

JEFFREY MANUFACTURING COMPANY, BRUCE MOFFAT COLLECTION

JEFFREY MANUFACTURING COMPANY six-ton mining locomotive 406, built in 1907, was handling a work train in 1957. This was typical of the motive power in the Chicago freight tunnels.

Chicago's Flood of Memories from Forty Feet Below

Chicago's Forgotten Freight Tunnels

by Bruce Moffat

Thirty-three years after it quietly ceased operation, a nearly forgotten part of Chicago's past suddenly became a major news event. On April 13, 1992, just as the morning rush hour was getting under way, several downtown buildings reported that their basements were taking on water. Within a few hours, Chicago's "Loop" district was virtually deserted. Financial institutions, office buildings and stores had sent their employees home. The city's two downtown subways were closed as a safety precaution. Many buildings' mechanical systems suffered extensive damage as the flood waters rose.

The city's print and broadcast media provided almost non-stop coverage of the first flood to ever hit the Loop. What made this calamity even more remark-

able was that this flood was not caused by any of the usual natural events such as heavy rains or swollen rivers. In fact, the flood was not even visible to those fleeing the Loop. The flood was totally underground, confined to the city's 47-mile network of abandoned freight tunnels and to those buildings which were attached to it. It was quickly determined that the wall of a freight tunnel had been breached where it passed beneath the Chicago River at Kinzie Street.

The "great Chicago flood" brought a renewed interest by both media and public into the history of the tunnel system and the two-foot gauge electric railway which operated in it for more than

a half century. For the next several weeks I was kept busy fielding requests for background information on this unusual railway and the circumstances that led to its construction. To me, the tunnel system was of more than casual interest, for in 1982 I had completed a book on the subject entitled *Forty Feet Below — The Story of Chicago's Freight Tunnels* (Interurban Press, distributed through Pentrex, Pasadena, California). Almost immediately it became the most sought-after book in town!

Beginning in 1898

The tunnels were constructed not to house a railway but rather a telephone system — at least that's what the promoters told the city fathers! On June 27, 1898, Chicago alderman Edward J.

Novak introduced an ordinance in the City Council to award a telephone franchise to an unnamed company which would compete with the already well-established Chicago Telephone Company. The franchise was to run for 50 years and required that all cables installed in the city's central area be buried. Fourteen days later, the intended recipient of this franchise, the Illinois Telephone & Telegraph Company, was incorporated to "acquire, construct, build, buy, sell, lease and operate telephone plants and plants for the conveyance and transmission of sound and signals by electricity."

On February 20, 1899, following some political wrangling between Mayor Carter Harrison and the aldermen, the City Council awarded the IT&T its telephone franchise. The 30-year grant required that all cables in the area bounded by Fullerton Avenue, Western Avenue, 22nd Street, Halsted Street, 55th Street and Lake Michigan be placed underground. The IT&T was also required to have a telephone system in service within five years. The construction of tunnels to house the cables was not mentioned or required. Although not entirely pleased, the mayor allowed the franchise to become law without his signature.

Surveying began that summer. Construction was handled by the affiliated Illinois Telephone Construction Company, who sunk their first shaft in the basement of a saloon operated by Alderman Johnny Powers on Madison Street, less than two blocks from City Hall. At the base of the shaft, 30 feet below street level, a small-diameter construction tunnel (in keeping with its franchise, IT&T used the term "conduit") was built into the alley behind the saloon; it then followed an alley to nearby LaSalle Street. Under LaSalle, the construction crew built a larger "conduit" measuring six feet nine inches wide and seven feet six inches high stretching from Madison to Monroe, a distance of one block. This section was completed in late 1899 or early 1900.

During the summer of 1900, construction was suspended, apparently because of alleged inaccuracies in the city's maps necessitating additional surveying work by the company. It was during this time that IT&T quietly moved to enlarge its corporate powers to allow the handling of merchandise, mail and other items. This significant change in corporate outlook was kept from city officials!

