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#### CURRENT EVENTS.....

## Urban Commuter / Light Rail / Modern Streetcar News!

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**LOS ANGELES, CA** - This month Los Angeles County Metropolitan Transportation Authority (LA Metro) will begin an eight-month street restoration project near the Little Tokyo/Arts District light-rail station as the agency advances its Regional Connector transit project, LA Metro officials announced in late December 2019.



The Metro Regional Connector Project extends from the Metro Gold Line Little Tokyo/Arts District Station to the 7th Street/Metro Center Station in downtown Los Angeles, allowing passengers to transfer to Blue, Expo, Red and Purple Lines, bypassing Union Station. The 1.9-mile alignment will serve Little Tokyo, the Arts District, Civic Center, The Historic Core, Broadway, Grand Av, Bunker Hill, Flower St and the Financial District.

This new Metro Rail extension will also provide a one-seat ride for travel across Los Angeles County. From the Metro Gold Line, passengers will be able to travel from Azusa to Long Beach and from East Los Angeles to Santa Monica without transferring lines.

As part of the 1.9-mile underground light-rail extension project that will connect the Blue, Expo and Gold lines in downtown Los Angeles by 2022, crews built a temporary roadway near the Little Tokyo Station to facilitate excavation and construction of a tunnel under 1st and Alameda streets, LA Metro officials said in a press release.

Now, crews must remove the deck panels that made up the temporary roadway, backfill and pave the road to restore the street. The work will require street closures around the station until Aug. 31, 2020.

The Regional Connector transit project will also include three new stations at 1st Street/Central Avenue, 2nd Street/Broadway and 2nd Place/Hope Street.

**NEW ORLEANS, LA** - Progressive Railroading reported on December 27th that the New Orleans Regional Transit Authority (NORTA) restored streetcar service to the Union Passenger Terminal Amtrak station in New Orleans in the previous week.

Since October 2019, NORTA's streetcar lines have suffered service disruptions and suspension on four of five lines following the collapse of the Hard Rock Hotel that was under construction near Canal Street and Rampart Blvd. The collapse killed three and injured more than 19 people, local media reported.

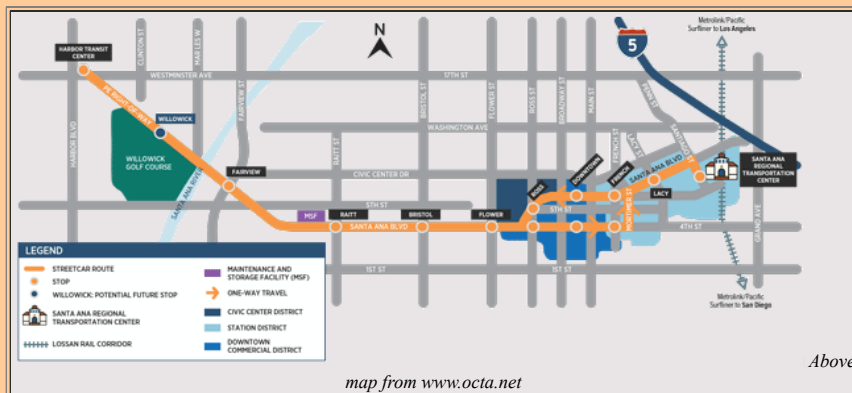


Streetcar service has now resumed on Loyola Avenue via the Canal-Cemeteries Line, and service was extended on Canal Street via the Riverfront Line. Service on Canal Street will run from the French Market to a streetcar stop at Carondelet Street, NORTA officials said in a press release.



In November, NORTA also resumed service on the Riverfront Line. The area near the collapse site remains a restricted zone and is closed.

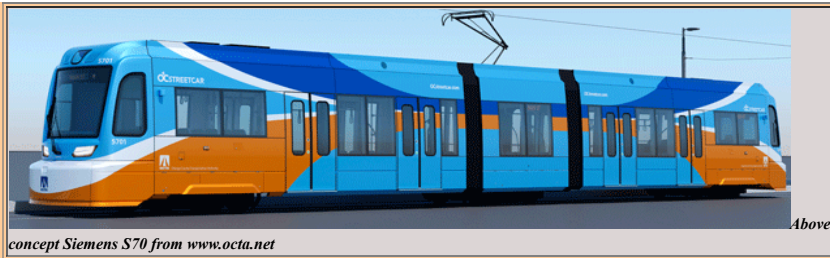
**ORANGE COUNTY, CALIFORNIA** - Progressive Railroading reported on December 5th that the Orange County Transportation Authority (OCTA) crews are advancing construction on the 4.1-mile, 10-stop OC Streetcar route between the Santa Ana Regional Transportation Center and a new transit stop in Garden Grove, California.



