued from page 5)

August 5, 1895: Operated through service to Manhattan via the Fifth Avenue "L"

July 10, 1899: Electric trains equipped with shoes and trolley poles started operating from Park Row to Coney Island

March 16, 1919: Trains started operating to Kings Highway on the new elevated structure. Gravesend Avenue trolley cars provided service under the elevated structure from Cortelyou Road to Coney Island

May 10, 1919: Elevated service was extended to Avenue X

May 1, 1920: Elevated service was extended to Coney Island-Stillwell Avenue

May 30, 1931: Nassau Street Loop was opened and subway trains started operating to Coney Island in non-rush hours and Kings Highway in rush hours. Curtailed elevated service operated from Sands Street to Ninth Avenue in non-rush hours and Coney Island in rush hours

Service on the original structure between Ninth Avenue and Ditmas Avenue was discontinued on May 11, 1975, 85 years after trains started running there on the surface.

Toward Underground (and Underwater) Rolling Stock

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the four axles by a gearless, spring-supported "quill" system which allowed the armature to function freely in spite of the inevitable undulations in trackage that were experienced during operation at speed. Providing a total of 1,420 horsepower, the Westinghouse 130 motors were collectively designed to deliver a top speed of 80 mph or more as the unit received 11,000 volts of single-phase alternating current (which was the maximum such capability then available) through roof-mounted pantographs. This electrical energy was then in turn stepped down to 650 volts through an onboard transformer and used to power the motors, which were also capable of operating at a similar or greater level of efficiency when they received 660 volts directly from the New York Central's d.c. third rail through conductive shoes mounted on the two truck frames (there were also miniature d.c. pantographs on top for switch navigation near Grand Central). After a period of testing during which final specifications were developed, 34 more similar units were ordered from the same tandem supplier (Baldwin the bodies, Westinghouse the equipment) and "EP-1's" 01-035 were on hand when electric service commenced in July, 1907. There were a number of technological difficulties with the series that reflected the concept's ongoing evolution as experienced in real time, with the most pronounced modification being the addition of a single guiding axle at each end in an effort to combat the original units' propensity to "hunt" (oscillate) excessively at higher speeds. This created a "1-B+B-1" wheel arrangement, which was applied to the next order for just six (6) EP-1s, numbered 036-041 (delivered in 1908), along with other minor body and technical changes. As there was not enough space within the original frames as cast, the guiding axles were not applied to the original 35 EP-1s, some of which lasted in operation as late as 1947.

In 1905, as the Westinghouse Electric Company was in the latter stages of designing the EP-1 locomotive for the New York, New Haven & Hartford, it was also drawn into providing equipment for two pilot locomotives of a similar nature for the Pennsylvania Railroad, but because there were no proven traction alternatives then available, the "Pennsy," while otherwise neutral on the subject, was leaning heavily toward the use of a 650-volt direct current ("d.c.") system in its New York Terminal. As a result its prototypes would be configured for the use of third rail, but be otherwise virtually identical to those of the New Haven in form and substance. So emerged PRR prototype "AA-1" units 10001 in November, 1905 and 10002 in September, 1906, with stubby steel bodies built to Baldwin Locomotive's specifications at the Juniata Shops near Altoona. Similar to the EP-1, both prototypes had two large four-wheeled driving trucks for motive needs in so-called "B-B" arrangement, but used articulated frames and smaller 52-inch drivers powered with 350-hp motors and control supplied by Westinghouse. The four traction motors on 10001 were "nose" fastened to the truck frames with their energy being transferred to the axles through gearing; those on the 10002 were of the gearless, spring-based "quill" variety as on the EP-1, with one motor attached directly to each axle for four in all. *(Continued next issue)*

CORRECTION

Member Nick DiBari informs us that we omitted the RJ in our summary of the November 27, 1967 Jamaica rush hour service, which was published in the September, 2014 ***Bulletin***.

After checking our records and the November, 1967 ***Bulletin***, we found that RJ trains operated in both directions between 95th Street and Jamaica during the AM rush and from Eastern Parkway to 95th Street and back to Jamaica during the PM rush.

Commuter and Transit Notes

No. 311

by Ronald Yee and Alexander Ivanoff

METROPOLITAN TRANSPORTATION AUTHORITY

Grand Central Terminal could see a major improvement to pedestrian access on its west side. S.L. Green, a real estate developer, is proposing to build a 65-story office tower on the city block bounded by Madison and Vanderbilt Avenues and E. 42nd and 43rd Streets. In return for city approval to build this tower, up to $220 million in Improvements to the Grand Central complex have been proposed, including the removal of a wall and creation of a new wider mezzanine that would facilitate the flow of people utilizing the Grand Central-Times Square Shuttle and speed their flow toward and up staircases to street-level glass-enclosed atriums directly across from Grand Central Terminal. As a means to guarantee the construction of these transit improvements, the development permit agreement would stipulate the opening of the transit improvements before a single tenant can move into the new office tower. (***New York Daily News***, September 8)

MTA LONG ISLAND RAIL ROAD

95% of the membership of LIRR's 5,400 unionized employees ratified the contract that the union leadership had agreed upon with the Metropolitan Transportation Authority on July 17, 2014, heading off a strike that had been threatened for July 19. The ratified tentative agreement is now set for MTA Board approval at its September meeting. The agreement provides a 17% wage increase over a 6.5-year period while employees would, for the first time ever, contribute 2% of their base 40-hour salary toward their health care package and new employees would contribute toward their pensions for 15 years as opposed to 10 years for current employees. While the wage increases would be retroactive to the 2010 effective date of this new contract, the healthcare co-pays would only take effect this year and not be made retroactive. (***Chiefleader.com***, August 25)

A 1914-vintage LIRR MP-54 baggage combine coach located at the intersection of Routes 347 and 112 in the town of Port Jefferson Station has apparently been guaranteed future public access once a project to modernize the intersection is completed in 2015. Used as a meeting hall for the North Brookhaven Chamber of Commerce as well as housing its tourism information center, there had been great deal of concern regarding the future of the vintage railroad car, which the chamber had acquired in 1977. In the months since May, 2013, when the modernization project started, the lack of a curb cut (driveway) on the edge of one of the approaches to the rebuilt intersection could have denied motor vehicle access to the railcar's location on a cul-de-sac road leading to it. *Editor's Note by Ron Yee: This car will apparently have a better fate than the MP-54 coach that resided in the Long Island Expressway eastbound rest area near Exit 53 for decades before succumbing to a modernization project around 10 years ago.* (***northshoreoflongisland.com***, August 26)

MTA METRO-NORTH RAILROAD

Connecticut Governor Dannel Malloy and Connecticut Senator Richard Blumenthal have called into question the justification of a fare increase on the New Haven Line in 2015. Connecticut's current agreement with MNR assigns the New Haven Line 40% of the total cost of operating the entire railroad, which also operates the Hudson and Harlem Lines in New York State. Of that 40% share, 65% of it is shouldered by Connecticut. Concurrently, Metro-North's parent agency, the Metropolitan Transportation Authority (MTA), has notified Connecticut to expect to fund a large one-time spike in expenses in 2015 as it is anticipated that MNR's unionized employees will be awarded a contract similar to that won by the unions at the Long Island Rail Road. Connecticut would also have to fund its portion of various capital expenses from FRA-mandated safety initiatives. Connecticut had budgeted $71 million to fund the MNR New Haven Line, but it now appears the 2015 funding requirements will be driven up another $57 million to cover the labor contract, and funding requirements for 2016 and beyond would be higher than the $71 million currently being paid. There are limited options: a larger increase in fares; an increase in the state subsidy; a blend of both; or, the worst case scenario, service reductions to make up for the shortfall in funding. The battle has just begun. (***The Courant***, August 24)

