

The Bulletin



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This Month's Cover Photo:

SNCF Z 8800 set 42B with Z 8884 driving motor in the lead, at Javel Station and soon to depart as an RER Line C service to Versailles on the occasion of a weekend service change. The 8800 class are dual voltage 1.5 kV DC / 25 kV AC 50 Hz. Built by a consortium of Alstom-ANF-CIMT-TCO, they were delivered between 1986-1988. Photo taken July 21, 2018 by Subutay Musluoglu

In This Issue: ...Page 2

NEW YORK CITY SUBWAY CAR UPDATE: R-32s RETURN TO SERVICE! (Photographs by Ron Yee)



A train of R-32s, led by 3436-3437, is seen entering the Hewes Street station on July 9.

Several trains of the Phase I R-32s that were recently resurrected were placed back in revenue service on the **J/Z** starting on the morning of July 1, with the start of another new supplement that restored the complete weekday schedule on the **L**. This denied the use of what had otherwise been "surplus" R-143 and R-160A-1 equipment from the **L** on the **J/Z** and **M**. This left no alternative than to resume the use of reborn Phase I R-32s in lieu of the missing R-179s. At that time there were 82 R-32s available

from the East New York facility, a fleet which was expanded to the following 90 as of July 12: 3360-3361, 3376-3377, 3380-3381, 3388-3389, 3394-3397, 3400-3401, 3414-3415, 3419/3740, 3432-3433, 3436-3437, 3444/3777, 3454-3455, 3460-3461, 3488-3489, 3500-3501, 3512-3515, 3520/3891, 3548/3593, 3574-3575, 3590-3591, 3614-3615, 3646-3647, 3670-3671, 3706-3707, 3714-3717, 3772-3775, 3778-3779, 3780-3781, 3792-3793, 3798-3799, 3804-3805,

(Continued on page 2)

New York City Subway Car Update

3810-3811, 3834-3835, 3840-3841, 3886-3889, 3894-3897, 3912-3913, 3928-3929, 3932-3933, and 3938-3939.

As of July 3, the two erstwhile East New York (Canarsie) R-160A-1 trains that were borrowed by 207th Street for the **C** (8329-8332, 8341-8344, 8357-8360 and 8369-8372) had been returned home, which concurrently began the complete (100%) use of full-length R-46 equipment on the **C**. This may prove temporarily to be the last eight-car rolling stock to be assigned to the **C** until such time as the four-car R-179s

are restored to service later in 2020.

The following additional 190 Jamaica-assigned R-160s have operated on the **A** from June 15 through July 12: Alstom R-160A-2s 8663-8667, 8673-8677, 8682-8687, 8698-8702; Alstom R-160Bs 8738-8742, 8818-8822; Siemens R-160Bs 8848-8852, 8858-8862, 8888-8892, 8908-8912, 8958-8962, 8968-8972; Alstom R-160Bs 9193-9197, 9203-9212; Alstom R-160A-2s 9248-9252, 9258-9262, 9278-9282, 9418-9422, 9458-9462, 9478-9482, 9488-9492, 9523-9527, 9538-9547, 9563-9572, 9608-9617, 9643-9647, 9658-9667, 9788-9792; Kawasaki R-160Bs 9803-9807, 9823-9827, 9833-9837, 9878-9882, and 9918-9922.



R-32 3500 leads a southbound **A** at Marcy Avenue, July 9.



R-32s north of Chauncey Street station, relaying into East New York Yard, July 9.

PRE-UNIFICATION SUBWAY CAR ROSTERS - PART II
by Jeff Erlitz

In the July issue of *The Bulletin* (page 20), we printed a roster of Interborough Rapid Transit (IRT) subway cars but did not have any space available for an introduction. Herewith is that introduction, as well as part two of this short series.

The New York City Transit Authority used to have all kinds of information sheets available to the public that were created by the Department of Public Information and Community Relations (at least as it was known in the 1960s). One of those single-page handouts was the IRT roster we presented to you last month. That roster was reproduced almost exactly as the original had ap-

peared and included all cars ordered by the IRT, from its inception in 1904 to the final order of Low-Voltage World's Fair Steinway motor cars in 1938. That roster was undated but was probably produced in the mid- to late 1960s.

This month, we continue with a roster of the subway cars of the Brooklyn-Manhattan Transit Corporation from its inception (actually in Brooklyn Rapid Transit (BRT) days) to just before unification in June, 1940. This roster shows the fleet "as delivered." The original copy of this roster was dated August, 1968 but has been reformatted to save space.

(Continued on page 3)

Pre-Unification Subway Car Rosters — Part II

(Continued from page 2)

NUMBERS	TYPE	BUILDER	DATE	NOTE
2000-2099	A ¹	American Car and Foundry	1914	67' Standard Motor
2100-2199	A ¹	American Car and Foundry	1915	67' Standard Motor
2200-2299	A ¹	American Car and Foundry	1916	67' Standard Motor
2300-2399	A ¹	American Car and Foundry	1917	67' Standard Motor
2400-2499	A ¹	American Car and Foundry	1918	67' Standard Motor
2500-2599	A ¹	American Car and Foundry	1919	67' Standard Motor
2600-2699	A ¹	Pressed Steel Car	1920	67' Standard Motor
2700-2799	A ¹	Pressed Steel Car	1921	67' Standard Motor
2800-2899	A ¹	Pressed Steel Car	1922	67' Standard Motor
4000-4044	A ¹	Pressed Steel Car	1924	67' Standard Trailer
4045-4049	AX ²	Pressed Steel Car	1924	67' Standard Trailer
6000-6003 ³	D	Pressed Steel Car	1925	Triplex
6004-6070 ³	D	Pressed Steel Car	1927	Triplex
6071-6121 ³	D	Pressed Steel Car	1928	Triplex
7003 ⁴		Pullman-Standard Car Manufacturing	1934	Multi-Section ⁵
7004-7013 ⁴		St. Louis Car	1936	Multi-Section
7014-7028 ⁴		Pullman-Standard Car Manufacturing	1936	Multi-Section
7029 ⁴		Edward G Budd Manufacturing	6/1934	Multi-Section ⁶
8000 ⁷		Clark Equipment	1938	Compartment ⁸
8001-8005 ⁷		Clark Equipment	1940	Compartment ⁸

Notes:

1. As built, all A-Type cars, both motors and trailers, were single units with cabs at each end and conductor controls at the center door.
2. Though trailers, these cars also had controls at one end.
3. Each section of the Triplex cars was sub-lettered A, B and C.
4. Each section of the Multi-Section cars was sub-lettered Sec. A, Sec. B, Sec. C, Sec. B1 and Sec. A1.
5. Painted Pullman green, this unit was nicknamed the Green Hornet.
6. Built of stainless steel, this unit was nicknamed the Zephyr.
7. Each section of the Compartment cars was sub-lettered A, B and A-1.
8. Painted two-tone blue, the Compartment cars were nicknamed Bluebirds.

Commuter and Transit News

by Jeff Erlitz

MTA NEW YORK CITY TRANSIT

The Metropolitan Transportation Authority (MTA) announced on June 30 that the agency is deploying a dozen vending machines at ten subway stations allowing customers to buy Covid-19 personal protective equipment (PPE). The new machines, part of a pilot program, will offer reusable face masks, gloves, hand sanitizer, and sanitizing wipes.

The pilot program consists of 12 machines at these 10 locations:

- 14 St-Union Square **4 5 6 L N Q R W**
- 34 St-Herald Square (two machines) **B D F M N Q R W**
- 34 St-Penn Station **1 2 3**
- 34 St-Penn Station **A C E**
- 42 St-Port Authority Bus Terminal **A C E**
- 42 St-Times Square (two machines) **1 2 3 7 N Q R S W**
- 59 St-Columbus Circle **1 A B C D**
- 74 St-Roosevelt Av **7 E F M R**
- Atlantic Av-Barclays Center **2 3 4 5 B D N Q R**
- Lexington Av **E M**

The machines are of two types. Eight machines are being installed and stocked by Canteen, a division of the Compass Group, a food services company. These machines were built by Vengo, a manufacturer of retail vending machines. Four machines are branded as "Simply" and are being installed and stocked by vending machine company Swyft.

The MTA is also distributing hand sanitizer at every station as well as 2 million single-use surgical masks to customers at station booths thanks to donations from the State of New York and City of New York. (MTA press release, June 30)



One of the Vengo vending machines. MTA photograph

MTA LONG ISLAND RAIL ROAD

July 11 was the last day of staffed operation of Nassau Tower in Mineola. This tower is directly in the path of the new Main Line Third Track and needed to be moved out of the way. This interlocking, controlling the junction of the Main Line with the Oyster Bay Branch, is now controlled from Jamaica Central Control, which is in the AirTrain building on the south side of the tracks in Jamaica.