The work resumed in September 1901. To speed the digging of the tunnels which would ultimately run beneath every street in the Loop area, additional construction shafts were sunk at various downtown street corners. Unlike the original tunnel section, all further tunneling was generally



ILLINOIS TELEPHONE CONSTRUCTION COMPANY / BRUCE MOFFAT COLLECTION

done at a depth of 40 feet below street level. This elevation was chosen so as to locate the tunnels in a blue clay stratum underlying most of the downtown area. This simplified boring (the clay was actually dug out by hand) and reduced the likelihood of cave-ins or disrupting the orderly settlement of nearby buildings. The installation of track and trolley wire in the completed tunnels was also begun at this time.

Two-foot in the tunnels

The relatively small tunnel size and the limited public-way available for turnouts between intersecting routes dictated that the railroad be laid to a gauge of two feet. Twenty-foot radius curves were standard, although the rolling stock was designed to handle curves as tight as 15 feet. It was intended to use an electrified center rack rail to both power the locomotives and provide sufficient tractive effort to pull loaded trains up steep grades, mainly found where the tunnels crossed beneath the Chicago River. Subsequent testing revealed that standard adhesion-type mine locomotives drawing power from an overhead trolley wire could adequately handle the expected traffic.

Word of the company's railroad ambi-

tions eventually leaked out, resulting in the mayor ordering a halt to construction on April 27, 1902. This action came on the heels of an inspection tour by a City Council committee which discovered a 14-foot-high "conduit" under construction. Eventually an accommodation was reached between IT&T and the city allowing the company to handle freight through the tunnels.

On July 15, 1903, the City Council amended the IT&T's franchise to permit the construction and operation of a 50-mile tunnel railway system within ten years. The ordinance also stipulated that upon the expiration of the franchise in 1929, ownership of all tunnels not located under private property would revert to the city. Not included were the rails, cables and other equipment housed inside the tunnels. The city would have to purchase these assets if it wished to take over operations. The city also reserved the right to order the removal, alteration or relocation of any tunnel necessary to accommodate the construction of water tunnels or passenger subways.

On October 29, 1903, the Illinois Tunnel Company was incorporated and absorbed both the IT&T and the Illinois Telephone Construction Company.

Non-revenue operations initiated

With about 20 miles of track completed, limited train operations were begun on January 2, 1904. The first movements were handled by one of two center-third-rail powered cog locomotives that the company had purchased from the Morgan Electric Machine Company of East Chicago, Indiana. The locomotive towed several merchandise cars which were loaded with barrels to simulate anticipated operating conditions. Although this event received no attention from the general press, the company photographer was on hand, recording several views, two of which were later published as postcards.

Besides "practice" trains, the two Morgan locomotives were kept busy hauling carloads of excavated materials out of the tunnels for disposal in what is now known as Grant Park, which at that time was being reclaimed from Lake Michigan. Later debris was dumped in Burnham Park as well to create the park lands we have today. These were the only locations where tunnel trains came out of the ground. Connections were soon made with many of the Loop's larger buildings and virtually every railroad freight house.

Dinner 40 feet below

To commemorate the start of train operations, a banquet was held for members of the Chicago Press Club on February 10, 1904. It was held in the Jackson Street tunnel. The dinner party



ENGINEERING PHOTO COMPANY / BRUCE MOFFAT COLLECTION

entered the tunnel through the company's telephone switching plant at 177 Fifth Avenue (now 105 South Wells Street) and descended to tunnel level by elevator. There they were met by a special train which carried them on a short tour before depositing them at the banquet site which was centered at the intersection of Jackson and Fifth. Tables

extended for two blocks and were equipped with dial telephones so that the attendees could try what was then the last word in telecommunications. The tunnel was decorated with bunting, and a band provided background music.

Following dinner, Tunnel Company President Albert G. Wheeler and General Manager/Chief Engineer George

A CONSTRUCTION CREW posed for their portrait at Madison and LaSalle streets (**below**) in 1900. The hand-cut clay, wooden forms and concrete lining are visible (**opposite**) in this unusual construction view. On February 10, 1904, members of the Chicago Press Club celebrated the tunnel opening with a banquet (**above**) beneath Jackson Boulevard.



W. Jackson spoke about the building of the system and their expectations for its success. It was revealed that about \$7 million had been spent on construction up to that time and that three locomotives (two third-rail and one trolley) and 24 freight cars were in service. Much work remained to be done, however, before regular freight traffic could be handled. That year also saw the tunnel company placed under the control of the Chicago Subway Company. The Subway's board of directors included such notables as E.H. Harriman (who controlled the Union Pacific, Illinois Central and Chicago & Alton Railroads) and V.A. Valentine, who represented J. Ogden Armour of meat packing fame.

