In 1963 the owners of Leonards Department Store in Fort Worth startled the transit industry by constructing a subway to bring shoppers from an outlying free parking lot directly into the lower level of their downtown store. Surplus PCC cars from the abandoned D. C. Transit streetcar system were obtained and refurbished for use in the subway. No fares were charged and the subway carried an average of between 10,000 and 15,000 passengers per day.

The Tandy Corporation purchased Leonards Department Store in 1967 along with the subway line. The store was sold to Dillard Department Stores of Little Rock in 1974, but Tandy retained ownership of the subway with the idea of utilizing it in conjunction with plans to redevelop an eight-block area in downtown Fort Worth.

Construction of the $100-million complex to be known as Tandy Center was begun in 1976 and it is scheduled to be completed in 1979. The project will include twin 20-story office buildings, a 900-car parking structure, a three-level shopping mall with a major new department store and an additional 450,000 square feet of smaller retail establishments, an ice-skating rink, a 45-story office building to serve as Tandy’s headquarters and a 500-room hotel.

The subway will play a major role in the success of Tandy Center. The underground terminal has been completely rebuilt and enlarged, while the outer end of the line was extended 200-feet to a new station in the parking area. The 27-acre lot presently handles 2,500 cars and consideration is being given to expanding the lot to 70-acres to accommodate 10,000 cars.

(Continued on Page 2)
EL PASO - Streetcar service on the International Car Line has been idle since July 30, 1973, when the Mexican government cancelled El Paso City Lines' concession to run in Ciudad Juarez. The move was an apparent reprisal against the transit company for abolishing tolls on one of the two Rio Grande toll bridges and for firing the toll collectors, all of whom were Mexican nationals. The move by EFCL officials was in response to the rejection by Mexican officials for a toll increase on the bridges. One of the FCC's was impounded by the striking toll collectors in reprisal for the loss of their jobs.

In 1974, the tolls operated briefly on a truncated route in El Paso for a nickel fare. $150 a day losses was the chief reason given for the suspension of the service. In the meantime, the city of El Paso proposed numerous trolley route extensions to the Chamizal memorial, Ft. Bliss and Yeleta, pointing out that UMTA would fund these rail routes. There was no comment from El Paso City Lines was hit by a lengthy strike in 1974, one effect of which was a surge in jitney competition, which still continues. The strike was not settled, but unionized employees were replaced by non-union help. It was also noted that Juarez merchants claimed a 60-percent increase in business since the trolleys quit hauling the Pesos out of Mexico.

Early in 1976, there was some optimism that Mexican president Tuls Echeverria would sign approval of resumption of streetcar service on the International Car Line in Juarez. However, several months close to the Mexican president suggested that he would first require approval from the unions in Juarez that precipitated the cessation of service. Such approval was not forthcoming.

On January, 17, 1977, the last El Paso City Lines buses completed their runs two hours earlier than usual, as it was the last day of El Paso City Lines, but also the end of the last National City Lines transit company. On the following day, the former EFCL buses, along with the buses of two other area transit companies bore the logo of Sun City Area Transit (SCAT), the name of the new city-owned system. After city acquisition, the Amalgamated Transit Union gathered the necessary signatures on a petition asking union representation, but this was denied by the NLRC because it has no jurisdiction over municipal or state employees.

The 1976-built FCC's became the property of the El Paso streetcar department, and the U.S. portions of the toll bridges also became El Paso city property.

Training materialized of the scheme to operate a Blackpool "boat" car as a tourist attraction over the El Paso-only portion of the car line in 1977. Meanwhile, on the other side of the border, there were no plans for the tracks to be used.

ARIZONA'S coal-hauling Black Mesa & Lake Powell Railroad has given up hope of any automated-train operation. Reasoning given included weather conditions, theft of trackside "designator" boxes and dissimilar train size from day to day.

- TRAINS
BOSTON

The Urban Mass Transit Administration has announced grants of over $110 million in transit aid to the MBTA. The largest portion of this allocation totals $42,009,180 and is designated for the final design and construction of the northwest extension of the Red Line beyond Harvard Square. Another $22,296,080 is provided for the additional costs of the Red Line extension from Quincy Center to Braintree which is now under construction. Grants totaling $32.5 million will be used for improvements to the transit power system. Fifty of the MBTA's FGC cars will be rebuilt with funds totaling $6,412,480. A number of miscellaneous projects will be financed by a grant of $7,895,480. These will include improved fare collection facilities, the obtaining of preferential operating treatment for transit vehicles on city streets and a number of other programs to improve the efficiency and safety of the transit system.

Proposals for a further extension of the Red Line rapid transit service from Arlington Heights to Bedford Center over the Boston and Maine Railroad line to Bedford have been determined to be economically unfeasible according to a study recently completed by the MBTA. The report indicates that the extension of the rail service would produce too few riders to justify the operating costs and capital investment. An expansion of bus service into this area would be more economically practical. To accommodate the expanded bus service, the study suggests paving the existing Bedford rail right-of-way and converting it into a busway. Six different alternatives were considered in this study. No mention was made of the possible use of light rail feeder service such as that which exists at the Ashmont end of the Red Line.