Crews have begun pouring foundations for a maintenance and storage facility to be constructed along the former Pacific Electric Railway Co. right-of-way in Santa Ana throughout 2020. Utility line relocation is underway and scheduled to be completed in early 2020.

Streetcar construction has been suspended on Fourth Street until 2020 to give shoppers access to businesses in the area during the holiday season.

The \$408 million OC Streetcar project is funded by federal money, including a \$149 million grant from the Federal Transit Administration, and by Measure M funds, Orange County's half-cent sales tax for transportation improvements. The streetcar will begin testing and operations in early 2022 with six Siemens S70 vehicles.



concept Siemens S70 from [www.octa.net](http://www.octa.net)

Above

OCTA also has completed construction of the foundation and pier walls for a 350-foot-long bridge across the Santa Ana River. Other bridge work is scheduled to resume after the rainy season, OCTA officials said in a press release.

**SAN FRANCISCO, CALIFORNIA** - Progressive Railroading reported on December 11, 2019 that the San Francisco Municipal Transportation Agency (SFMTA) will increase fares for its cable-car line, **effective Jan. 1, 2020.**



Single ride fare and one-day passes for the agency's cable car will increase by \$1, while three- and seven-day passes will increase by \$2. Cable car fares have not changed since 2015, SFMTA officials said in a press release. The SFMTA's board also approved discounted fares for all qualified seniors, youth and people with disabilities and free access for qualified seniors, youth and people with disabilities who have a low income.

San Francisco Municipal Railway (MUNI) celebrated its 107th birthday on December 28, 2019. The following photo, provided by Market Street Railway was taken on the opening day, December 28, 1912.



**SEATTLE, WA** - The U.S. Department of Transportation (USDOT) has revealed its intent to award a \$790 million grant and \$629 million low-interest loan to Sound Transit to enable the start of construction on the Federal Way Link light-rail extension, Sound Transit officials said on December 16, 2019 according to a report issued by Progressive Railroading on December 17th.

The Federal Transit Administration (FTA) late last week transmitted the \$790 million full funding grant agreement (FFGA) to Congress, starting a 30-day notification period. The action means that the FTA intends to execute the grant after the 30 days expires, Sound Transit officials said in a press release.

The USDOT also notified Congress of its intent to close a Transportation Infrastructure Finance and Innovation Act (TIFIA) loan for the project. The loan represents the fourth and final loan under Sound Transit's \$1.99 billion TIFIA Master Credit Agreement, which the agency signed with USDOT's Build America Bureau at the end of 2016.

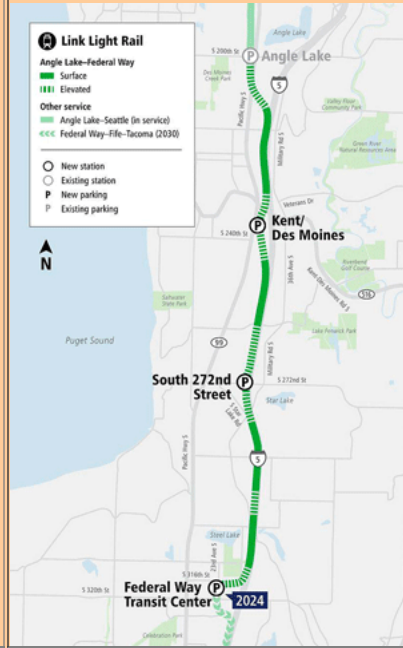
In advance of the FFGA approval, Congress also approved \$100 million in fiscal-year 2019 Capital Investment Grant (CIG) funding that will represent the first installment of the grant. The CIG program provides funding for major transit projects, such as new light- and commuter-rail systems.

The federal actions will enable what Sound Transit officials describe as a "critical project" to enter construction in early 2020.

"Securing this federal funding enables us to fulfill our promise of delivering regional light rail to the residents of South King County," said Sound Transit Chairman John Marchione. "The tireless advocacy of our congressional delegation was instrumental in completing this vital step to transform people's commutes and build a more prosperous future for the region."

The Federal Way Link Extension would extend the Link light-rail line 7.8-miles from Angel Lake Station in SeaTac, Washington, to the Federal Way Transit Center bus station in Federal Way by 2024. The project includes building three stations and adding 3,200 parking spaces along the route.

Demolition and utility relocation work began this fall.



Sound Transit crews will begin construction in early January to integrate new light-rail infrastructure to the eastside of its existing Link light-rail system.