Nassau Tower also controlled three remote interlockings, Nassau 1 between the New Hyde Park and Merillon Avenue stations, Nassau 3 between the Mineola and Carle Place stations, and Nassau 4, south of the East Williston station on the Oyster Bay Branch. The junction in Mineola where the tower stands, had been redesignated Nassau 2 when all four them were placed in service in 1996.

There has been a tower on this spot since the first one, known as Tower 45, was placed in service on March 4, 1905. That tower was a brick structure that contained a 52-lever mechanical interlocking machine that had been built by Union Switch & Signal under license from Saxby & Farmer in England. In 1907, Tower 45 was renamed MT. On December 31, 1922, New Year's Eve, that tower was demolished in a freight train derailment. At the time, there was a walkway from the tower directly into Substation #8, right next door. This is undoubtedly how the tower operator saved his life that evening.

A wooden replacement tower, the one you see here, was placed in service April 25, 1923. It, too, had a 52-lever US&S/Saxby & Farmer mechanical machine. On April 23, 1937 MT Tower was renamed Fair, named for the nearby Nassau County Fairgrounds. Less than a year and a half later, on September 18, 1938, Fair Tow-

(Continued on page 5)



One of the Simply vending machines made by Swyft. MTA photograph

Commuter and Transit News

(Continued from page 4)

er was renamed Nassau, perhaps because Mineola is the county seat of Nassau County. On November 17, 1975, with the closure of Locust Tower up in Locust Valley on the Oyster Bay Branch, a small push-button all-relay control panel made by the Bristol Division of Acco Industries Incorporated was added to Nassau Tower, on the right side of the Block Operator's desk.

Barely a year later, on November 5, 1976, in conjunction with the reconfiguration of the switches at the Belerose end of Queens Interlocking in Queens Village, another push-button all-relay control panel, this one made by Quindar Electronics Incorporated, was added to Nassau Tower, on the left side of the Block Operator's desk.



On the final day of staffed operation, July 11, Nassau Tower is seen from the pedestrian crossing between the station platforms and Main Street.

Jeff Erelitz photograph



Also seen on July 11, this Tower Control Panel had been built by Union Switch & Signal and had been installed in 1996. It replaced a mechanical interlocking machine and two auxiliary control panels.

Jeff Erelitz photograph

All three interlocking machines in Nassau Tower were replaced with the Union Switch & Signal Tower Control Panel you see above on May 9, 1996. On that date, the two single crossover switches that were immediately

west of the Mineola station were replaced with two new interlockings at Nassau 1 and Nassau 3.

Finally, on May 8 of this year, the US&S control panel was removed from service, replaced with a computer workstation using one of the "office control systems" such as made by Alstom or RailComm.

Over the weekend of July 11-12, 3rd Track Constructors (the joint venture of Picone, Dragados USA, CCA Civil, and Halmar) working on the Main Line Third Track Project, rolled yet another new bridge into place. This took place at the New Hyde Park Road crossing in the village of the same name. This was the fifth new, three-track bridge to be installed as part of this major project. Only two weeks earlier, the Glen Cove Road bridge was replaced.

The New Hyde Park Road bridge is the biggest one by far because it was built for five traffic lanes and a sidewalk. There are two traffic lanes in each direction plus a southbound-only left turn lane for Clinch Avenue, something that did not even exist in grade crossing days.



View west of the new bridge and supporting under structure for New Hyde Park Road, immediately south of the railroad tracks, July 4, 2020. There is a two-track bay closest to the camera, and a one-track bay and pedestrian overpass to the left.

Jeff Erelitz photograph



View south of the Main Line right-of-way just east of the New Hyde Park station, on New Hyde Park Road, July 4, 2020. The roadway and side walls have already been completed, except for the final layer of pavement. Over the course of the July 11-12 weekend, the tracks and this wall of dirt will be removed. Old sewer and water lines protrude from the subsurface.

Jeff Erelitz photograph

(Continued on page 6)

Commuter and Transit News

(Continued from page 5)



It is now July 11, and the new bridge structure has been partially moved into position. This is also looking south along New Hyde Park Road. Piles of dirt still need to be carted away.

Jeff Erlitz photograph



Looking east along the Main Line at New Hyde Park Road on July 11. The bridge, underpass and retaining walls were all constructed as one piece and is being shoved with hydraulic jacks into place. It was maybe halfway there at this point.

Jeff Erlitz photograph

Once again, there was no train service between Floral Park and Hicksville.

Taking advantage of the shutdown in service two weeks previous, during the Glen Cove Road bridge roll-in, the new pedestrian overpass at the Carle Place station was installed.



Seen here on July 4, the new overpass is now in place at Carle Place station. It was installed over the weekend of June 27-28.

Jeff Erlitz photograph

New schedules went into effect on Monday, July 13, as concrete tie installation shifted from the LIRR's Main Line (between Hicksville and Bethpage) to the Port Washington Branch, with work taking place between Woodside and Flushing. The schedule changes include:

Port Washington Branch:

Westbound, Morning:

- The 8:04 AM train from Great Neck to Penn Station will not operate. As an alternative, the 7:46 AM train from Port Washington to Penn Station has added stops at Great Neck (7:56 AM) and Bayside (8:03 AM), and the 8:23 AM train from Great Neck to Penn Station has added stops at Little Neck (8:26 AM) and Douglaston (8:28 AM)
- The 8:45 AM express train from Port Washington to Penn Station will not operate. As an alternative, a train making all local stops (except Plandome) departs at 8:47 AM

Westbound, Afternoon/Evening:

- The 5:00 PM train from Port Washington to Penn Station will not operate. An added train departs Great Neck at 5:19 PM and operates express to Woodside (5:38 PM) and Penn Station (5:50 PM)
- The 5:44 PM train from Great Neck to Penn Station will not operate. As an alternative, the 5:49 PM train from Port Washington to Penn Station has added stops at Little Neck (6:02 PM), Douglaston (6:04 PM), Bayside (6:07 PM) and Flushing-Main Street (6:14 PM)
- The 10:15 PM train from Port Washington to Penn Station departs 1 minute earlier, at 10:14 PM

Eastbound, Morning:

- The 5:29 AM train from Penn Station to Port Washington departs 12 minutes earlier, at 5:17 AM
- The 6:31 AM train from Penn Station to Port Washington departs 5 minutes earlier, at 6:26 AM
- The 7:55 AM train from Penn Station to Port Washington departs 3 minutes earlier, at 7:52 AM.

Eastbound, Afternoon/Evening:

- The 3:39 PM train from Penn Station to Great Neck

(Continued on page 7)

Commuter and Transit News*(Continued from page 6)*

will be restored to the schedule

- The 3:49 PM train from Penn Station to Port Washington will not operate
- The 5:26 PM express train from Penn Station to Port Washington will be combined with the 5:29 PM train from Penn Station to Great Neck. The combined train will continue to depart at 5:29 PM and make all local stops to Port Washington, arriving at 6:16 PM

Note: Additional trains (westbound and eastbound) have been adjusted to depart between 3-7 minutes later.

Weekdays, Midday: Service will be reduced from half-hourly to hourly

Weekends, Overnight: No train service between Woodside and Flushing-Main Street. Free LIRR shuttle buses transport passengers between Woodside and Flushing-Main Street. Train service will operate between Port Washington and Flushing-Main Street

Babylon Branch:

- The 6:57 AM train from Freeport to Penn Station will not operate. Alternate service departs Freeport at 6:45 AM or 7:08 AM

Hempstead Branch:

- The 5:05 AM train from Penn Station to Hempstead departs 21 minutes later at 5:26 AM
- The 7:05 PM train from Penn Station to Hempstead instead departs from Atlantic Terminal at 7:09 PM. Connecting train from Penn departs at 6:56 PM

Port Jefferson Branch:

- The 5:06 PM train from Penn Station resumed operating express to Syosset, Cold Spring Harbor and Huntington

Ronkonkoma Branch:

- The 5:26 AM train from Penn Station to Ronkonkoma departs 15 minutes earlier, at 5:11 AM
- The 6:00 AM train from Penn Station to Ronkonkoma departs 7 minutes later, at 6:07 AM
- The 5:36 PM train from Ronkonkoma to Penn Station departs 21 minutes later, at 5:57 PM

West Hempstead Branch:

- The 7:36 AM train from West Hempstead to Penn Station will depart two minutes earlier, at 7:34 AM

MTA METRO-NORTH RAILROAD

Metro-North announced it has reconfigured vending machines at 12 stations throughout the system to allow customers to purchase items of personal protective equipment (PPE). Customers will be able to buy KN95 masks, bottled hand sanitizer, and gloves at the machines starting July 10. Free masks and hand sanitizer are still being distributed at stations and on trains for any rider who needs. Metro-North has installed touchless hand sanitizer dispensers at stations for customers and employees to access. Masks are also stored on all trains in the event a person boards without one.