Freight service was formally inaugurated on August 15, 1906, through the approximately 45 miles of tunnel that had been completed.

A reporter for the *Chicago Evening*

cars were dropped off at the Milwaukee Road's freight house, Marshall Field's department store, the Chicago Great Western's freight house and the Monarch Refrigerator Company (a cold storage company).

Despite the high hopes of its promoters, the railway and telephone operations tended to generate more losses than profits. The amount of business handled failed to meet expectations, resulting in the Illinois Tunnel Company entering receivership in 1909. Under receivership, conditions improved somewhat. By July 1911, the railway was reported to be earning a modest profit. The telephone system, however, continued to lose money.

Anxious to end the bankruptcy as quickly as possible, the Armour and Harriman interests perfected a reorganization plan which was put into effect in April 1912. The assets of the Illinois Tunnel Company were "sold" to two new entities: the Chicago Tunnel Company assumed operations of the railroad system, while a new Illinois Telephone & Telegraph Company assumed responsibility for the deficit-ridden telephone operation (which was sold to the Chicago Telephone Company in 1917). Control of these two companies was placed in the hands of the Chicago Utilities Company, a holding company. The principals in these new companies had also been affiliated with the former, rendering the corporate changes more or less cosmetic.

The succeeding years saw traffic improve as additional building connections were established. Some buildings, like the Field Museum of Natural History, were designed to receive their coal deliveries by tunnel train and have ashes removed in the same manner. By 1929, the Chicago Tunnel Company had a fleet of 149 electric mine-style locomotives, over 3200 freight cars of various descriptions and over 59 miles of track in operation. This is even more remarkable when it is remembered that the company's entire system was contained in an area of only two square miles! The temperature within the tunnels stayed at "about 50 degrees" year around.

Traffic

The movement of coal was a major source of revenue. Many of the Loop's largest buildings received coal for heating purposes by tunnel train and had the resultant ashes removed the same way. For many years, the company operated four receiving stations where it received coal from the "full size" railroads. Special narrow gauge steel side-dump gondolas were used to handle coal deliveries, while ash was removed in wood-bodied cars.

Coal traffic was an early victim not only of motor truck competition but also the shift to oil or natural gas, being

completely discontinued in 1948. Ashes continued to be handled until the system closed in 1959.

The other major source of traffic was LCL (Less than Car Load) items, or what we would now call "package express." Much of this traffic was destined to or from the numerous department stores lining State Street. Outgoing shipments from these retailers were hauled through the tunnels to one of four "Universal" (freight transfer) Stations located on the tunnel system's periphery. Here they were reloaded onto trucks for final delivery, usually to points in the greater metropolitan area. These Universal Stations were operated by the affiliated Chicago Warehouse & Terminal Company.

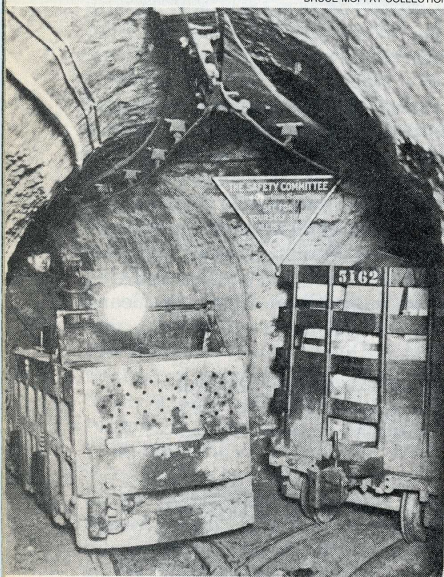
Other loads were dispatched to the numerous railroad freight houses served by the tunnel system for delivery to more distant cities. Additional LCL traffic was also generated by several wholesale grocery firms and small manufacturing companies which enjoyed direct access to the tunnels. LCL traffic was abandoned in 1956, a victim of increased truck competition.