As of September 1, all 380 M-8 EMU cars arranged as powered married pairs have been delivered to Metro-North. Of these cars, 364 have been accepted for passenger service (as of August 1) with 12 still in acceptance testing status as of September 1. This leaves only the 25 single-unit, non-powered M-8 carbody style coaches which are expected to be delivered by November from the Kawasaki plant in Lincoln, Nebraska. These single cars will be placed between M-8 pairs to form 5-, 7-, 8-, or 11-car consists to more closely match expected maximum ridership volumes on select equipment cycles. Not included in these figures are the three M-8 EMU cars that were ordered from Kawasaki to replace the three M-8 cars that were written off in the May 17, 2013 wreck near Fairfield (MTA MNR website, August 25; ***Westchester Journal News***, September 1)

The replacement of an entire signal hut at CP229 on Metro-North's New Haven Line has been achieved in just four months instead of the expected 18 months. A

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fire on May 10 had virtually destroyed the original signal hut, which controlled all switching movements as well as the home signals at CP229. Since May 10, MNR has stationed a signal maintainer at the site of a temporary signal hut that had limited capabilities but nonetheless, ensured that there was some degree of routing flexibility through the area should the need arise. With the loss of a fully functional CP229, there had been an almost nine-mile stretch of track that had limited options if there was a need to reroute trains from one track to another. (***Iohud.com,*** September 12)

The lift bridge over the Harlem River carrying Metro-North Railroad trains will be undergoing a six-month-long process of lift cable replacement. Upon completion, they will raise the center span even higher than it currently rises, allowing taller ships to pass below. (***NY 1 News***, September 13)

As part of another pilot program to improve accessibility for customers carrying bicycles aboard its trains, Metro-North is installing a pair of bicycle racks in the walls of the handicapped-accessible sections of 50 additional M-8 New Haven Line cars. Railroad policy still prohibits bicycles from peak period trains arriving or departing Grand Central Terminal between 6 AM and 10 AM and from 4 PM to 8 PM due to capacity constraints, and priority for the space would still be given to riders with wheelchairs and baby strollers. While the cars in this pilot program are expected to be outfitted with the bike racks by November, no timetable has been mentioned as to when all M-8s would be so equipped if the pilot program is a success. (***Stamford Advocate***, September 15)

NJ TRANSIT

NJ Transit updated its rolling stock status on July 18. Only five of its 524 single level cars, one of 26 ALP-45-DPs, and four of 65 ALP-46s remain out of service from Superstorm Sandy damage. All 429 multi-level coaches are available for service and a contract has been awarded to Bombardier to modify the eight ACES multi-levels (7229-36) operated in Atlantic City service to match the rest of the multi-level fleet. 160 cars of the original 230 Arrow III EMU fleet remain in service, 70 cars having been set aside in favor of the higher capacity multilevel push-pull coaches. (Randy Glucksman, August 10)

NJ Transit appointed Robert M. Lavell to the position of Vice President and General Manager of Rail Operations on September 10, 2014. He had been the acting VP and GM of Rail Operations since March. He had served as NJT's Deputy General Manager of Equipment for six years prior to this year and had a 30-year career at Amtrak, holding a variety of positions, including Regional Vice President of Equipment Maintenance. One of the first actions he took was to announce plans to replace all of the rail system's single-level cars with multi-level cars. It would enable NJT to reduce its overall passenger fleet from 1,124 cars to 1,050 cars by the year 2020 while simultaneously increasing available seating by 6%. Not only would all of NJT's remaining single-level push-pull coaches (classes Comet III, IV, and V) be replaced but all of its Arrow III class EMUs would be replaced with EMUs of a multi-level design. No word on the engineering issues involved in producing such a self-propelled electric railcar, weight issues being the primary concern. In addition, Dennis J. Martin was appointed General Manager of Bus Operations and Neil S. Yellin became NJT's First Deputy Executive Director. Yellin was the former Vice President and Chief Safety Officer at the Long Island Rail Road. *(Editor's Note by Ron Yee: There would also be significant underfloor and overhead space and engineering issues for all of the support equipment associated with EMUs. As for the fate of the relatively new Comet IV and especially Comet V series single-level coaches, it could be surmised that many of these surplus cars could be sold to other existing or planned commuter rail operations across the nation.)* (***Asbury Park Press***, September 12; ***NJ.com***, September 10)

The August 19 derailment of an NJT train on the Montclair-Boonton Line near the Walnut Street station has been attributed to faulty concrete ties. An ALP-45-DP dual power locomotive was in the lead at the time of the derailment. 1,110 concrete ties were replaced in the area of the derailment, which spanned a half-mile of curved track. The two-track line was single-tracked through the area as repairs were expedited. Work was completed September 2, well ahead of the projected September 8 date. During the interim, eight trains were cancelled, Trains #208, 212, 209, and 211 in the morning peak and Trains #50, 262, 267, and 275 in the evening peak. (***Montclair Times***, August 21; ***Star Ledger***, August 31)

PORT AUTHORITY TRANS-HUDSON RAILROAD

The new World Trade Center transportation hub will offer free, unlimited Wi-Fi service to the public at the PATH station as well as the retail areas of the complex. Over 200,000 people per day are expected to pass through the hub when it opens in 2015. (***New York Daily News***, August 12)

The PATH system has been cited for costing nearly three times as much to operate as the New York City subways. Port Authority of New York & New Jersey (PANYNJ) officials cited increased regulatory requirements stemming from being required to adhere to Federal Railroad Administration (FRA) procedures such as brake testing at each terminal as well as far more intensive periodic inspection processes, etc. The PATH system was created by an agreement between the Governors of New York and New Jersey to rescue the financially strapped Hudson & Manhattan Railroad and enable a total modernization of the system in the mid-

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Commuter and Transit Notes

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1960s. It was to be heavily subsidized by the tolls collected by the Port Authority's four bridges and two tunnels. Fast forward to 2014: the entire rail car fleet has been replaced with PA-5 class equipment that will accommodate a communication-based train control system that is planned as well as massive repairs and upgrades of both river tunnels following the damage wreaked by Superstorm Sandy in October, 2012. There is much controversy swirling around the fact that much of the bridge and tunnel toll revenues as well as airport facility charges at the airports controlled by PANYNJ have been siphoned off to non-transportation projects, such as financing the rebuilding of the World Trade Center complex. There have been suggestions to merge the PATH system into a much larger operation such as New Jersey Transit, but it has been noted that such a move would have little effect on the operating inefficiencies that burden PATH. (***businessweek.com***, August 22)

AMTRAK

The cities of Indianapolis, Rensselaer, Lafayette, West Lafayette, Tippecanoe County, and Beech Grove have come to an agreement with the Indiana State Department of Transportation to extend funding of the Hoosier State for an additional four months through January 31, 2015. Negotiations are continuing with Corridor Capital LLC to take over the operation of the service at the end of this period. (Al Holtz, August 20)

The Montana cities of Sidney, Glendive, Miles City, Billings, Livingston, Bozeman, Butte, and Missoula now have connecting bus service on Jefferson Lines with Amtrak's *Empire Builder* at the classic Great Northern Railway depot at Williston, North Dakota. (Al Holtz, August 21)