Passengers can find the PPE in vending machines at the following 12 Metro-North Railroad locations:

- Croton-Harmon
- Dobbs Ferry
- Fordham
- Hastings-on-Hudson
- Harlem-125th Street
- North White Plains
- Port Chester
- Poughkeepsie
- Rye
- Southeast
- Tarrytown
- Yonkers

The vending machines are stocked by Canteen, a division of the Compass Group USA, and were built by Vengo, a manufacturer of retail vending machines. The products range from single use hand sanitizer for \$0.75 to premium KN95 masks for \$9.99.

Metro-North is working with Canteen to identify additional locations to add more vending machines at stations in the near future, including Metro-North's West-of-Hudson stations. (MTA press release, July 10)

NJ TRANSIT

On Monday, July 6, NJ Transit started accepting cash on board trains. (NJ Transit service alert, July 2)

NJ Transit approved an order of additional locomotives from Bombardier Transit Corporation.

The NJ Transit Board of Directors approved the purchase of eight additional ALP-45A dual-powered locomotives for \$70.5 million. The new locomotives will allow NJ Transit Rail Operations to retire some locomotives in the fleet to increase mechanical reliability, improve on-time performance, and provide operational flexibility.

The new order brings the number of ALP-45A locomotives NJ Transit has on order to 25, following an initial order of 17 approved by the Board in December, 2017.

The new locomotives, which feature upgraded diesel engines, will replace some of the older PL-42AC series diesel locomotives in NJ Transit's fleet. The locomotives also feature an after-treatment system to meet the Environmental Protection Agency's (EPA) Tier IV emissions requirements, further reducing the locomotive's emissions when operating in diesel mode.

Additionally, the ALP-45As can take advantage of operating in electric mode whenever overhead catenary is available, which is more cost-effective and environmentally friendly than diesel operation.

NJ Transit has a goal of reducing its carbon footprint and notes replacing a Tier I locomotive with a Tier IV locomotive can result in an estimated emissions reduction of 52.0 NOx tons annually.

Other benefits of the ALP-45As are:

- Self-rescue capability by changing power modes
- Redundancy by having two engines instead of one;
- Improved diagnostic capabilities and an upgraded pneumatic system
- Ability to operate push-pull passenger train service on both electrified and non-electrified lines at speeds of up to 125 mph in electric mode and up to

(Continued on page 8)

Commuter and Transit News

(Continued from page 7)

100 mph in diesel mode

- Increase in horsepower, acceleration and available head-end power over the locomotives they will be replacing. (*Mass Transit*, July 17)



A rendering of the ALP-45A dual-powered locomotive that can be powered via catenary or under diesel power.
NJ Transit rendering

OTHER TRANSIT SYSTEMS

BOSTON, MASSACHUSETTS

The Massachusetts Bay Transportation Authority (MBTA) has signed a contract with the joint venture of Skanska and D.W. White Construction to rebuild the Fall River Secondary Line.

This is the first major package of the South Coast Rail Phase 1 Expansion in Massachusetts. The total contract is worth \$159 million. Skanska will include its \$79 million portion of the contract in the U.S. order bookings for the second quarter 2020.

The project includes two new stations, in Freetown and in Fall River, and a layover facility for train storage in Fall River. The contract also includes nearly 12 miles of track, eight railroad bridges, 10 grade crossings, and additional systems infrastructure.

Construction began in June and is scheduled for completion in October, 2022. (*Mass Transit*, July 10)

PHILADELPHIA, PENNSYLVANIA

Regional Rail's rush-hour crowds, the entangled webs of people weaving in and out of Philadelphia's largest businesses and transit hubs, have been missing for months.

Since March, the roar of Center City's underbelly quieted as workers adapted to makeshift desks at home and found new coworkers in roommates, partners, and pets. Regional Rail, the first service SEPTA reduced as ridership dwindled amid the COVID-19 pandemic, begins its glacial return to more frequent service Monday, June 29.

Riders can expect hourly weekday service on most lines, while the Airport and Paoli/Thorndale Lines will run every half hour. The Chestnut Hill West and Cynwyd Lines stay suspended. It is a big improvement from the severe changes of April, when some lines were cut and others pulled into stations every two hours.

But the timeline for its return to "normal" schedules has not been set. Much will depend on businesses' reopening plans and the suburban workers who discovered the practicalities of working from home. SEPTA knows it has "to win back" its riders, said general manager Leslie Richards.

"We don't know how ridership is going to bounce back," she said. "We don't know if it will be even across all of our modes. We definitely know that the majority of our riders on transit don't have other alternatives, and so that ridership trajectory and projection looks different than Regional Rail."

Most Regional Rail riders rely on SEPTA to get to work. Or the Philadelphia Flower Show. Or a Philadelphia Eagles game.

About 95% of riders use the service to get from outlying stations to Center City stations, according to SEPTA. Ridership had been steady, averaging between 34 million to 35 million trips annually the last three years — a more than 50% boost compared with two decades ago.

Ridership was a sliver of itself at the height of stay-at-home orders but is slowly trickling back. There were about 16 riders per train in the beginning of the month, growing to about 36 passengers by the third week of June.

Richards said reaching 80% of normal ridership until there's a vaccine for the coronavirus would be "a good scenario." As it maps out the months and years ahead, SEPTA is keeping a keen eye on economic and behavioral trajectories.

"For some job types, some job categories, (telecommuting) will be much more pervasive than it is now," said Mimi Sheller, professor of sociology at Drexel University and director of its Center for Mobilities Research and Policy. "But there's so many jobs where you still can't telecommute and so I think there's going to continue to be just a real mix."

Some riders who lost their jobs from the shutdown won't have a need for Regional Rail, while others will continue to work from home. Some may forgo monthly passes and take to personal vehicles, potentially causing a surge in traffic that one expert refers to as "carmageddon."

Even still, Donald Hill, General Chairman of the local Brotherhood of Locomotive Engineers and Trainmen, calls trains "the most reasonable mode of transportation in and out of the city." He said people ask him repeatedly when service will return.

"The traffic was a nightmare prior to the pandemic," he said. "Now, people start driving after the pandemic, more cars on the road, it's going to be an absolute nightmare."

Whenever there's a service disruption, "there's always a component of ridership that never comes back," said Matt Mitchell, Delaware Valley Association of Rail Passengers Commuter Rail Chairperson. While big companies are poised to play a major role in Regional Rail's recovery, he said, it goes both ways.

(Continued on page 9)

Commuter and Transit News*(Continued from page 8)*

"There will be a partnership," Mitchell said, "because the employers need SEPTA just as much as SEPTA needs the employers."

The authority, seen as a major economic driver, has been working with businesses to encourage staggered shifts to diminish traditional rush-hour crowds.

"We don't want everybody taking that one train home," Richards said.

But many large employers are in no rush to get workers back to the office, and are likely to continue shifting murky timelines to keep workers safest from the coronavirus.

Comcast, one of the region's largest employers, does not expect to welcome back a "vast majority" of its 9,000-person workforce to its headquarters until after September 30, said spokesperson John Demming. About 40% of its employees use Regional Rail or the subways, he said.

More than 7,000 Thomas Jefferson University and Jefferson Health employees will be encouraged to continue working from home in the region's "green" reopening phase, returning workers in a "phased manner." Drexel University said it plans to reopen campus in the fall, but teleworking details are still being ironed out, according to a spokesperson.

"It's not like a switch is going to get flipped and offices are going to say, 'OK, thou shall come back to the office,'" said Greg Krykewycz, of the Delaware Valley Regional Planning Commission. "I think it's going to be more of an invitation. You're going to be able to come back to the office if you want to, and that's a very different thing."

A prolonged period of reduced ridership is poised to contribute to SEPTA's financial challenges but will help ease riders' social distancing concerns aboard trains.

Conductors now guide riders onto its emptiest cars, while crews are told to alert managers when they reach 55 passengers per car. SEPTA has enhanced cleaning efforts and now requires face masks for all passengers.

Frequency will also be key to winning riders back — as they will be forced to find alternatives if they cannot count on a train arriving when they need it.