Some schedule changes were made on the Green Line in mid-October, 1977. Weekday rail service on the Arborway line operated only to Heath Street loop during the installation of new rail along Centre Street in Jamaica Plain. Buses provided service between Heath Street and Arborway. Through rail service between Arborway and Park Street was operated on Saturdays and Sundays. Riverside service once again terminates at Government Center rather than Lechmere. Beacon Street and Commonwealth Avenue cars now run to Lechmere. Since both of those routes are only operated with FGC cars, the Lechmere viaduct no longer sees the new LRV's in regular service.

The MBTA and MBU have made a total of 41 modifications to the LRV's in an effort to improve their reliability. The doors, which originally had 1,500 parts have undergone 16 changes alone. The trucks received modifications to correct problems which resulted in several derailments. By October, 64 percent of the LRV's were available for service compared with September, when only 56 percent were available on the average.

Sporting red, white and gray livery of MBTA's Red Line, Mattapan-Ashmont high speed line FGC's No. 3330 and 3345 are depicted here awaiting completion of last summer's track renewal project. At this interim measure, the red ex-Dallas FGC's will continue to provide service until the arrival of replacement red LRV's.

February 1978

Toroonto

Toronto's Spadina subway was opened to revenue service on January 29. The new line is 6.25 miles long and connects with the University subway west of St. George station. The Spadina runs in a northwesterly direction to a terminal at Wilson Avenue in the Borough of North York. It is expected that the Spadina line will ease the passenger loadings on the Yonge Street subway which parallels the new line about two miles to the east. Half of the line is above ground, with a portion operating in the median of the truncated Spadina Expressway.

New rail rolling stock will arrive in Toronto during 1978. The first of six prototype light rail cars has been completed by SIG of Orbe, Switzerland and is being tested on the Orbe-Chavornay Railway prior to shipment to Toronto. The remaining 190 cars will be built in Canada by Hawker-Siddeley.

The first of 50 new double-deck cars for 00 Transit went on public display in Toronto Union Station on December 6. The new cars are being built by Hawker-Siddeley at a cost of $40 million. They have a capacity of 162 seated passengers and each car is equipped with a washroom and drinking fountain. Unlike the gallery cars which are used in Chicago, the passengers on one level cannot see those on lower level and the problem for the conductors as tickets are not collected on the train. The first double-deck train will go into operation on the busy Lakeshore route in June as 15 of the new cars will be in service and tested.

—John A. Pick

CHATTANOOGA Area Regional Transportation Authority recently advertised for bids for rehabilitation work on the Lookout Mountain Incline, including trestle repairs, roadbed reconstruction, underground drainage, stone walls and steel platforms. Closing date for bids was January 30, 1978.

—Passenger Transport

Philadelphia

In recent years there has been considerable concern about the future of the Franklin Elevated structure. On several occasions, pieces of concrete and metal have been shaken loose by the vibrations of passing trains and some officials have expressed fear that the structure may have fallen into an advanced state of deterioration. Plans have long been proposed for the eventual replacement of the elevated, but a lack of funds has prevented this from becoming a reality. In the '70s, when the structure were discovered, a number of temporary solutions were undertaken. These included imposing speed restrictions on the trains and patchwork repairs to the affected portions of the elevated.

The relocation of the rapid transit line into the median of the Delaware Expressway between Girard Avenue and Second Street offered a unique opportunity to use the abandoned portion of the elevated line for stress tests. The City of Philadelphia, SEPTA and UMTA joined forces to carry out a $180,000 study of the elevated structure. Hydraulic jacks were attached to the decks of the 8-foot test spans. By using different combinations of the jacks, various stress situations were created in each span. The entire 450-ton loading capacity of the jacks failed to produce anything more serious than a 1.75-inch deflection. Only after the vertical members of one central truss were cut did the span slump. Safe bearing capacity was maintained even though the load at failure was 430-tons, or six times that which the structure was designed to carry.

The impressive performance of the elevated spans in handling loads far in excess of design loads indicates that the structure may have more life left in it than was previously thought.

—Engineering News Record

(Philadelphia continued on Page 4)
PHILADELPHIA

(Continued from Page 3)

Riders on Philadelphia's Market-Frankford rapid transit line may soon enjoy the comfort of a fleet of air-conditioned cars. Last summer, car No. 614 was equipped with a roof-mounted air-conditioning system which incorporates the old ceiling fans for air circulation. This car, one of 266 built in 1946, by Budd at a cost of $91,000 each, is identifiable by two roof fans. The idea was created by connecting the four existing fan humps, installing eight evaporators and eight fresh air ducts, and providing one inch of insulation. The compressor/condenser units and controls were mounted beneath the floor of the car.