Massachusetts Governor Deval Patrick announced an agreement whereby the state will purchase a 49-mile rail line between Springfield and East Northfield that would permit the *Vermonter* to return to its original routing, avoiding a 25-minute detour via Palmer, Massachusetts that has been in effect since the late 1980s. This line, popularly referred to as the Knowledge Corridor, has been undergoing a rebuilding financed by $115 million in FRA and state funds, with the line returning to passenger service as early as the end of 2014 and all work on the line being completed in 2016. (Al Holtz, August 22)

The Spanish mission-style depot first opened January 11, 1927 near downtown Orlando, Florida currently servicing Amtrak trains and SunRail commuter trains immediately adjacent to it, will receive a $2.1 million facelift. Outside surfaces will be restored and painted, leaks fixed, air-conditioning systems overhauled, and accessibility for the physically challenged improved. Work was expected to commence in September. A renovation of the interior will have to wait for another grant to become funded as phase two of the overhaul. (*Orlando Sentinel*, August 22)

As part of a cooperative effort between Amtrak, the New York State Department of Transportation, and the National Park Service's Trails and Rails program, Amtrak's sole remaining full dome car, 10031 (*Ocean View*), was to make its return to the Trains #68 and 69, the *Adirondack*, for the Fall foliage season from September 25 to November 4, 2014. Due to vertical clearance restrictions in the Penn Station complex in New York City, this car will only operate between Albany and Montreal. It is scheduled to operate northbound on Train #69 on Monday, Thursday, and Saturday and southbound on Train #68 Tuesday, Friday, and Sunday. It does not operate on Wednesday. (Amtrak, September 11)

An earlier statement by Amtrak President Joe Boardman has been confirmed by Chief of Northeast Corridor Planning and Performance Drew Galloway that each of the Hudson River Tunnels connecting Penn Station with New Jersey will have to be closed for at least one year to enable them to be fully rebuilt and repaired after October, 2012 flood damage from Superstorm Sandy. The timetable for such a rebuild has been placed at less than 20 years away, making the construction of the Gateway Project Tunnels far more urgent than previously thought. A detailed engineering assessment is currently underway, with the report due later in 2014. Current operations dictate that only one tube at a time can be closed for maintenance on weekends, reducing train capacity from 24 trains per hour to a mere 6. Imposing such restrictions on weekday train traffic would be an impossibility for Amtrak's Northeast Corridor operations, never mind NJ Transit, which is a mere tenant on Amtrak-owned and -controlled rails. (*Editor's Note by Ron Yee: Should such a scenario unfold, where one of the tunnels must be closed long-term for safety reasons, one could see the return of a massive ferryboat operation crossing the Hudson River from places such as Hoboken, to where most NJ Transit trains would likely be diverted.)* (***Morristown Daily Record***, September 3)

MUSEUMS

On Sunday October 12, 2014, the Shore Line Trolley Museum will be commemorating the 110th anniversary of IRT and the 50th anniversary of the final run of the Lo-Vs back in 1964 on a fantrip sponsored by the Electric Railroader's Association. Lo-V 5466 has been restored to its appearance in the late 1930s. The car will be operated for the public to ride at 11 AM, 1 PM, and 3 PM with photo run-bys scheduled in-between. Refer to: www.shorelinetrolley.org (Shore Line Trolley Museum, September 9)

MISCELLANEOUS

Carstens Publications closed down all operations Friday, August 22 after 50 years of publishing leading hob-

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by magazines, including ***Railfan and Railroad***. On August 29, White River Productions announced that it had acquired ***Railfan and Railroad Magazine*** as well as ***Railway Model Craftsman***. The new owners have promised that current subscriptions will be fully honored. For information, contact the company at ads@railfan.com or (800) 282-3291. (***Railfan.com***, August 22; White River Productions, August 29)

Railcar manufacturer Kinkisharyo International, a U.S. subsidiary of Kinki Sharyo Company, based in Osaka, Japan, is moving its corporate headquarters from Massachusetts to El Segundo, California. This company is the builder of the new light rail cars for Los Angeles Metro. Two options were exercised recently for an additional 97 cars intended for the Crenshaw/LAX line and also to replace the oldest LRVs in Metro's fleet currently serving the Blue Line to Long Beach. Kinkisharyo has supplied the largest number of low-floor light rail vehicles to North American operators. One of the goals of this move to California is to build a plant to manufacture the carbody shells in the U.S.A., rather than import them from Japan and simply assemble the cars for clients in plants located in the same state or locale. (***Los Angeles Daily Breeze***, September 5)

OTHER TRANSIT SYSTEMS

PHILADELPHIA, PENNSYLVANIA

SEPTA has extended its pilot program of 24-hour weekend subway and elevated train service to November 2. The original pilot program, which began on June 15, was slated to end on Labor Day, September 1, but was extended to be able to evaluate the ridership volumes and fare revenues that would be generated by students and workers returning to their normal patterns of work activities in the Fall season. SEPTA will weigh the revenue stream versus the costs of keeping the system open overnight on weekends before it determines if the program could be made permanent. (***Progressive Railroading***, August 15)

PATCO is performing final acceptance testing of the initial eight-car trainset of cars rebuilt by Alstom Transport, Incorporated. 120 cars are scheduled for the $194 million rebuilding program. The first trainset had been expected to be in passenger service by February, 2014, but the program has encountered several technical issues. Once these cars pass their 500-mile test with no defects, the cars will finally be accepted for revenue service and the rest of the cars can be placed into the rebuilding program. Six more cars are almost completed at the Alstom plant in Hornell, New York with another 26 cars already on site for rebuilding. Once rebuilt, the highly-sought-after railfan seat across from the Train Operator will become a memory. Full-width operating cabs will be the standard for the rebuilt fleet, resulting in a reduction of seating from 160 to 152 in each pair of cars. Other upgrades slated for this car fleet are new flooring (non-skid) and seating (bucket seats replacing the bench seats), new lighting and heating, ventilation, and air conditioning systems, the ability to accommodate communication-based train control signaling systems, new thicker windows, and state-of-the-art passenger and route information systems. (Al Holtz, September 8)

VIRGINIA

Seeking to maintain recent momentum to add light rail transit, the Chesapeake City Council on August 19 voted to officially ask Hampton Roads Transit, operator of The Tide LRT, to help Chesapeake locate adequate funding for a $1.8 million study of the proposal. Chesapeake's City Council adopted a resolution endorsing LRT in Chesapeake as early as 1996, and four years later, unlike neighboring Virginia Beach in 1999, voters approved a referendum favoring the concept. As with many rail projects, concerns over local cost shares stalled further progress until last June, when the City Council indicated a willingness to advance a study, as well as begin applying for federal and Virginia state funding assistance.

Chesapeake reportedly already has applied for part of $24 million in state transportation planning money that will become available in 2021 under the Regional Surface Transportation Program. Neighbors Virginia Beach and Norfolk are using funds from the program for other proposed LRT extensions.

Virginia Beach seeks to extend The Tide from its current eastern terminus at the Newton Road station to its Town Center, though access to the city's beachfront has been shelved for the present. Norfolk, with backing from the U.S. Navy, seeks to add LRT access to Naval Station Norfolk, extending The Tide from its current western terminus at the Fort Norfolk Medical Center station.

Hampton Roads Transit and the city of Norfolk officially marked the opening of the 7.4 mile The Tide LRT, costing $318 million, on August 18, 2011, with revenue service commencing three days later. Rail transportation has seen a renaissance in Virginia, with Amtrak extending *Northeast Regional* service to the state and the return of intercity rail to Norfolk along with light rail, successes with Virginia Railway Express (VRE), and, just recently, with the opening of the Silver Line, which will extend to Dulles Airport by 2018. (***Railway Age***, August 20)

NORTH CAROLINA

Light rail transit plans got the backing of officials in Durham and Orange Counties on August 13, setting the stage for a concerted effort to secure federal funding for a regional LRT system covering the central core of the Tar Heel State's famed Research Triangle (officially the Raleigh-Durham-Chapel Hill Combined Statistical Area).