"First of all, you want to convince the public that it's clean....," said Bernard Norwood, head of the SEPTA Conductors' union. "Secondly, you want them to see there will be social distances on the train so they will feel safe riding. And thirdly, you want to run enough service so they don't have to wait like they're waiting now."

Could there be more quiet cars to come? It is possible. NJ Transit recently suggested riders "avoid loud talking or restrict phone conversations" to limit the virus' spread. The recommendation too was made in a "Back on Board" report by Tri-State Transportation Campaign, a nonprofit advocacy group based in New York.

No such measure exists yet for SEPTA, but Richards is "interested in considering anything that keeps people as safe as possible," she said.

"We're entering a phase where nobody really knows what the other side of it is going to look like," Krykewycz said, "and agencies that are willing to try stuff are going to succeed and agencies that aren't willing to try stuff are not." (*The Philadelphia Inquirer*, June 29)

SCRANTON, PENNSYLVANIA

The proposed Scranton to Hoboken, New Jersey passenger train may have hit the end of the line.

Or just stalled for years of more waiting.

NJ Transit, which would operate the train, recently issued a 10-year transportation plan that has no new dollars for extending service on the Lackawanna Cutoff beyond Andover, New Jersey. The agency's plan calls for spending \$1.845 billion on three other service expansion projects, but not the remaining 21 miles on the cutoff between Andover and the Delaware Water Gap.

"There are no plans at this point to extend the project beyond Andover," New Jersey Transit spokeswoman Lisa Torbic said in an email.

Larry Malski, the executive director of the Pennsylvania Northeast Regional Railroad Authority, and other officials sloughed off the new plan. They continue to seek federal money for the project.

"We need the next 21 miles, and that's what we're going after in the federal appropriation," Malski said. "Once the 21 miles are there, we're in Pennsylvania. We control our destiny."

Democrats on the U.S. House Transportation and Infrastructure Committee released a \$494 billion, five-year surface transportation bill June 3 that contains \$26 billion for rail projects, including \$19 billion for the new Passenger Rail Improvement, Modernization, and Expansion grant program. The program is "devoted entirely to passenger rail improvements and expansion, performance optimization, and intercity passenger rail transportation expansion," according to a House Democratic summary. The bill also increases funding to \$7 billion for an existing federal grant program for passenger and freight rail projects. The bill would allow commuter rail authorities to compete for the money. On June 22, the House Democrats included the provisions of that bill in a \$1.5 trillion infrastructure bill that would focus on roads, bridges, transit systems, schools, housing, broadband access and other infrastructure.

So far, Senate Majority Leader Mitch McConnell (R-Kentucky) has shown no willingness to get behind a huge infrastructure bill.

NJ Transit has begun extending its service 7.3 miles to Andover on the 28-mile cutoff, whose tracks were removed in the 1980s. That extension alone is not scheduled for completion until the second half of 2026, Torbic said.

A study released earlier this year pegged the cost of restoring the service between Scranton and Hoboken at \$288.93 million, far cheaper than a \$551 million estimate in 2006. Chuck Walsh, President of the North Jersey Rail Commuter Association, said a plan minus the cutoff shouldn't come as a surprise, but said federal transportation priorities could change New Jersey

(Continued on page 10)

Commuter and Transit News

(Continued from page 9)

Transit's mind.

"That's the message they have given us, that they don't really want to be — at least at this point in time — involved west of Andover," he said. "Would funding from the federal government change that? It remains to be seen...It's not over. Stay tuned."

U.S. Representative Matt Cartwright, (D-8, Moosic), said transportation plans get amended regularly and blamed the coronavirus pandemic for tanking states' transportation and other revenues, limiting funding for more projects. Other NJ Transit projects also failed to make the plan, he said.

"It means in the short term, they're not devoting money to go past Andover," Cartwright said. "They're continuing to work to Andover...It's really not an apposite time for them to be adding things to the wish list."

Cartwright said he is not upset or deterred.

"When and if we get federal money to extend this line to the Delaware Water Gap, that 10-year plan gets amended immediately," he said. "I've not given up hope. It's going to be a long slog. I've said that ever since I started talking about this." (*The Scranton Times-Tribune*, June 29)

BALTIMORE, MARYLAND

The Maryland Department of Transportation Maryland Transit Administration (MDOT MTA) resumed normal schedules on the Penn, Camden, and Brunswick Lines on July 13. Service reductions had been implemented on March 17 under the COVID-19 health emergency. Passengers were encouraged to utilize their Charm-Pass for a contact-free payment option and while seating was not restricted, riders were encouraged to maintain social distance where possible. (MARC service alert, June 30)

WASHINGTON, D.C. AREA



The second car of the Red Line train lodged up against the first car. Washington Metrorail Safety Commission photograph

Metro officials are trying to figure out how a Red Line train derailed on June 7. No injuries were reported, and the train was carrying 32 passengers.

The Operator ran a red signal as it pulled out of the Silver Spring Metro station and two cars left the tracks. The Washington Metrorail Safety Commission is cur-

rently looking at communications prior to the accident, what happened to the switch, and other factors that might have been the culprit.

Pete Piringer, spokesman for the Montgomery County Fire and Rescue Service, says the first car might have slipped from the tracks as the train began moving from the station, which then jammed one car door. The safety commission released information that said the first car of the train entered a storage track, or pocket track, while the second car was still moving on the main line track. The front set of wheels on the second car derailed, and the second car collided with the first car.

Investigators are now looking at video supplied by the train but are saying they do not believe mechanical or infrastructure problems caused the accident.

The safety commission checked the track for damage, looked at the switches and rail cars, and collected evidence as part of its investigation. It may take months before officials know the reason behind the derailment. (*Railway Track & Structures*, July 8)

ATLANTA, GEORGIA

The Metropolitan Atlanta Rapid Transit Authority (MARTA) announced it will begin using electrostatic sprayers to more easily and efficiently disinfect trains and rail stations as the agency prepares for an increase in ridership during the COVID-19 pandemic.

Delta Air Lines provided MARTA with 50 electrostatic sprayers that disperse disinfectant in a fine mist that clings to and sanitizes surfaces without leaving a residue.

The 30 handheld and 20 backpack sprayers are being used by trained MARTA maintenance crews to disinfect vehicles and facilities in a fraction of the time needed for a typical wipe down cleaning, MARTA officials said.

The backpack sprayers are especially useful in cleaning MARTA's rail cars every evening since the wearable two-and-a-half gallon tanks eliminate the need for constant disinfectant refills. The equipment can sanitize a 450 foot, 6-car train in under 20 minutes.

Currently, rail cars are lightly cleaned while in-service. Now, the goal is to incorporate mid-day sanitizing with the electrostatic sprayers.

Meanwhile, MARTA began distributing 2 million free disposable masks to riders at rail stations and bus bays. (*Progressive Railroading*, July 6)

PORTLAND, OREGON

Come August, TriMet will begin the largest MAX improvement projects to date, resulting in a four-week closure of the Steel Bridge to allow crews to make a series of major upgrades to the MAX light rail system that will improve resiliency, improve on-time performance, and create a smoother ride.

From August 2-29, the upper deck of the Steel Bridge will be closed to auto, bus, MAX light rail, bicycle, and pedestrian traffic to accommodate the work. All MAX lines — Blue, Green, Orange, Red, and Yellow — will be disrupted. To move people around the disruption, shuttle buses will depart about every two to five

(Continued on page 11)

Commuter and Transit News

(Continued from page 10)

minutes, serving the Rose Quarter, Union Station/NW 5th & Glisan, and Old Town/Chinatown stations.

Bus lines 4, 8, 35, 44, and 77, as well as all auto traffic, will be detoured to other bridges. Pedestrians and bicyclists will be able to cross the Steel Bridge on the lower-deck pathway, which will remain open during the entire project.

TriMet says this improvement project will have a positive effect for MAX riders system-wide, improving reliability and keeping trains on time. Last August, TriMet completed MAX track and switch improvements in the Rose Quarter area in preparation for this work. This project will build upon those upgrades, resulting in fewer issues that slow or disrupt access across the bridge. The project will also add a boost to the economy, supporting 450 jobs in the community.

The Steel Bridge MAX Improvements Project will increase system reliability and revitalize light rail across this historic 108-year-old bridge, the nucleus of the MAX system with more than 620 trains crossing it every day. Crews will work on the bridge 24 hours a day during the four-week closure. Work includes installing improved lift joints and locks, new switches and signal equipment, as well as technological improvements. Nearly 9,000 linear feet of rail and expansion rail also will be replaced.