The end of the line

Although never financially well-off, the Chicago Tunnel Company managed to make ends meet through the World War II years. The war's end brought not only significant changes to the economy but also signaled a general shift away from railroads to motor trucks which were rapidly becoming larger and more cost competitive. Railroad freight houses were also being relocated to areas remote from the Loop. Declining traffic, increased operating costs and the effects of deferred maintenance all took their toll on the tunnel railway. If this were not enough, the company was also still reeling from the loss of some of its most profitable trackage in the late 1930s to the construction of two passenger subways by the City of Chicago.

Attempts to arrest the traffic decline were met with failure. Unable to meet its financial obligations, the system was placed in receivership on July 11, 1956. That September saw all LCL operations discontinued, leaving only some ash and trash removal traffic. The Universal Stations were also closed in an effort to reduce expenses.

In mid-1958 a users committee comprised of several downtown business offered to purchase and reorganize the system. Their offer was rejected by the Interstate Commerce Commission as being too low. Meanwhile, control of the system passed into the hands of the Rutland Transit Company, a Vermont-based trucking firm. Unable to raise additional funds, the users committee threw in the towel on March 5, 1959. Revenue train service was halted the next day, although limited non-revenue

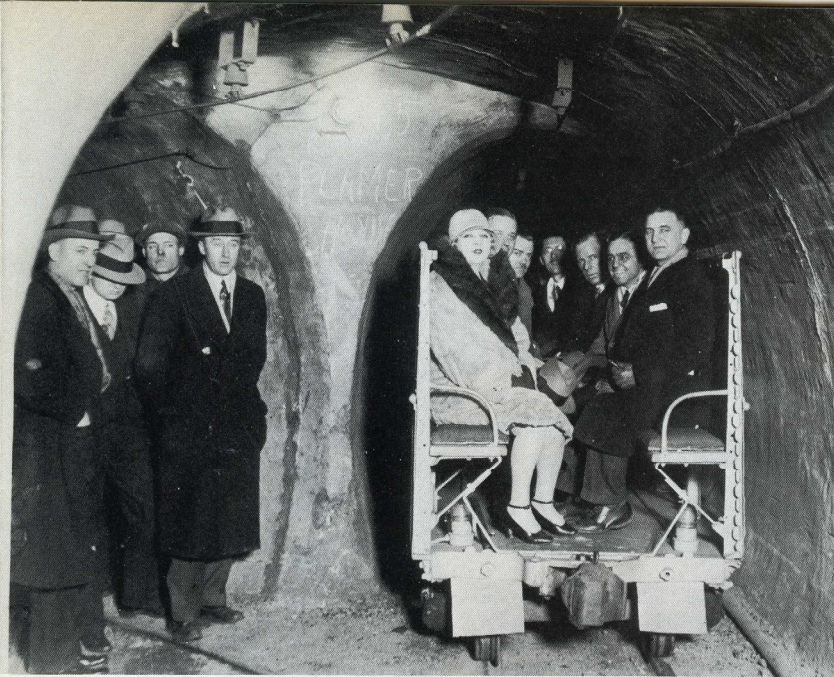


BRUCE MOFFAT COLLECTION

Post was on hand to record this memorable event:

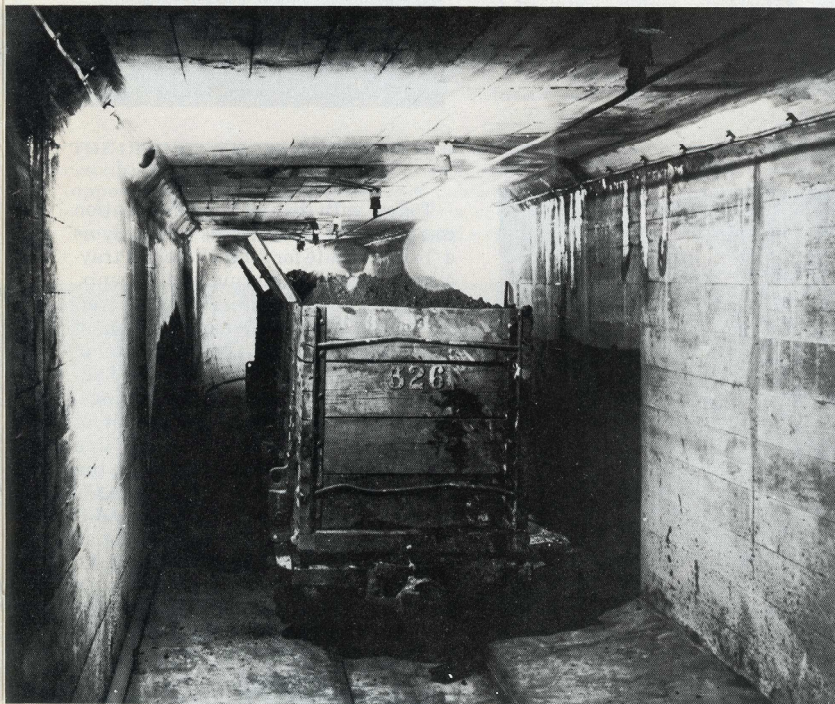
"This morning at 11:00 o'clock the first trainload of merchandise traveled over the tracks in the network of tunnels underlying Chicago's streets. 'This move inaugurates,' said George W. Jackson, chief engineer of the tunnel company, 'a system of freight handling that will relieve the streets of 20,000 tons of merchandise a month. It will revolutionize traffic in Chicago, will make teamsters' strikes impracticable and will give the passenger traffic of the downtown streets a chance to make some headway.'"