Still missing from the equation so far, however, is a third county, Wake, which includes the state capital, Ra-

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leigh; it has yet to commit to growing LRT.

Durham and Orange Counties have approved measures to bolster chances of state funding support for LRT linking Durham and Chapel Hill; the plan has express public support from elected officials and state Department of Transportation division engineers. Durham and Orange Counties already collect a half-cent sales tax intended to provide local funds for the project.

But a funding cap enacted by state legislators means only $135 million in state assistance can be directed toward the rail plans during the next 10 years, short of the $455 million in state matching funds anticipated as necessary to advance the $1.8 billion project.

Last February the Federal Transit Administration approved conceptual planning of an LRT starter line, initially linking East Durham and the University of North Carolina-Chapel Hill. Numerous others colleges and universities located in the Triangle — a secondary source of the region's nomenclature — would be eventually linked by LRT as a rail system grew to cover more of the area. (***Railway Age***, August 14)

ATLANTA, GEORGIA

Atlanta Streetcar's four Siemens S-70 class light rail vehicles have begun the process of street testing in preparation for the inauguration of service in late 2014. The 2.7-mile line is virtually complete and has 12 stations. The street testing is expected to last 60-90 days before service commences. For more details on this new line, go to http://streetcar.atlantaga.gov/. (Atlanta Streetcar website, August 14)

FLORIDA

Member Dennis Zaccardi provided some news about the Pinellas Suncoast Transit Authority's ballot measure, Greenlight Pinellas, which includes a light rail component. Going into November, public opinion on the measure is split, but accusations of a 300% tax increase have been beyond unfounded. Charlie Crist, the moderate Republican-turned-Democrat (who supported high speed rail as a Republican) has endorsed the measure. (***Saint Petersblog***, September 15; ***Tampa Bay Times PolitiFact***, March 20)

All Aboard Florida, the high-speed passenger rail service linking Miami, West Palm Beach, and Orlando being developed in conjunction with Florida East Coast Industries, has selected Siemens as the manufacturer for its train sets. Each of the five consists ordered will have an EPA Tier IV-compliant diesel electric locomotive at each end with four passenger coaches and operate at up to 125 mph. The coaches will feature the latest passenger amenities such as Wi-Fi, ergonomic seating, and accommodations for bicycles and baby strollers. The coaches will be designed exclusively for high-level platforms to facilitate passenger access and be fully compliant with Americans with Disabilities Act requirements. The five initial sets will cover the service between Miami and West Palm Beach and it is expected that another five sets will be ordered to cover the West Palm Beach-to-Orlando segment. The trainsets will be designed to accommodate an expansion to seven coaches when ridership warrants and funding becomes available. The Siemens plant in Sacramento will perform all manufacturing functions and most components will be made in the U.S.A. (***Associated Press***, September 11)

CHICAGO, ILLINOIS

The Chicago Transit Authority is spending $33 million to modernize three Blue Line stations at Western, California, and Damen. To expedite the work, California is closed 24/7 in both directions for 42 days from September 4 to October 15 and Damen will be closed 24/7 from October 20 to December 21. In addition to the vitally needed structural repairs, new signage and lighting as well as expanded fare control areas and new bicycle racks will bring the stations up to 21st Century standards while restoring some of the historic late 1800s-vintage features. (Al Holtz, August 13)

The Chicago Transit Authority awarded a $40.3 million contract to rehabilitate the elevated structure and tracks between the Merchandise Mart and Armitage stations on the Brown (Ravenswood) and Purple (Evanston Express) Lines. The work is expected to commence in the Spring of 2015 and be completed by year's end, eliminating two-thirds of the slow orders that have plagued the Brown Line. (***Chicago Tribune***, August 14)

The Chicago Transit Authority (CTA) will spend another $92 million for a total of over $166 million to rehabilitate all 257,1992-3-vintage 3200-series cars. Component replacements include propulsion and power systems, wheels and trucks, doors and door motors, installation of LED interior lighting, HVAC upgrades, and LED destination signs similar to the new 5000-series cars. The work will be performed in-house by CTA personnel. (Al Holtz, September 11)

Officials from the Chicago Department of Transportation, Amtrak, and Metra have been working on a master plan to improve Union Station from a passenger flow and facilities standpoint. Platforms would be improved by reconfiguring unused platforms and tracks to create new platforms that are wider than those in current use. Lighting, leaky roofs, and canopies would be replaced while the iconic and historic Great Hall would remain untouched. These improvements are sorely needed to accommodate anticipated ridership growth for Amtrak, especially for downstate services and trains to the Rockford-Quad Cities area and from the development of high-speed rail linking Chicago with points north and east. Metra's BNSF corridor, operating out of the south

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concourse, is the busiest of its 11 lines. (***Chicago Tribune***, September 10)

MINNEAPOLIS-ST. PAUL, MINNESOTA

The new Green Line LRT has made news in recent weeks on various fronts, some good, some bad. Opponents continue to snipe at the proposed Southwest Corridor Light Rail Project, sought by the Metropolitan Council as the third LRT line to serve Minneapolis/St. Paul and surrounding municipalities, despite the fact the route has received approval from many of the communities it would serve, including an approval that made the news during the ERA Annual Convention in Minneapolis.

Some residents along the route continue to protest the risk of hazardous material shipments and potential accidents from freight trains sharing the right-of-way of the current proposed route. The proximity of LRT and freight rail activity prompted some residents to urge the Federal Transit Administration to withhold federal funding pending additional study.

Recently Minneapolis and the Metropolitan Council jointly announced a "tentative agreement" to proceed with the planned development of the line, linking downtown Minneapolis and Eden Prairie. The two parties had sparred for months over the project's right-of-way options, generated in part by proposals for LRT to share the right-of-way with existing freight rail operations, which Minneapolis opposed and still expresses unhappiness over despite the pact.

The 15.8-mile Southwest LRT Project, also called the Green Line Extension, will extend the Green Line (Central Corridor LRT which opened June 14, linking St. Paul, the state capital, with downtown Minneapolis) from downtown through growing southwestern suburban municipalities.

Glencoe (Minnesota)-based short line Twin Cities & Western Railroad operates trains over part of the right-of-way that Metro Transit would use. Minneapolis has insisted that control of the right-of-way be held by a public entity, though it appears reluctant to be such an entity itself.

Though the line would serve four other cities in addition to Minneapolis, each of which had various problems or concerns, Minneapolis, the state's largest, has been most difficult to mollify.

Hennepin County voted on the project on August 19 and gave its approval; the Minneapolis City Council followed; and the Federal Transit Administration gave a thumbs-up to an extension of the Blue Line. The extension, also known as the Bottineau Transitway, would run north from Target Field in Minneapolis, stretching 13 miles to Brooklyn Park. The extension is estimated to cost $1 billion to construct and would open for revenue service in 2021.

During the ERA Annual Convention, the Green Line suffered its first fatality when 42-year-old attorney Shana Buchanan was struck about 10:15 AM Sunday near the Westgate station, near the border between Minneapolis and St. Paul. Originally it was speculated that it was a suicide, as Buchanan had been suffering from depression and was taking a medical leave, but updates on the story have indicated that it might have been a case of distracted attention. (***Railway Age***, August 15 and August 25; ***MinnPost***, August 20 and August 29; ***Star Tribune***, September 2)

John Pappas photograph.