Among the oldest bridges crossing the Willamette River in Portland, the Steel Bridge has served as a major crossing point since it opened in 1912. In the mid-1980s, it became part of TriMet history when it closed for two full years for the construction of the MAX Blue Line. Today, with a mix of auto, bicycle, pedestrian, bus, and train traffic coexisting on the span, it has become one of the most multimodal bridges in the country, according to the agency. This project will help TriMet and the bridge move people into the future as the community recovers after the pandemic and the region grows.

During the project, TriMet will make adjustments to bus service and run shuttle buses to keep MAX riders moving. TriMet also encourages people to cross the Steel Bridge on foot, bicycle, or by other mobility devices as the lower pathway will remain open during the project.

- MAX Orange and Yellow Line trains will only be between Union Station and Interstate Rose Quarter
- MAX Green Line trains will only run between Rose Quarter TC and Clackamas Town Center
- MAX Red Line trains will only run between Gateway Transit Center and Portland International Airport
- MAX Blue Line trains will run between Hatfield Government Center in Hillsboro and Old Town/Chinatown Station on the west side of the Willamette River, and between the Rose Quarter TC and Cleveland Ave stations on the east side

To lessen the disruption to MAX Red Line riders heading to and from the airport, shuttle buses will run directly between the Kenton/N Denver Ave station, which will be served by both Blue and Yellow Line trains, and the air-

port.

MAX Blue Line trains will run between Hatfield Government Center in Hillsboro and Old Town/Chinatown Station on the west side of the Willamette River, and between Lloyd Center and Cleveland Ave stations on the east side. (*Mass Transit*, July 9)



Tri-Met SD660 321 (Siemens, 2003) + 214 (Siemens, 1997) are operating on a MAX Yellow service to Expo Center in this scene on the Steel Bridge on June 23, 2017.

Jeff Erlitz photograph

SAN FRANCISCO, CALIFORNIA



Stadler KISS EMU outside the Stadler plant in Salt Lake City.

Calmod.org photographs

(Continued on page 12)

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

As part of the Caltrain Modernization (CalMod) Program, Caltrain recently placed the first EMU (electric multiple-unit) trainset from Stadler Rail on the 25,000-volt electrified test track at the builder's Salt Lake City manufacturing facility.

Over the coming weeks, Caltrain said, the trainset will undergo high-voltage static testing as power is incrementally applied while it's stationary on the track. The equipment will then undergo low-speed acceleration and brake tests.

All systems, among them doors, HVAC, and public address, will undergo functional tests before the first trainset travels to TPCI, Pueblo, Colorado, for higher-speed testing on the electrified RTT (Railroad Test Track), which can accommodate speeds up to 165 mph.

Caltrain purchased new, high-performance KISS bi-level EMUs from Stadler Rail to replace the current diesel-locomotive-hauled trains as part of Caltrain Electrification. Caltrain's new equipment is a key component of the CalMod Program to electrify the corridor from San Francisco's 4th & King Station to approximately the Tamien station in San Jose.

These are being assembled into seven-car train sets that are expandable to eight cars in the future. A total of 19 train sets were ordered.

A typical passenger car layout will have two main levels with between 85 and 100 seats per car. There will be some flip seats, in addition to the regular fixed seats. Most seats will face one direction and if there are any seats facing each other, there will be a table in the middle. There will be two dedicated bike cars per seven-car trainset that will be well-marked. Each bike car will have a lower, mid-, and upper level, with bike storage on the lower level. Security cameras will be posted in each bike car to enhance security.

In addition, Caltrain announced that more than 1,000 catenary poles have now been installed along the corridor from South San Francisco to San Jose. (**Railway Age**, May 24)

Bay Area Rapid Transit's (BART) Board approved a \$2.42 billion capital and operating budget for fiscal-year 2021, which began July 1.

The budget focuses on increased investment in passenger and employee safety and provides the ability to adapt train service levels to match changes in ridership, BART officials said in a press release.

COVID-19-related expenses add \$44 million to the budget in added costs related to enhanced cleaning regimens, the purchase of hand sanitizer, investment in personal protection equipment (PPE) for employees, and increased communication and education to the public about new protocols.

The operating budget uses \$251 million of federal Coronavirus Aid, Relief, and Economic Security (CARES) Act funds to maintain service levels, avoid transit worker layoffs, and purchase PPE.

Additionally, the operating budget estimates BART will

be eligible for \$20 million in reimbursements from the Federal Emergency Management Agency for COVID-19-related expenses.

The budget also includes \$146 million in cost reductions from eliminating vacant budgeted positions, reducing non-labor expenses, and scaling back operating allocations, which primarily fund capital projects.

"Coming up with a budget in these uncertain times has been like walking a tightrope," said BART Board President Lateefah Simon. "It has been a true team effort, with BART's labor unions working very hard to partner with management to find solutions along with federal emergency funds helping to keep trains running."

BART has developed two scenarios for ridership guided by the pace of the San Francisco region's recovery. The scenarios have ridership for the year averaging as high as 50 percent and as low as 15 percent of pre-pandemic levels. The budget's anticipated fare revenue is based on the midpoint between the two scenarios at 122,000 daily riders, agency officials said. In comparison, the FY2020 budget-based fare revenue on an average weekday ridership of 404,900.

Because ridership and other revenue sources are expected to remain highly variable, BART staff will revise the budget in three months, if necessary, BART officials said.

Meanwhile, BART's Board also awarded a \$58 million contract to Turner Construction Company and RIM Architecture to design and build the new BART Headquarters in Oakland, California.

Work under the contract will include furnishing, management coordination, professional services, labor, equipment, materials, and other services to perform the design and construction of the new BART Headquarters.

Turner and RIM has committed to 32 percent small business participation in its work. The contract includes a liquidated damages provision should the contractor fail to meet its established commitment to small business.

This spring, BART is scheduled to move from its current headquarters at 300 Lakeside Drive to the new headquarters at 2150 Webster Street.

The \$142 million purchase of the building with closing costs and \$85 million in interior construction has been financed by a 25-year sales tax bond. (**Progressive Railroading**, June 30)

LOS ANGELES, CALIFORNIA

Major construction work on the nine-mile Foothill Gold Line extension of Los Angeles' L Line light rail route was launched on July 10.

The extension from APU/Citrus College to Pomona is scheduled for completion in 2025, adding four stops in Glendora, San Dimas, La Verne, and Pomona.

If additional funding can be secured by October, 2021, a further planned 3.2-mile extension to Claremont and Montclair could be completed by 2028.

Construction is being undertaken by a joint venture of Kiewit and Parsons under a design-build contract

(Continued on page 13)

Commuter and Transit News

(Continued from page 12)

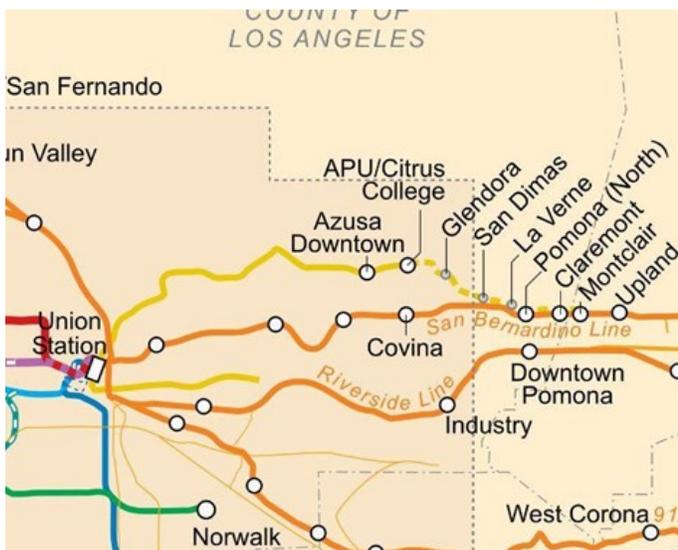
awarded by the Foothill Gold Line Construction Authority in August, 2019. The same companies built the first two sections of the Gold Line, with the 13.6-mile extension from Los Angeles Union Station to Pasadena opening in July, 2003 and the 11.4-mile extension to Azusa and APU/Citrus College following in March, 2016.

Between Glendora and Pomona, the light rail line will parallel an existing BNSF freight corridor also used by Metrolink commuter rail services. The project requires relocation of the freight tracks, installing a pair of electrified light rail tracks, rebuilding 21 level crossings, building or renovating 19 bridges, and constructing four stops incorporating “unique artwork” by locally selected artists.