The experiment has made No. 614 much quieter inside than her sisters, and she uses less electricity for the air-conditioning than for the electric heating. The car entered service on July 26, 1977. Both SEPTA and the city were so pleased with the results that Philadelphia applied for an 80 percent grant from UMTA to install air-conditioning in all of the Market-Frankford cars. The work should start in 1978 if the funds are forthcoming.

--Cornelius D. Seon

International News

To most light-railway fans, Europe means the German-speaking countries, plus the Netherlands, Belgium and Italy. Tramways elsewhere on the Continent are too scattered to be seen on a short trip. But if the light-air traveler desires, he can tour a continent of tramways that will encourage the visitor to skip an area like southern Europe entirely, and miss some of the smallest, but most courageous, and sometimes most interesting, rail operations anywhere.

St. Etienne, France, is a pleasant, medium-size manufacturing town thirty miles southwest of Lyon. Removed from the Paris-Nice rail axis, St. Etienne serves few tourists, the only visitors seem to be railfans and transit people from other French cities. St. Etienne's single streetcar line, one of two in France, runs up and down the main street and is the core of the city's transportation system. Thirty-five French and Belgian PCC's, including five articulated units, provide intensive service over the 4-mile meter-gauge route, and operation and maintenance are impeccable. The cream and green cars are among the few in Europe that still carry trolley poles, and are featured on a poster in the local tourist office and on most of the postcards. Also for sale in tobacco shops, apparently a ride on a French streetcar is an exotic experience for Frenchmen. Like Lyon and many other cities in southern Europe, St. Etienne also has a trolleybarn network.

Four stations of Lyon's new metro opened for public viewing on October 22, 1977, with service operation scheduled to begin late last year. An elaborate train/metro/bus interchange has been constructed at the Perrache station. Lyon recently installed new equipment on its pantograph-equipped funiculars, and the Croix Rousse line is being extended down to an underground terminal in the metro. This involves adjustment of the passing track halfway up the hill. A light-rail line is provided below the Croix Rousse.

France's other streetcar line operates in Marseille, and is only two miles long, but includes a trolley subway. A boulevard, private right-of-way and narrow branch lines the loop is laid near the car barn at the edge of town. The Mediterranean city's steamy seaport atmosphere contrasts sharply with quiet, conservative St. Etienne. Marseille's sixteen PCC's were also constructed by La Brugeoise et Nivelles in Belgium, and are double-end, standard gauge, carry pantographs and are painted cream and dark blue. The cars are notable for having six sets of double doors, three each side, and therefore space to seat only sixteen passengers. Tramway route 68 terminates downtown in the Canebière, east of Versailles on Boulevard Carabidé south of La Canébière. The tunnel entrance, which is not easy to find, is a few steps downhill in the Marché des Capucins. Marseille is also constructing a conventional subway.

Since the demise of the Granada and Madrid systems, it is often thought that no trams remain in Spain. Untrue. Barcelona's ex-Washington PCC's are gone, but the city has a streetcar line, operated by 77-year-old single-truck cars with walk-around trolley poles. The "Tramvia Blau" (or "Tramvia Blau" in the local language, Catalan) operates from the Avenida Tibidabo terminus of the Sarriá subway line up a hill to the foot of the Tibidabo funicular. The route is less than a mile long, and, after Detroit, may well be the smallest streetcar system in the world. The six cars are operated by a private company, and never ran on the Barcelona city system. The line is well publicized in guidebooks and on maps, and commemorated its 75th anniversary in 1976 by publishing a large blue and gold trolley poster (inscription in Catalan) that can still be purchased in Tibidabo Park at the top of the funicular.

The small town of Sóller lies in the mountains twenty miles north of Palma, on the Spanish island of Majorca. The Ferrocarril de Sóller's electric trains connect it with the capital, and the company operates a two-mile trolley line through Sóller and along the highway down to the beach. Some of the cars formerly ran on the Palma city system, and open trailers are attached during warm months, which is most of the year. Track is meter gauge and the burnt-orange single-truck cars have bow collectors. This line, like almost everything in Majorca, is supported largely by tourism, and taken in the train and tram to Puerto de Sóller is a popular tourist excursion.

Trolley operations in Lisbon, Coimbra and Porto, Portugal, are well known, although the latter two are somewhat neglected. The Coimbra system is one of the jewels of Europe, and on November 1977, the first of antique Brill open trolleys is still sitting in the Alcochete barn. The cars are dusty and sad-looking, but so far are unwandalized. Overhead and track are intact on the hillside, but all track in town has been removed, and the line will never run again. There is, in fact, little in Sintra to suetz from the usual visitor that this is the place that Earl Clark's 1971 Directory said should be a shrine for every American electric railway enthusiast. Transportation over the scenic 7-mile route to the westernmost point of Europe is now provided by shiny new buses of the Rodoviaria Nacional.

--Allen Morrison