The Green Line has been hampered by delays stemming from traffic signals in the city of St. Paul, leading to increasing frustration on the part of its riders, who experience around 15 minutes of delay per trip. The 11-mile trip currently takes almost one hour. The traffic signal prioritization system has not been effective in expediting rail traffic. While it is similar to the system in place for Phoenix, Arizona's light rail system, St. Paul has been reluctant to allow it to significantly impact the flow of vehicular traffic, stemming from political fears of upsetting automobile drivers for special treatment of the light rail line. As a result, the delays have created a 55% on-time performance, causing many users to miss their bus connections. While ridership averages almost 31,000 passengers per weekday, running about 12% above projected ridership levels for 2015, these delays have generated criticism of the light rail system and could hinder future ridership growth. (***Star Tribune***, August 20)

OKLAHOMA CITY, OKLAHOMA

Oklahoma City is preparing to solicit bids from streetcar manufacturers for its proposed $130 million initial streetcar line. The City Council there voted on August 26 to begin the bidding process to obtain five dual-power streetcars, although the initial section will use overhead catenary.

Last September the city approved the streetcar plan as part of its larger MAPS 3 development project. Estimates call for the line to begin revenue service in 2017.

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Local media report the Request for Proposals (RFP) allows manufacturers room to vary vehicle length, but imposes height requirements to address low bridge clearances along the proposed route.

City engineers expect up to 10 different streetcar manufacturers to reply to the request. (***Railway Age***, August 27)

HOUSTON, TEXAS

Metropolitan Transit Authority of Harris County (Houston's METRO) has filed a motion with the Surface Transportation Board to formally acquire nearly 58 miles of right-of-way from Union Pacific Railroad .

A Surface Transportation Board docket published on August 14 notes that METRO is making the move "to acquire from Union Pacific Railroad Company (UP) the right to restore rail service over a rail-banked right-of-way between milepost 3.48 near Bellaire Junction in Houston to milepost 61.2 near Eagle Lake, a distance of 57.72 miles, in Harris, Fort Bend, Austin, Wharton, and Colorado Counties, Tex."

A METRO spokesperson on August 15 told ***Railway Age*** that "METRO is not buying this property. This is related to a sale to Fort Bend County of all rights in the corridor from the county line with Fort Bend out to Eagle Lake."

METRO, based in Houston, currently operates light rail transit and bus services primarily within Harris County, but has been exploring regional passenger rail ("commuter") options for the past few years.

UP received permission to abandon the line in 2000 but later worked out an agreement with METRO to rail bank the segment for future use. The deal was expected to be wrapped up by the end of August. (***Railway Age***, August 15)

DALLAS, TEXAS

Dallas Area Rapid Transit (DART) commenced service on its Orange Line, linking the Dallas-Ft. Worth Airport with downtown Dallas on Monday, August 18 on a new five-mile line linking Terminal A and the Belt Line station. (***Metro***, August 19)

CALIFORNIA

Think that passenger rail in the United States is on the decline? Caltrain will purchase 16 surplus railcars from Metrolink to extend trainset lengths and provide more capacity for standing-room only peak-hour trains.

The Bombardier bi-level railcars will be purchased from Southern California Regional Rail Authority, which operates the Metrolink service. While these cars are similar to the Bombardier vehicles Caltrain uses, Metrolink's fleet has been largely retired, replaced by new equipment from Hyundai-Rotem, in part due to the 2008 Chatsworth accident, which has left a black mark on the Bombardier fleet. Caltrain said it could take up to one year to rehabilitate the cars and place them into service.

The total cost of purchasing and renovating the equipment is $15 million. Caltrain said the majority of this funding will be covered by a farebox revenue bond; Caltrain will cover the remaining funds by reinvesting surplus farebox revenue into the railcar purchase.

The additional cars are intended to provide short-term capacity relief on peak-hour trains, which, as a result of the ridership increase, frequently experience standing-room-only conditions. "Customers are sometimes required to stand for lengthy periods during longer trips," Caltrain noted. On the other hand, standing-room only is common on many commuter rail systems, including Metro-North.

Caltrain's newer Bombardier equipment and gallery trains are currently configured with five cars, which include two bike cars. Trains can carry between 550 and 650 seated passengers. The former Metrolink equipment will be used to expand a number of peak-hour trains to six cars. As in many of these instances, Caltrain did make note that some platforms might need to be extended. While Caltrain has been seeing huge ridership increases, Metrolink has been experiencing slight declines in ridership over the last few years (see below). Furthermore, statistics also point towards a ceiling for Metrolink ridership due to demographics and geography. (***Railway Age***, September 5; ***Los Angeles Times*** via Al Holtz)

LOS ANGELES, CALIFORNIA

Metrolink ridership continues to fall since its peak in 2008 due to the ravages of the worst recession to hit southern California since World War II. Unemployment in the region ranges between 8 and 13%. An influx of residential properties appearing in the formerly all-business downtown districts of Los Angeles also contributed to a change in travel patterns, with many workers living and working in downtown and not needing a commuter rail system to feed the central business district. With Los Angeles not having a core downtown as most large U.S. cities have, and instead having several scattered business districts not conducive to the travel patterns best served by commuter rail, the ridership base has deteriorated over the past few years as many other former riders, dissatisfied with poor timekeeping of the trains, have opted to return to commuting by car, albeit with the latest generation of ultra-fuel efficient vehicles such as Toyota Priuses. Faced with passenger revenue fall-offs that will likely be addressed by service reductions, fare increases, or both, Metrolink now has a choice to make, both of which could exacerbate the loss of ridership systemwide. (***Metro***, September 10)

SEATTLE, WASHINGTON

Following San Francisco's lead, King County Metro, serving the Seattle metropolitan area, will be the second city transit agency to offer a subsidized fare of $1.50 for between 45,000 and 100,000 low-income riders. Metro has stated that it will cost $7-9 million in re-

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duced fare revenues and administrative expenses. Eligibility for the special ORCA fare cards, providing the $1.50 rides that will only be valid on buses, will be limited to those persons whose income is less than 200% above the federal poverty level, which is currently $23,340 for individuals or $47,770 for a family of four. The reduced fare ORCA card is designed to provide affordable transit for those in need, a vital public service that could attract one million more rides on the system, which was expected to lose ridership with the 25-cent fare increase due to take effect in 2015. In the past 10 years, the system has reduced its tax subsidies from 80 percent to 71 percent. This fare program will ultimately reduce farebox revenues for the King Metro, which is concurrently seeking approval for an increase in the local sales tax and automobile registration fee to avert service reductions on the bus system. (***Seattle Times***, August 14)

TORONTO, ONTARIO, CANADA

The Toronto Transit Commission (TTC) has finally jumped onto the bandwagon of transit agencies designating their rapid transit lines by color, letter, or, in TTC's case, numbers. Effective immediately, the Yonge-University-Spadina Line is #1; the Bloor-Danforth Line is #2; the Scarborough RT is designated as #3, and the Sheppard Line will be referred to as #4. (Toronto Transit Commission, August 16)