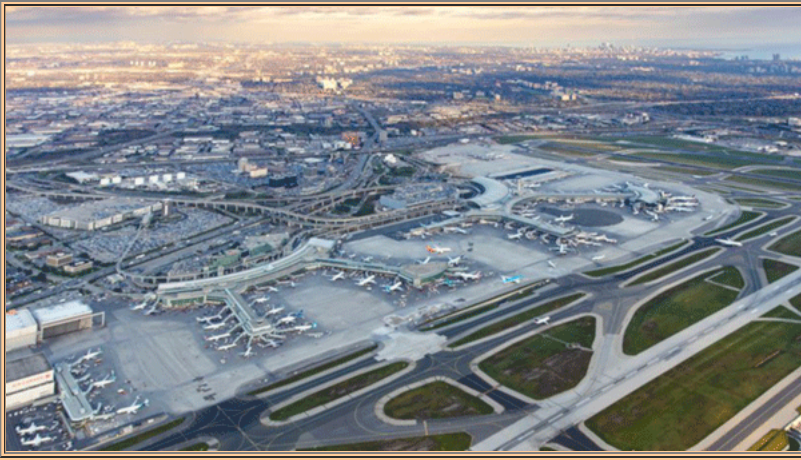
On January 4-5, no light-rail service will operate through downtown Seattle as crews work on the integration. Then from January 6 to March 13, construction will require trains to operate less frequently, Sound Transit officials yesterday said in a press release. During the 10-week period, light-rail riders traveling through downtown will transfer via a new center platform at Pioneer Square Station. Sound Transit on December 17 also announced plans for additional light-rail closures from February 8 - 9 and March 14 -15.



(Photo from Sound Transit)

The construction is part of the Connect 2020 project to prepare for the opening of the 10-station East Link extension by 2023. Once complete, light-rail trains will run from Northgate to Redmond via downtown Seattle, Mercer Island and Bellevue.

**TORONTO, ONTARIO, CANADA** - Progressive Railroading reported that at the end of November 2019, the Greater Toronto Airports Authority (GTAA) committed CA\$40 million to Metrolinx to support the Eglinton Crosstown West light-rail extension from Renforth, Ontario, to the Toronto Pearson International Airport.



The funding would help advance the technical work necessary to complete the extension and improve transit access to the airport, which the authority operates, GTAA officials said in a press release. The GTAA previously invested CA\$38 million in work that is currently underway on the project. With last weeks announcement, the authority has committed CA\$78 million to Metrolinx in a joint work program. The GTAA and Metrolinx are also exploring potential ground connections to the planned Union Station West at Pearson airport and to the employment areas around the airport, a potential Kitchener GO rail corridor connection and improved light-rail and bus connections.



"Significant improvements to our regional transit system are required for our region to be able to compete globally, and that is why we are making this financial investment to advance this work," said Howard Eng, GTAA president and CEO.

**ZURICH, SWITZERLAND** - The first of 70 Flexity trams that Bombardier Transportation is supplying to Zürich arrived in the city in the early hours of November 13. . The low-floor trams are intended to replace the first and second builds of Tram 2000, which are nearing the end of their 40-year service life.



The seven-section meter gauge trams are 141 ft long, 7.8 ft wide and 11.8 ft high with 90 seats and have capacity for up to 186 passengers. Operator VerkehrsBetriebe Zürich (VBZ), the municipal transport operator of the Swiss city of Zürich, placed the order in 2016, paying about \$367 million for the vehicles, spare parts, depot equipment and driver training.

These low-floor trams are intended to replace the first and second builds of Tram 2000, which are nearing the end of their 40-year service life. The Tram 2000 is a type of tram vehicle that was originally designed for the VBZ, and first introduced in 1976. Shown below left is a two section Tram 2000, series 2001-2098, 70 ft long, built in 1985-1987 and at right, a three section Tram 2000, series 2099-2121, 92 ft long, built in 1992-1993.



We just might see cars this long eventually in the United States!

## General Urban Transit News!

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Progressive Railroading reported on December 12th that ridership on U.S. public transit agencies rose 2.2 percent in third-quarter 2019 compared with ridership during third-quarter 2018, according to an American Public Transportation Association (APTA) report the previous day.

The growth in total ridership included a 5.46 percent surge on heavy rail systems and a 4.38 percent gain on commuter-rail systems, APTA officials said in a press release.

Riders took 2.5 billion trips during the quarter, which is the second consecutive quarter to post an increase, and the first consecutive quarter to log an increase since the third and fourth quarters of 2014, they said. The growth in ridership amounted to 54 million more trips in Q3 2019 versus Q3 2018.

Heavy rail systems that reported notable increases during the quarter included MTA New York City Transit, up 7.6 percent; and Washington Metropolitan Area Transit Authority, up 7.23 percent.

Light-rail systems that logged notable increases included the Charlotte Area Transit System, up 12.74 percent; Sacramento Regional Transit District, up 6.35 percent; and Metro Transit in Minneapolis, up 4.03 percent.

Among commuter-rail systems that posted notable increases were the Regional Transportation District of Denver, which opened its Southeast Rail Line Extension in May and was up 35.11 percent; Florida's SunRail, up 18.26 percent; and MTA Long Island Rail Road in New York, up 12.41 percent.