That first train consisted of eleven cars loaded with general freight originating at the Erie Railroad freight house at 14th and Clark Streets. These



HERMAN KROGAN / BRUCE MOFFAT COLLECTION

MOVIE STAR MAE WEST visited the tunnel beneath the Palmer House Hotel in 1929. The most enduring work of the tunnels was the removal of furnace ashes in wooden hoppers like these (**below**) at the CB&Q office building in 1946. One of the home-built locomotives and a package car were photographed (**opposite**) at a junction in 1928.



CR&O RAILROAD / BRUCE MOFFAT COLLECTION

moves continued through the 9th. By this time the only commodity being handled was heating ash.

Testimony before the Illinois Commerce Commission on May 11, 1959, emphasized the rundown condition of

the property. It was revealed that the cessation of operations had left 98 cars loaded with ash stranded throughout the system, the operable locomotive fleet had dwindled to just a single unit, and pump failures had caused the Ran-

dolph, Franklin and Orleans crossings under the river to flood completely.

No objections were heard at abandonment hearings held by both the Illinois and Interstate Commerce Commissions. The Interstate Commission approved the company's abandonment petition on June 10, 1959, with the Illinois Commission following suit on July 13. Chicago's most unusual railway was now a part of history.

But unlike most railroad abandonments, very little of the system was actually scrapped. The scrap contractor removed most of the freight cars, trolley wire, pumps and all but two of the locomotives. Not included was the track, which was embedded in concrete and deemed too difficult and expensive to remove. It remains in place to this day.

Since entry to the tunnels was invariably through sub-basements of buildings and there were no emergency escape exits to street level, it was not difficult to seal off the system. Many entrances were permanently walled off with brick or concrete, while others were closed with steel doors — whose water-tight integrity deteriorated over the years and would be the cause of many of the problems in the spring of 1992. Because all access was through occupied buildings — including City Hall — the tunnels remained vacant and free of "street people." In 1968, however, anticipating a "long hot summer" of race riots following the 1967 outbreaks in Detroit, Cook County Sheriff Joseph I. Woods suggested turning the tunnel system into an emergency prison system to hold arrested rioters. The plan was never implemented.

Some of the tunnels are now used by Commonwealth Edison for high voltage power cables and others by a fiber-optic cable company. It was the fiber-optic workers who first discovered the breach at the Chicago River and warned of the possible flood.

And what of those two locomotives? One of 20 homebuilt locomotives still exists as a badly rusted hulk beneath a public works yard near Grand Avenue and the Chicago River. It seems to have been simply "overlooked" when everything else was removed.

The second locomotive, in much better condition, is located, of all places, adjacent to the Field Museum of Natural History. This five-ton Baldwin, built about 1905, is not on display but was abandoned in the tunnel, its location apparently making it not worth the cost of removal. There remain numerous freight cars stranded at various points in the tunnels, as well, although most of them are badly deteriorated wooden ash cars that were not worth salvaging.

After the events of April 1992, however, it will be a long time before Chicago forgets about the 47 miles of history 40 feet below its streets.