It has been reported that the fare for the new Union-Pearson Express linking Toronto's Pearson Airport with Union Station in downtown Toronto could range as high as $20-30, a sharp contrast to the current $3 base fare via subway line #2 of the Toronto Transit Commission (TTC) to its Kipling terminal and utilizing the connecting TTC bus to the airport. While the new airport express, utilizing 18 Diesel Multiple Unit trains (DMUs) built by Nippon-Sharyo, will provide travel times of as little as 25 minutes, far less than half the time required by TTC subway and bus, the news of a much higher-than-expected fare is generating controversy. The line is scheduled to open in time for the Pan Am and Parapan Am games in the summer of 2015. *(Editor's Note by Ron Yee: The TTC vs. Pearson Airport Express option would roughly parallel the option presented to Londoners, who have a choice of 2 Heathrow Express or Limited Express services versus the London Transport Piccadilly Line linking downtown London with the airport, except that TTC charges a flat fare of just $3 (less if on multi-ride ticketing options) while LT's Piccadilly Line charges a fare based on distance traveled and is much higher than its base fare.)* (***Toronto Star***, August 22)

The DMUs, which can be configured in trainsets of two or three vehicles accommodating 120 or 180 seated passengers, are EPA Tier 4 compliant and can be converted to EMUs once GO Transit goes forth with its electrification plans, even more crucial with talks of high-speed rail coming to Ontario. Trip distance is 23.5 km (14.5 miles). There are two intermediate stops, at the Bloor-Dundas and Weston GO Transit regional/commuter rail stations. (***Railway Age***, August 15)

TTC's new Bombardier Flexity class Light Rail vehicles made their debut on August 31 on Route 510/Spadina. A press photo shows car 4403 breaking the inaugural banner at the Spadina station. A proof of payment fare system is now in effect on the line to take advantage of the four doors on each side of the 30-meter-long low-floor cars. All 204 cars are expected to be delivered by 2019, totally replacing the venerable CLRV and ALRV fleet dating back to the 1980s. *(Editor's Note by Ron Yee: It has been widely circulated that the ALRVs will be the first to be retired, despite being younger than the CLRVs, which began replacing the classic PCC fleet in 1979.)* (***Toronto Sun***, August 31)

John Pappas photograph.

WATERLOO, ONTARIO, CANADA

Ontario's Region of Waterloo has launched a new website designed to keep residents and other interested parties updated on ION light rail transit construction, set to become intensive as 2015 begins.

Region of Waterloo officials noted on August 15 that ION construction initially will proceed in at least 12 locations, including five along the ION-adapted Bus Rapid Transit route serving Cambridge, Ontario, and seven along the ION light rail transit (LRT) route linking Waterloo and Kitchener. An overview of initial 2014 ION construction also was provided. The website will continually be updated to announce changes and plans as they evolve.

Groundbreaking was set to occur on August 21. The $1.7 billion (CAD$1.9 billion) design, build, operate, and maintenance (DBOM) plan was awarded last March to the GrandLinq consortium. Ion will employ Bombardier Flexity Freedom light rail vehicles.

ION staff will meet with residents, business owners,

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and community groups in the months ahead to reinforce the information flow, including updates on road restrictions and/or road closures. Officials also plan to issue written notices to every resident and business owner within 100 meters of ION construction before work begins.

The GrandLinq consortium also is training supervisors to establish neighborhood contacts to expedite construction and address potential problems involving traffic and other disruptions involving access to residences or businesses. (***Railway Age***, August 18)

MEXICO

Construction has begun on the first phase of the third light metro line in Mexico's second-largest city, Guadalajara. The initial section of Line 3 will link Periférico Zapopan in the northwest of the city with Federalisimo on Line 1.

The total length of all three phases will be 21.5 km (13.4 miles) and the line will have 18 stations. The second phase will include a 5.5-km (3.4-mile) tunnel with five underground stations, including an interchange with the east-west Line 2 at Plaza Universidad. The final section will extend the line on an elevated alignment into the southeastern suburbs to terminate at Central Camionera in Tlaquepaque.

When all three phases are completed, Line 3 is expected to carry around 233,000 passengers per day with a journey time of 33 minutes between the two terminals.

Service will be operated by a fleet of 16 two-car trains, each accommodating up to 500 passengers. (***International Railway Journal***, August 28)

LONDON, ENGLAND

London Underground (LU) has launched a bidding process for trains for the Northern and Jubilee Lines to enable more frequent service to be operated on each line following resignalling and to provide additional trains for an extension of the Northern Line.

LU requires five 108-meter (354-foot)-long six-car trains for the Northern Line with an option for up to 45 additional trains, plus an option for up to 18 126-meter (413-foot)-long seven-car trains for the Jubilee Line. LU is considering whether to cascade trains between the two lines, which may require the incorporation of redundant Jubilee Line trailer cars into the new trains.

The tender includes an option for a through gangway between cars within each train. The trains must be designed for a life of 40 years, and meet high levels of reliability and performance from entry into service.

The contract will have a minimum value of £40 million (USD$66 million) and could reach £470 million (USD$775 million) if all options are exercised. The contact will run for four years and six months.

LU announced on August 21 that it had selected Ferrovial Agroman Laing O'Rourke for a £500m contract to design and construct the extension to the Northern Line from Kennington via Nine Elms to Battersea. The award of the contract is conditional on funding and approval of the project by a public inquiry that is expected shortly. The total cost of the project is around £1 billion (USD$1.65 billion) and it will be financed by contributions from the developer of the old Battersea Power Station site and through a new enterprise zone. The extension is expected to kick-start regeneration of the Nine Elms area. It is hoped to start construction of the extension in Spring next year and complete the project in 2020. (***International Railway Journal***, August 22)

MARSEILLE REGION, FRANCE

Could free light rail come to Ithaca, Elmira, or even Binghamton? One could wish, but for a town east of Marseille, France, that dream is now a reality. Aubagne, a town of 46,000 inhabitants, inaugurated its first light rail line on September 1.

Like the town's bus network, no fares are charged for travel on the tram line, making it the first free-to-use light rail system in France and one of the first in Europe.

The 2.7-km (1.68-mile) line has seven stations and links the main line station in Aubagne with Charrel. Construction began in early 2013 and the project had a budget of €166 million (USD$214 million) including rolling stock.

Service operates at 10-minute headways using a fleet of 10 Citadis Compact low-floor LRVs. The 22-meter-long three-section vehicles accommodate up to 125 passengers.

The Urban Community of Pays d'Aubagne et de l'Etoile decided in April that it would not proceed with construction of the second or third phase of the network, although the community's president, Sylvia Barthélémy, announced at the opening ceremony that the municipal government will study the reopening of the (14-km) Valdonne railway north of Aubagne as a light rail line.

The proposed line would serve an area with a population of 60,000, linking Aubagne with Roquevaire, Auriol, La Destrouse, and La Bouilladisse. At present there are around 18,000 car journeys a day on the road between Aubagne and La Bouilladisse, and 110,000 vehicles per day use the motorway linking the area with Marseille. (***International Railway Journal***, August 22)

RUSSIA

Talgo has delivered a variable-gauge set of 20 coaches for Russian Railways (RZD) to Berlin in readiness for testing on the German network.

RZD has ordered seven Talgo sets. Three of these trains will be equipped with variable-gauge 1,435-mm and 1,520-mm-gauge wheelsets for use on services from Russia to Europe, while the remaining four trains will be fitted with fixed 1,520-mm-gauge wheelsets. The variable-gauge trains will be introduced on overnight services between Moscow and Berlin next year.