Rendition of the San Dimas station on the Gold Line's Foothill Extension.

From *Metro Report International*



Map of extension east of APU/Citrus College to Pomona and, hopefully, Montclair.

Metro Report International map

The extension is being funded by a sales tax approved by voters in 2016, as well as state greenhouse gas reduction funds. It will provide connections to regional destinations including the L.A. County Fairplex

events venue, numerous colleges and universities, as well as museums and parks. It will also provide a direct interchange between the Metro and Metrolink commuter rail networks at Pomona North.

Los Angeles Mayor Eric Garcetti said the Foothill extension was “a down payment on a more connected, dynamic, and equitable future for Angelenos, and it will pave the way to good-paying jobs and a stronger transportation network across our region.” (*Metro Report International*, July 13)

SAN DIEGO, CALIFORNIA

The North County Transit District (NCTD) ordered 11 commuter rail cars for *Coaster* service, which Bombardier explained will position the transit district to significantly increase service frequencies to 30-minute headways and begin state-of-good-repair replacement of current legacy *Coaster* coaches and cab cars over the coming years. Current headways between trains vary between 45 and 60 minutes during peak periods and more than 3.5 hours during the non-peak period.

The base order, valued at approximately \$43 million, includes eight coaches and two cab cars to support the San Diego Association of Governments 2050 Revenue Constrained Regional Plan (Regional Plan) for increased service levels, as well as an additional cab car. NCTD also has the option to purchase up to 27 additional cars to support its ongoing state of good repair needs.

The new cars will be built at Bombardier’s manufacturing site in Thunder Bay, Canada. Deliveries are scheduled to take place in the fall of 2022. After testing and commissioning, the cars will begin to enter service that winter. (*Mass Transit*, July 17)

MONTREAL, QUEBEC, CANADA



An AZUR train set.

STM photograph

The Societe de transport de Montreal (STM) received the first of 17 new AZUR trains intended for the Green Line during the last week of June and they were put into service within a few days.

The remaining 16 trains will be delivered by 2021 at a rate of one train per month, STM officials said in a press release.

The new trains — built by a Bombardier Transporta-

(Continued on page 14)

Commuter and Transit News

(Continued from page 13)

tion-Alstom consortium — will be added to the 54 already operating on the Orange and Green Lines. Those trains were put into service between 2016 and 2019. (*Progressive Railroading*, June 30)

BLACKPOOL, ENGLAND

Blackpool Trams started running again on Sunday, July 19. Trams had been suspended on Sunday, March 29. Buses on Service 1 provided an alternative service to the trams throughout the closure. Trams are running up to every 20 minutes, with the last one around 7:30 PM. (Blackpool Transport website, June 30)

OOSTENDE, BELGIUM



The first CAF Urbos for De Lijn's coastal tramway after being unloaded at Oostende.

Metro Report International photograph

The first 48 CAF-built Urbos 100 trams for De Lijn's coastal tramway was delivered to the operator's Oostende depot on the night of June 22-23.

The meter-gauge vehicles have been ordered under a 2017 framework contract for up to 146 Urbos trams. De Lijn has already deployed 23 cars in Antwerpen out of a planned total of 66 unidirectional and 12 bidirectional cars. Another 18 bidirectional versions have been ordered for Gent.

The 70-kilometer coastal tramway linking Knokke and De Panne-Adinkerke via Oostende is due to receive 48 unidirectional trams, with an option for up to 14 more. The five-section low-floor cars are 31.6 meters long and 2.4 meters wide, with capacity for 187 passengers. Multi-function spaces are provided for wheelchair users and passengers with prams or bicycles.

The new trams will replace 46 cars supplied by BN which are now approaching 40 years old. Following commissioning and test running, the CAF cars are expected to enter passenger service on the coast line at the end of 2020 or early 2021. (*Metro Report International*, June 30)

BERLIN, GERMANY

Berlin's Senate has approved a new 15-year direct award contract worth up to €19 billion with state-owned

Berlin Transport Authority (BVG).

The contract, which comes into effect on September 1, will run until 2035 and has already been approved by BVG's Supervisory Board.

"This transport contract marks the beginning of a new era of investment," says Senator for the Environment, Transport and Climate Protection Regine Günther. "In the coming years, BVG will renew, expand, and convert its fleet and network in a climate-friendly manner offering significant improvements. This is exactly the right way to make public transport so attractive that Berliners and their guests make the switch from private cars."

The contract has an initial value of up to €12.7 billion, including the basic remuneration for operation and subsidized services for passengers such as students and passengers with limited mobility. The tariff compensation totals around €3.1 billion.

The plan also includes €4.3 billion in additional grants, with around €2 billion for construction of new light rail lines, around €1.7 billion for maintenance and renovation, and around €600 million for ongoing projects such as the U5 extension. Another €2 billion has been allocated to support decarbonization efforts, with between €1.3 billion and €2.4 billion earmarked for infrastructure improvements. Federal grants are expected to cover part of this investment although these are yet to be confirmed. The contract also includes €450 million for the operation of 227 e-buses.

The planned investment over the next 15 years is more than double the current rate. Over the last 10 years, BVG invested €300 million a year in vehicles and infrastructure, but this is set to rise to €800 million annually over the coming decade with BVG set to invest €2.4 billion and €750 million in renewing and expanding the respective metro and light rail fleets by 2030. This includes trains for new lines and to improve performance on the existing network.

In response to the coronavirus pandemic, the contract includes a financing guarantee whereby the state will cover all pandemic-related revenue losses until the first revision in 2024, which will also allow adjustments to be implemented from 2031 if needed.

In addition, the contract includes a network accessibility guarantee to ensure the network is fully accessible to passengers with reduced mobility with specific alternatives in place in the event of malfunctions such as the failure of elevators.

Plans are in place to expand the light rail network by nearly 40% over the next 15 years to increase transport options to new property developments and in densely populated areas. A 10-minute frequency will be introduced during the day to make light rail services more attractive. The contract also include investment in long-term training to cover the increased need for drivers.

During the Senate meeting on July 7, when the contract was approved, Günther also provided an update on the expansion of the light rail network:

- The extension of the M2 light rail line from Heinersdorf towards Blankenburg S-Bahn station was ap-

(Continued on page 15)

Commuter and Transit News

(Continued from page 14)

- proved on June 9, with the route now being specified
- Planning for a light rail line from the Pankow S-Bahn and U-Bahn station via Heinersdorf to Weißensee is currently being finalized
- Preliminary planning is underway for the Alexanderplatz-Potsdamer Platz line, with studies to extend the line from Potsdamer Platz to Rathaus Steglitz due to take place in close coordination with this process
- Basic studies have been completed for the extension of M10 beyond Turmstrasse station. On December 17, 2019, the Senate decided to continue planning the light rail route from the Turmstrasse U-Bahn station to the Jungfernheide S-Bahn and U-Bahn station. The contract for further planning services is currently being awarded in collaboration with BVG
- The studies to extend M10 to connect the Warschauer Straße S-Bahn and Hermannplatz U-Bahn stations are currently being finalized. (*International Railway Journal*, July 8)

STOCKHOLM, SWEDEN



Bombardier's Movia C30 metro trainset for Stockholm.
Metro Report International photograph

Bombardier Transportation has handed over the first Movia C30 articulated trainsets for use on Stockholm's Red Line, the supplier confirmed on June 26.

Regional transport authority Storstockholms Lokaltrafik ordered the 96 four-car units in June, 2013 under an SKr5 billion contract with options for up to 80 additional sets; at that time the trains had been expected to enter service in 2017. Following certification in June, 2019 a pre-series unit was delivered to Stockholm for further testing. Series deliveries by rail to SL's Norsborg depot began in April, 2020, and six sets are now available for trial running and driver training before entering regular service.

Operating in pairs, the C30 units will progressively replace older stock on the northeast-southwest Red Line. Each 70-meter articulated unit has capacity for 634 passengers including 140 seats in a mix of transverse and longitudinal layouts and multi-purpose spaces for wheelchairs, prams, and bicycles.

Each car has three wide sets of sliding doors per side to speed up boarding and alighting and reduce station dwell times. Along with the resignaling of the Red Line, this is expected to permit an increase from 24 to 30 trains per hour in each direction.

Designed for 750 volts d.c. third rail operation, the trains are being assembled at Bombardier's Hennigsdorf plant near Berlin, using bodysHELLS manufactured in China by the Bombardier Sifang Transportation joint venture and Flexx Eco bogies from Siegen. The Mitrac propulsion system comes from Västerås and the Orbiflo remote condition monitoring technology was also developed in Sweden.