"The landscape of American transportation is changing; the public transportation industry continues to implement technological innovations and improved access that benefits communities and is a critical part of the transportation network," said APTA President and Chief Executive Officer Paul Skoutelas.

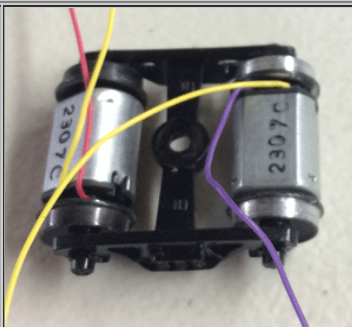
### MODELING HINTS.....

## Axle Mounted Motors - Part 2!

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by Andrew James Chier, *Southern California Traction Club*.

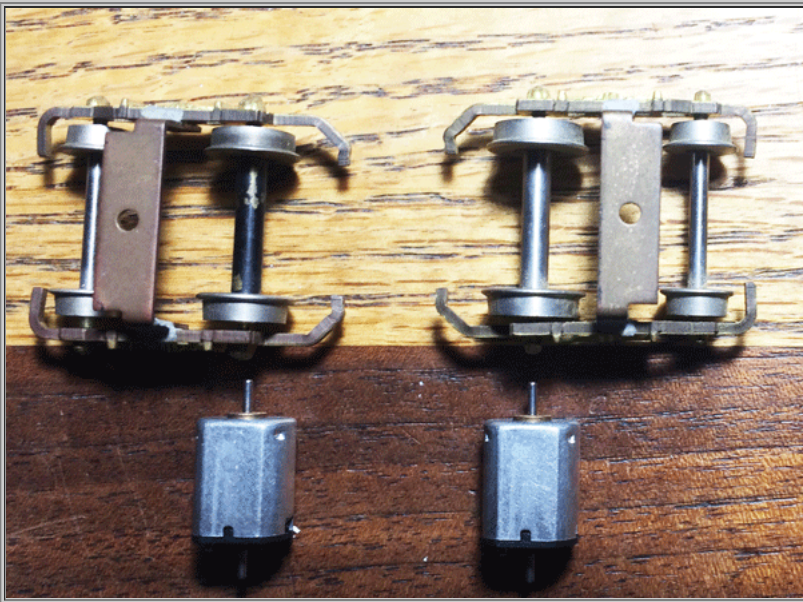
Experimenting started on December 1st with building some motorized axles. We used a lathe to part the plastic axle in some Athearn 33" wheel sets, then installed some tiny double shaft motors in place of the axles. This is a close tolerance situation as the motor contacts are small and between one side of the motor and the back of the wheels and should be installed before the wheels are attached. The left photo below shows Andrew working the lathe. In the right photo below, motor 1 (left) has been wired with red and yellow wires and the motor 2 (right) with purple and yellow wires.



Next task will be installing the pickup wipers, then experimenting with series and parallel configurations, with adjustments in the decoder settings to fine tune it.

Geoff Bunza, <https://model-railroad-hobbyist.com/node/37896>, came up with this idea for motivating a caboose to create a gravity coupling as was done on Cajon Pass. We are testing it's viability in traction drives. Will it have low speed control with sufficient torque? Stay tuned.

Custom Traxx also obtained some of these motors and will be attempting to install them in HO scale brass Brill 39E maximum traction trucks with one on each truck as is the case in the prototype. See next photo.



The Holiday season and the attendant requirements are slowing progress on this task but we will keep you abreast of all the happenings.

Currently, the major issue with these motors is the rather short shafts on each end. The total length of the motor shaft is 20.6 mm from end to end. But the typical back to back distance on an HO scale truck is 14.4 to 14.5 mm. While this leaves 3.1 mm per wheel with which to fasten the shaft to the wheel, the typical axle going into a traction or sideframe is 24 mm long. So the procedure so far is to use Athearn trucks with 33" wheels, cut the axle flush with the back of the wheel and drill the axle into the remaining portion of the axle in the wheel to fit the end of the motor shaft. This leaves the original axle point on the outside of the wheel to interface with the sideframe. While motors with a 24 or 25mm shaft would be perfect, attempts to get the motors with longer shafts has not been successful to date. Plus the use of the plastic axles makes it necessary to use wipers on the wheels to provide the track voltage to the motor or decoder.

The motors being very small cannot handle a wiper with too much pressure so that will be a balancing act. So our next step will be to use the Athearn metal wheels with the truncated axles combined with the motors on both of the 39E trucks, wiring the motors in series with resistance. The motors at 3 volts require about 30 milliamps.

So far, we have completed two trucks with two motor each with 33" wheels and wipers and they are under testing.



Stay tuned!!