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Around New York's Transit System

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tilation fans, etc.) necessitated by flood damage from Superstorm Sandy. As part of the Metropolitan Transportation Authority's "Fix and Fortify" campaign to make the subway system more resistant to flooding, or, if one does occur, minimize its impacts and allow quick restoration of service, NYC Transit is undertaking a huge effort to repair all of the damage wreaked by that epic storm with its record-breaking storm surge. The Greenpoint and Montague Street Tunnels were the worst affected by the flooding. One feature the closure of this tunnel created was the creation of a free *MetroCard* "walking transfer" between the Broadway station on G and the Lorimer Street station on J M. There is a grassroots effort being made by local politicians and community groups to try to make this transfer a permanent feature in the NYC subway fare structure. Citing a potential impact of $700,000 to $1.1 million in lost fare revenue, MTA is not amenable to this concept as it could be precedent-setting for the system and require expensive changes to the fare card system as well as further reduce fare revenue. *Editor's Note by Ron Yee: In the coming months and years, a few other river crossing tunnels may be closed down in a similar manner to facilitate total overhauls.*

Montague Street Tunnel Reopens—Weeks Early

The Montague Street Tunnel reopened on the evening of Sunday, September 14, restoring R train service a month earlier than the planned 14-month period to achieve a complete rebuilding of its infrastructure. The $250 million rebuilding project involved the replacement of 11,000 feet of track (rail and roadbed), 30,000 feet of terra-cotta duct banks in the benchwalls of the tunnels, 75,000 feet of power cables, and 200,000 feet of communication cable (all of which are of a type that is resistant to damage from seawater immersion), as well as beefing up vital infrastructure such moving a signal room at Whitehall Street to a higher level and making relay and breaker rooms more resistant to future water intrusion and flooding with additions such as submarine-quality watertight doors and higher capacity pumps to remove water from the tunnel if it ever floods again.

The first revenue trains through were as follows (times as per schedule):

First northbound N (September 14): left DeKalb Avenue at 10:51½ PM; arrived at Whitehall Street at 10:58½ PM

First southbound N (September 14): left Whitehall Street at 11:23 PM; arrived at DeKalb Avenue at 11:30 PM

First northbound R (September 15): left DeKalb Avenue at 5:45 AM; arrived at Whitehall Street at 5:52 AM

First southbound R (September 15): left Whitehall Street at 6:06 AM; arrived at DeKalb Avenue at 6:13 AM

"Vontz" Wrong With This Picture?

New York City subway riders and employees now have to face another type of risk when on the trains – bedbugs. Since August 3, at least five trainsets have been removed from service and fumigated for the pesky and hard to remove/kill insects, which have been documented as biting at least one subway crewmember. So far, bedbugs have been reported on N, Q, and 6. Subway officials, while reacting immediately to reports of any bedbug sightings and aggressively responding to eradicate them, are saying that with a daily ridership of around 5.5 million, the number of trains affected is actually quite small. *Editor's Note by Ron Yee: There could soon be an explosion of bedbug reports if they are anything like the colonies of roaches on buses and trains that flood out of their summertime hiding spots once the heaters are fully turned on in colder weather.*

Object Detection System Being Tested

The Metropolitan Transportation Authority is testing a new high-tech system designed to detect objects such as people who have fallen into the track area. The test is being conducted at an undisclosed station to prevent pranksters from interfering with the testing. Combining laser detectors, thermal imagers, and smart video, the system is designed to detect "intrusions" on the track areas and activate flashing light signals located in the tunnel 300 feet upstream of the station. This system does not trigger an automatic stoppage of train movements but alerts Train Operators to slow their trains prior to reaching the station and be on the lookout for an obstruction, potentially saving many lives.

Staten Island Railway Real Time Data

MTA SubwayTime™ App, which started in December, 2012, displays the real-time data for subway routes 1-6 and the 42nd Street Shuttle. Real-time data for Staten Island Railway's Great Kills, Eltingville, Annadale, and Huguenot stations was included recently and is shown on the stations' countdown clocks. This system tracks Staten Island Railway trains through the signal system and compares their locations with the train schedule. Then the system calculates the arrival times in accordance with the schedule and train location.

Staten Island Railway, which transports 24,600 passengers on an average weekday, is a 14-mile, 22-station line. It was operated as a subsidiary of the Baltimore & Ohio Railroad for 72 years and was taken over by MTA in 1972. The railway operates 64 R-44 passenger cars modified to Federal Railroad Administration standards. The railway also has a full roster of locomotives, hoppers, flatcars, and crew cars.

Staten Island Railway Security Cameras

Crime statistics indicate the new security cameras installed at stations as well as an increase in police patrols system-wide when the local high schools release their students have resulted in a dramatic reduction in

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TRACTION TOUR TO SOUTHERN EUROPE
by Jack May
(Photographs by the author)
(Continued from September, 2014 issue)

I arrived in Pisa at 15:45 and was immediately thrust among a host of tourists. From looking at a city map posted in the station's forecourt I concluded I could walk to the leaning tower in a reasonable amount of time. Wrong!, and especially noticeable after I took a few bad turns on what had turned into a very warm sunny afternoon. I finally arrived at the UNESCO World Heritage site at about 16:30 and was immediately impressed. Despite the throngs of visitors it was easy to get relatively unobstructed photos of the lovely buildings that dominate the square.

By the time I completed my exploration I was rather tired, and did not want to repeat my walk. There was a nearby bus stop but no ticket machine. I took my chances and rode back to the station (a little over 5 minutes —unlike me, the driver knew the way) and I was able to catch the 17:45 train (a push-pull local bound for Rome) for the 15-minute ride back to Livorno. A Route 1 bus at 18:03 got me to the square at 18:08, in time for the 18:21 pier shuttle. It was a full bus, and the starter indicated it was the last bus of the day. I was back on the Eurodam at 18:30, with departure set for 20:00. A fine day.

The city of Pisa looked a bit worn for wear. About halfway on my journey to the tower I came across the attractive 11th Century San Paolo All'Orto church, situated along a walking street.

The only shore excursion in which Clare and I participated together was on Sunday, April 21. We docked at Monte Carlo in the Principality of Monaco on time at 8:00 and boarded the motor coach for the "Taste of the Riviera" excursion shortly after. The bus had only a couple of empty seats and soon we were traversing through some excellent mountain scenery on the way to the village of Eze. Much of the guide's narrative was devoted to the royal family of Monaco, Princess Grace, and the government's relationship to France. Of course the risks of driving unsafely were mentioned as we scaled the steep, narrow, and sharply curved road.

As we arrived in Eze we saw many vendors busily setting up goods for sale to tourists. The village is perched atop a steep craggy hill that is not open to regular automobile traffic. It dates from medieval times and our group walked along narrow cobblestone streets, past churches and other old buildings, with our guide's narrative emphasizing the beautiful scenery and views of the Mediterranean from way up high. The weather was mostly cloudy, and fortunately not too warm, but Clare still found the walk a little formidable and did not make it all the way up to the peak, where a park with a cactus garden is located (charging admission, of course). Nevertheless, she enjoyed the exercise. The tour members gradually spun off to visit shops, cafes, and restrooms, but we all returned to the coach in time for its scheduled departure.

Back on the Corniche, we continued along the Cote d'Azur to our final destination, the city of Nice, with views of Cap Ferrat, Villefranche, and Cap d'Antibes from the mountains above. Nice sports a light rail line, opened in 2007, that includes a section of battery propelled wireless operation. I had covered the line extensively in 2009, and so did not feel it necessary to do any further photography at this time. Two more lines are in the works. After the coach was parked, we stayed with the group, and walked into the Old Town, crossing the streetcar tracks en route. We spent the lunch hour at a wine cellar, where cheese and the local vintage were tasted, while an interesting talk on the subject was given. A little later we were given some free time and walked through a flower market along the promenade next to the beach and sea, and consumed snacks from various vendors. The area was busy, as a bicycle race had just ended, and lots of traffic barricades were being removed.