The C30's striking exterior design won a Good Design award in 2017, being described as "a clear expression of Scandinavian style that will become an unmistakable city icon." According to the manufacturer, the air-conditioned trainsets meet the highest standards for energy consumption and are 98% recyclable. (*Metro Report International*, June 29)

SPAIN



CAF has already supplied narrow-gauge trains to Basque operator, Euskotren, including Series 950 sets.
Euskotren photograph

Spanish national operator Renfe has awarded CAF a contract worth €258 million to supply 37 meter-gauge trains, including 26 EMUs and five bi-mode multiple units for commuter services around the country, and six EMUs for Madrid.

The 31 multiple units will reduce the average age of the existing Cercanías commuter service in Asturias, Cantabria, the Basque Country, Galicia, Castilla y León and Murcia from 28 to 15 years.

The two- and three-car trains will have a maximum speed of 100 kph, and the EMUs will be equipped with a last mile battery system. The bi-mode trains will be designed to be upgraded for either battery or fuel cell operation in future.

The contract includes an option for six additional

(Continued on page 16)

Commuter and Transit News*(Continued from page 15)*

EMUs and an additional bi-mode multiple unit. The trains will have spaces for bicycles and will be accessible for passengers with limited mobility.

CAF will also supply six trains for services along the C-9 meter-gauge line in Madrid, which connects Cercedilla and Cotos.

The contract includes 15 years' maintenance for 12 of the meter-gauge trains and the six Alpine trains, which will be undertaken by the Actren joint-venture between CAF and Renfe Fabricacion y Mantenimiento.

The order is part of Renfe's €5 billion fleet renewal project, which was announced last year. (*International Railway Journal*, June 30)

AUCKLAND, NEW ZEALAND



Rendering of Auckland's proposed light rail.
From *International Railway Journal*

The New Zealand government has dropped plans for a two-line light rail network in Auckland after the cabinet could not agree on how the project should be implemented. The project to open a line between the city center and Mount Roskill by 2021 was a major promise made by the Labour Party before it won the 2017 general election. Two competing proposals were put forward to construct the City-Mangere and City-North West lines. The first, developed by the Waka Kotahi NZ Transport Agency, was followed by an unsolicited proposal from NZ Infra, a joint venture between the NZ Super Fund and CDPQ Infra, an arm of a Canadian pension fund Caisse de dépôt et placement du Québec. "Either would have created hundreds of jobs and resulted in an Auckland metro that offered Aucklanders a 30-minute trip from the central business district (CBD) to the airport," Transport Minister Phil Twyford says. The Ministry of Transport was tasked with comparing the two proposals and advising the cabinet on their merits before a final decision was made on which one to build. However, disagreement within the Labour-NZ First coalition caused the project to stall and, ultimately, be dropped ahead of the upcoming election in September. However, Twyford says the project remains part of the Auckland Transport Alignment Project (ATAP). "The Ministry of Transport and the Treasury will report back after the general election on the best option for this project to be delivered by the public sector," he says. "The Ministry of Transport and the Treasury will also engage with NZ Infra and Waka Kotahi about how work done on this project can support the next phase. "Auckland Light Rail will be New Zealand's most complex infrastructure project in decades and it's vital we get it right for future generations." (*International Railway Journal*, June 29)

SOUTHWEST UNITED STATES

by Jack May

(Continued from July, 2020 issue)
(Photographs by the author)

Monday, April 17

Our three-night stay at the Hampton Inn near Phoenix's Sky Harbor Airport would facilitate our activities for the next few days. I would spend our first day in Arizona riding and photographing local rail transit, while Clare, Sig, and Cathy would go sightseeing with an emphasis on certain museums in this city of 1.6 million people. I visited Phoenix in April, 2009, specifically to see the light rail system, but that was before a pair of extensions were placed into service and the people mover that connects an LRT station with the airport's terminals was opened. Thus I had good reason to come back.

Actually, I first visited Phoenix in 1961, having been sent there by my employer, Hudson Laboratories, to test the prototype GE 225 computer at General Electric, as we had ordered one of the first to be manufactured and my boss wanted to know if it really would work. My experiences there and during the next few years with

that computer is a long story, but might only be of interest to the most obsessive mainframe computer geeks. Suffice to say (1) I was able to ride the *Golden State* and the *San Francisco Chief*, the latter via the Santa Fe's Ash Fork-to-Phoenix connection, and (2) I found out only in the past year that the machine was designed by (of all people) Steven Spielberg's father, Arnold.

I visited Phoenix on two later occasions (in the late 1980s and early 1990s) for winter meetings of the National Association of Advertising Distributors, the trade group to which my last employer belonged. My impression of the city in those days could be summed up by the sentence: There's no there there (apologies to Gertrude Stein and Oakland, California). The capital of the State of Arizona was virtually all sprawl, but at least there was Amtrak service. And then things got worse, as for various reasons too long to discuss here, in 1996

(Continued on page 17)

Southwest United States*(Continued from page 16)*

the *Sunset Limited's* route had to be changed and the closest it got (and still gets) is Maricopa, some 35 miles south. On my 2009 trip to explore the city's new light rail line, there was no public transit available to Maricopa from Phoenix whatsoever, but I understand there is now a Thruway Bus Connection. Clare and I had to be driven to the middle of nowhere to catch the train, which fortunately was on time; on that occasion we rode in a Superliner sleeper as far as Austin.

When I originally heard that Phoenix was going to build a light rail line I was extremely dubious, as I did not think that LRT could be successful where population density is low. But I did not realize that Phoenix, even with its wide streets and long blocks, had become the fifth most populated municipality in the United States (all the more reason for Amtrak to serve it) and that the city and its surrounding communities contain a large number of traffic generators that other cities would envy, including a multiplicity of universities, stadiums, arenas, hospitals, state and municipal government campuses, and high schools. Sports seem to be especially important in Phoenix, as the area hosts successful professional hockey, baseball, basketball, and football teams, as well as the Arizona State Sun Devils (college football and basketball), most of which play in separate venues along the light rail line.

Anyway, I was dead wrong (happily), and this city, with its adjacent communities of Tempe and Mesa, now has an impressive and heavily used light rail system, 26 miles long, and still growing. And it is a wonderful testament to what can be accomplished in an automobile centric area: to provide its population genuine choices of how to attain mobility. The proof is in the ridership pudding. Originally planned to carry 26,000-30,000 riders on weekdays, right out of the box it was moving an average of 35,000, and 40,000 was reached within a year of opening. The 2020 forecast was for 48,000 riders, but that had already been surpassed by the time I visited, with a daily mean of almost 52,000 that year plus fantastically high numbers resulting from special events: 69,278 on one weekday, 74,107 on a particular Saturday, and as many as 80,210 on the Sunday in 2017 when the Diamondbacks season opener coincided with the NCAA final four. Regular ridership is usually lower on Saturdays and Sundays than weekdays, but when attractive events are scheduled, rules of thumb are thrown out the window and participants clearly know that the best way to get to their destinations is by light rail.

The "L"-shaped line opened on December 27, 2008, and its two extensions, 2.8 miles on its eastern end further into Mesa, arrived in 2015, with 3.2 miles northward to Dunlap coming just a year later. This increased the line's length to 26 miles and its number of stations from 31 to 38. Further expansion is in the works, including an additional 2 miles east within Mesa (Editor's Note: it opened on May 18, 2019), and probably most interest-

ing of all, the Tempe Streetcar, a three-mile-long line scheduled to go into service in 2021. It will start at the Dorsey/Apache Boulevard station of the light rail line, and run first west and then north, looping through the center of Tempe on its way to Marina Heights. The line is currently under construction and will be served by six Liberty streetcars being built by Brookville in Pennsylvania. These cars, similar to those running in Dallas, Detroit, Milwaukee, and Oklahoma City, operate both under wire and on batteries. The wireless section of the line will include the crossings of the LRT line near its Mill Avenue/3rd Street station (see <http://www.urbanrail.net/am/phoenix/phoenix.htm> for a map).

Meanwhile, Valley Metro has ordered 11 S70 LRVs from Siemens, with an option for 69 more (which would be needed for additional light rail expansion, including a further two miles to the northwest scheduled for 2023). These will be of the familiar 70-percent low floor design that operates on a number of light rail systems in the United States, including Charlotte, Houston, Portland, San Diego, and Salt Lake City. Upon their delivery Valley Metro will have two types of cars in operation, the new units plus the existing 50 that were built by Kinkisharyo for the line's opening.

Phoenix also has a people mover, which was built to connect Sky Harbor Airport with the light rail line at its 44th Street station. That stop was the closest to our Hampton Inn, only a few I-o-n-g blocks away, but I was saved the walk as Clare, Sig, and Cathy drove me there on Monday morning, prior to the start of their sightseeing exploits. The two-mile-long automatically-operated elevated line opened on April 8, 2013. During the planning process thought was given to building it as a traditional light rail line, but instead the final decision was to employ Bombardier's proprietary Innovia people mover product, almost identical to the system installed at Dallas-Fort Worth Airport. The rubber-tired guideway system is similar to many others, basically an enrichment of the Westinghouse Skybus, whose technology passed into Bombardier's hands with its acquisition of Adtranz in 2001. Eighteen short cars, with seats for 8 people, provide frequent service in trains of two or three units.

Phoenix is toward the western end of the Mountain time zone, so the sun rises relatively late, but then it sets pretty late as well. Thus with the shadows being a bit long during the early morning, I chose to cover the airport people mover as the first order of business. It is a relatively long drag from the light rail station to the people mover platform, but fortunately the route is all air-conditioned and passengers do not have to exert themselves too much, as they can ride an escalator, then two moving sidewalks and a final escalator to reach the train, passing (or stopping) en route at machines that can issue airline boarding passes. In fact there is also a checked baggage office, but it was closed at the time I passed. Annunciators on the platform display the time and safety messages, but are not countdown clocks; instead automated announcements are made prior to the arrival of trains and when the

(Continued on page 18)

Southwest United States*(Continued from page 17)*

doors are about to close for departure. Platforms are enclosed with full-height platform screens to keep the heat out and to prevent unauthorized access to the guideway. You probably know that this part of Arizona can experience very high temperatures, with the mercury regularly rising above one hundred degrees in the summer, so effective air-conditioning is a must. Fortunately, for our entire stay in the state, we experienced sun and very comfortable temperatures with daytime highs in the low to mid 80s.

I rode the line, which offers free passage but had few other customers during this mid-morning period. It has a number of grades and curves, a turnout for the "carbarn" and a total of four stations, including one for the economy parking lot, then Terminal 4 and finally Terminal 3 (which has a walkway to Terminal 2 — there is no Terminal 1). It will be extended another half-mile to the rental car center in the future. Running time was 7 minutes. I stopped for a few photos on my return and took others out the windows at the front and rear of the train.

There are transit fare vending machines located near the final escalator that runs down to the surface, but I purchased my \$4 day ticket from one at the street entrance after figuring out that I could not have obtained one for the half-price senior rate as I had not applied for the necessary photo I.D. card. The one-way fare is \$2 and reduced fares (also good for the disabled and students) are half that. I figured \$4 is a pretty fair price for a day of entertainment. The line itself is a bit boring, compared to similar ones in other cities, as it mostly runs in paved center reservation through a large amount of sprawl. There are exceptions though, including a bridge over the Salt River; some trackage through the Arizona State University campus near Sun Devil Stadium in Tempe; paired single track along Jefferson and Washington Streets in downtown Phoenix and along 1st Street and Central Avenue; a layup track along First Avenue next to the Transit Center; and a decorated bridge over Margaret T. Hance Park (and the buried I-10 roadways) along Central Avenue near the now-relocated Phoenix Trolley Museum. I extensively photographed these locations in 2009 and even visited the (static) trolley museum, where Brill Birney 116 was undergoing restoration. In 2009 Valley Metro also had ex-Toronto PCC 4607 on the property, displaying it for the public near the Transit Center, but that car is now at the Arizona Railway Museum in Chandler. In fact while photographing it eight years ago I ran into Ray DeGroote, who had the same idea. We spent the following day railfanning together.

Adding to the lack of excitement I felt about my upcoming photographic exploits was the fact that a large percentage of the Kinkisharyo fleet is covered with advertising; I saw only two sets of two-car trains without that abomination on at least one of the units. Cars were running every 12 minutes, so one would think I had

plenty of opportunities to take pictures, but when you consider that it takes 85 minutes to ride the 26-mile-long line* from end to end each way, and I did want to see the extensions at both ends, my time was limited, but I did not mind, as I was not enthused about the photo opportunities. (By the way, service operates every 15 minutes on Saturdays and every 20 on Sundays.)

**The 26-mile number rings a bell for me, as it was not that long ago when Philadelphia's trolley Route 23, at 25.5 miles, was considered to be the longest streetcar line in the United States, if not the world. With the "light rail revolution" that started some 40 years ago, that number has been surpassed in a number of cities, including for example, the Blue Line from Hillsboro to Gresham in Portland, and the Gold Line from East Los Angeles to Azusa in Los Angeles., which are longer than 30 miles. I am sure there will be more in the future.*

I first traveled eastward toward Tempe and Mesa, and stopped over alongside the campus of Arizona State for a photo. Returning in the opposite direction, I stopped at the pedestrian overpass downtown and at the Transit Center before continuing outward toward the northern extension. During the early afternoon I observed that three-car trains were now operating in both directions, significantly increasing capacity. One of the reasons for this came to the fore when we stopped at the Campbell station and the train became inundated by students from Central High School. I suspect this scene played out at other stops as well, as there are a number of private and parochial schools on the line. It is possible that Valley Metro's rush hour requirements extend well into the start and end of the school day. I observed some two-car trains picking up a third unit during their layover at the northern terminal at 19th & Dunlap (and I would not be surprised if that occurs at the eastern terminal as well). The extensions seemed to be built in the same manner as the original line, and the only difference I could ascertain was that the concrete roadbed and the station platforms were cleaner on the newer sections of line.

Except for the advertising on the LRVs, I was impressed with the operation. Operators are very professional, moving along in a lively manner, matching automobile speed limits. I do not know if the main streets on which the tracks are located have extra-long green cycles or whether traffic light priority has been implemented — in any case the trains I rode rarely encountered red signals. Ridership seemed to be excellent, with lots of ons and offs throughout each trip. My day ticket was inspected once, so I suspect the POP fare system works very well.

I returned to the 44th Street station in time for the arrival of the sightseeing party, but rather than picking me up, Sig and Cathy dropped Clare off, as we had to obtain a second rental car for our Tuesday activities. Sig and Cathy planned to visit relatives in nearby Chandler, while we were going to go to Tucson on the following morning. That city will be the subject of the next part of this trip report, and I bet you can guess exactly what at least one of us ended up doing on that day.

(Continued on page 19)

Southwest United States

(Continued from page 18)



A two-car train of Bombardier Innovia APM 200s pauses on the lead tracks to the storage and maintenance facility before threading its way into service.



A view of Sky Harbor Airport's Skytrain between two garages near the East Economy Parking station.



A two-car train accelerates as it climbs to its pinnacle, somewhat over 100 feet above a taxiway that connects two of the airport's main runways. It had to be built to that height so that Boeing 747s and Airbus 380s could pass under it.



No, not double track with two trains passing each other, but rather a lifelike reflection against a glass wall at the entrance to Skytrain's inner terminal at 44th Street.



Looking northward from the Skytrain platform at the 44th Street station at a pair of LRVs traversing Washington Street. The Valley Metro station of the same name is off the photo to the right. The Phoenix Mountains loom in the background.



Even where the Valley Metro runs on private right-of-way, the tracks are embedded in thick concrete. Sun Devil Stadium and Hayden Butte are in the background of this view of an eastbound train of LRVs from the University Drive/Rural Road stop in Tempe. The summit of Hayden Butte (1,400 feet) is a popular destination for hikers and students of Arizona State University. *(Continued on page 20)*

Southwest United States

(Continued from page 19)



Two photos from either side of 5th Street looking eastward toward a pedestrian overpass that provides an excellent afternoon location for traction photographers. The telephoto setting used in the right view emphasizes the strings of lovely palm trees that line Washington Street just east of the city center.



At left, a view from the pedestrian overpass that spans Washington Street between 5th and 7th Streets showing a westbound train of two Kinkisharyo LRVs. At right, the southbound train of LRVs shown along 1st Avenue is not operating "wrong rail," but rather running alongside a siding that permits trains to be positioned for use after events at sports venues and other traffic generators further along the line. The northbound rails run on Central Avenue, a block to the east, beyond the mission revival-style Westward Ho (center and right). Once Phoenix's prime hotel, it was turned into an apartment complex housing residents who no doubt have excellent local transportation. An art-deco federal building, Civic Space Park, and Valley Metro's main transit center, called Central Station, lie between the two rail-carrying avenues just south of this spot.



Looking east along Washington Street, the tracks converge beyond the 38th Street station, which contains a center platform.

(Continued next issue)