Our return trip was along the highway that runs at the foot of the mountains, with glimpses of the sea on the right and occasional views of the electrified SNCF tracks on our left. We arrived back at about 16:00, a good two hours before the ship's departure, and a few minutes before a short, heavy shower. It was a nice way to spend the day, but hardly spectacular.

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Traction Tour to Southern Europe

(Continued from page 17)

In the following four photos, the angles create a perspective that may make the other buildings look taller than the Leaning Tower. They are slightly shorter.

➔This imposing structure, the Cathedral (Duomo), lies to the left of the bell tower.

←The classic view of the Leaning Tower. Construction of the 183-foot high bell tower in the Cathedral Square (Piazza del Duomo) was started in the 12th Century and completed in the 14th .

The Baptistery is very impressive. It and the Cathedral are about 4 feet shorter than the bell tower.

Crowds of people approach the walled area through this entryway.

A view of the Mediterranean from the village of Eze. Note the cruise ship anchored in the background. We would return to Monte Carlo on the road in the left foreground.

The colorful cactus garden atop the village of Eze on the French Riviera.

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Traction Tour to Southern Europe

(Continued from page 18)

Another view of densely populated Monte Carlo and its port, from our cruise boat. This and the previous photo were taken just after a short, violent shower.

Monte Carlo, the capital of the Principality of Monaco, is in the background of this view of one of the *Eurodam*'s swimming pools.

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Around New York's Transit System

(Continued from page 15)

The 1520-mm-gauge sets had been due to enter service in October between Moscow and Kiev, but due to political tensions between Russia and Ukraine, the plans have been cancelled.

RZD announced earlier this year these trains will instead replace Siemens Sapsan high-speed trains on the Moscow – Nizhny Novgorod route from 2015. The first of the 1520mm-gauge trains was delivered direct to Russia earlier this year and is now undergoing trials. (***International Railway Journal***, August 22)

DUBAI

With testing now well underway, Dubai Road and Transport Authority (RTA) has announced that Dubai's inaugural light rail line, the Al Sufouh Tramway, will open to passengers on November 11.

The 10.6-km first phase of the line from Dubai Marina to the depot near the Dubai Police Academy will have 17 stations and is expected to transport around 27,000 passengers per day in the first year of operation. This is expected to increase to 66,000 per day when the 4-km second phase of the project opens in 2020.

The line is the first in the world to be entirely electrified using Alstom's APS ground-level power supply system. *(Editor's Note by Sasha Ivanoff: Member Jack May mentioned APS technology at his January presentation, and most systems have a hybrid APS and overhead catenary setup, not dedicated APS.)* Alstom is also supplying 11 44-meter-long LRVs for the first phase of the project, with a further 14 vehicles set to be delivered for the second phase.

Sheikh Mohammed bin Rashid Al Maktoum, ruler of Dubai, attended the latest round of trial operations in mid-August, riding on a vehicle during a line test and touring the depot. (***International Railway Journal***, August 21)

CHINA

Construction is expected to begin in October on a 339-km direct line linking Chongqing with Changsha, the capital of China's Hunan province, after China's Ministry of Environmental Protection approved plans for the Yuan 37.6 billion ($USD 6.1 billion) project.

The line will be designed for 200 km/hour (125 mph) operation and will be used by freight trains as well as passenger services.

The project is due to be completed in 2020, reducing the journey time between the two cities to around four hours. (***International Railway Journal***, August 27)

Around New York's Transit System

(Continued from page 16)

reported crimes on the line. Police statistics are showing a greater than 50% reduction in crime in the six years since 2008. However, many riders continue to blame the fare-free policy south of the Clifton station as being one of the primary reasons why the risk of crime is still perceived by many riders as uncomfortably high in the areas surrounding many stations, especially after dark.—***SILive.com***, August 27

Around New York's Transit System

The Voices Behind Transit Announcements

Several people make the announcements on New York's subway system. Charlie Pellett, a veteran news anchor, a reporter for Bloomberg Radio, and an avid subway rider, makes some of the announcements on the R-142 through R-188 cars and safety announcements in stations. Bernie Wagenblast, a transportation consultant, records his announcements from the desk of his New Jersey office. His voice can be heard informing passengers of train arrivals on routes 1-6.

Subway Globes

Transportation expert and historian Hank Raudenbush wrote the following:

"All of us antiquarians remember a different set of globes on the same lampposts:

"IRT entrances had a round blue globe; BMT entrances had an old-fashioned lantern with 8 panels alternating green and white with the white ones lettered 'BMT;' and IND entrances had cubical globes with all corners beveled, one white and one green.

"There were very few entrances to H&M that were not also subway entrances. Does anybody remember if they had a style? Additional details and corrections are welcome."

NYC Transit's Use of Welded Rail

Welded rail has been installed on almost half of the 660 miles of track in the NYC subway system in an effort that started in 1979 and is credited with reducing the number of broken rail incidents by two-thirds. However, the labor-intensive work, requiring sometimes significant service disruptions, has a long way to go before the entire system is upgraded with 390-foot lengths of welded rail. The location of the F train derailment of May 2, 2014 in Queens was a section of track slated for welded rail, but thus far it is unclear if the jointed rail was the cause of the incident.

Fourth R-142/R-188 Conversion Set in Service on 7

R-188 7902 was observed operating with upgraded R-142A car 7250 (north motor) on August 20, marking the fourth set of R-142A conversions in service on 7.

A Train Operates in Wrong Direction

A Train Operator and Conductor were removed from line service and placed on desk administrative duty pending investigation into a potentially catastrophic case of a wrong-way A train. Apparently, the Operator of an A train that was ordered to turn at Canal Street and proceed northward (due to serious service disruptions ahead on the tracks to Brooklyn on August 11) ended up proceeding north on the southbound express track, almost all the way to W. 4th Street, before the Operator saw the headlights of an oncoming southbound train and brought the train to a stop. The entire time, the wayward train had only been moving at around 10 mph and most of the route was on straight track or gentle curves that did not result in potentially serious blind-curves. *Editor's Note by Ron Yee: The investigation will likely include why the Train Operator, who is supposed to be qualified on the physical characteristics of the line, misinterpreted the instructions from the Control Center, went north on the wrong track, failed to hear warning calls on the radio, and failed to notice that there was a lack of regularly spaced wayside colored light signals (standard "automatic signals" as opposed to home signals found at or near switching locations) as the train proceeded north.*

G Service Through Greenpoint Tunnel Restored

G train service between Court Square in Queens and Nassau Avenue in Brooklyn was restored on Tuesday, September 2 after a five-week shutdown that started on July 26 to facilitate the reconstruction and component replacement (track, signal, emergency pumps and ven-

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SUBDIVISION "B" CAR ASSIGNMENTS

CARS REQUIRED SEPTEMBER 28, 2014

LINE	AM RUSH	PM RUSH	LINE	AM RUSH	PM RUSH
A	304 R-46	10 R-32, 304 R-46, 8 R-68A	L	160 R-143, 32 R-160A	152 R-143, 16 R-160A
B	48 R-68, 152 R-68A	48 R-68, 136 R-68A	M	184 R-160A	160 R-160A
C	144 R-32	136 R-32	N	240 R-160B	220 R-160B
D	240 R-68	224 R-68	Q	20 R-160A, 210 R-160B	20 R-160A, 200 R-160B
E	240 R-160A, 20 R-160B	240 R-160A, 20 R-160B	R	232 R-46	232 R-46
G	52 R-68	48 R-68	S (Franklin Avenue)	4 R-68	4 R-68
J/Z	8 R-32, 40 R-42, 112 R-160A	8 R-32, 32 R-42, 112 R-160A	S (Rockaway)	12 R-46	12 R-46